# **Getting Started:**

**Human-Centred Solutions** 

to Engage Ontario Millennials

in Investing









# **About Upside Consulting Group**

Upside was founded in 2006 with a vision of helping clients benefit from the transformation facing the wealth management industry. Most firms have strategies for dealing with the changing landscape, but do they go far enough? Whether it's designing new products, transforming distribution models or improving the client experience, we bring a user-centric mindset and knowledge of FinTech trends to stretch your thinking. Then, we provide business planning, facilitation and program management to help you translate strategies into actions that produce measurable results.

# Amelia Young, CFA

Amy combines the science of quantitative analysis with the art of behavioural and human-centred design to help businesses work better. She brings 25 years of experience in equity research, corporate strategy and management consulting to help wealth management firms benefit from the transformation currently reshaping the industry.

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Since the 1990's Rick has based his qualitative research practice on a behavioural, human centred approach to problem solving, service design and innovation. His background in theatre (Master of Fine Arts in Stage Direction), the global advertising industry and consulting have shaped his research methods.

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# Acknowledgements

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# **Executive Summary**

# **Project Context**

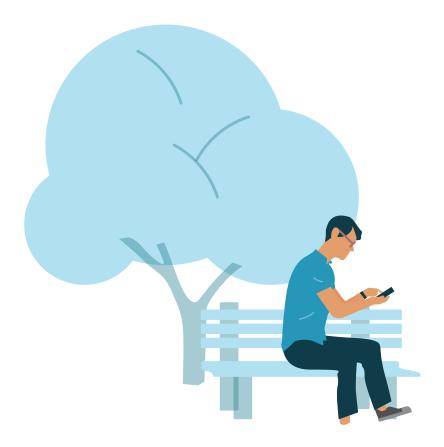
Investing is the act of putting money into ventures that have the potential to pay back more in the future. Put another way, it's an opportunity to make money work for you. Combined with responsible spending, saving and borrowing, investing is an important part of preparing for one's financial future. However, investing can also be stressful, overwhelming and intimidating. The options available are countless, choosing between them means learning new terminology, and their potential benefits are uncertain and distant in time.

Missing Out: Millennials and the Markets, a 2017 research study published by the OSC Investor Office, found that millennials are committed savers: 4 in 5 Ontario millennials (age 18–36) have savings, and 73 per cent of those with savings set aside monthly or with each pay cheque (OSC 2017b). This research also found, however, that feelings of fear and lack of trust may be leading many younger Ontarians to avoid investing. Only 1 in 2 millennials have investments and, while many non-investor millennials cited economic constraints as a barrier to investing, many cited other factors as well, including not knowing enough about investing (59 per cent of non-investors), fear of losing money in the markets (57 per cent), and low trust in big banks and investment firms (30 per cent) (OSC 2017b).

These findings raised a number of questions. What does investing mean to millennials? What are their preconceptions about investing? Where and from whom do they learn about investing? What are the perceived costs and benefits from investing? What trips them up and at what point does this happen? What can stakeholders do to help?

# **Approach**

This report seeks to shed light on these questions. It begins by examining relevant literature from the behavioural sciences and the existing industry landscape. We supplemented this review with qualitative research focused on the financial lives of younger Ontarians: over the course of two weeks in February 2018, we conducted 90-minute in-depth interviews with 18 Ontarian millennials, each of whom is employed full-time and either had some early experiences with investing or was on the cusp of being able to do so. We also engaged a small group of industry participants, selected for their expertise in engaging with the Millennial cohort, to provide feedback on our initial insights from this research. We synthesized the learnings gained from this work into a set of behavioural design principles intended to help stakeholders in the investing ecosystem to design products, services, and programs to respond to the needs of potential millennial investors.





# What You'll Find in this Report

### LITERATURE REVIEW.

Literature from the behavioural sciences suggests that millennials face significant obstacles to investing that affect even those with the economic resources to invest. Behaviour change requires motivation, ability, and an appropriate trigger, but in the case of investing, each of these elements is often lacking. First, individuals tend to be less motivated to take action when the potential benefits of that action are uncertain and distant in time, as is the case with investing. People don't feel connected to their future selves, and this is particularly true for millennials going through the life stage of "emerging adulthood," when little about the future course of one's life feels certain. Second, individuals often find complex, unfamiliar environments, like investing, overwhelming and discouraging. Third, triggers are difficult to design due to the other two challenges laid out above, and because the behaviour we want to encourage depends on an individual's circumstances – not every investment is right for everyone, and investing isn't always right for everyone. The literature does, however, suggest possible strategies for developing triggers that help individuals connect with their future selves and build confidence with investing.

### **CURRENT INVESTING CHANNELS.**

However, the investing channels commonly available to millennials don't appear to be providing effective triggers. Banks tend to focus on goals and milestones that don't resonate with millennials. Online investment advisors (often referred to as "robo-advisors") can gain trust by communicating in an approachable and transparent way, but the virtual engagement model may not give first-time investors the reassurance they need to get started, and opening a new investment account outside the big bank context can be a significant leap for individuals who lack significant experience using financial services. Microinvesting, which automates saving and investing with the aim of making both painless, has potential to help millennials get started, but this concept is relatively new in the Canadian market and faces challenges similar to robo-advice providers in encouraging individuals to establish financial relationships outside of the "big bank" context. Workplace pensions have tremendous potential to help millennials get started investing — automatic enrolment and the perception of "free money" from employer matching are powerful tools for encouraging investment — but these pensions are out of reach for many millennials.

### INTERVIEW INSIGHTS AND JOURNEY MAP.

Our qualitative research helped us investigate some of the reasons why existing financial services channels do not seem to be serving the needs of prospective investors in the millennial cohort. Much of what we heard resonated with the existing literature, but helped us better understand how this literature applies to investing. Our research uncovered four key insights:

- 1. Many millennials are at a life stage where it's difficult to picture one's future self, as so much about life remains uncertain, and investing feels like something that limits one's freedom to try on new identities and experiences.
- 2. Millennials are deeply affected by their perceptions of where their peers are at. Social comparisons can serve as important reference points for setting and acting on financial goals, as long as they feel relevant and don't feel out of reach.
- 3. Investing feels overwhelming if there is no clear way to take the first step. Paralysis over having too many options is exacerbated by industry practices that evoke skepticism and undermine trust.
- 4. Experimentation can build confidence in the investing process. In the absence of opportunities to test and learn, those with little or no knowledge of investing fear loss to a degree that is a barrier to investing.

Our research also helped us design a map depicting a journey of a first-time, millennial investor (see page 24). Designing this map helped us better understand the steps involved in moving from being a non-investor to an investor, as well as the obstacles that keep many from moving from one step to another.

