



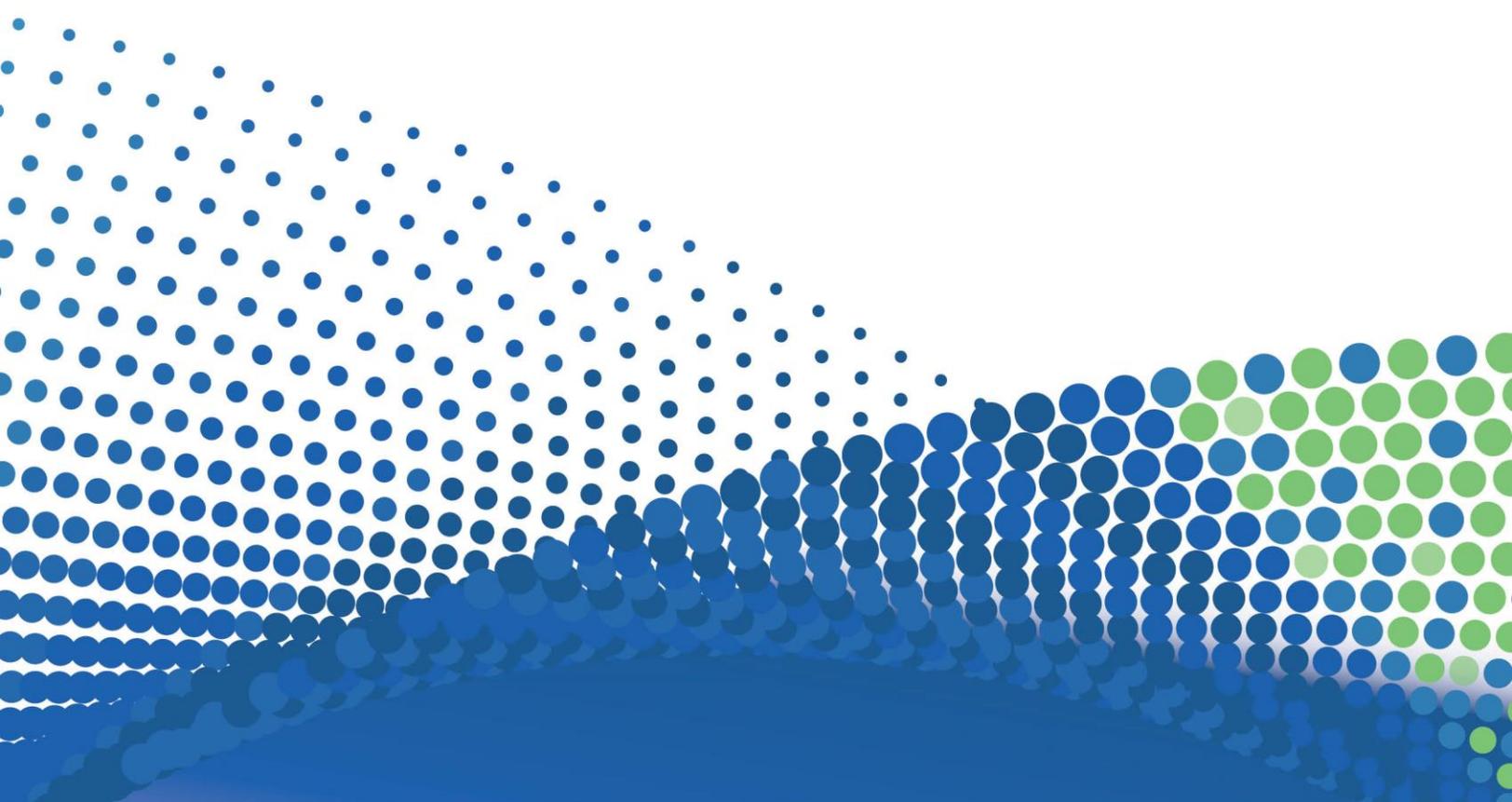
Financial Consumer
Agency of Canada

Agence de la consommation
en matière financière du Canada

Review of Financial Literacy Research in Canada

An Environmental Scan & Gap Analysis

November 26, 2020



Information contained in this publication or product may be reproduced, in part or in whole, and by any means, for personal or public non-commercial purposes without charge or further permission, unless otherwise specified. Commercial reproduction and distribution are prohibited except with written permission from the Financial Consumer Agency of Canada.

For more information, contact:

Financial Consumer Agency of Canada 427 Laurier Ave. West, Ottawa ON K1R 1B9

www.canada.ca/en/financial-consumer-agency

Cat. No.: FC5-67/2020E-PDF (Electronic PDF, English)

ISBN: 978-0-660-36683-8

© Her Majesty the Queen in Right of Canada, as represented by the Minister of Finance Canada, November 2020.

Aussi disponible en français sous le titre : **Revue de la recherche sur la littératie financière au Canada : Une analyse de la conjoncture et des lacunes**

Message from the Committee Chair

The Financial Consumer Agency of Canada (FCAC) has a mandate to promote the protection of consumers by supervising federally regulated financial entities and by collaborating with stakeholders to help strengthen the financial literacy of Canadians. Research and the interpretation of data remain the primary ways to test and evaluate the success of these endeavours, and recent research findings have suggested promising results.

Canada is one of the most financially literate countries in the world, according to both national and international measures. International surveys have shown that both Canadian adults¹ and youth² have some of the highest levels of financial literacy in the world. Our own national measures tell a similar story³, highlighting the progress we have made in improving the financial knowledge, skills and confidence of Canadians—but we must go further.

There is plenty of room for improvement. Even before the COVID-19 health crisis, too few Canadians had a budget, debt levels were exceptionally high, and many were not doing enough to secure their vision of a comfortable retirement. Although developments in new financial services and products are promising to give consumers more choices and opportunities, without proper guidance, this rapid increase in marketplace complexity threatens to leave many Canadians behind.

The [National Research Plan for Financial Literacy](#) was born from the need to leverage the power of research to help craft the future of discoveries, policies, and best practices in the field of financial literacy and financial well-being for all Canadians. It was designed to identify key questions, and uncover supporting evidence, to help enhance the decision-making around the development of financial literacy programs and services across Canada. It identified some of the emerging opportunities and challenges that consumers face when dealing with their personal finances and provided evidence which could be used to help improve policies and programs aimed at promoting a more equitable financial marketplace.

The 2018 [Progress Report: National Research Plan for Financial Literacy](#) provided a snapshot in time, highlighting the new ideas and research findings that were generated as a result of the National Research Plan. Although research and the state of knowledge have advanced enormously, many questions remain unanswered. In order to build on this positive momentum, the [Research Committee on Financial](#)

¹ International Network of Financial Education (INFE), a part of the Organization for Economic Development and Cooperation (OECD), ranked Canada third in the world for financial literacy in their 2017 survey.

² In the OECD's Programme for International Student Assessment (2018) on financial literacy, Canada tied for second among participating countries.

³ Canadian Financial Capability Survey (2014, 2019)

[Literacy](#) was tasked with providing an updated environmental scan and gap analysis on the current state of financial literacy research in Canada.

This Review of Financial Literacy Research in Canada: Environmental Scan and Gap Analysis (“The Review”) continues to emphasize FCAC’s commitment to financial literacy and financial well-being, as part of its raison d’être and as a core responsibility laid out in its [Business Plan](#). It begins by highlighting the need for an environmental scan and gap analysis, which is intended as a map to help guide FCAC’s work as well as that of stakeholders across the country. It then provides a snapshot of some of the current stakeholder work captured by the environmental scan, and organized by the research priorities, which were identified in collaboration with the Research Committee. Importantly, current and future planned projects are also described, and are followed by the identification of some existing gaps—all of which are intended to help guide the financial literacy community into a productive future.

At a higher level, this Review is contributing to the FCAC Integrated Research Plan. The main goal of the Plan is to provide even stronger support for evidence-based and behaviourally informed policy development, programs, and interventions. Together, these efforts will ultimately contribute to FCAC’s continued role as a leader and innovator in financial consumer protection.

It is therefore with great pride that I present this Review of Financial Literacy Research in Canada. This Review reflects the sustained collaborative efforts and enthusiasm of FCAC and stakeholders to advance knowledge in the emerging multidisciplinary field of financial literacy and financial well-being. The number of researchers, policymakers, non-profits, and for-profit organizations that become allies in the field year-over-year, is truly a testament to the success of the subject matter.

I want to thank all the members of the Research Committee for their past and future efforts. Without their collaboration and leadership, the Review of Financial Literacy Research in Canada would simply not exist.

Ruth Stephen
Director, Strategic Policy, Research & Experimentation
Financial Consumer Agency of Canada

Table of Contents

Message from the Committee Chair	3
Introduction: The need for a review of financial literacy research in Canada ...	6
History and objectives of the Review of Financial Literacy Research in Canada.....	7
Research priorities and themes	10
Research priorities: Past and future research	14
Managing debt.....	14
Navigating the financial marketplace	21
Case Study I: Precarious Employment and Vulnerable Finances	23
Building savings	30
Case Study II: Financial Decisions with Low Income	32
Budgeting	37
COVID-19 financial literacy research	41
Next steps	42
Appendices.....	44
Appendices.....	44
I: Canadian data for researchers.....	44
II: List of authors & contributors.....	45
III: Glossary of terms.....	45
IV: List of FCAC tools	47
V: Suggested citation of the Review of Financial Literacy Research in Canada	47
VI: References	48

Introduction: The need for a review of financial literacy research in Canada

Household debt is one of the Canadian economy's largest financial vulnerabilities (Bank of Canada, 2019). Household debt levels have reached historic highs, in part, because it has become easier and more attractive to incur debt (Poloz, 2018). The rapid increase of financial products and the availability of digital financial services has greatly increased the complexity of the financial marketplace, and provided consumers with more incentives and opportunities to build their debt.

