FORECAST

Advisers: Adapt or die

Robo-investing firms will play a role in accelerating the shift away from traditional financial advisers, especially for younger people, experts say.

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SECTION E

Automated Investing

EDITOR: CHRISTINA VARGA

DEMOGRAPHICS

Not just for millennials

Automated advisories are finding a surprising demographic variety in their customers

MARY GOODERHAM

Years of traditional investing convinced Anna and Kirk Foat to try an online investment adviser.

Frustrated with high fees, complex statements and difficulties managing their accounts while looking to consolidate their various financial holdings, the London, Ont., couple made the switch to a robo-advisory service three months ago.

Far from the millennials that such financial technology is expected to attract, Ms. Foat, 40, and Mr. Foat, 48, are mid-career professionals with two children and substantial assets. They represent the widening demographic that is increasingly finding automated investing appealing.

Ms. Foat, principal of Big Dog Sales Consulting, a company that helps startups grow, considers herself an early adopter; indeed, she switched to an online bank in 1998. "People said, 'That's crazy, you need a teller,'" she recalls, noting that it took longer to come around to online investing, particularly given the fact that she had a trusted adviser.

When the adviser retired, the Foats found that the new one made frequent trades that added to already high fees and went against their desire to stay invested for the long term.

With the move to bring everything to Nest Wealth, an online digital advisory based in Toronto, the Foats now pay just $20 a month each and can keep better track of their portfolio.

Jenny do Forno, head of customer experience at Nest Wealth, says the company is finding that "demand for our service is broad and it goes across all demographics."

Nest Wealth is a Netflix-style subscription service, charging a fixed fee of $20 to $80 a month.

The Foat family, clockwise from top left: Kirk, Anna, Dylan, 3, and Jack, 5. ONE FOR THE WALL PHOTOGRAPHY

> **You can see your entire portfolio anywhere in the world, at any time.**
>
> **Adam Nanjee**
> *MaRS Discovery District*

Clients range from first-timers in their early 20s to an 88-year-old investor, she says, with an average age in the mid-40s.

The "prime motivator" for all age groups is avoiding the high fees associated with traditional mutual funds.

"They could forfeit half of their portfolio over time. They want a sophisticated portfolio that meets their financial goals," she says, noting that with Nest Wealth, clients have access to professional advisers, while the technology brings cost-efficiencies that reduce costs while creating a better user experience.

Adam Nanjee, head of the financial technology group at MaRS Discovery District, a Toronto innovation hub, says digital advisories have seen "huge growth" because of the access they bring.

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ALGORITHMIC ADVICE

The digital financial advisory scene in Canada

DAVID ISRAELSON

It is no exaggeration to say that automated, or robo-adviser, services are poised to shake up the Canadian financial advice industry.

More aptly described as automated investing services that allow people to select and manage investments online with the support of allocation algorithms and also the occasional human interaction, robo-advising is quickly moving from market niche to mainstream.

While some of the companies offering these services are startups, established financial services companies are taking notice; for instance, Bank of Montreal has started offering its own online platform.

These online services are attracting investors who are comfortable with technology and prefer not to to spend the time with face-to-face interaction with a financial adviser.

The costs to use robo-advisories in Canada are generally attractive, particularly for those with relatively small amounts of investable assets.

"Advisory technology has come a long way in the last few years," says Anthony Boright, president of InvestorCom Inc., which assists asset managers and investment dealers with regulatory compliance.

"They range from self-help, don't-talk-to-anyone solutions where everything is online, to services where if you have a question you can talk to a real adviser."

For instance, Chris Nicola, who co-founded WealthBar in 2014, says his investor service offers automated investment decisions, along with "financial advisers [who] provide direct one-on-one financial planning for our clients." WealthBar is affiliated with Mr. Nicola's family firm Nicola Wealth Management.

Generally, automated advisory firms see their target market as largely millennials – people who are starting to build up funds but don't yet have a lot and who are comfortable with technology.

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SOFTWARE

Automation takes the emotion out of the equation

But the algorithms making financial decisions have one flaw

GUY DIXON

Robo-advisers don't care about your children (and their costly university tuition), or about your parents (and their need for home care), or the kitchen reno that's eating into your investment budget.

All that plain-vanilla robo-advising services care about is the asset allocation of a client's investments, based on risk tolerance and age. Plain and simple.

That's both the purpose and the problem with the algorithms running today's automated investing services, say finance specialists.

"Honestly, it's not very sophisticated," said Moshe Milevsky, a professor of finance at York University's Schulich School of Business.