### DESIGN PRINCIPLES FOR STAKEHOLDERS.

Our research informed the development of six "design principles," each of which is meant to start conversations among stakeholders about how we can develop and refine programs, products, and services in ways that better meet the needs of their users. For purposes of this report, the word "users" means Ontarian millennials. These design principles are listed below:

- 1. Prompt millennials to identify their own unique motivation for investing and validate that motivation in a non-judgmental way.
- 2. Meet millennials where they are by providing personalized, achievable steps that make it easy to get started.
- 3. Lengthen perspective by making the future consequences of current actions feel more concrete.
- 4. Curate aspirational social comparisons to promote achievable investing habits.
- 5. Allow for low risk experimentation, reinforcing early learnings with feedback that builds confidence and motivates continued progress.
- **6.** Inspire trust by putting the user's needs first.



# Literature Review

Human behaviour is highly influenced by unconscious biases. We have two systems for making decisions: an intuitive, automatic system that is accountable for many of our everyday decisions (System 1) and a deliberate, logical system that rationally analyzes and solves problems (System 2) (Kahneman 2011). Because we lack the time and energy to employ System 2 for all of the decisions we make, we cope by employing System 1 as often as we can. System 1 is highly susceptible to making mistakes in judgment, however, particularly mistakes that favour instant gratification over long-term well-being.

The OSC Investor Office's Behavioural Insights Report provides an extensive review of the implications these phenomena have for financial decision-making (OSC 2017a), and we do not seek to repeat this work here. Instead, after providing context on the Millennial "mindset," we focus on two elements of this literature that are particularly salient to our project: a model of behaviour change that specifies the conditions required for a target behaviour to occur, and studies of specific factors that help to satisfy or impair them.

# What's Going on With Millennials?

"When our mothers were our age, they were engaged ... They at least had some idea what they were going to do with their lives ... I, on the other hand, will have a dual degree in majors that are ambiguous at best and impractical at worst (English and political science), no ring on my finger and no idea who I am, much less what I want to do... Under duress, I will admit that this is a pretty exciting time. Sometimes, when I look out across the wide expanse that is my future, I can see beyond the void. I realize that having nothing ahead to count on means I now have to count on myself; that having no direction means forging one of my own."

(Kristen, age 22)

This quotation, from Jeffrey Arnett's May 2000 paper entitled "Emerging Adulthood: A Theory of Development from the Late Teens Through the Twenties," captures an important piece of context about the Millennial mindset (at least in western societies). In previous generations, the path to adulthood was relatively simple – one becomes an adult after completing adolescence – and one's life path was largely set by one's early twenties.

But the myriad of options available to millennials today, coupled with the uncertainties caused by social and technological change, such as the rise of precarious work and the gig economy, has engendered an amorphous, intermediate stage between adolescence and adulthood, which Arnett refers to as "emerging adulthood."

Emerging adulthood is "a time of life when many different directions remain possible, when little about the future has been decided for certain, when the scope of independent exploration of life's possibilities is greater for most people than it will be at any other period of the life course"

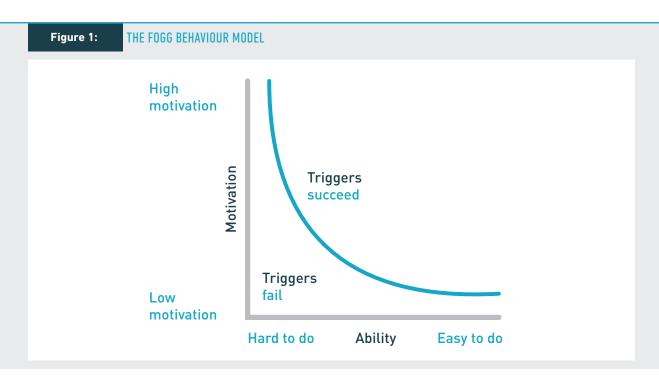
(Arnett 2000). Individuals react to this broad range of potential options by seeking out a wide range of experiences before settling down into the roles and responsibilities of adult life.

Emerging adulthood is amorphous because it is difficult to know when it ends. Emerging adults rank concrete events such as finishing education, choosing a career, marriage and parenthood at the *bottom* of possible criteria associated with reaching adulthood. The top three criteria they rank as signifying adulthood are relatively vague: "accepting responsibility for oneself", "making independent decisions" and "financial independence." Social comparisons are also unhelpful in identifying transition points. While, up to the age of 18, nearly everyone's status is "student" and they are living with parents or guardians, and by the mid-30s many have completed their education, are married and have become parents, a person's demographic status is very difficult to predict in between these ages.

The wide variety of options and highly transient nature of the emerging adult life stage provide important context regarding the mindset millennials may bring to decisions about saving and investing.

# Behaviour Change Requires Motivation, Ability and a Trigger

The Fogg Behaviour Model (Fogg 2009) tells us that for a target behaviour to occur, a person must have sufficient motivation, sufficient ability and an effective trigger. Figure 1 below illustrates that behaviours for which people have high motivation and high ability are the most likely to occur. Above the line where motivation and ability are in equilibrium, triggers are effective; below it, they are not.



The model also illuminates the concept of tradeoffs between motivation and ability. Tasks that are easy to perform require relatively low levels of motivation. In contrast, tasks for which people feel a high degree of motivation don't have to be particularly easy because people are willing to expend energy to complete them.

Applying the Fogg model to the behaviour of getting started with investing suggests a three-pronged challenge:

- Motivation is generally low. Investing requires delaying gratification for uncertain benefits that will occur far in the future.
- Ability is generally low. Investing generally requires many steps and interdependent decisions. It's difficult to know where to start.
- Triggers may be difficult to design, both because they need to overcome low motivation and low ability, and because the target behaviour is difficult to define it will vary depending on an individual's circumstances (including their financial goals and means).

Below, we review relevant literature on the factors that affect motivation and ability, and discuss in greater detail how this literature may apply to investing. We then turn to discuss insights from the literature on how to design triggers that could help increase individuals' motivation and ability to become investors.

# What Motivates People?

Psychologists distinguish between *intrinsic* motivation and *extrinsic* motivation (Deci and Ryan 2008). We feel *intrinsically* motivated to do something when it's something we're interested in or that we enjoy doing. By contrast, we feel *extrinsically* motivated to do something when we are seeking an external reward or avoiding external punishment. Fostering intrinsic motivation is believed to be a more effective way of bringing about behaviour change than creating punishment and reward systems designed to foster extrinsic motivation (Deci and Ryan 2008). Accordingly, we turn to focus more closely on intrinsic motivation and its sources.

It has been suggested that intrinsic motivation flows from three core needs: autonomy, competence and relatedness (Deci and Ryan 2008). In other words, we are intrinsically motivated to do things that give us a sense of control, that we feel competent at doing, and that help connect us to others. We feel less motivated to do things if we feel we can't control their outcomes, if we don't feel like we're good at doing them, and if doing them doesn't help us feel connected to others.

Investing can give us greater control over our financial futures over the long-term, but we don't necessarily see it that way when making financial decisions. We tend to favour the immediate over the distant: we have trouble delaying immediate gratification to achieve distant gains (Samson 2016).

We also tend to prefer the concrete over the abstract (Malkoc, Zauberman and Bettman 2010) – the emotions we feel in the present guide the decisions we make, and abstractions don't engage us emotionally (Chang and Pham 2013). Investing feels especially abstract because its benefits are uncertain, distant in time, and relate to a distant future self (who may feel especially distant to millennials in the midst of emerging adulthood) (Trope and Lieberman 2010).