Accumulating debt and challenges navigating the increasingly complex financial marketplace have resulted in Canadians saving at record-low levels. This reduction in savings can contribute to an increasing reliance on debt, which people in turn use to fund their day-to-day purchases or non-routine expenses. Engaging in priority planning behaviours, such as active saving and budgeting, can mitigate the risk of falling into debt traps—but again, not enough Canadians are engaging in such behaviours.

The Review of Financial Literacy Research in Canada highlights past and current advancements in financial literacy research (produced by government and non-governmental stakeholders) while identifying existing gaps within the financial landscape. The overriding goal is to help strengthen the financial well-being of all Canadians. The four **research priorities**—i.e., managing debt, navigating the financial marketplace, building savings, and budgeting—are critical behaviours that support this well-being. Improved financial literacy is critical but, like all behaviour, individual choices and actions are context-dependent. As such, behavioural change alone will not be enough to sustain change.

The context in which Canadians in different circumstances make financial decisions is as important as the behaviours themselves. In this sense, context is represented here as encompassing **themes**—i.e., mental and behavioural abilities, the social determinants of well-being, financial technology, and research in practice—all of which importantly influence, alter, and restrict individual choices. For example, Canadians across the country relying on low or precarious income need financial literacy skills relevant to their circumstance, and the financial industry and policy landscape affect each of these people in very different ways.

Understanding this context better in the long-term is critical for promoting financial well-being through financial literacy. Importantly, this improved understanding comes both from the work of government entities, as well as independent stakeholders, such as academics and non-profit organizations, who are all engaged in research endeavours.

By shining a light on these research priorities and encompassing themes, the Review aims to bolster solutions and serve as a guide to researchers, policymakers, and practitioners whose ultimate goal is to help in assisting Canadians with making personalized financial decisions to optimize their lives.

History and objectives of the Review of Financial Literacy Research in Canada

This Review of Financial Literacy Research in Canada: Environmental Scan and Gap Analysis builds upon prior work supporting and promoting financial literacy and financial well-being. The [National Research Plan for Financial Literacy](#) played an integral role in the successful implementation of the [National Strategy for Financial Literacy—Count Me In, Canada](#) (FCAC, 2015b). The National Strategy was developed to mobilize and engage public, private, and non-profit sectors to help strengthen the financial literacy of Canadians. Its main goals were to help empower Canadians to manage their money and debt wisely, plan and save for the future, and to help prevent and protect against fraud and financial abuse. A renewal of the National Strategy began in 2020 and is set for release in 2021.

To achieve these goals, the National Research Plan was designed to enhance the efforts of the research community and other relevant stakeholders. It was also used to promote the clear identification of what we know and do not know about financial literacy in Canada. By describing key research findings and pointing to research opportunities, it has acted as an evidence-based guide to inform and help improve financial literacy programs and services, to guide policy, and to help improve the financial well-being⁴ of Canadians.

Financial literacy & financial well-being

Financial literacy and financial well-being is still a new field—underscored by the creation of the [International Network on Financial Education](#) in 2008—but it is one in which Canada has consistently played a leading role.

Definitions of financial literacy have typically been more narrowly defined around knowledge and education. However, the FCAC Research Committee has emphasized

⁴ The 2018 National Research Symposium on Financial Literacy, was guided in part by the objectives of the National Research Plan and the members of the Research Committee. The Symposium centred on the theme *Using Research to Improve the Financial Well-Being of Canadians*—as detailed by the [Post-Symposium Report](#).

a broader definition, which includes financial well-being⁴, and places greater value on the importance of psychological factors and practical outcomes.

Financial literacy refers to a combination of financial awareness, knowledge, skills, attitudes and behaviours necessary to make sound financial decisions and ultimately achieve individual financial well-being. **Financial well-being** is the extent to which you can comfortably meet all of your current financial commitments and needs while also having the financial resilience to continue doing so in the future (CFPB, 2015; Muir et al., 2017; FCAC, 2019d). Financial literacy is not an end goal but is rather a means to improve one's financial well-being in a personally meaningful way.

The National Research Plan allowed us to improve our base of evidence, particularly tailored to a Canadian context, but also helped to emphasize the importance of financial well-being. The emerging concept of financial well-being is one of the many positive elements arising from new evidence. To summarize the progress in this rapidly moving field, and to help disseminate lessons learned and guide future work, a [Progress Report on the Research Plan](#) was published in 2018.

This Review of Financial Literacy Research in Canada aims to complement and extend the work of the National Research Plan while considering new levels of depth to better reflect the evolution of this new field. The Review is also meant to contribute to FCAC's Integrated Research Plan—the main goal of which is to provide even stronger support for evidence-based and behaviourally informed policy development, programs, and interventions which will ultimately contribute to FCAC's role as a leader and innovator in financial consumer protection.

This Review is not intended as an exhaustive review of the literature, but is rather a snapshot used to capture the state of the field and provide an updated map for moving forward. New evidence generated by this body of research created by government, academic, non-profit, and other stakeholders will provide insights that can help guide the ongoing work of public policymakers and assist practitioners in maximizing the success of their clients. In turn, these practical advancements will help inform future research.

The three main **Objectives of the Review of Financial Literacy Research in Canada** are to:

- 1) Help advance financial literacy and financial well-being as a leading-edge interdisciplinary field of research.

- 2) Highlight and promote empirical evidence as a means to strengthening Canadians' financial literacy and financial well-being.
- 3) Inform, and be better informed by, the work of practitioners and policymakers working towards strengthening Canadians' financial literacy and financial well-being.

This Review emphasizes FCAC's commitment to financial literacy and financial well-being, and the protection of consumers, as part of its *raison d'être* and core responsibilities laid out in the [FCAC Business Plan](#). It is intended as a map to help guide the many efforts of stakeholders across the country. It provides a snapshot of some of this stakeholder work, organized by four research priorities and shaped by recurring themes (outlined below). This high-level review of research findings is a necessary step towards monitoring and evaluating trends that may impact financial consumers. Laying out what we know also helps to identify potential gaps in our knowledge, and is the foundation for efficient decision-making. In addition, there is a final section that comments on the financial literacy and well-being of Canadians in the context of the COVID-19 health crisis. This approach aims to contribute to, and support, the ongoing stakeholder initiatives that help promote financial consumer protection and strengthen the financial literacy of Canadians.

Research priorities and themes

Research priorities

The research priorities were identified by the academic, non-profit, business, and government communities as being fundamental to understanding and improving financial literacy and financial well-being. Specifically, FCAC relied on research publications, ongoing stakeholder discussions, and in-depth interviews with the FCAC Research Committee Members. It was agreed that the priorities identified in the National Research Plan remain the vital components underpinning financial literacy research, education, policy, and practice.

The four main **research priorities** identified are:

- 1) Managing debt
- 2) Navigating the financial marketplace
- 3) Building savings
- 4) Budgeting

Managing debt involves the borrowing and repayment of money. Many consumers are unaware of the long-term costs of mortgages, credit cards, and other loans, and too few have a plan in place for paying them back.

Navigating the financial marketplace speaks to the growing complexity of the financial marketplace and to the consumer's ability to find the most suitable financial products and services.

Building savings involves putting money aside for the future, with some of the most common uses being to pay for emergency expenses, education, and retirement.

Budgeting is a fundamental component of financial planning and involves tracking income vs. expenses. As Canadians incur debt, the financial marketplace becomes more complex and harder to navigate, and with people saving less money overall, budgeting can help consumers meet their personal needs today and into the future.

Themes

The research priorities each represent a complex set of behaviours which are influenced by many factors at the individual and community levels. These factors

vary considerably—from the local environment in which people live, to individual personality traits, to the availability of different technologies, to name a few. Many of these factors can be grouped into broader encompassing themes, which cut across the research priorities, and represent pillars upon which future research will be built. Together, the themes illustrate the many context-dependent ways that our behaviours can be influenced, altered, and restricted—and these can be used, where appropriate, to guide future research.

The four **themes** are:

- 1) Mental and behavioural abilities
- 2) Social determinants of financial well-being
- 3) Financial technology
- 4) Research in practice

Mental and behavioural abilities can influence and restrict the financial choices of individuals and groups. Psychological traits such as personality (e.g., self-control) and personal attitudes (e.g., views on savings) play a role in shaping our financial behaviours. Cognitive abilities (e.g., memory, attention) have limits, and the amount of financial information and the rate at which it arrives are frequently beyond these limits. According to work across many fields, such as psychology and behavioural economics, these cognitive capabilities are largely influenced by, and can change according to, individual experience (e.g., biases), emotion (e.g., the role of stress), and timing (e.g., life stages, or periods of scarcity where we have fewer resources). There is also a well established decoupling between competence (e.g., financial knowledge and skills) and confidence (e.g., subjective perceptions of knowledge), which can result in large differences between our intended and real actions. A consideration of this theme for each research priority can help to paint a clearer picture of financial decision-making and behavioural choices at the level of the individual.