The algorithms only learn so much about a client, which some argue is a good thing. It means investing is freed of emotion, which can lead to losses. Instead, the programs quietly rejuggle clients' portfolios periodically to maintain investment goals and risk preferences.

The most popular automated investment services will take investors through a series of questions to determine their risk tolerance, investing time horizon and what kind of return on investments they are looking for. This may also include a call from a broker to verify the information. The algorithm then begins a process of adjusting the assets periodically to try to hit the investors' preferences.

This shouldn't be mistaken for algorithmic trading programs, which buy and sell securities based on complex technical analysis of patterns and correlations within the market. Automated advisers' tasks are simpler, matching different kinds of portfolios with investors' preferences. "In fact, this is 30-year-old technology," Dr. Milevsky said.

It's even older if you consider that the basics come from Nobel Prize-winning economist Harry Markowitz's Modern Portfolio Theory introduced in 1952, if not from concepts of risk tolerance that are far older. The assumption is that greater risk should have the potential of bringing greater reward, and that diversifying a portfolio is a way to reduce risk.

Algorithms, Page 5

The Top 10 Reasons to Automate Your Investments

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OUTLOOK

How digital services will affect advising

Human advisers and the automated services themselves will need to innovate to survive, experts believe

PAUL ATTFIELD

Automated investing is only going to grow, many industry experts believe. And, as they try and peer into the future, many conclude that, combined with a new technology-oriented generation inheriting a wave of wealth, that means adapt or die for financial advisers.

Chief among those would be the "slothosaurus" financial advisers, a term coined by Wesley Gray, the founder of Alpha Architect, a financial services company on the outskirts of Philadelphia. By that, Dr. Gray, also an author of books on investing, is referring to the sort of advisers who take a 5-per-cent commission and a 2-per-cent management fee and fully believe they provide true value by virtue of the great relationship they have with their clients.

Unfortunately, according to Dr. Gray, the sort of clients who value those relationships are moving into their senior years, and their children, who will inherit their wealth, don't share the same opinion. Robo-advisers will play a role in accelerating that shift away from traditional advisers, he says, though he acknowledges that the financial adviser-client relationship is not without its appeal, and will continue to have its place within the spectrum.

For instance, the role of adviser as a "psychologist coach" is one that pays dividends, he believes, because the ability to talk a client off a cliff when a market crisis happens is invaluable.

"I think that's still a real value proposition and that's something that's hard to replicate with a computer, at least so far," Dr. Gray says. "I'm sure at some point if people get more comfortable with technology you might be able to prevent some of that even with a machine."

With the Gen Y and Gen Z demographics starting to map out their financial futures, the tools available for them to do that will have to adapt to their individual tastes, and that starts with ease of use.

"We're getting so busy with life these days that we're hearing, particularly from the millennial demographic, that they just want it to be all automatic," says Adam Nanjee, the head of financial technology at MaRS Discovery District in Toronto.

Another requirement is transparency, he adds. People are looking at every penny, says Mr. Nanjee, so when clients start to see management fees related to mutual funds that they don't understand, price and ease of comprehension become factors.

"Let me go to a robo adviser service where I know exactly what I am paying, I know exactly what I am paying for and I know exactly what it is investing in," says Mr. Nanjee, describing some people's attitudes.

The penetration of smartphones in Canada will also play a key role in the future of automated investing. More than 80 per cent of 18- to 34-year-olds used a smartphone in 2014, with that figure expected to grow to about 98 per cent in 2018, according to a survey conducted last year by eMarketer.

A reliance on being able to access financial services on the fly will only increase, Mr. Nanjee says.

"To me, that's the future: real time … irrespective of where you are, you're going to be able to essentially control, adapt, change, modify all of your financial services at your fingertips."

Automated advisories may themselves feel the need to adapt and innovate, for instance in the area of customization. While the format generally funnels clients toward one of a number of model portfolios, the next generation of investors will likely want more control over their financial futures.

Pauline Shum, a professor of finance at the Schulich School of Business at York University in Toronto, says that her Gen Z son filled out a questionnaire for a robo adviser and the first thing he asked when he received his portfolio was, "Can I change it?"

York University's Pauline Shum: Automated advisories will need to give investors more information. TIM FRASER FOR THE GLOBE AND MAIL

"I think that's one of the directions they need to evolve [in] to meet broader investor demand," Dr. Shum says. "They're playing a numbers game: They charge very low fees so they need to have a very large customer base and to catch [more] people they might need to go in that direction."

In addition to her work at Schulich, Dr. Shum is also the president and co-founder of PW Portfolio Analytics Inc. The company seeks to provide overall portfolio analytics, especially risk exposure, on a subscription basis. The idea, as Dr. Shum says, is to "open up that black box because when I get that model portfolio from the bank or from a robo it's just a list of some funds."