Each of these factors creates *psychological distance* that makes the potential benefits of investing less salient and less likely to be acted on. What's more, uncertainty over the benefits of investing triggers another bias – we feel losses more acutely than gains (Samson 2016) – that may lower the motivation to invest, as fear of potential loss may lead us to avoid opportunities for future gain (*loss aversion*).

The cognitive biases described above may also influence how we seek to fulfill our intrinsic needs to feel competent and connected to others: immediate gratification is self-affirming in the present, and spending on experiences can help connect us to friends and family; investing will not provide these benefits instantaneously. These biases also affect our perception of factors relevant to extrinsic motivation: we place greater weight on rewards and punishments that are more immediate than on those that lie farther out in time and are less certain.

# What Influences Ability?

Ability is in part a function of simplicity – generally, the easier it is to do something, the more likely people are to do it (Eyal 2014). When performing a targeted behaviour means choosing between a large number of options, or highly complex options, we tend to feel overwhelmed and afraid to make a decision (Samson 2016). As a result, we will defer or avoid making that decision. This phenomenon is called *choice overload*, and it renders us less likely to perform target behaviours that require us to grapple with too much complexity.

By contrast, if performing a target behaviour is the default option, we generally are much more likely to perform it. This is due to our natural tendency towards *inertia* – to choose the path of least resistance (Thaler and Benartzi 2004). Simplicity only works up to a point, however. While we may accept a default choice set by someone we know and trust, we tend to be skeptical of defaults set by those we don't know or don't trust. In these environments, we prefer to be more involved in the decision-making process, so that we can feel that we've done our due diligence and made a choice that works for us (Sunstein 2012).

Simplicity, managed correctly, can create positive feedback loops that encourage people to form habits. This is because making a target behaviour simpler to do strengthens our self-efficacy – our belief in our ability to perform that target behaviour. Individuals with high self-efficacy feel more able to and are more likely to achieve behavioural outcomes (Bandura 1994). Self-efficacy leads us to set higher goals, exhibit stronger perseverance in the face of adversity, and feel less stress and anxiety when attempting a target behaviour. Doing activities that promote our self-efficacy helps us fulfill our intrinsic need to feel competent, hence enhancing our motivation to continue to perform (and build a habit of performing) that behaviour (Bandura 1994).



But this feedback loop can operate in reverse. Being faced with overwhelming amounts of complex, unfamiliar choices undermines our self-efficacy, rendering us both less able and less motivated to complete a target behaviour. Because we tend to interpret information in ways that confirm our existing beliefs (confirmation bias) (Dawson, Gilovich and Regan 2002), feelings of low self-efficacy can leave us reluctant to attempt a target behaviour again even when circumstances change.

Investing today is anything but simple. As illustrated by our industry review and the outcomes of our interviews with millennials, discussed later in this report, many younger Ontarians feel overwhelmed by investing and don't know where to start. However, millennials' low familiarity with investing means that making things too simple and setting defaults that don't feel personalized may not resonate—millennials may feel more comfortable with choices that remove unnecessary complexity, but allow them to feel involved in making the decision. These considerations suggest a need for powerful but well-calibrated triggers that can have positive effects on both motivation and ability.

# Finding Triggers That Work

A trigger is something that tells people to perform a behaviour now. Triggers can be designed to spark our motivation to perform a behaviour, or to facilitate our performing that behaviour by making it easier or giving us the confidence to perform it (Fogg 2009). A trigger may also serve as a reminder to do something that we already have the motivation and ability to do – for example, moving savings into a separate "savings account" helps remind us of our savings goals (Soman and Cheema 2011).

Defining what behaviour a trigger should encourage among non-investors is challenging, as the target behaviour will depend on the individual's circumstances: investments that are suitable for some individuals may not be suitable for others, and, for some people, the best option may be to hold off on investing until later. The literature does, however, suggest a number of factors that could be helpful in developing triggers that, once an appropriate target behaviour is identified, could build motivation by connecting us with our future selves and build individuals' self-efficacy with respect to investing.

Tactics intended to connect us with our future selves fall into one of two categories. First, they may encourage us to think in a more abstract way that leads us to consider the interests of our abstract future selves. For example, Barry and Halfmann (2016) found that stimulating people to think about abstract, intangible concepts promotes greater focus on the long term. Second, we can frame choices in ways that make the future feel more concrete. This was illustrated in a study that aimed to motivate college students to donate to a food drive. A specific request for a certain type of food, accompanied by a clear way to get it done (a map and a specific time) got the group deemed least likely to donate to give at three times the rate of those deemed most likely to donate but who hadn't been given a clear path of action (Ross and Nisbett 1992).

Numerous studies illustrate how reducing psychological distance between one's current and future self produces more future-oriented decision-making:

- College seniors who were told that graduation would not change their identity required a lower premium to defer receipt of a gift card reward (in other words, they required less of an incentive to leave the reward for their future selves) than students who were told that their imminent graduation would impart substantial changes to their identity (Bartels and Urminsky 2011).
- Study subjects who were shown a photo of themselves aged to 70 years allocated \$172 of a \$1,000 prize toward retirement, compared to only \$80 for those who were not shown the aged photo. (Hershfield 2011).
- Feelings of power enhance people's connection with their future selves, causing them to choose future-oriented rewards (Joshi and Fast 2013).

The Joshi and Fast (2013) study referred to above may also illustrate how building self-efficacy can help us foster a sense of control over our future and, accordingly, a greater willingness to plan for it. Bandura (1991) cites three additional experiences that impact perceptions of self-efficacy; these tactics may help bridge psychological distance as well:

- Mastery experiences Successes build a robust belief in one's ability to exercise control over
  potential threats. Experiencing success with an activity provides evidence of ability to perform
  similar activities, reduces the perceived risk of loss, rejection or other adverse consequences and
  thus reduces psychological distance. Conversely, failures undermine self-efficacy and increase
  psychological distance because they heighten the perceived risks associated with the activity.
- **Vicarious experiences** Seeing people similar to oneself succeed in an activity raises observers' beliefs that they too possess the capabilities to master comparable activities. Psychological distance is narrowed because we experience mastery by association. The effect of vicarious experiences is amplified when behaviours are witnessed across society. The perception that "everyone" is doing something creates a strong motivation to adopt similar behaviour. <sup>1</sup>
- **Social persuasion** People who are persuaded verbally that they possess the capabilities to master given activities are likely to mobilize greater effort and sustain it. Encouragement narrows the psychological distance between the current self and the future (successful) self by counteracting self-doubts and limiting focus on personal deficiencies when problems arise.

<sup>1</sup> Vicarious experiences presented to an individual must be relevant to their circumstances to be effective—examples that feel out of reach may undermine self-efficacy and demotivate (Beshears 2015).



# Users are Getting Stuck in a Cycle of Inaction on their Journey Toward Investing

Theory on behaviour change tells us that changes only stick when there is motivation, ability and a trigger. We know that people struggle to motivate themselves to do things now that don't pay off until later. The challenge of connecting with one's future self is exacerbated for millennials because they are also at a life stage where the future is still very much out of focus. It's no surprise then that the benefits of investing are out of sight.