Social determinants of financial well-being captures the many factors, at the social, demographic, and environmental levels, that can have an impact on individuals or groups of consumers. For instance, municipal, provincial, and federal policies and programs can affect how people manage their finances, and can influence their awareness and access to financial services and products. Where a person physically lives can also have an impact on their financial choices. People in less dense areas, such as those in small towns or on reserves away from major cities, often have limited access to financial products, services, and information. Moreover, group identification (e.g., based on culture, ethnicity, or gender) can also have a real

or perceived impact on financial beliefs and behaviours. Research that incorporates this theme can help to clarify the kinds of financial phenomena seen at the group or population level, and can assist in identifying vulnerable groups of people and pathways of support.

Financial technology (or fintech) is playing an increasingly important role in our lives. Advancements in financial technology have never been more rapid, but it is currently unclear how these technologies are helping or hindering sound financial decision-making. Moreover, these developments have implications for individuals, financial service providers, and the industry as a whole. With the increased use of online and smartphone banking tools, mobile payments, the rise of cryptocurrencies, and a greater reliance on e-learning, a clearer understanding of how these technologies impact consumer choices and behaviours is needed. For example, although saving has become easier to do with electronic banking tools, which can automatically move money from your chequing to savings accounts, it is not yet clear if these tools are actually helping consumers. Also, companies other than banks and credit unions that offer financial services—so-called third-party companies—are increasingly creating products and services for financial consumers, such as mobile payment or budgeting apps. However, these services are often outside of typical regulatory boundaries and, because of this, there is a greater risk of confusing consumers who might be unsure of the security risks and their privacy rights. From this perspective, there is plenty of room for new research on consumer financial protection as well as the development of technologies to contribute to improvements in financial education. More research within each research priority can assist in outlining the current role that fintech is playing and help to anticipate its future impact.

Research in practice underscores the importance of helping practitioners and policymakers to find effective ways to leverage financial literacy and financial well-being research to best serve Canadians. Moreover, this theme also includes and promotes the use of community-driven approaches—whereby community members are encouraged to actively participate, and even lead, research endeavours. The characteristics of end users and different groups of consumers (e.g., those who live in rural or urban areas, minorities, youth or older adults) vary greatly. With this in mind, gathering evidence about, and incorporating, the needs of different consumers will help to increasingly tailor products, services, and educational and navigational strategies aimed at improving financial outcomes for Canadians. An example of such work includes the use of “just-in-time” interventions, which target selected consumers with well-timed information (e.g., parents with newly eligible children for an educational savings program). A consideration of this theme within each research priority could assist in translating context-dependent information into practice (i.e., identifying “when”, “how”, “for whom”, and “by what means” interventions or policies are most useful).

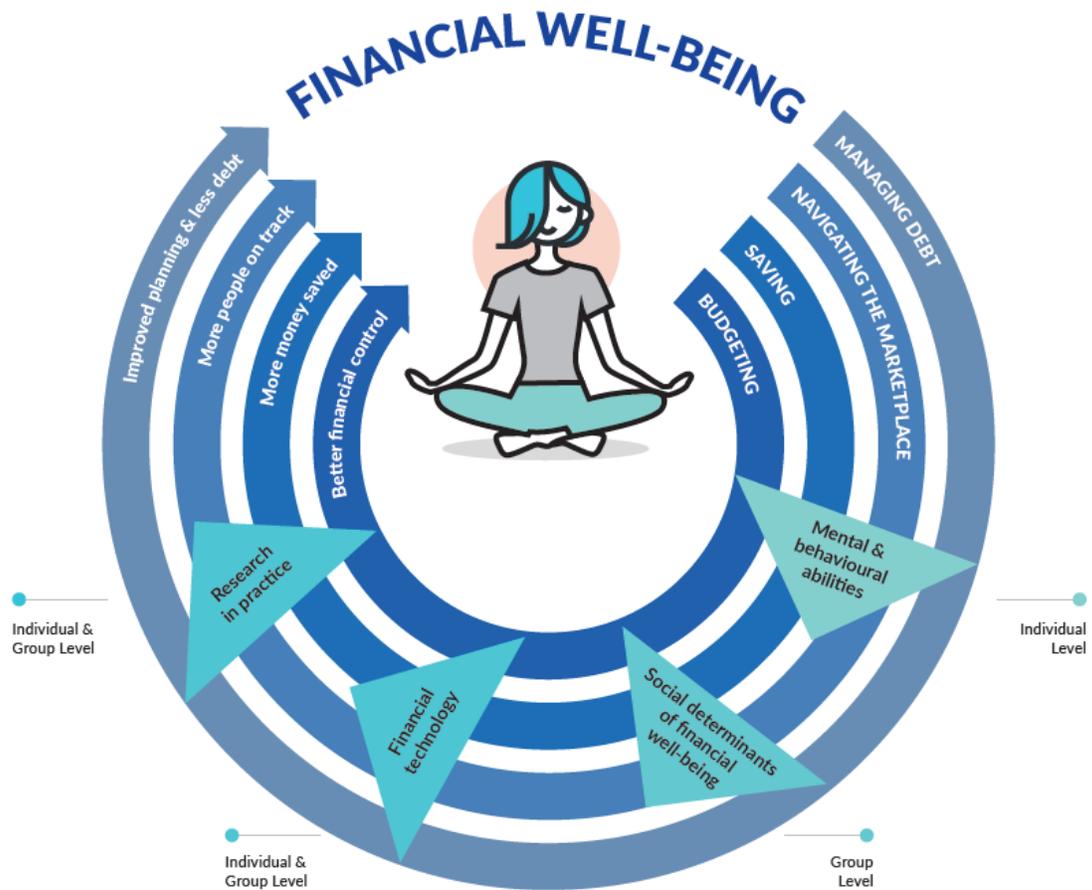


Figure: An illustration of the relationship between the research priorities and themes, and how these contribute to improved financial well-being. Note that these are not exhaustive, and future research may add to, or change, these priorities and themes.

Research priorities: Past and future research

As described above, this Review of Financial Literacy Research in Canada focuses on four **research priorities** for financial literacy and financial well-being: [Managing debt, navigating the financial marketplace, building savings, and budgeting](#).

The following sections outline what we currently know about each research priority from a Canadian context and discusses future opportunities, directions, and gaps. The research findings and future directions described in these sections emerge from both FCAC- and stakeholder-led initiatives and are, in many cases, collaborative efforts⁵.

The four **themes** noted above have been used to identify some existing gaps, and each section ends with a brief discussion of this assessment and a key points summary. This Review is not intended as an exhaustive analysis of all research, but is rather intended to help identify and promote key areas of interest, existing gaps, and some priority questions with particular relevance to Canadians.

Managing debt

Canadians have one of the highest debt levels in the world, owing nearly \$1.74 for every dollar of income (Statistics Canada, Q1 2020a), and most (70.4%) carry some form of debt (Statistics Canada, 2016). People can take on debt in many ways, including mortgages, lines of credit, credit cards, car loans, student loans, personal loans, and payday loans, to name a few. Most Canadians could benefit from better knowledge, skills, and confidence to help them manage their debt. While certain forms of debt can be used to acquire skills and assets (e.g., education, houses), others can prey on psychological biases and encourage people to fall into debt traps (e.g., with the use of revolving credit). Research that uncovers the factors and challenges associated with efficient debt management, as well as ways to improve debt management behaviour, continues to be a priority to both FCAC and the broader financial literacy community.

Managing debt: Starting points for future research

The **Canadian Financial Capability Survey (CFCS; see Appendix I for more information)** and now the **Financial Well-Being Survey (FWBS; see Appendix I)** have been essential in detailing the landscape of Canadian debt, and FCAC has led a lot of this work. For example, FCAC reports identified that most debt is held by

⁵ Although the in-text citations typically identify the research leader (e.g., FCAC or stakeholder), efforts have been made within the body of the text to clarify collaborations and remove ambiguities.

people with higher incomes and those under 45 years of age (~60%). We are also seeing exceptionally low levels of personal savings, poor retirement preparedness, and an increased regular use of high-interest credit. For example, 1-in-3 people occasionally relying on credit for day-to-day expenses when they are short on funds (FCAC, 2015a, 2017b, 2018, 2019e).

Prior research has helped to clarify the opportunities and challenges people face when trying to manage debt or remain debt free. Some of this work has focused on the users of financial products, like Home Equity Lines of Credit (HELOCs) and payday loans or has looked at strategies that people use to repay their debts. Other lines of research have focused more on the demographic aspects of debt, such as age differences in debt, caregiver expenses, and the concept of debt-related stress. Together, these studies have helped uncover the socioeconomic, demographic, and psychological underpinnings of debt.

Research has found that many Canadians have a poor understanding of how Home Equity Lines of Credit work (FCAC, 2019a). This is particularly troubling because HELOCs are the second largest contributor to household debt behind mortgages⁶. This lack of understanding is likely driving some to make inadequate financial decisions—such as making default interest-only payments and taking on more debt than is easily manageable. For instance, although 1 in 4 Canadians with HELOCs reported making interest-only payments, more than half of those expected to completely repay their credit within five years (FCAC, 2019a).