She says investors generally lack information, such as how diversified their portfolios are and what kind of risk exposure they have, and one of the things that automated investing will have to address will be to provide more information for investors.

It's an area that Dr. Gray's Alpha Architect considered when building its robo-advisory. As a result, the company has people available to answer clients' questions.

"Some people don't have any, like the younger folks," Dr. Gray says. "I don't think we ever even get a call from them, but the older people just like to talk to somebody to make sure they're not investing in a Ponzi scheme or anything, which is totally reasonable."

Dr. Gray believes that, as those younger clients age and their capital builds, they will ultimately want some human interaction as their level of involvement with their portfolio increases.

He also feels that wherever automated investing goes, there will always be a human element involved, but that human may be acting more as a quarterback, walking people through various pieces of software and how it all works.

"I imagine it may go the way of accounting and tax, where it's a one-off fee as opposed to a 1-per-cent asset-management fee to sign you up for financial planning software, sign you up for a robo, that kind of thing," he says.

At the end of the day, he says, reliance on computers to do much of the heavy lifting is where the industry is headed, and everyone will be getting on board, with every financial advisory company needing its own robo-platform to stay in the game.

"I think software is going to more and more gobble up the activities that humans have traditionally done and I think it will go toward algorithms," Dr. Gray says. "In the end, I think at some level a human will have to be involved, it just may not be to the extent that it is today."

FACTORS TO CONSIDER

The pros and cons

What to look out for when deciding whether to use automated advisers

PAUL BRENT

Given the growth in the robo-adviser field, what's in it for investors? Here are some potential benefits and possible pitfalls.

POTENTIAL BENEFITS

Better service

A robo-adviser could provide many with less money to invest better service than they receive right now, says Dan Hallett, a vice-president and principal with Highview Financial Group in Oakville, Ont.

It is a view shared by Jason Casey, portfolio manager with Questrade Inc., which operates the Portfolio IQ automated service. He notes that it provides convenience, low fees and access to an actively managed portfolio "previously only available to clients through advisers who don't generally take on accounts under $200,000."

Services such as Toronto-based Questrade's are based upon investments in low-cost exchange-traded funds (ETFs). Investors own ETFs "directly and not units in a pool like mutual funds, which has advantages like tax-loss harvesting, which we implement for the client at year-end."

Fee transparency

The low-cost model lays out clearly what you pay in fees, something that the larger financial services industry is coming to terms with following the implementation of new reporting rules later this year (the Client Relationship Model, Phase 2, or CRM2) that requires companies to detail annual "hidden" costs such as service fees, referral fees and embedded commissions on investment products.

"We expect [adoption of automated advisers] to increase when CRM2 is in place and advisers are forced to disclose how much they are being compensated," said Questrade's Mr. Casey.

Quality of human advice

The Canadian investment industry has long been criticized for high fees, which often come with the retail investment model of advisers selling mainly high-cost mutual funds.

"This is going to threaten what I call the marginal adviser," Mr. Hallett says. "It is basically people who are pure product salespeople, they don't take very much of a consultative approach. They really are contacting clients for transaction purposes and people probably stay with them just out of inertia."

Innovation

As new entrants, automated advisers need to innovate to stand out in an increasingly crowded market. "We were the first robo adviser to come out with a socially responsible investing option, and that is because especially our younger clients were asking for it," said Navid Boostani, co-founder and chief executive officer of Vancouver-based ModernAdvisor.

WealthBar, another Vancouver-based automated adviser, has added more sophisticated wealth services, such as estate planning and insurance offerings, says Neville Joanes, the company's portfolio manager and chief compliance officer. "We can do sophisticated financial planning [such as] retirement income protections."

POTENTIAL PITFALLS

Discomfort with technology

Although services are not truly robotic, featuring at least some human interaction, many investors (particularly non-tech-savvy people) want to see a friendly and familiar face for annual performance reviews. "I certainly get that, especially older people, sometimes they value that personal relationship with an adviser. They understand that they are paying more and they are willing to pay the extra fees because they are just more comfortable with that relationship," says Mr. Boostani of ModernAdvisor.

WealthBar's Neville Joanes: Are you willing to fire your human adviser?

Change requires effort

Even if you know you can save on costs, are you willing to fire your human adviser or demote them to a lesser role? It's something that WealthBar's Mr. Joanes knows firsthand with his in-laws, who have said repeatedly they will move to an automated service but never have. "'When we have five minutes we will do it,'" is the response he gets.