Low motivation can be overcome if a behaviour is simple, but prospective investors are faced with an array of complex and unfamiliar choices that make it hard for users to find a clear path that they can visualize themselves following. Because they don't know where to start, many millennials may put off the journey towards becoming an investor, concluding that investing can wait for later.

Thus, users are confronted with a circular problem on their journey to becoming investors: those who aren't familiar with investing can't get started because they don't know where to start or who they can trust.

In the next section of this report, we evaluate the predominant service models available to millennials to determine whether they offer triggers that can motivate and enable more millennials to start investing.



# Today's Investing Channels

There is no shortage of places for millennials to find help with investing. We divide the main options available to millennials into four broad categories:

- 1. Bank and Credit Union Branches
- 2. Robo-Advisors
- 3. Microinvesting
- 4. Workplace Pensions

In addition to the sources of investing products and services above, there is a wide range of content available from various books and personal finance bloggers. The key strengths of these sources are their simplicity and objectivity; they lay out a clear process in plain non-technical language and are free of conflicts because they usually aren't selling investment products. The challenge is that seeking out the right advice requires a level of motivation that many people may not have and it's hard to know when, where, and how to apply the advice to one's own situation.

Searching Google is similarly problematic because many people get stuck at the first step: "what do I search for?" Even if they overcome this hurdle, they are then faced with the challenge of interpreting search results to weigh what information is most appropriate for them and then how to translate it into concrete actions. The combination of confusion and inertia makes taking the first step, or even knowing what that is, very daunting.

It is also important to note that there are several other channels through which Ontarians manage significant amounts of wealth, including accounts with investment advisors, financial planners, insurance advisors and private investment counsels. While these channels are generally reserved for people who are further along in their investing journey, it's not uncommon for advisors serving affluent segments to offer advice to the millennial children of their clients. Because these channels are for the most part only available to a privileged subset of millennials, we do not profile them in this report.

In addition, because we are concerned with millennials' behaviour with respect to investing channels offering broad exposure to the capital markets, we do not explore non-traditional channels that are popular with certain portions of the millennial demographic—such as crowdfunding and the emerging "crypto" sector—that do not provide this exposure.



### Bank and Credit Union Branches

Branches of the Big Five retail banks are by far the dominant source of investing services for Ontario millennials. *The Missing Out study* found that 67% of investor respondents sought out information from a bank to get started investing (OSC 2017b). There are three probable reasons for this:

- For people just starting out, investing may be heavily intertwined with saving and other "money matters," and most Canadians have a longstanding relationship with their bank as a place to save.
- 2. When you don't know what questions to ask, having a conversation with someone who knows (at least a bit) more than you may be seen as a way to get started.
- 3. The conversation doesn't cost money.

There are also limitations to this model, however. First, banks aren't clear about how much money you need to get started. This can be a significant barrier to entry since most people don't know which services are right for them and the fear of being rejected looms large. Second, this is exacerbated by the fact that bankers often frame conversations in terms of conventional life goals that may not resonate with millennials. They also tend to speak in jargon that restrains people from asking questions for fear of looking inept. While most branches have CFPs on staff who are capable of answering any question a beginning investor might have, small clients don't always have access to people with the necessary expertise to fully explain investing products and concepts. Branch staff also have a strong incentive to sell proprietary products, which often causes their advice to be received with a degree of skepticism as to their motive.

### Robo-Advisors

Online investment advice (often referred to as "robo-advice") gains competitive advantage on the getting started front in a few important ways: it's transparent about who qualifies, the onboarding process is relatively frictionless and fee transparency increases the perceived objectivity of the advice. In addition, many robo-advice offerings make a priority of using plain language and intentionally target millennial priorities and values.

However, the fact that robo-advice platforms report high customer acquisition costs and have yet to capture substantial market share suggests that the model also misses the mark in addressing behavioural barriers. First, the need to establish a new relationship with an organization is a friction point, especially given the low motivation and inertia surrounding money matters, and particularly where that organization is relatively young and unproven. Second, while the digital nature of the service makes it more accessible, it can also make the service less tangible for those who are new to investing and don't yet have a mental model of how it works.

# Microinvesting

While relatively new in Canada, the large numbers of customers using microinvesting platforms in the US<sup>2</sup> indicates that the model has the potential to make investing more engaging. The *Missing Out* report found that 66 percent of non-investor millennials say they aren't investing because they don't make or don't have enough money. Micro investing seeks to overcome this barrier by allowing the user to automatically transfer small amounts into savings (like rounding up purchases or a small daily amount) that the user is unlikely to miss. Then, the firm automatically invests those savings in a robo-advice solution.

While the total amount saved is relatively small (usually about \$20 per month), this can play an important role in building the user's confidence that they can in fact save *something*. It also reduces the barrier of loss aversion because people are less afraid of losing small amounts that they didn't have to work hard to save; you start with nothing so it feels like you're risking nothing.

# **Workplace Pensions**

While the rise of occasional, contract work and the gig economy has made workplace pensions less prevalent among the millennial cohort, they remain an important pathway for many to access the world of investing. However, plan design has a substantial impact on how effectively these plans are used, if at all. In keeping with the behavioural principles in the literature review, plans that offer automatic enrolment have substantially higher participation rates than those that don't, particularly if plan eligibility is immediate, because people are more likely to enroll if it's part of their employee onboarding process.

Relatedly, while accessing the "free money" associated with employer matching is a strong incentive to save, employees tend to only save amounts that maximize the employer match. For the most part, however, employees are not very engaged in these plans; they have an extremely high tendency to accept default contribution rates and investment options and rarely go back to update them.<sup>3</sup>

Plan administrators are beginning to offer services to increase employee engagement with their workplace pensions. Many are developing portals to make it easier to access plan information and do simple financial planning. In an effort to engage millennial employees, one firm recently launched a program offering pension matching for student loan payments. While these efforts are in their infancy, employers have the potential to be a powerful influencer in the investing ecosystem because employees tend to perceive them as a more trustworthy source of information than many traditional industry participants.<sup>4</sup> This may partly explain why employees are so willing to accept defaults in this context.

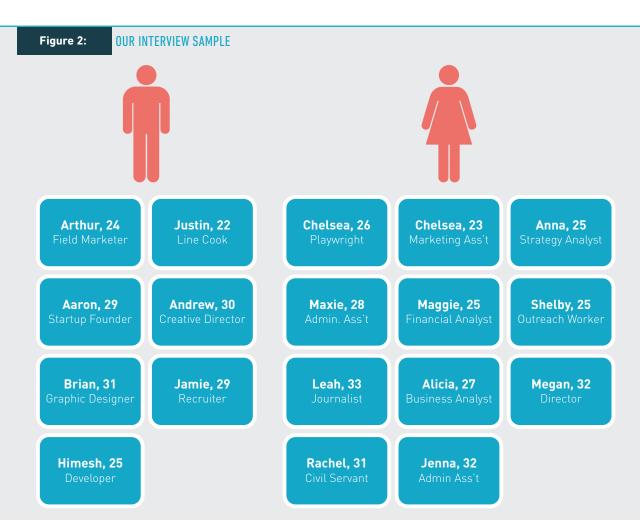
- 2 https://techcrunch.com/2018/02/26/acorns-the-financial-management-service-for-everyone-else-adds-3-million-users/
- 3 Forecasting the Future of Group Retirement Plans, 2016 CAP Benchmark Report, Canadian Institutional Investment Network.
- 4 Healthy, Wealthy & Work-Wise: New Imperatives for Financial Security, Mercer, 2018.