Many consumers are also uninformed about payday loans. An FCAC-led survey of 1,500 payday loan users revealed that most people did not understand how expensive such loans were, and that 45% used them for unexpected costs (e.g., car repairs) and 41% for regular expected costs (e.g., living expenses) (FCAC, 2016b). Perhaps the least intuitive finding in this report was that 20% of borrowers had household incomes exceeding \$80,000. This is in line with another study showing that those with low levels of financial knowledge, and expectations of improved financial conditions in the future, were more likely to use payday loans despite the high interest rates (Islam & Simpson, 2017). Detailed information on the payday lending sector in Canada has been integrated in a book edited by Drs. Jerry Buckland, Christopher Robinson, and Brenda Spotton Visano (2018). The authors painted a complex picture of the payday loan system and its users, from both a Canadian and US perspective, and ultimately point out that more research is needed to determine who might be best helped or harmed by such products.

Work by Dr. Keri Kettle, at the University of Manitoba, and colleagues has looked at loan repayment strategies used by US consumers. To achieve this goal, they combined the benefits of doing retrospective analyses on a large dataset (i.e., more

⁶ This debt has grown faster than all combined non-mortgage loans (CMHC, 2019).

power), with the benefits of conducting a series of smaller behavioural studies (i.e., more control) (Kettle et al., 2016). Their findings revealed that consumers with multiple debt accounts are more motivated, and successful, in repaying their loans when they use a concentrated strategy (i.e., focus on reducing debt in one account), when compared to more dispersed strategies (i.e., spreading their available funds across multiple debts). Interestingly, these effects are greatest when the repayments are concentrated on the lowest debt accounts. It will be important in future to see how such findings translate to a Canadian context.

Other debt-payment research looked at the behaviour of organizations that failed to file their annual returns for a payroll tax in Ontario (House et al., 2018). Using a strategy that has been found to work at the level of the individual, the researchers used behavioural insights—carefully worded late notices with step-by-step instructions for payment, in a large-scale and multi-wave experiment—to nudge organizations to pay their taxes sooner. The authors concluded that detailed planning behaviour could help groups (and not just individuals, as previous research has shown) overcome the procrastination associated with paying down their tax debts.

Canada's universal health-care system covers many medically related costs, however, as Dr. Karen Duncan and colleagues discovered there is an existing burden for caregivers. Nearly half of all Canadians will become caregivers in their lifetime, and the research team found that more than a third of people over 45 years of age has incurred out-of-pocket caregiving expenses (Duncan et al., 2016). While the data did not allow for a detailing of financial profiles specifically, and thus of personal debt, it did suggest that this group of caregivers is particularly vulnerable to increased financial burden and health-related stressors that are worth exploring further in future research.

Stress is a topic that crosses all areas of debt, as finances are known to be the single greatest stressor for Canadians (Financial Planning Standards Council, 2018). The Canadian Payroll Association's Annual Survey revealed that 40% of workers feel stressed by debt (CPA, 2018). This result was extended by Dr. Hayley Hamilton and colleagues (2019), who showed that debt stress was associated with poor health (mental and physical). They also showed that those from low-income households were more likely to experience higher levels of debt stress, and that women and those who are separated or divorced were disproportionately affected. Financial stress has also been associated with self-reported financial well-being and life satisfaction (Brzozowski & Spotton Visano, 2019). In a similar vein, Dr. Lisa Fiksenbaum and colleagues showed that their measure of financial threat—defined as the fearful-anxious uncertainty about one's financial situation—was also associated with increased debt levels and economic hardship, as well as a willingness to change one's financial behaviours (Fiksenbaum et al., 2017).

Age-related differences have also been increasingly explored. For instance, households with parents that co-reside with their adult children have been on the rise for decades, and one study showed that such households are more likely to have fewer assets and nearly twice as much debt as households without adult children present (Maroto, 2019). A study on Canadian millennials (born from 1980 to 2000) found that they have similar financial knowledge and financial well-being when compared to the previous generation (so-called gen-Xers) (Robson & Loucks, 2018), but are more likely to carry student loans and credit card debts and have little or no retirement savings. Complementary findings from a US study showed that millennials using mobile payments (i.e., from computers or smartphones) are more likely to overdraw on their financial accounts, pay credit card fees, and withdraw from retirement savings early, compared to non-mobile-using millennials (Lusardi et al., 2018). These results present a unique opportunity to validate such findings in the Canadian context.

A small qualitative study comparing millennials with unmanageable student debt from Montreal and Santiago, Chile, suggested that Canadians are more likely to consider indebtedness to be a personal responsibility, whereas Chileans believed that families and states held more responsibility (Pérez-Roa, 2019). At least one study has emphasized the importance of considering this group in relation to all other age groups (Ben-Ishai & Stanley, 2017)—to help to avoid the propagation of misleading myths, such as those of the lazy or “doomed” millennial generation—as many age groups have similar financial issues (e.g., increased debt). In fact, Drs. Nicolas Bédard and Pierre-Carl Michaud (2018) highlighted the concern that debt—particularly mortgage debt—is also increasing amongst a subset of households who are approaching retirement. The authors suggest that growing debt at this life stage can be particularly dangerous for many, as a change in borrowing costs or house values could decrease their standard of living in retirement.

Managing debt: Future directions

The following planned, or in-process, research initiatives are being undertaken to fill existing gaps in our current understanding of personal debt management in Canada:

- **Dr. Karen Duncan at the University of Manitoba** has begun a project entitled *Financial Decision-Making: The Influence of Financial Knowledge, Stress and Help Seeking Activities*. She and her colleagues will use data from the 2014 CFCS to improve our understanding of how Canadians handle personal debt. For example, the team will use data from the CFCS to identify the characteristics of consumers who carry an unpaid balance on their credit cards and to get a sense of how different groups of people handle unexpected expenses. This project will also link debt management behaviours to other

topics, such as budgeting and saving behaviours, with an eye towards improving and tailoring future debt management interventions. Relatedly, the 2019 CFCS will help to track the ongoing progress and challenges associated with financial literacy and financial well-being more broadly, and financial behaviours, such as debt management, saving, and budgeting behaviours, more specifically.

- **Prosper Canada**, through a literature review and key informant interviews, will describe the consumer debt landscape, particularly how it affects those living on low and moderate incomes. This work aims to identify critical gaps in existing research about the conditions under which consumer debt becomes a source of financial insecurity and who faces the greatest risks. The project will also identify policies and regulations that particularly exacerbate or help mitigate consumer debt for low to moderate-income earners.
- **Dr. Jodi Letkiewicz and colleagues** have begun a series of projects to explore the debt management space in more detail. For instance, her team has collaborated with Credit Counselling Canada to explore debt relief options in Canada, with a particular focus on those with lower incomes. They will also use focus groups to look more deeply into issues related to debt for students and other young Canadians, and have also prepared the groundwork for interviewing financial planners across Canada to better appreciate their perspectives and the challenges they face with clients in the current environment.
- **The Association of Community Organizations for Reform Now Canada (ACORN)** will examine the experience of lower-income consumers in the online high-cost credit market. ACORN will study the online lending options that exist for lower-income consumers. The goal is to determine to what extent and for what reasons these products are used, as well as how these options compare to financing offered by mainstream financial institutions.
- **Drs. Matthew Brzozowski and Brenda Spotton Visano** are exploring the link between subjective and objective measures of financial stress. One currently unanswered question is whether people facing similar financial difficulties also share similar levels of self-reported financial stress. This is an extension of their work noted above.
- Members of the **York University** faculty, staff, and student community (including Dr. Spotton Visano) are also combining efforts to develop a suite of financial literacy resources for students. These include interactive

workshops on financing pathways to post-secondary education for high school students (including Francophone and Francophile students), and a series of podcasts about Ontario student debt repayment and rehabilitation processes.

- **Drs. Lisa Fiksenbaum, Esther Greenglass, and Zdravko Marjanovic**—from York University and Concordia University of Edmonton—are continuing their work on financial threat, in the context of financial and debt management. In particular, they will be exploring the relationships between financial threat, financial management, and other psychological variables related to perceived sense of control and personality.

Managing debt: Existing gaps

When considering the four themes noted above, it becomes apparent that much of our current understanding is focused at the level of individual behaviour. Although some recent projects have leaned more towards debt management from a social or practical perspective, we still know relatively little about the social determinants of financial well-being and how financial technology is influencing Canadians' ability to manage their money.

The CFCS has been fundamental in providing a portrait of Canadians' knowledge, abilities and behaviours concerning personal financial management. Now that three waves of data have been collected (i.e., from 2009, 2014, and 2019), it will be important to understand what kinds changes have occurred over time. For instance, it will now be possible to compare some behavioural changes made by financial consumers across each research priority, and also get a sense of group differences that might exist (e.g., how have debt levels for low-income Canadians changed over ten years?)