Why pay for simple

On the surface, this is perhaps the strongest argument against automated advisers. Why pay for someone to build you a low-cost, ETF-based, buy-and-hold portfolio when you could do it yourself. On the other hand, this may be harder than it seems, says Highview's Mr. Hallett.

"It sounds really easy to do and you say, 'Why the heck do I need help doing that?' The reason is that people can't stop themselves doing something. Frankly, sometimes the hardest thing is just to sit on your hands and leave it alone."

Special to The Globe and Mail

ESTABLISHED PLAYERS

Banks reflect on what works and what doesn't

JOSH O'KANE

Bringing automation to investing can make it easier, but it can just as easily lead to pitfalls. The Globe and Mail reached out to wealth management experts with Canadian banks about their views on these new services. These four responded.

Joanna Rotenberg, head of personal wealth management, Bank of Montreal

People really want to digitally access their information wherever they want to be, and to get the benefit and comfort of professional portfolio management, and to do that at an affordable cost. We thought the idea of professional portfolio management, but simple digital access at an affordable rate, was really giving them the best of both worlds. Not overburdening them with complexity – that was a really important principle for us. If you put what we have with SmartFolio [the bank's digital portfolio management service] in the context of the broader tools that we offer, we also thought this would give them the broadest range of choice.

Andrew Turnbull, managing director and head of investor services, Canadian Imperial Bank of Commerce

Our first conclusion was that this is a big, broad space and hard to define by one term. Second was that investors, both novice and experienced ones, are generally looking for a more engaging investing experience that provides more on-demand, real-time digital interaction. This behaviour, this need, transcends the spectrum of those who are advice-seeking to those who are more self-directed. They're looking at how they open their accounts, fund their accounts, check progress against their goals, how they access their accounts for tax documents and vital information – they want that available to them when they want it. They want to be more engaged in the experience of investing. Investors are looking to connect with somebody. There's a great discomfort – is there really just a robot managing this in the background? And they want to, at various points in their lives, based on different circumstances that occur in their lives, they want to be able to turn on that advice layer, and also be able to turn it off, in order to be able to address something that happens in a key moment.

David Agnew, head, Royal Bank of Canada Wealth Management

In Canada, our high-net-worth and ultra-high-net-worth clients continue to tell us they value their wealth manager as the cornerstone of their relationship due to their knowledge of clients, expertise and advice, and ability to offer broader RBC capabilities. We are also investing in digitally enabling wealth managers to enhance their ability to serve clients and exploring our options to offer clients additional ways to invest with us.

Glen Gowland, senior vice-president and head of Canadian wealth management, Bank of Nova Scotia

If you're going through a robo-type investment approach, the big thing to be aware of is that an adviser often provides context. Make sure you understand who's on the other side of the investment conversation you're having, whether it's digital or face-to-face. Obviously, the need for cybersecurity is very important. And make sure you're getting all the context for the decisions you're making. As more ways to invest come about, it's a great thing to have choice, but it becomes more important for the investor to choose which type of adviser they use.

Responses have been edited and condensed.

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The Top 10 Reasons to Automate Your Investments

1. Canadians pay some of the highest fees in the world. If you're not automating your investments, you're probably one of those Canadians.
2. Research suggests that the common house cat may have a better chance of picking stock "winners" than your money guy.
3. If you want superior returns, you're better off matching the market than trying to beat it. And that's not our opinion; it's Warren Buffett's.
4. It's good to be emotional, just not in the stock market. Automating means you won't buy when the market is high or panic when it's low.
5. Rebalancing your portfolio is like meditating—everyone knows it's great for you, but most people still don't do it. Wealthsimple is like getting someone to meditate for you. Ommmmm.
6. Investing in the stock market is sort of like investing in human progress. They both trend upward over time, just not always in a straight line.
7. Keeping your money in a savings account is like throwing it away very slowly. Thanks, inflation.
8. Automatic deposits let you take advantage of compounding interest, mankind's greatest invention (after antibiotics and *Game of Thrones*).
9. Instead of visiting a bank branch, you can open an account online, set your risk tolerance, and be off learning to brew beer while your money is on cruise control.
10. Don't worry, we're not robots. At Wealthsimple, you can always talk to one of our smart, friendly, 100% human experts to help you hit your goals.

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FAQ

The basics

A quick guide to what to expect from the current crop of automated advisories active in Canada

PAUL ATTFIELD

What do online advisers do?

An online investment adviser, or robo-adviser, is a model of investing that automates portfolio management. It's not a robot, per se, but a model of investing that translates such things as your age, goals, appetite for risk and the amount of liquidity required into decision-making algorithms that dictate the investing strategy. They also provide automatic rebalancing, where your portfolio's blend of stocks and bonds is periodically brought back into line with your ideal mix.