# Research Methodology

The quantitative research that underpinned the *Missing Out* report was quite broad. It addressed a representative sample of 1,585 Ontarians age 18 to 36, with results weighted by age, gender and region using Statistics Canada census data, and touched on many aspects of millennials' financial lives. In contrast, the purpose of our study was to develop an in-depth understanding of the experiences Ontario millennials are having in their journey towards investing: what makes them start thinking about it, what actions they take (or don't) and most importantly, why.

A different set of research questions called for a different approach. We conducted 18 90-minute in-person interviews with a targeted sample of millennials – individuals from the GTA and London who had completed their schooling and secured full-time employment. We gathered our sample largely through Facebook, Twitter and the team's personal networks. Participants ranged from 22 to 33 years of age and come from a range of career paths and socio-economic backgrounds (though mostly from solidly middle-class families). All have university degrees; the extent of parental support for that education varied widely but most had taken out student loans. Most lived independent of their parents, and while several were in long-term relationships, none were married or had children:



# **Research Insights**

Our nearly 30 hours of interviews produced insights surrounding thoughts, feelings and behaviours that characterize millennials' early experiences with investing and the events that led up to them. We heard about what consumes their attention and what they ignore, what excites them and what terrifies them, what engages them and what turns them off. While our sample size precludes statistical generalizability, several themes came through with great clarity and consistency. We heard these themes expressed repeatedly in different words and different situations. That much of what we heard reflected key themes in the existing behavioural science literature gives us greater confidence that these themes are not idiosyncratic to the particular people we interviewed, but reflect broader patterns relevant to a broader population.

These themes are captured in the four insights that follow. Below, we share these insights with accompanying evidence of what we heard from participants, as well as behavioural implications.



Insight #1 Many millennials are at a life stage where it is difficult to picture their future selves, as so much in their lives remains uncertain, and investing feels like something that limits their freedom to try on new identities and experiences.

Younger people feel disconnected from their future self, particularly if they feel too many decisions remain for their future self to come into focus, and may find it tougher to plan for the long-term as a result.

"It's hard to see yourself in the future. I've done so many different things that it's hard to predict the future because one thing leads to another."

"When you're 17 you can't see beyond six months. At 22, I'm starting to see three years out. My parents see 15 years out."

"A lot of what I see about investments is for 60-year olds. I need something more immediate – a 35-year old."

Investing and long-term planning are seen as inconsistent with early adulthood, as things that "lock you in" when you want to prioritize taking in new experiences and exploring new possibilities before you settle down.

"That's not for Anna now. That's for Anna later. For now, I want to feel more free."

"Today it feels like we have less responsibility. In my friend group, 30% are still living at home. I think that's why I feel, I'm young; I don't have to do that yet.

"This selfish period of time has lasted longer than I thought it would. I look at my peer group and we're not doing what my parents were doing in their 30s."

This bias towards the present is exacerbated by everyday inertia that makes it tough to take the first step.

"In school I was a procrastinator because the system allowed me to succeed that way. People work well under deadlines. Investing is one of those things that can always be put off. If you were to tell me if you don't start tomorrow you won't have a retirement. I'd do that tomorrow."

"I know it's never too early to start saving, but I'm not doing it!"

"You just keep thinking I'll do it tomorrow."

While putting off investing may feel right in the moment, some older millennials are starting to realize these decisions have consequences that they didn't fully anticipate.

"When I was young I was a stupid kid. I wasn't thinking about saving. Now I wish I'd started investing when I was in my 20s and still had time on my side."

"At 25 I thought I'd come back from London and everything would fall into place. It's taken a lot longer than I thought. Everyone around me is moving on to those next steps. I don't regret the decision though. I'll always have those experiences."

"For a very long time I thought my income would increase so saving money would make sense. I thought only people with money saved money. As soon as I said 'my income will increase' I realized my lifestyle also increases."

### **BEHAVIOURAL IMPLICATIONS**

Changing behaviour requires bridging the distance between one's present and future selves by highlighting the future consequences of current decisions (both positive and negative). "Future selves" that are closer in time (e.g., 35 rather than 65) may be easier to bridge to. Research shows that stimulating concrete as opposed to abstract thinking (e.g. presenting financial scenarios) can help increase confidence and provide a sense of control. It's also important to combat inertia by amplifying the benefits of taking action, minimizing the perceived cost and effort of taking action, and drawing attention to missed opportunities.



Insight #2 Millennials are deeply affected by their perceptions of where their peers are at.

These social comparisons can serve as useful reference points as long as they are relevant and don't feel out of reach.

# The varied composition of the Millennial generation means that peer social comparison can be tricky, leaving many in limbo.

"I can't compare myself to my friends who are married."

"My friend Lindsay lives at home for no cost. She can afford to be stupid. I can't."

"What's the average and how do I compare to the average? Maybe you're doing good, or not doing good. Show a scale by age."

# Social comparisons can be a useful tool to validate current behaviours and identify potential alternatives.

"It would be interesting to see how other people with my same salary spend their money and invest it. Toronto Life has a neat piece that shows how different types of people prioritize things. It's nice to see what other people did."

"My boyfriend was a huge influence. He has always been very ambitious. He was working three jobs. I felt I had to catch up to be a good partner for him. He inspires me to be better with money."

# Social comparisons can be demotivating if people feel they can't catch up or if it seems like no one else around them is succeeding either.

"I'm ashamed about being financially behind other people my age. I feel like I can never catch up."

"It's frustrating to look at people who have it all together."

"A lot of my friends have no savings because anything left from their paycheques goes to OSAP. This is very common."

It can also be difficult for people perceived to be at the top of the social hierarchy because they don't have peers from whom to get support.

"When I talk to my friends about saving they say 'don't even talk to me about that because I have so much debt.' I can't get advice from older friends for this reason."

"I'm the person my friends don't want to talk to about money because I'm doing better than them."

"It's hard when your friends are being reckless with money. I think I'm weak in the face of these temptations so it's good to know I've taken away the temptation with the automatic savings."

### **BEHAVIOURAL IMPLICATIONS**

Millennials use social comparisons to determine how they're doing. Empowering comparisons show people with similar challenges pursuing creative alternatives that produce a desired result. It will also be important to use comparisons to highlight behaviours that produce deferred benefits that, unlike purchasing a home or travelling, aren't visible in the present.



Insight #3 Investing feels overwhelming if there is no clear way to take the first step.

Paralysis over having too many options is exacerbated by industry practices that evoke skepticism and undermine trust.