Further, the financial literacy and behaviours of Canadian youth are an emerging topic of interest, given the timing and rate at which they can take on debt over the subsequent few years of their lives (e.g., credit cards, student or car loans). International and national surveys have identified Canadian youth as having a strong baseline level of financial literacy. The **Programme for International Student Assessment (PISA; see Appendix I)** ranked Canadian 15-year-olds as second overall globally on financial literacy and suggested that young people who have handled their own money, and who talk regularly about money at home, are more financially literate (OECD, 2017; 2020). Although there is a baseline for financial literacy of Canadian youth, not much is known about risk factors, group differences, and the effectiveness of teaching programs (or of the financial literacy, competence, and confidence of the teachers themselves). Beyond this international

perspective, very little is known about how the financial literacy of Canadian youth predicts their future financial decision-making and financial well-being.

We have gained some information tailored to certain age groups (e.g., youth, millennials, older adults) and financial products (e.g., HELOCs, payday loans), and have learned that debt-related stress can have negative effects on Canadians across socioeconomic levels. However, a number of outstanding questions remain. For instance, it is not clear to what extent people are knowledgeable about their debt, nor is it clear whether they have a plan in place to manage their debt (or precisely what kinds of strategies different groups of consumers might use). A gap exists in our understanding of the differences in the types of debt vehicles used, access to debt, and debt repayment strategies among men and women. Financial education interventions could also benefit from further clarity in these areas in order to better inform and tailor programming. Moreover, although mental health and financial health seem related, the relationship between mental (e.g., stress or the perception of being in control) and financial well-being is not clear.

Managing debt: Key points summary

- Canadians carry a high amount of debt in many forms.
- Poor retirement planning, increased use of credit for day-to-day purchases coupled with a lack of understanding of different types of debt vehicles, and less savings are all contributors to lower financial well-being and higher stress.
- The use of clear, active, debt management strategies may help improve financial well-being.
- Researchers are currently looking to better understand the connections between debt management and related behaviours (e.g., savings, budgeting) and psychological factors (e.g., stress) from multiple perspectives (e.g., consumers, financial planners).
- Future research is needed to uncover longitudinal changes in financial literacy and financial well-being. How the financial literacy of youth predicts their financial futures, and how societal and marketplace-level factors may act as barriers to financial well-being, should also be explored in greater detail.

Navigating the financial marketplace

Research in this section explores how consumers currently navigate the increasingly complex financial marketplace, the kinds of barriers to smooth navigation and engagement, and some of the features that might help to make it easier and more inclusive in the future. This research priority is broadest by nature, in that it can also include details on factors, behaviours, or tools that overlap with the other research priorities. Here, however, we have attempted to include research progress that is not specific to one of those other areas (i.e., debt, saving, and budgeting), but rather considers the kinds of knowledge or innovative ways of thinking that could help improve a consumer's ability to navigate the financial marketplace more generally.

Navigating the financial marketplace: Starting points for future research

The financial marketplace is perhaps too complex to identify only a handful of areas about which to learn and offer improvements. The nature of this research priority has prompted researchers to ask questions related to how people navigate and engage with the financial marketplace using a multi-lensed approach. Therefore, research within this priority has more often touched upon the four themes noted above—from exploring the marketplace complexity itself, to learning about the paths and barriers affecting people's ability to engage with (e.g., socioeconomic factors, financial education and confidence) or navigate (e.g., using technological tools or other sources of financial advice) the system.

The complexity of the financial marketplace is increasing rapidly. Canada has one of the fastest growing financial sectors in the world, and access to services has become easier as more people are using online or mobile financial services and products and three quarters own a smartphone (Canadian Bankers Association, 2018; Competition Bureau Canada, 2018; Edenhoffer, 2018). The use of cash for payments has been declining for decades, as our reliance on financial technologies, such as mobile payments, and other advances in the field are becoming greater (Engert et al., 2018). Their continued increase will likely be fuelled by financial technology communities, such as those found in the Toronto-Kitchener-Waterloo corridor, which contains the second-highest density of tech start-ups globally (Reynolds, 2019). Although the growth of the fintech community is rapid, many fintech companies have expressed ongoing challenges related to accessing expertise and mentorship, navigating and establishing partnerships with financial institutions, and building trust with consumers (Innovate Financial Health, 2020). These marketplace changes will require an equal expansion of regulatory changes and research efforts

to match the pace of growth (Competition Bureau Canada, 2018)—especially regarding our understanding of how people interact with financial technologies.

FCAC released the *Financial Well-Being in Canada: Survey Results* paper which demonstrated that an individual's financial well-being (see Appendix III for definition) is more strongly tied to behaviour than income (FCAC, 2018; 2019d). Specifically, the data based on a survey of over 1900 Canadians revealed that the key components to improving financial well-being were active saving behaviour, low levels of borrowing (particularly for day-to-day expenses), and financial confidence—including the feeling of being in control. The take-home message from this work was that, for many consumers, improvements in financial well-being could arise from changes in financial behaviours (e.g., budgeting, active saving, reduced borrowing) and improved financial confidence over increases in income alone. These findings provide insights that may benefit practitioners and other financial literacy stakeholders when it comes to designing and delivering future interventions.

Vulnerable members of society are the ones most likely to be neglected in, or excluded from, the financial marketplace (see below for [Case Study I: Precarious Employment and Vulnerable Finances](#)). Research findings to date have identified low-income earners, women, Indigenous Peoples, newcomers, and those with low educational levels as particularly vulnerable members of society. For instance, Dr. Jerry Buckland and colleagues have done considerable work investigating the effects of payday lending (Buckland et al., 2018b), how finance schemes positively and negatively affect vulnerable people globally (Buckland, 2018), and the issue of financial exclusion in Indigenous Peoples (Buckland et al., 2016). The latter study used qualitative methods to reveal some of the finer-grained issues that kept people from engaging with financial institutions, such as low accessibility, poor treatment by non-Indigenous employees, and a collectivist tradition that shies away from personal money management. An open-access text on personal finance by First Nations University of Canada Professor, Dr. Bettina Schneider, entitled [Financial Empowerment](#) (2018), also provides a practical approach to improving the financial knowledge and skills of Canadians—invaluably using both Indigenous and non-Indigenous perspectives. With regard to the question of a potential gender gap in financial literacy, Robson and Peetz (2020) suggest that individual personality plays a greater role in financial knowledge, choosing financial products, and staying informed, when compared to gender alone, while Fonseca and Lord (2019) suggest that financial confidence is a major explanatory factor.

Case Study I: Precarious Employment and Vulnerable Finances

by Jerry Buckland, PhD

Note that the stories below come from participants of the Canadian Financial Diaries research project and their names and other identifying information have been changed in order to protect their anonymity.

To date, the five-year Canadian Financial Diaries research project has worked with 29 low and modest-middle income Canadians. In this Project, participants track and share their finances with staff, and discuss their financial experiences and challenges. The quantitative and qualitative data are now being analyzed and some preliminary issues stand out. For example, some participants told stories of precarious jobs and vulnerable finances. Two such stories came from Trudy and Samantha, who are single, middle-aged, women with part-time jobs and annual incomes around \$10,000. Neither have mobile phones or internet access at home.

Trudy has relied on social assistance, and has struggled with mental health issues in the past. Her health is well now, and she is casually employed and follows a very tight budget. She resists returning to social assistance because she found it full of rules that reduced her quality of life, though she does receive some assistance for her rent. Until recently, she had two part-time jobs at 15 to 25 hours per week. One employer recently shut down, cutting her income in half. She is trying to get another job but has challenges using internet-based job boards. A community centre offers some supports but finding an appointment has been difficult. In order to get by, she has relied on her father to help out with her rent, which involves a monthly phone call as he lives out of town. The support was in question when, suddenly, her dad went into the hospital and she was unable to contact him. She considers this money a loan and plans to pay it back but right now she has no way to do that. Her finances are “on the edge,” and an unexpected bill, cancelled rent assistance, or loss of support from her dad would put her in a real bind. A root cause of her vulnerable finances is her precarious employment. If she had a full-time job—or even support to look for a job—her finances, and her confidence, would likely improve.

Samantha faces a similar kind of precariousness. She juggles casual jobs including working at a corner store and in a local non-profit organization. Her work at the corner store is very informal in that she is not paid an hourly wage but her pay is subject to the discretion of the manager and comes in the form of cash and trips to the grocery store at which time he buys groceries for her. She feels uncomfortable asking for money and the relationship places her in a very awkward position. Until recently it was her only job, making her feel unable to negotiate a better arrangement. Recently she got a part-time position with a non-profit organization and this has given her a second source of income plus new confidence. Her income is still very modest but has the potential, now that she has completed the probation period, to offer her more stability in the future. With this change, she may be in a position to renegotiate the arrangement at the corner store.

Both Trudy and Samantha have very precarious jobs and vulnerable finances. Trudy’s work situation has declined somewhat but her dad has been able, so far, to help her out. Samantha’s work situation has improved somewhat and could continue in that direction. Both Trudy and Samantha could benefit from training about, and access to, internet job search programs. For that to happen, they would need to access the right tools, and have the confidence and motivation to learn these new skills.

Regardless of specific demographic characteristics, financial confidence and making use of financial advice appear tied to increased engagement and navigation, as demonstrated through improved retirement planning and living standards (FCAC, 2017b). The first Canadian study to link financial confidence and seeking help with financial planning was from Dr. Letkiewicz and colleagues at York University (Letkiewicz et al., 2016). They showed that people who use professional financial planners tend to have higher incomes, more financial confidence, and less finance-related stress. A longitudinal analysis showed that people with high financial confidence are more likely to seek financial planning advice in future, but that, interestingly, higher self-reported levels of stress did not lead to professional help-seeking behaviour. These findings are also in line with an FCAC-sponsored report from the Social Research and Demonstration Corporation (SRDC), showing that financial confidence is a strong predictor of effective money management behaviours (SRDC, 2016b).