How do they know what to invest in for me?

Based on an individual risk assessment, which regulations require all advisers to administer, they invest clients' money into products that will allow them "to sleep at night," says Kyle Prevost, the owner of Youngandthrifty.ca, a financial blog for millennials. Often, automated advisories use model portfolios, depending on clients' risk profiles.

What kind of investments do they use?

Online advisers mainly use a passive investing approach, which consists of low-cost, broadly diversified exchange-traded funds. So a portfolio might include a Canadian equities ETF, an American equities ETF, an international equities ETF and investment-grade government and corporate bonds. Some may include exposure to real estate, often through real estate investment trusts, or REITs. "With the automated investing service it sticks to your plan thick and thin," says Robb Engen, co-founder of the Boomer and Echo financial blog and a fee-only financial planner. "So if I put in $200 it will allocate it to the four funds on its own and stick to the exact allocation that you decided upon early on. … I don't think the average investor would appreciate how much of a benefit that is. Take away the human emotion and decision and just go by the facts that you stated."

What are the fees?

Some robo-advisers charge between 0.3 and 0.7 per cent as a management or advisory fee (depending on portfolio size), while some of the larger companies charge a set fee in addition to the management cost. The fees are subtracted from any returns, often on a monthly basis, while trading commissions are a mixed bag. Some advisers include them in their management fees, while others charge anywhere from 1 cent per share to a flat fee of about $10.

Is my money safe?

Most of the major Canadian robo-advisers hold investments with a partner brokerage or bank, which are members of the Canadian Investor Protection Fund (CIPF). This fund provides protection for the investor in case the investment firm goes under.

ISTOCKPHOTO

How do I interact with an online adviser?

Most interaction, such as filling out your initial profile, is online. Most companies also offer some human interaction. "They'll talk to you on your terms and maybe that's over Skype or a text message or through an app or a desktop platform," says Mr. Engen. This appeals to those investors who feel comfortable with technology and prefer not take the time to meet with an adviser face to face.

FROM PAGE 1

Demographics: Different services for different needs

"Customers and consumers are saying, 'Give us our portfolios and the management of our portfolios at our fingertips,'" he says, noting that the services come with mobile-ready platforms and educate people about new markets.

"You can see your entire portfolio anywhere in the world, at any time."

The expectation is that users will earn similar returns as with traditional advisers while saving on fees, Mr. Nanjee says, although the technology is still in its infancy.

Ryan Riordan, assistant professor of finance in the Smith School of Business at Queen's University who focuses on fintech, says the "efficient portfolios" produced by robo-advisories should create the same exposure and trade-off between risk and return as traditional advisers.

There are a number of different formats and pricing schedules. They include Nest Wealth's subscription model, which appeals to higher-net-wealth individuals who appreciate the $80-a-month cap on fees, to services such as Wealthsimple, which gears costs to assets invested.

Small investors therefore pay low or even no fees to start, with the expectation that their accounts and costs will grow.

"Every new service that comes along has a new twist on the business model," Dr. Riordan comments, with each appealing to a different demographic. The very wealthiest investors often have access to specialized investment vehicles that are not included in efficient portfolios, for example infrastructure projects such as toll roads.

However, high-net-worth individuals who invest in standard fare such as stocks, corporate bonds and treasury bonds could use robo-advisories.

Ms. do Forno says Nest Wealth has slightly more female clients than male, noting that women are making more financial decisions and "tend to look more at all their options and not just default to the same traditional channels."

Ms. Foat thinks that online investing appeals to women because it "seems to be less daunting" than following the stock market every day. "It made sense to me," she says.

"It's the best of both worlds," she says, noting that traditional investment advisers "don't really know you," while some may have incentives to push certain investments and their advice is based on the same computer algorithms as robo-investing.

So far, the couple's investments seem to be doing well, which she's able to tell with a quick look at her online accounts rather than "reverse-engineering a statement" to figure out what has been gained, minus fees.

Mr. Nanjee expects a huge take-up of fintech advisory services when millennials begin inheriting wealth.

"There is going to be a lot of capital coming into the ecosystem," he says.

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GENERATIONS

Why millennials embrace auto-advisories

Convenience, transparency and cost are the main things driving a tech-savvy generation to automated services

DEIRDRE KELLY

Automated advisers are the next big thing in self-directed investing, and tech-savvy but cash-strapped millennials have already started embracing the new automated investment services while maintaining relationships with the people behind the apps.

"When it comes to servicing the instant needs and technology-fuelled millennial group, leveraging technology such as machine learning and deep data analytics drives instantaneity and puts users in control," says Rod Hsu, president of the Vancouver mobile payment company nTrust.