### It's difficult to find an appropriate starting point when you "don't know what you don't know."

"There is information out there but it goes back to taking too much effort. If you made this my full-time job I'd be happy to do the research but there's always something else to do."

"There are so many options – it's the paradox of choice. I find the whole thing overwhelming so I don't like to think about it."

"I'm afraid to ask questions. I don't want to feel stupid."

# The challenge of finding a comfortable starting point is exacerbated by skepticism about traditional financial channels and processes.

"Filling out a form online to book an appointment doesn't feel like the right way to find someone you can trust."

"I don't trust the banks as the best option but I don't trust myself to do it alone. I know there are other options out there but I don't know where to find them. A friend who's out for my best interests would be the best. The bank has no incentive to really help me out – just commissions."

"When you talk to professionals about your money there's some skepticism about what they get from it. They get free rein to play with your money but it doesn't impact them. It impacts you."

### Sources that aren't trying to sell a product or service are seen as more trustworthy.

"I haven't been comfortable with investing for most of my twenties. Then I came across a [post by a financial blogger]. It was about the magic of compound interest. He showed the simple math of how you get to \$2 million to fund retirement. After seeing this I decided it was worth looking into."

"A knowledgeable friend who's looking out for my best interest would be best."

"I don't know if I'm doing the right things. It would be helpful to have a message saying if you managed it differently, different results would be possible."

# Objective, personalized feedback, conveyed in small, manageable steps, can nudge people toward adopting investing as a habit.

"Paying off my student loan was my biggest accomplishment. I drew a thermometer on my bulletin board and I'd colour it in when I paid some off. I never felt so much freedom as the day I paid off that loan. Setting short-term goals helps you get to the longer term goal. It's too far out and motivation is lacking. You need the steps to get there. It also helps visualizing what it will be like when you get there even if it's far."

"You start a habit when you have negative reinforcement to make you try something different. Once you start, it's about having feedback to show you that it's working.

"A message saying I'd missed out would make me look at other options. It's good when they push information like that to you. To ask the question I have to think about how to ask the question."

"It would motivate me to have 'future me' paint a picture of what I've created for her. Also with scenarios. She breaks it down for me what I need to save now as a percentage of my salary for future me to have this great life in the future."

### **BEHAVIOURAL IMPLICATIONS**

The complexity of navigating the investing journey for the first time imposes a heavy cognitive load that overwhelms nearly everyone who doesn't have a trusted guide. We can reduce the cognitive load by orienting the user with objective information targeted to their circumstances and providing opportunities to get started with small commitments.



Insight #4 Experimentation can build confidence in the investing process. In the absence of opportunities to test and learn, those with little or no knowledge of investing fear loss to a degree that is a barrier to investing.

# The fear of loss is a substantial barrier to investing. Those to whom investing is foreign feel this fear particularly acutely.

"I've always been terrible at math so I don't understand investing. It's scary to put money out there. I'm afraid I'll lose it."

"I got a loan for school with a plan to invest the money. The money just sat there and I returned it at the end of the year. You just keep thinking I'll do it tomorrow. I had a bit of the education but it was a scary leap. Conceptually, I understand investing from school. There's a big difference between knowing and doing."

### With investing knowledge comes clearer expectations about market fluctuations.

"I learned about risk in high school. They had a stock market game where I lost \$4K in one day. That's not for me. Now I put it in low risk mutual funds."

"Investing is very well understood by math. I looked at the math, it agrees with the math and that gives me confidence."

"Investing is a balance between risk and return. People need to be mentally prepared when there is a loss and know not to panic."

# Traditional education won't fill this knowledge gap. Millennials need to experience it for themselves to believe it.

"I'd like to take some risk but not in a stupid way. Just a bit of money to see what happens — an amount I could afford to lose."

"It would be great if there was a simulation so you could try it out without losing."

"Test putting money into something to see what happens. Show me how I do. Send me a message telling me how my money could have done if I'd taken a certain action; and then tell me how to do something about it. And then combine it with a future message about how I could act then – but not too far into the future so I won't be able to see it."

### **BEHAVIOURAL IMPLICATIONS**

People fear what they don't know. We can reduce loss aversion by demonstrating how the specific investment decision being contemplated would perform under different market conditions and time periods. It is essential to convey this information in concrete terms that can be easily understood by the user and then be clear about what feedback will be available to gauge success.

# The Millennial Investing Journey

Our qualitative research also informed our development of a "journey map" that reflects the experience of a typical millennial non-investor. A journey map helps tell a story through the lens of the user by compiling what a typical user sees, does, thinks and feels as they progress through various phases of an experience. Expressing the user experience in this way helps us better understand where the start and end of the experience are from the user's point of view, and helps us break this experience into distinct emotional and cognitive phases. This exercise helps us locate barriers experienced by users on this journey and identify opportunities for intervention to help users along this journey.

Because our user is a millennial non-investor, our journey starts where many of them are: immersed in everyday life, struggling to define themselves and just trying to make it all work. It progresses through their initial awareness – and rejection – of investing, to early efforts to learn and, finally, to a place of confidence that habits are in place to continue moving in the right direction.





I can't think about I don't care what I'm acting on I'm learning I'm aware I don't what I don't know I don't know what I need to know what I know know something I know what to do A friend showed now so I don't I'll save later. me a blog The Journey miss out later I don't want to miss that made sense out on anything now! I'm on the This is so hard. Of The Millennial right track to How does anyone have the I can't find Non-investor future I want someone I trust My side hustle Could I miss out to help me! helps me pay on something later? Month-to-Month • A few months ahead • A year or two ahead Years ahead Week-to-week Peers starting to look forward Peers starting to make more The future consequences of Barriers everywhere Everyone having fun, future-oriented trade-offs doing interesting things and think about the financial my current decisions future **SEEING** Opening RRSP/TFSA Looking for stable work Exploring identity Refining identity Testing identity Managing debt Adjusting to work Settling in at work Succeeding at work Establishing regular contributions as a habit New people, interests, Making changes – job, home, Building savings Applying learning to make experiences relationships Researching, inquiring, conscious choices Reacting to expenses Managing expenses, savings testing, evaluating Checking progress DOING • I'm not doing OK • I'm doing OK Can I do better? • I will do better • I'm on the right track • I can figure this out • I can't save because... • I'll save when... What do I do first? I know what to expect from The bank didn't have my my money • I have no idea what to do • I don't want to think about I never thought about best interests in mind If I hit a speed bump I know >10 years out this now • I thought it would be easier what to do I should look into... • There should be more out I've got time to think about • Everyone's doing better than the future - later • This makes sense there for <35s me **THINKING**  Drowning Relived Curious Frustrated **Empowered**  Scared Optimistic Nervous Determined Aware • Embarrassed/Defeated Excited Overwhelmed Confident **Engaged FEELING**  Use aspirational social Lengthen perspective by Meet the where the are. Create opportunities for Reinforce early learnings framing information to low-risk experimentation with feedback that builds comparisons to show understand their personal achievable steps others like make the future motivation, and make it easy confidence and motivates Inspire trust by putting the you have overcome similar to get started with personalized. consequences of current continued progress user's need first challenges actions concrete achievable steps **OPPORTUNITIES** 

# From Insights to Design Principles

Design principles are meant to start conversations within and among a variety of stakeholders about how we can develop and refine programs, products, and services in ways that better meet the needs of users – in our case, Ontario millennials.