Work in older adults reveals a similar story, as financial confidence is the strongest indicator of financially desirable behaviours (such as saving enough money for retirement) and improved long-term financial well-being (SRDC, 2016a; FCAC, 2017b). However, older adults also seem to be unique in their engagement with financial services and institutions. For instance, an FCAC survey showed that most older adults regularly bank in person and at least one third never bank online (FCAC, 2019b). Also, research looking at older adults' knowledge and navigation of long-term care insurance products showed that there is very low awareness, knowledge, and understanding of the potential benefits of such products for some consumers (Boyer et al., 2020). These results further emphasize the need to better understand group differences such that future products and services may be tailored to meet the needs of different financial consumers.

The use of behavioural insights and an understanding of natural biases continue to be powerful tools for optimizing financial decision-making and helping Canadians engage with, and more easily navigate, the marketplace. Dr. Dilip Soman and his Behavioural Economics in Action at Rotman team continue to be world leaders in this regard. They have provided a number of influential documents and tools, including a how-to manual for organizations who wish to employ behavioural insights techniques (Feng et al., 2018) and the Financial Literacy in a Box (FLIB) tool (Luo et al., 2016) aimed at improving people's understanding and behaviours related to select financial topics (e.g., compound interest, education savings). They have also made a clear case for directing more research resources towards understanding financial behaviour online (An et al., 2016) and have shown how behavioural insights can have an impact on specific financial topics, such as applying for life insurance (Poon et al., 2017) or using financial literacy to encourage responsible gambling habits (Hurla et al., 2017).

Finally, the research-to-practice gap has been particularly challenging. Programs designed to improve financial education or provide effective financial counselling are typically based on findings from research studies but are themselves often untested. This disconnect can lead to practitioners not knowing the effectiveness of their programs but can also make it difficult for potential funders or policymakers to clearly differentiate the value of one program from another. With this in mind, Prosper Canada and partners (2016) created the [Financial Literacy Outcome Evaluation Tool](#) in 2016 to help practitioners better assess the effectiveness of their programs using a tailored approach. Another promising research-in-practice initiative arose in the [First Nations Financial Wellness Project](#) (Prosper Canada, 2018)—a joint program of the Aboriginal Financial Officers Association of Canada (AFOA), Prosper Canada, and First Nation partners—which developed evidence-based literacy, coaching, and training programs aimed at improving the financial well-being of Indigenous Peoples in Ontario. The more common incorporation of such community-driven methodologies, here and within all research priorities, may help to improve the effectiveness and impact of the research itself and the solutions it offers.

Taken together, research that helps to clarify the characteristics and challenges associated with easy, accessible, targeted, and timely navigation continues to be a priority.

Navigating the marketplace: Future directions

There are many issues which continue to be of great interest in this area, including: developing a clearer picture about the role of financial confidence and financial well-being, considering how to best use findings from behavioural science, understanding the barriers faced by vulnerable populations and how to empower these groups, and determining how to translate research into practice. The following planned, or in-process, research initiatives are being undertaken to advance our current understanding of how people navigate and engage with the complex financial marketplace in Canada:

- The **Behavioural Economics in Action at Rotman team** are continuing to explore how behavioural insights can inform finance-related practices and policies. In particular, they are currently investigating the known gap between financial planning intentions and actions. As discussed above, high levels of financial literacy do not often translate to optimal decision-making, or to seeking out financial advice when needed. We also know that overestimating one's knowledge can lead to risky behaviour and economic vulnerability—and that older adults are particularly at risk (Khan et al., 2017). Still, the socioeconomic and psychological characteristics of people who do act on financial knowledge or intentions are not currently clear. Moreover, in a related project, Dr. Soman and colleagues aim to explore the

psychology of risk, as there is evidence that most people do not seem to assess risk using a probabilistic framework, but are instead more inclined to use rules-of-thumb or heuristics. A more nuanced understanding of risk will allow the team to develop better instruments for measuring risk tolerance and thereby help people make better financial decisions. Finally, the team has also compiled a report on “sludge”—frictions in the environment that prevent people from acting on their financial knowledge. These might include cumbersome processes, confusing communications or the potential for negative emotions.

- **Dr. Andrea Hasler and colleagues** have a number of projects looking at some of the navigational behaviours and challenges faced by specific groups, such as teachers, women, and millennials. Prior research has suggested that many teachers are uncomfortable teaching issues in finance due to a lack of confidence and knowledge (McGregor, 2018) as well as having math anxiety (Ramirez et al., 2018). Moreover, although a lot of information related to the delivery of financial material is available, teachers often fail to use it. A 2019 study from this team found that professional development is an important factor in helping educators feel confident and motivated to teach personal finance in their classrooms (GFLEC, 2019). This team has launched the [Fast Lane](#) website to provide resources and strategies on how to promote financial education in school and are continuing to investigate how to best prepare teachers to teach personal finance.
- Another project from **Dr. Hasler and team** will summarize the growing evidence on the gender gap in financial knowledge, and aims to provide insight on why, for instance, men gain knowledge (but not necessarily confidence) more easily than women (Rothwell & Wu, 2019). Finally, this group will also investigate millennials’ relationship with financial technology including why they are exceptionally comfortable with using technology in many ways, such as for banking and shopping, but are much less engaged in other financial issues (e.g., comparing financial products, reading about financial advice; Yakoboski et al., 2018). This team is also further exploring differences in the financial capability of US millennials who use mobile payments, compared to those who do not (Lusardi & Hasler, 2019). This latter work will inevitably draw from recent Canadian research and public forums summarizing some of the financial challenges that millennials face today (Robson & Loucks, 2018).
- **Drs. Gail Henderson and Pamela Beach** are investigating how elementary school teachers include financial literacy in their curriculum and how

teachers select and evaluate resources for use in the classroom. They are also looking at teachers' awareness and perceptions of the source of resources, comparing resources produced or sponsored by the financial industry, government and non-profit organizations contained within FCAC's [Canadian Financial Literacy Database](#). The researchers have conducted studies using document analysis, online surveys, and interviews. Information about these studies is linked through their [Canadian Financial Literacy Project](#) centred at Queen's University.

- **Dr. Jiaying Zhao**—a Psychology Professor at the University of British Columbia—continues to investigate the role of scarcity (i.e., having insufficient resources to cope with demands) on people's ability to make sound financial decisions (Zhao & Tomm, 2018). Dr. Zhao's group is also working with the [New Leaf Project](#) to pilot unconditional cash transfers and additional non-cash supports (e.g., coaching, financial literacy training with VanCity Credit Union) to address homelessness in the Metro Vancouver area. Finally, Dr. Zhao's group is working on a collaborative project with researchers from University of Washington to develop interventions to increase financial resilience among low-income individuals.
- **Dr. Bettina Schneider** will examine not only how people, particularly Indigenous students, can connect their own experiences to the topics covered in her published text on [Financial Empowerment](#) (2018), but also the impact of culturally relevant financial literacy education on Indigenous students and communities.
- The [Canadian Financial Diaries](#) research project—led by **Drs. Jerry Buckland, Gail Henderson, David Rothwell, Jennifer Robson, and Louise Simbandumwe**—uses both quantitative and qualitative methods to better depict the financial realities, stresses, and opportunities of low- and modest middle-income Canadians. It also includes financial practitioners and regulators to help inform practical and policy tools in support of financial empowerment. Phase one, having tracked the finances of 30 Canadians over the course of a year, is nearly complete. Phase 2, which involves a larger number of participants is planned for 2021.
- **Drs. Jerry Buckland, Vinita Godinho, and Carmen Daniels** are working on a comparative study of Australian and Canadian regulations related to financial service access. An article related to this work is published in the fall 2020 issue of the Canadian Journal of Urban Research.

- **FCAC** conducted a national survey in 2018 to assess the financial well-being of Canadians. [Results](#) from the **Financial Well-Being Survey (FWBS; see Appendix I)** suggested that Canadians who practise active savings behaviour and avoid using credit to pay for daily expenses, have higher levels of financial well-being—results which are similar to comparative countries, like Australia and Norway (FCAC, 2018; 2019d). Moving forward, FCAC used these data and results to develop and launch the **COVID-19 Canadian Financial Well-Being Monitor (see COVID and Financial Literacy Research section and Appendix I below)**.

Navigating the marketplace: Existing gaps

Our current understanding of how people navigate the financial marketplace crosses all four themes—social determinants of financial well-being, mental and behavioural abilities, financial technology, and research in practice. Yet, given the complexity of this research priority, there is still much to learn and many ways that we could apply the existing research to practical applications.

The interactions between financial technology use, digital literacy, and financial literacy are not well understood. For instance, little research has been done globally or in a Canadian context on the role of financial technologies in improving or hindering financial literacy and decision-making. It is not clear how people’s behaviours have changed as we have transitioned towards the greater use of technology. It is also not clear how the increasing threat of cyber-attacks might influence how people navigate the marketplace, as most Canadians will encounter some form of cybercrime in the coming year and over one fifth of Canadian businesses reported that they were affected by a cybersecurity incident in 2017 (Statistics Canada, 2018a). Importantly, despite this increased threat and being generally concerned with privacy, Canadian consumers are becoming more comfortable with sharing personal information regularly online (Canadian Marketing Association, 2018).