The 33-year old entrepreneur, himself a millennial, observes that investing is one area of the financial industry experiencing innovation as a result of the growing presence of robo-advisers. Millennials are especially keen to explore the changing landscape, regarding it as a new digital frontier.

"Millennials like the convenience, transparency and overall value of our services," says Edward Kholodenko, president and chief executive officer of the automated-adviser firm Questrade Inc.

John Paterson, a 26-year-old resident of Toronto, uses automated investing to save time and money.

"I already have experience trading stocks for myself online, and decided against going with a traditional adviser as I didn't feel I'd have enough time to thoroughly evaluate them and identify any who could outperform the markets," Mr. Paterson says.

"I knew I wanted to invest in a diversified ETFs portfolio, and with an automated wealth management service I have a secure way to invest passively while saving time."


Rod Hsu


John Paterson


Amarpreet Kaur


Riyad Mobeen

What he most likes about robo-advisers is their convenience.

"It is a combination of the ease of use, the ease of signing up, and the low fees, " Mr. Paterson comments. "Over a longer timeline the ultimate gauge of my happiness will be what kind of returns I get on my investments, but for now the user friendliness is what I like best."

Ashton Marcus is a 28-year-old public relations consultant who runs her own company in Toronto. She relies on easy-to-use automated systems that provide step-by-step instructions, personalized options and detailed reports to help her build her business.

"It's not uncommon for millennials to interact with robots instead of humans," Ms. Marcus says. "For most of us it's about doing that initial online research, tackling investments on our own time, and utilizing the human element as a secondary resource."

Assaf Weisz, the co-founder and managing director of Purpose Capital, an investment advisory firm in Toronto with many millennials in its stakeholder group, says the drive among millennials to embrace robo-advisers has many factors.

"Millennials are digital natives and unburdened by a suspicion of person-less services. Culturally, shaking a hand and sitting across the table from someone typically isn't a prerequisite to building trust the way it used to be," observes Mr. Weisz.

"Many of our daily interactions are digital first, and because of that we've developed a comfort level for placing key financial information online."

For Amarpreet Kaur, a 33-year-old operations manager in Brampton, Ont., robo-advisers are just another form of technology helping her keep pace with her changing world.

"My generation has the tendency to be quick at making a decision," Ms. Kaur says.

"We observe a lot, and are surrounded by technology day in and day out. Everything is so fast-paced and we need technology to keep up with that. I personally want to explore different options and not be afraid to say no. If an app could take care of the thinking and help me financially in the long run, that's the ideal situation. When the app knows what I favour and how risk-averse I am, I can be more comfortable making investments and strengthening my portfolio."

Automated investment advisory services are as accessible as social media and shopping online. Millennials see them as extensions of their cellphones. And yet the technology is ever-evolving, making robo-advisers subject to unpredictability. It is why millennials who use them will still crave the personal touch, to assure them whenever things go wrong, say experts.

"There's a certain level of automation which may work when encountering a problem or issue," Mr. Hsu says. "But nothing beats dealing with a human."

Mississauga resident Riyad Mobeen, 31, is the founder of the mobile tech startup Xumee, a company for job seekers that replaces the traditional résumé with 30-second video pitches, and he says it is a matter of inspiring trust.

"Automating financial services will surely blend well with our lifestyle, but I believe there needs to be a human element that can empathize with us – something most automated services can't do."