Because our design principles – which draw from the insights gained from our conversations with millennials, as well as the literature and industry review described above, are meant to be used by a variety of stakeholders in the financial ecosystem, from investment firms, to organizations delivering investor education, to fintech startups, each of whom has expertise in their respective areas, we have deliberately made these design principles open-ended rather than prescriptive. In short, you will not find any ready-made solutions or silver bullets here.

You will, however, find examples illustrating how these design principles could be applied in different contexts. But these examples are illustrative, not prescriptive: firms and organizations will be best placed to develop solutions that apply these principles, provided that they focus on users and place their needs first in the design process.

We believe that the six design principles described below will help stakeholders develop tools to help motivate and enable users to make progress on their journey towards understanding and engaging with investing. While certain principles may be more impactful in certain contexts and channels than others, all should help address barriers in the journey traversed by first-time investors.

# Principle #1 Prompt millennials to identify their own unique motivation for investing and validate that motivation in a non-judgmental way.

Behaviour change requires motivation. For millennials to make financial trade-offs between the present and the future, they need to know what's in it for them. Instead of making assumptions about millennials' motivations or the life milestones they have in mind, help individuals identify their own motivation and engage from there. When millennials discover their motivation and can see investing as relevant to them they are more likely to engage.

### **HOW THIS MAY SHOW UP IN PRACTICE:**

### Imagine an open-ended goal-setting conversation:

What matters to you? What are some things you're excited about for the future? Everything counts: Travel, family, experiences, career, volunteering, a home, a wedding, kids. Having a good handle on what you want makes it easier to take the steps you need to take to make it happen.

### Imagine starting with motivations, and not products, first:



**Meet Sarah.** Sarah currently works as a bartender, but she's a lawyer at heart. She invests because she wants to go back to school.



Meet Samir. Samir just got his dream job at a startup. He invests so he can start his own business. He's not sure when, but when the time comes he wants to be ready.



Meet Jo. Jo is a marketing assistant. She doesn't know what's next for her, but she's investing so she doesn't miss out when she figures it out.

What would you invest for? Click here to get started.



# Principle #2 Meet millennials where they are by providing personalized, achievable steps that make it easy to get started.

Getting started with investing is a barrier from the start for millennials in part because the sheer number of options to assess is overwhelming. While most believe they should be doing something, the absence of a clear starting point - or even a starting point for what to research - triggers choice overload and becomes a substantial barrier. Use available information to propose a starting point that makes sense to the user, narrowing the scope of questions and decisions and combatting choice overload.

### **HOW THIS MAY SHOW UP IN PRACTICE:**

# Imagine a different conversation associated with a fresh start:

Congratulations on the new job! It's always exciting to start a new chapter of your career. It's also a great time to start thinking about your financial future. One simple thing you can do is start putting away a small percentage of your salary for your future. You may not know what the future looks like, but regardless, it will probably go better if you've got some type of nest egg. Most people your age start with 5-10% of their after-tax income. 5% would only be \$3.50/day. That would add up to \$xx in five years!

You can always start at the low end and increase your savings over time. We can help with a program that automatically increases the amount by 1% each year.

### Imagine guidance that arrives just when it's needed:

Congratulations on paying off your student loan! Most people shift that monthly loan payment into longer-term savings within the first year. How about selecting a date in the future when you think you'll be ready to do that? We can set it up so it automatically starts then:

- 1 month from now
- 3 months from now
- 6 months from now

Don't worry, we'll give you a heads up the month before so you're ready.

# Principle #3 Lengthen perspective by making the future consequences of current actions feel more concrete.

Many millennials find the future difficult to picture, in part because they are working through the challenges of emerging adulthood. Draw attention to longer-term considerations with scenarios that motivate millennials to invest by connecting the impact of current decisions to their future consequences.

### HOW THIS MAY SHOW UP IN PRACTICE:

# Imagine messaging that helps the user understand their future:

Hey. It's your future self again. A few months ago I asked you to start putting away a few bucks a day for our future. Just \$5 a day will grow to well over \$10,000 in five years. Think about all the cool stuff we could do with that. Can we get started now? If you're still not ready, when would be a good time to think about this? Click here to put a time in your calendar.

### Imagine showing the cumulative benefit of small habits:

Congratulations on paying off your student loan. That's a huge accomplishment! Now that you've paid off the debt your "past" self saddled you with, how about setting up your "future" self in style? If you put that \$200/mo you're used to paying OSAP into an RRSP, in five years your future self will have almost \$14,000! Plus, your current self will get a tax refund of about \$750 each year to have some fun with.



# Principle #4 Curate aspirational social comparisons to promote achievable investing habits.

Millennials are highly influenced by their perceptions of what their peers are doing and the results derived from those actions. But these perceptions can be based on flawed or incomplete information. Data points that are tangible and visible – such as buying a home or travelling – are easier to find than comparisons relating to the less visible activities that contribute to longer-term financial well-being.

Social comparisons that provide meaningful reference points about what could be possible if they chose to engage in these activities can increase the motivation to engage in longterm investing. But the use of social comparisons comes with an important caveat: these comparisons can be motivating only if they feel achievable and relevant to an individual's circumstances: if one feels incapable of measuring up, these comparisons can be discouraging.

### HOW THIS MAY SHOW UP IN PRACTICE:

# Imagine encouragement that shows how others like you are making it work:

We noticed that you opted out of the feature that your chequing account offers to round up your purchases and invest the difference. The vast majority of our customers find this program a great way to save. In fact, people in your age group saved an average of \$xxx last year from small round-ups that they didn't even miss. Based on your transaction history, you would have \$xxx if you'd stuck with the program. Would you like to re-enroll?

# Imagine insights about trade-offs people like you have chosen:

Congratulations on that raise! You've got some exciting choices ahead about what to do with that money. Here are some comparisons of the choices other people your age with similar income have made. Most of them are saving 5% of what they earn. If you took half of that raise you'd get there.

Principle #5
Allow for low risk
experimentation,
reinforcing early
learnings with
feedback that builds
confidence and
motivates continued
progress.

Investing is a lifelong journey comprised of many small steps. Once they get started, millennials crave regular reinforcement that the steps they're taking are having the expected result. Personalized guidance about what the next steps should be can also help. Low-risk opportunities to learn by doing can create feedback loops that build confidence in past decisions while charting a new, but familiar, course.

### **HOW THIS MAY SHOW UP IN PRACTICE:**

# Imagine receiving personalized suggestions about how to put money to work:

You've done a great job of socking away \$5,000 in your TFSA. Have you ever wondered if your money could be working harder for you? That money is currently earning an interest rate of only 1%. That means in 5 years it will grow to \$5,255. There are other investments you could buy that could help you grow your money faster.