Taken in combination with the recent explosion in the financial technology sector, future research will be needed to understand how consumers are engaging with existing technologies, but also to help create and improve the next generation of tech tools aimed at improving financial well-being, or offering products and services to consumers. Moreover, additional research will be needed to guide the creation of front-line programs and services (both tech- and people-centred) tailored to the most vulnerable of Canadians—including low-income earners, youth, women, immigrants, minorities, and Indigenous Peoples. One example of such work uses an

evidence-based approach to share insights for practitioners providing financial advice to Canadian newcomers, particularly through one-on-one financial coaching (Varatharasan & Fremont, 2020). Particularly, a significant gap in research involving Indigenous Peoples and those living in the Territories continue to exist in all areas of financial literacy and well-being, given the challenges to data collection and geographical isolation.

A greater adoption of strategies that leverage behavioural insights and an appreciation of cognitive biases and mental abilities will undoubtedly help in this regard. For instance, we still do not have a clear picture of the relationship between personal finances and subjective perceptions of financial well-being—such insights might help us better understand what motivates beneficial financial behaviours across groups of people. Although there are ample resources in each of these fields of study, the challenge going forward will be to learn how to best combine such knowledge in ways that have clear positive impacts on the financial well-being of Canadian consumers. We know that people of all ages have access to copious amounts of financial literacy information online, but more evidence is required to understand the precise impact of this information on different age groups, from children and adolescents, to working-age and older adults.

Finally, considerable efforts in all research priorities have been used to explore financial literacy and financial well-being from the individual's perspective. It has been tacitly assumed that personal responsibility of financial matters should be the priority, when in fact we know that behavioural change alone is not enough to help vulnerable Canadians to fully engage with the financial system. As such, less work has been directed at understanding the broader societal barriers that might prevent a highly motivated individual from succeeding financially—from federal or provincial regulations, to geographical or cultural differences. Future research would benefit from recognizing the importance of using tailored, context-dependent, approaches that address issues simultaneously from an individual and societal perspective.

Navigating the financial marketplace: Key points summary

- The complexity of the financial marketplace is increasing rapidly and, for most people, access to financial services has become easier than ever.
- As the financial marketplace continues to expand, vulnerable members of society are most likely to be neglected or excluded.
- Resources (e.g., tools and how-to manuals) are available to help improve people's understanding of financial topics, strengthen their financial behaviours, and help practitioners evaluate and improve the effectiveness of their financial education programs.

- Researchers are exploring the navigational challenges and unique financial stresses faced by vulnerable groups (e.g., women, youth, low-income, Indigenous Peoples), and how to improve these navigational strategies through leveraging behavioural insights (e.g., intention and action, scarcity, confidence) to better deliver financial education.
- Future research is needed to understand the role of financial technologies in financial literacy and financial decision-making, the broader societal barriers that might prevent individuals from succeeding financially, and how behavioural insights can enhance tools aimed at improving the financial well-being of consumers.

Building savings

Canadians on average are not saving enough money overall, although the incredibly low household savings rate of 0.7% near the end of 2018 had gone up substantially to 3.6% by the end of 2019 (Statistics Canada, 2020b; before the COVID-19 pandemic). Of course, having savings is often tied to higher levels of manageable debt and increased options in the financial marketplace (e.g., regarding investment choices). However, historically lower interest rates and the wide availability of revolving credit products have contributed to low saving rates and increased debt overall (Canada Interest Rates, 2019). Moreover, a slow growth in average wages over the past few decades is also contributing to this phenomenon (Statistics Canada, 2013, 2019b). Recent research has given us a clearer picture of the Canadian savings landscape. Although there are many reasons to save money, some of the best-studied are related to emergency expenses, education, and retirement.

Building savings: Starting points for future research

Emergency expenses can involve a number of unexpected events, from having to get immediate car or home repairs, to managing the loss of a job or an unexpected economic downturn. The Canadian Payroll Association's Annual Survey (2019) reported that 1-in-5 Canadians said they would not be able to absorb an unexpected expense of \$2,000, suggesting a slight improvement from the years before (CPA, 2017, 2018). Further, research by Drs. David Rothwell and Jennifer Robson showed that just under half of Canadians at the low-income level have sufficient financial assets to maintain their current lifestyle for three months (Rothwell & Robson, 2018). (See below for **Case Study II: Financial Decisions with Low Income.**) Prior work outside Canada has shown a positive link between financial literacy, confidence, and the likelihood of having emergency savings (Babiarz & Robb, 2014), while other work has extended these results to low-income earners in Canada, revealing positive links between financial education, financial confidence or self-efficacy, and savings (Rothwell et al., 2016, 2017). What is clear is that

improvements in financial knowledge alone are not as likely to help households build emergency savings (Despard et al., 2020).

The cost of education has increased substantially over the past few decades, as reflected in yearly tuition costs (~\$7,000 in 2018) and the average student's debt (~\$26,000 for those graduating with an undergraduate degree) (Statistics Canada, 2015b, 2018b). This underscores the value in Canadian youth and their parents saving for education and furthering their knowledge of saving for their future in general. However, wealthier families that can afford to save are more likely to do so, while lower income families are more likely to see an average decline in their overall wealth after having children (Maroto, 2018). Nonetheless, Canadian youth appears well positioned to grasp the power of saving for future items or services such as education, as most 15-year-old students said that they would save for an item they could not afford or would not buy the item at all (OECD, 2017).

Promisingly, nearly three quarters of Canadian parents reported saving for their children's education (FCAC, 2015a; 2019e). Of these, the majority reported using the Registered Education Savings Plan (RESP) vehicle to accomplish this goal. Low-income earners and Indigenous Peoples⁷ are particularly vulnerable populations, who generally save well below the Canadian average, although nearly half of low-income earners that do save for their children's education use RESPs to do so. The Privy Council's Impact and Innovations Unit, in collaboration with the Innovation Lab at Employment and Social Development Canada, used behavioural science to increase the uptake of the Canada Learning Bond—an educational savings incentive for low-income families (Hardy et al., 2018). Overall, they found that sending letters to target groups (i.e., first-time parents) and the use of additional key documents (e.g., a mock cheque) increased the uptake significantly.

Perhaps the single greatest use of savings, for most people, will be to retire—a period in which one's quality of life will be largely tied to the assets they have built up over time. The number of Canadians poised to retire in the next few decades is climbing quickly, and it has been estimated that by 2036 there will be 39 seniors for every 100 working-age adults (Statistics Canada, 2015a). Most Canadians are unsure how much they will need to save for retirement and are concerned that they are unable to save enough (FCAC, 2017b).

The annual [RSI Index](#) for 2020, released by the Retirement and Savings Institute at HEC Montreal, showed that most Canadians have a limited understanding of their retirement system—especially challenging are questions related to employer plans and the Old-Age Security program, in which three quarters of respondents get fewer

⁷ The CFCS analysis specifically considered Indigenous peoples living off reserve, but that this trend is understood to extend to those living on reserve as well.

than 50% of questions correct. Moreover, research on the Quebec and Canada Pension Plans reveals that [Canadians are unclear about how to maximize their benefits](#) and that changes to the eligibility age could result in unwanted consequences (Michaud et al., 2020). In a survey of 2,000 Canadians, the Ontario Securities Commission (2018) found that while younger Canadians are optimistic about retirement, relatively few have started saving. Among working-age Canadians, two thirds are preparing for retirement (FCAC, 2017b). However, it is worth noting that a growing number are expecting to work past retirement age (CPA, 2018).

The abilities and knowledge of individuals can vary significantly across groups. The most financially literate, the highest earners, the most educated, and people over 65 are most aware of what they need to save to retire comfortably, while those with low-incomes as well as Indigenous Peoples are least likely to be saving (Boisclair et al., 2017; Messacar, 2017; FCAC, 2017b). In fact, those who score higher on basic financial literacy knowledge questions are more likely to be saving in a retirement—or tax-free savings account, such as an RRSP, TFSA, or pension plan (Boisclair et al., 2017). Financial confidence (introduced above) appears to be a crucial link between financial knowledge and saving, for growing both emergency and retirement funds, and this is emphasized for low-income earners (Rothwell et al., 2016). Importantly, this work has helped to broaden the field of financial literacy in Canada, by placing a greater emphasis on the value of subjective measures (e.g., confidence, sense of control), which are increasingly recognized as fundamental mediators of sound financial behaviours.

Saving is important for these, and many other, reasons—and Canadian consumers are generally saving less today than in the past. This is why research that informs about the potential challenges and barriers to saving, as well as ways to improve saving behaviour, continues to be a priority.

Case Study II: Financial Decisions with Low Income

by Jodi Dueck-Read, PhD

People with low incomes face difficult choices. This includes people who work in low-waged jobs and those who receive Employment Income Assistance (EIA). With limited income, EIA recipients find it challenging to stretch their money (let alone consider saving it) and must choose their banking options carefully—which includes considering proximity and the possibility of paying additional fees.