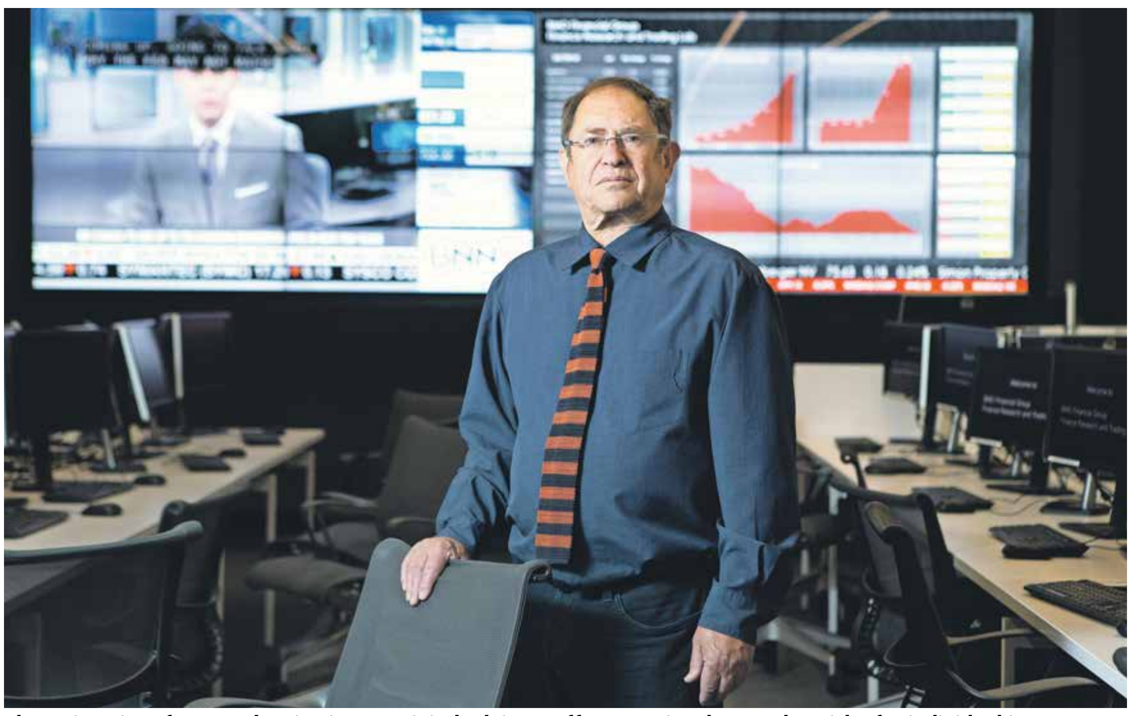
Barbara Stewart is a portfolio manager and partner with Cumberland Private Wealth Management in Toronto who has done extensive research into automated advisers in the marketplace.

"My research suggests that, yes, sometimes the robot will completely replace the human adviser. But other times the robot will augment the human adviser. And most of the time the robot will reach a new market that is not currently being addressed by human advisers," Ms. Stewart says.

Generally speaking, what humans ought to do best is customer service. And yet Mr. Weisz thinks the financial industry lags behind others when it comes to catering to the needs and wants of millennials.

"The customer experience can feel stuffy, overly corporate, and be riddled with opaque fees and technical terminology that create distance and intimidation more than it educates," Mr. Weisz says.

"Many of the robo-advisers are keenly aware of that, and design their user experience to feel much friendlier, more approachable, and more in line with the experience millennials get from many of the other services they use online."


The University of Toronto's Eric Kirzner: Digital advisers offer a service that can be tricky for individual investors to replicate. JENNIFER ROBERTS FOR THE GLOBE AND MAIL

FROM PAGE 1

Algorithms: Don't look closely at the individual

» Yet, like technical analysis, which studies big-picture market movements and not the fundamentals of individual companies, Dr. Milevsky argued that robo-advising doesn't look closely enough at the individual, either.

"I think that's the concern that I and many academics have looking at these algorithms. They haven't really stepped up to the plate to deal with who I am individually. They are dealing with me as an age, as an individual who has a certain time horizon. There are so many other things going on in my personal balance sheet," he argued.

Take a physician and a teacher, he said. Both are 35 years old, and both earn the same. The teacher may make less than the doctor throughout his career, yet he has a pension and job security. The physician may make more down the road, but she's self-employed and without a pension. "His portfolio, by virtue of what he does for a living, by virtue of his job, should look very, very different than the physician's," Dr. Milevsky said.

Mark Yamada, president and chief executive officer of Toronto-based Pur Investing, which designs algorithmic investment software, said that there are very sophisticated algorithms being used in finance. Yet those aimed at everyday retail investors "are pretty simple."

He noted that "all of the robo-advisers offer a simplified risk profiler that tries to get to not only the investing time horizon but also the short-term risk tolerance of every individual client."

Yet, because of the simplified nature of the product, automated advisers are tied by limited knowledge of clients. "More information is always better, but there are some practical limitations to that. And certainly with robo-advisers, you can't ask them [clients] 45 questions," Mr. Yamada said. "Maybe seven or eight is the max."

The main selling point is that robo-advising is cheaper, especially for clients who need less hand-holding. Yet the algorithms are based on the same kinds of assumptions as all investing. For instance, Mr. Yamada noted that despite the assumption that higher risk should bring the possibility of higher returns, there is the low volatility anomaly in the market, in which some low-volatility stock can have higher risk-adjusted returns than highly volatile stocks.

And then there is diversification. The assumption is that a wide variety of securities should help dampen risk. Yet when the market tumbles, diversification can be of little help. When the market falls, many diverse sectors fall. "We know that when they need it the most, it doesn't work," Mr. Yamada said.