The TSX Composite Index has grown an average of 5% over each of the past 5 years. Some years it has been up more than that; other years it has dropped. Overall though, your \$5,000 invested in that market would have grown to \$6,381.

Not sure about locking up all of your savings for the longterm? How about starting with half?

# Imagine education about the risks and rewards of specific scenarios:

There are a few different things you could do to get the money in your TFSA working harder for you. It depends on what you're comfortable with and when you want to use your money. Here's what the ups and downs of different options would have looked like over the past five years:



Want to see what it looked like over other time periods? Click here.

Want to understand how we got these numbers? Click here.

# Principle #6 Inspire trust by putting the user's needs first.

It came through clearly in the interviews that millennials are very focused on getting advice from people who have their best interests in mind. As a result, they're drawn to those who aren't perceived as having anything to sell, such as family and friends, and bloggers and authors. There was particular skepticism about business models where an individual is perceived to be deriving some type of personal benefit from a sale: for example, branch staff were generally perceived to be less objective and transparent than robo-advisors. While the subject of how to inspire trust merits extensive further study, our research highlighted four key ingredients:

- other people I respect have had good experiences with this person/product/service/channel;
- fits me and my goals, not predefined yardsticks based on outmoded assumptions of saving and investing:
- frames information in a way that gives me real-time insight into how I'm doing and what I can do to course correct; and
- is transparent about how your business makes money, what I get for your services, and how your interests are aligned with mine.

### **HOW THIS COULD SHOW UP IN PRACTICE:**

### Imagine an objective rating of investing options based on alignment with user needs:

The Trust Score: Objective criteria to help you assess the trustworthiness of the products and services provided by this firm.

Average trust rating of other users

 $\star$ 

Personalizes service to your needs

Provides useful, actionable insights  $\ \star \ \star \ \star \ \star \ \star$ 

 $\star \star \star \star \dot{\star} \dot{\star}$ 

\*\*\*

Demonstrates alignment with

### Imagine if workplace pension sponsors took a more active role in investor education:

from last quarter.

You're currently putting in 2% of your salary (\$xx per month) and we're matching 50% of that. You're eligible for

retirement, but at the rate you're currently saving, that between ages 65-90. Did you know if you saved just an Click here to see how.

# **Conclusion**

Nudging people to create new habits is no small task. Research indicates that millennials are doing a lot right—from saving regularly to paying off debt—but that there are significant barriers that make it harder for millennials to decide whether investing is right for them and to act on their intentions.

The aim of design principles is to start a conversation about how programs, products and services might be delivered in more human-centred ways that will better engage millennials in investing for their future. They are intended to inspire stakeholders in all parts of the investing ecosystem – from investment firms, to organizations delivering investor education, to fintech startups and others – to test new models, observe how their users respond and continue to learn and adapt.

While we believe the design principles that have emerged from this project offer a starting point that is particularly relevant to engaging millennials in investing, this approach has implications far beyond the millennial cohort. Saving rates of Ontarians have been declining steadily for a generation and the behavioural foundation of our design principles should be equally relevant to promoting investing among other cohorts.

In keeping with the OSC Investor Office's priority of publishing research that provides insights into retail investor knowledge, attitudes and behaviours, this study is intended to stimulate dialogue about how a more human-centred approach might be used to improve the financial well-being of Ontario millennials. Its findings offer evidence to help inform the OSC's policies and programs, and point to potential avenues for further research, including through developing prototypes of and testing initiatives that reflect the design principles outlined in this report.









# **REFERENCES**

Arnett, Jeffrey Jensen (2000). Emerging adulthood: A theory of development from the late teens through the early twenties. American Psychologist, Vol. 55. Issue 5, pp. 469–480.

Bandura, Albert (1991). Social Cognitive Theory of Self-Regulation. Organizational Behaviour and Human Decision Processes. Vol. 50, pp. 248–87.

Bandura, Albert (1994). Self-efficacy. In V. S. Ramachaudran (Ed.), Encyclopedia of human behavior (Vol. 4), pp. 71–81.

Barry, Carly and Halfmann, Kameko (2016). The Effect of Mindset on Decision-Making. Journal of Integrated Social Sciences. Vol. 6, Issue 1, pp. 49–74.

Bartels, Daniel and Urminsky, Oleg (2011). On Intertemporal Selfishness: How the Perceived Instability of Identity Underlies Impatient Consumption. Journal of Consumer Research. Vol. 38, pp. 182–198.

Beshears, John (2015). The Effect of Providing Peer Information on Retirement Savings Decisions. The Journal of Finance. Vol. 7, Issue 3, pp. 1161–1201.

Chang, H. and Pham, M. T. (2013). Affect as a decision-making system of the present. Journal of Consumer Research, Vol. 40, pp. 42-63.

Deci, Edward L. and Ryan, Richard M. (2008). Self-Determination Theory: A Macrotheory of Human Motivation, Development, and Health. Canadian Psychology, Vol. 49, Issue 3, pp. 182–85.

Eyal, Nir (2014). Hooked: How to Build Habit-Forming Products. Portfolio Penguin. Toronto, Canada.

Fogg, BJ. (2009). A behaviour model for persuasive design, Persuasive Technology Lab, Stanford University, Claremont California.

Hershfield, Hal E. (2011). Increasing Saving Behaviour Through Age-Processed Renderings of the Future Self. Journal of Marketing Research, Vol. 48, pp. 23-37.

Joshi, PD and Fast, NJ (2013). Power and reduced temporal discounting. Psychological Science, Vol. 24, Issue 4, pp. 432–38.

Kahneman, Daniel (2011). Thinking Fast and Slow.

Malkoc, Selin A., Zauberman, Gal and Bettman, James R. (2010). Unstuck From the Concrete: Carryover Effects of Abstract Mindsets in Intertemporal Preference. Organizational Behavior and Human Decision Processes Vol. 113, Issue 2, pp. 112-26.

Pink, Daniel H. (2012). To Sell is Human: The Surprising Truth About Moving Others. Riverhead Books. New York, USA

Ross, L. and Nisbett, R. (1992). The Person and the Situation. Essential Contributions of Social Psychology.

Soman, Dilip and Cheema, Amar (2011). Earmarking and Partitioning: Increasing Partitioning by Low-Income Households. Journal of Marketing Research. Vol. XLVIII, pp. S14-22.

OSC Investor Office (2017a). Behavioural Insights Report.

OSC Investor Office (2017b). Missing Out: Millennials and the Markets.

Samson, Alain (2016). The Behavioural Economics Guide.

Sunstein, Cass R. (2012). Impersonal Default Rules vs. Active Choices vs. Personalized Default Rules: A Tryptych. Regulatory Policy Program Working Paper RPP-2012-17. Mossavar-Rahmani Center for Business and Government, Harvard Kennedy School, Harvard University.

Thaler, Richard and Benartzi, Shlomo (2004). Save More Tomorrow: Using Behavioural Economics to Increase Employee Saving. Journal of Political Economy, Vol. 112, pp. S164-187.

Trope, Yaacov and Liberman, Nira (2010). Construal-Level Theory of Psychological Distance. Psychology Review. Vol. 117, Issue 2, pp. 440–463.