But this isn't just a flaw with automated advisers, he said. "It's a flaw with all investing. What robo-advising is doing is they're taking the flaw, and they're selling it to you at a fraction of the price of a real live adviser."

Ultimately, it's about whether a plan is suitable for an investor. There are some who can completely figure out investments for themselves, some who may need a little prompting with a robo-adviser, and some who may need a lot from a financial adviser. Automated investing and its algorithms have a niche squarely in the middle of this spectrum.

"Some people really do need to have advice, they need to have direct advice, and they need to have it very tailored to their needs.

"But not all investors need that, of course," said Eric Kirzner, professor of finance at the University of Toronto's Rotman School of Management. He is also a consultant to robo-adviser Wealthsimple in Toronto.

Automated advising offers an asset-allocation product to investors who do not need further help, and it is attractive to many because of its low cost, said Dr. Kirzner.

"They do do some suitability analysis, but not anywhere near the depth of analysis that a full-service broker is supposed to do," he said.

But for all its limitations, it offers a service that can be tricky for individual investors to replicate, in terms of readjusting assets, keeping risk steady, or moving some assets for tax reasons.

"A little knowledge is a dangerous thing. Certainly, if someone said, 'I understand Modern Portfolio Theory and I apply Markowitz,' I'd be really suspicious," he said.

FROM PAGE 1

Canada: Simplified investment

» They simplify investment by offering a limited range of portfolios, usually based on exchange-traded funds (ETFs).

Automated advisors are designed to fill the gap between people who are entirely comfortable trading online and doing their own research, and clients who look for and may need more hands-on advice, says Dave LeRiche, director of strategy at BMO InvestorLine in Toronto.

"It's for people who are comfortable with managing their investments online, but don't have the time or capability to make confident [investment decisions] by themselves."

The investors "don't have to do anything except decide how much they want to deposit, check their balances and see how their investments are tracking toward their goals," Mr. LeRiche says.

Unlike more conventional online investing, which relies on the investors to buy and sell, robo-adviser clients allow the algorithms to rebalance their portfolios when the balances vary from the targets the clients allocated.

These targets are determined by a simple questionnaire that prospective clients can fill out online, and in many cases the service is augmented by a chat line or phone or e-mail advice.

"You don't get the person in the panelled office on the 70th floor of one of those bank towers, who will hold your hand," says Moshe Milevsky, associate professor of finance at the Schulich School of Business at York University in Toronto.

"But many people do not need that."

One thing to note about robo-advisers is that their heavy reliance on ETFs makes the portfolios easy for do-it-yourself investors to replicate, avoiding fees altogether, says Pauline Shum, finance professor at Schulich.

Dr. Shum is also president and co-founder of PW Portfolio Analytics, which offers portfolio analysis to institutional and retail investors.

"There's not a lot of effort that goes into [portfolio design] compared with what traditional asset managers do," she says.

While this may be fine for newer or smaller retail investors, "I don't think a basket of seven or eight ETFs will work for high-net-worth investors [usually considered those who have more than $1-million in investable assets]."

Special to The Globe and Mail

AVAILABLE IN CANADA

While some of the robo-advising companies are still small, more than 10 have already launched in Canada. They include:

› Bank of Montreal's SmartFolio, the first entrant from among Canada's big banks. SmartFolio offers exchange-traded-fund (ETF) portfolios that are primarily BMO's own ETFs. Like other robo-advisers, SmartFolio lets clients access their accounts by computer, tablet or smartphone. The management fees and expenses (management expense ratio or MER) are a weighted average of between 0.2 and 0.35 per cent of the client's account, with a minimum of $15 per quarter that is waived for clients who deposit $250 or more in the quarter.

› Nest Wealth, based in Toronto. Founded by Randy Cass, a former portfolio manager and BNN TV host, the company charges a flat monthly price of $20 to $80, depending on the size of the portfolio. The company says it is independent from any particular fund or ETF companies.

› Questrade Portfolio IQ, whose investment style mixes passive ETFs that follow major indexes with actively managed ones. The Toronto-based company offers portfolios that range from aggressive growth to conservative income. Fees range from none at the smallest account level to 0.7 per cent of the account.

› WealthBar, based in Vancouver, which also mixes passive and active ETFs and offers hands-on planning as well as automated portfolio management. Unlike pure tech-based advisory services, each WealthBar client gets a dedicated financial adviser to help plan and make decisions. Fees range from none at the smallest account level to 0.6 per cent of the account.

› Wealthsimple, based in Toronto, offers clients up to 10 portfolio models. Fees range from none at the smallest account level to 0.5 per cent of the account.

David Israelson

How smart is your investment portfolio?

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