Sandy (a pseudonym) is a Financial Diaries participant, and is in her early fifties and draws income from EIA. As a person with a disability, Sandy uses a walker to get around downtown Winnipeg. This is a

challenge during the long snowy winter months. Except for weeks that sidewalks are unplowed and she is forced to stay home, she walks half a kilometre to her volunteer position as a client advocate. Sandy makes careful decisions about her limited income. When the monthly EIA cheque is deposited into her bank account, she has difficult choices to make about how to pay her bills and buy groceries.

For instance, should she travel by bus to her bank and withdraw cash so that she minimizes ATM and/or transactions fees? This takes time and bus tickets. In terms of groceries, she could make purchases at the convenience store in her neighbourhood or take the bus to a grocery store with cheaper and healthier options. In each case, she could use her debit card or withdraw cash from a nearby ATM. Most months that I met with Sandy, she shared with me that she purchased groceries from the convenience store due to ease of frequent access. She commented that her EIA allotment for groceries was insufficient to purchase fresh fruits and vegetables from a grocery store. Additionally, she often used nearby ATMs incurring additional fees because access was quick, timely, and convenient. Her low-cost bank account offered too few transactions and she incurred fees for over usage. It seems that Sandy's financial decisions are largely driven by her reality as a person with low income and limited mobility.

Low-cost bank accounts offer a necessary service to impoverished individuals and yet the restrictions on debit card transactions fail to meet Sandy's needs, and have unintended consequences. People on EIA or with low incomes cannot make large purchases frequently, and instead they make small and recurrent purchases at stores near to them. Furthermore, as banks are moving towards paperless and mostly online systems, people with limited incomes need physically close and reliable internet access. Making cost-effective financial decisions poses a steady stream of challenges for vulnerable populations.

Building savings: Future directions

The following planned, or in-process, research initiatives are being undertaken to fill existing gaps in our current understanding of how to promote personal savings in Canada:

- A project by **Dr. David Rothwell and colleagues**, such as UK Professors Steve McKay and Karen Rowlingson, will be investigating emerging saving behaviours of individuals nested within countries (across the OECD). This will focus on better understanding how sociodemographic characteristics and contextual factors interact to prevent and promote emergency saving.
- While traditional definitions of poverty have relied mainly on levels of income and savings, another project by **Drs. Rothwell, Robson** and colleagues considers an expanded definition which includes asset poverty—the idea that financial assets are not sufficient to maintain financial well-being at low-income thresholds for at least 3 months (Rothwell & Robson, 2018). Indeed, they have estimated that asset poverty is two to three times higher than income poverty, and that this measure should be considered by practitioners (e.g., financial counsellors) and policymakers when assessing

economic vulnerability in future. Early findings from this project have also compared asset poverty and wealth accumulation differences in Canada and the US (Rothwell et al., 2020).

- **Drs. Jerry Buckland, Gail Henderson and colleagues** are currently studying group RESPs⁸, a previously under-explored topic in financial inclusion. Some of the work from this project has been [published previously](#). Their work used a combination of questionnaires, interviews, and focus groups to assess the experience of low-income group RESP subscribers. One key finding was that some salespeople have been targeting low-income consumers even though many do not benefit from such a product (Buckland et al., 2018a). Dr. Henderson and practitioners with SEED Winnipeg are continuing to look at this topic and are creating plain language educational resources aimed at low-income earners to help clarify when and for whom such products are most beneficial.
- **Dr. Pierre-Carl Michaud and colleagues**, at the Retirement and Savings Institute of Montreal are linking CFCS and administrative tax data, to better understand the connection between financial knowledge and the kinds of choices people make when filing their taxes. The results from this work will complement prior work by this team showing that simple and timely financial education programs can improve the knowledge, decision-making and savings rates for working-age adults who should likely be contributing to tax-sheltered retirement accounts (Boyer et al., 2019).
- **Dr. Andrea Hasler and colleagues** are investigating the drivers of financial well-being among US African American and Hispanic women and millennials by exploring how their financial situations, financial capability, and financial literacy contribute to their financial well-being. Recent research conducted by this team found that financial literacy differs among demographic groups with scores on a financial knowledge assessment increasing with age, household income, and education, and with men displaying higher scores than women (Yakoboski et al., 2019). Moreover, the research team finds that personal finance knowledge among US African-American adults lags that of whites (Yakoboski et al., 2020). This research links financial literacy to financial wellness as individuals with higher scores were more likely to have the capacity to absorb a financial shock, actively save for retirement, and were less likely to be constrained by debt. Findings will be used to inform the

⁸ Group RESPs are an education savings vehicle that use a pooled investment model.

development of more inclusive and targeted school and workplace financial wellness programs, given the importance of providing financial education in the workplace to enhance employees' financial security, strengthen financial literacy, and improve retirement planning. Such financial education is especially important as the responsibility for retirement planning continues to shift from the employer to the employee (Fisch et al., 2020).

- **Dr. Hasler and colleagues** are also continuing to examine financial fragility (i.e., an individual's ability to cope with an unexpected expense) in the US with a particular focus on the determinants of financial fragility for middle-income households. This will build on prior research indicating that financially fragile middle-income households have low financial literacy, use high-cost borrowing to pay for emergency expenses, and are less likely to plan for retirement (Hasler et al., 2018).
- **Dr. Dilip Soman's team** at the University of Toronto use behavioural insights to design interventions to help improve people's ability to make sound decisions. They are also working on research designed to improve the efficacy of financial education programs. In addition to those noted above, one current project from this team is looking at assisting people in improving their retirement savings through simple changes to pension statements and by employing text messages related to reminding consumers about ongoing contributions.
- **Prosper Canada**, through a literature review and key informant interviews, will describe the role of emergency savings in building and sustaining financial health, particularly amongst low-and moderate-income Canadians, as well as identify barriers to saving. This work aims to identify existing policies, products and programs that have effectively stimulated low-and moderate-income households to build emergency savings globally and opportunities to enhance or pursue new interventions in Canada.

Building savings: Existing gaps

When considering the four themes noted above, it becomes apparent that much of our current understanding is focused at the levels of individual behaviour and the social determinants of financial well-being. The area of building savings has lent itself more towards the study of practical measures, such as trying to understand

consumers' experiences with retirement or educational savings products, or targeting clear recommendations at policymakers or front-line practitioners.

However, much work remains to better understand how such products are being used. For instance, it is not clear how often, and for what purposes, consumers are tapping into retirement or education funds before they are due. It is also unclear to what degree that Canadians who do save might be using less efficient vehicles for doing so (e.g., savings accounts), when products more suited to their goals might exist (e.g., TFSAs, RRSPs, RESPs). Most of the barriers to saving that were suggested years ago are still relevant today—including insufficient disposable income, a poor understanding of available financial tools and products, and low financial literacy levels, such as not knowing how much to save (Boisclair et al., 2017)—although we have a greater understanding today of how to effect change in the future.

Like for other priorities, a number of outstanding questions remain. Although there are now many online and smart-phone tools to assist with managing debt, building savings, and budgeting, relatively little is known about how these tools are helping or hindering consumers' financial well-being. Moreover, there is little work in a Canadian context that explores the impact of expert advice, or on the use of computer-assisted recommendations, on saving behaviour and financial well-being.

Building savings: Key points summary

- Canadians are saving less money overall.
- Borrowing to pay for unexpected expenses, increasing tuition costs, and a lack of clarity in how to prepare and how much to save for retirement are all challenges and barriers to saving.
- Educating Canadians on relevant savings vehicles (e.g., TFSA, RESP, Canada Learning Bond, RRSP) and designing financial education programs and resources to build financial confidence strengthen the financial literacy of Canadians and increase their likelihood of saving.
- Researchers are working to understand the barriers that prevent people from saving and are exploring ways to encourage Canadians to save by developing relevant financial education resources and targeted interventions that are delivered in a timely manner.
- Future research is needed to uncover the frequency and reasons consumers use savings dedicated to retirement or education for other purposes, to what degree Canadians use the most appropriate savings vehicle for their personal goals, and to understand the impact that savings tools have on the financial well-being of Canadians.

Budgeting

Budgets allow for a clear understanding of how both predictable and unpredictable expenses are addressed with one's income, and allows consumers to more effectively plan for their future. Budgets may be tied to one's ability to perform each research priority behaviour (i.e., manage debt, navigate the financial marketplace, and save) with confidence. Research that uncovers when and for whom budgeting is most helpful, as well as ways to improve budgeting behaviour, continues to be a priority.

Budgeting: Starting points for future research

A number of past research projects have helped illuminate the impact of personal budgeting behaviours on financial well-being. For instance, Fernbach, Kan, and Lynch Jr (2015) found that individuals who use budgets engage in priority planning to identify their needs over their wants. Those with a budget are more likely to meet all of their financial commitments, are more likely to save, and are better prepared for retirement (FCAC, 2017b). However, despite its benefits, fewer than half of all Canadians have a budget (FCAC, 2015a, 2016a, 2019e) with many saying they keep their budget in their mind alone (CPA, 2017; FCAC, 2019e).

An FCAC project aimed at non-budgeters was able to deliver educational and promotional messaging about the positive impact of using a budget through a mobile app (FCAC, 2016a, 2017a). Early results from British Columbia, Newfoundland & Labrador, and Ontario showed that the intervention produced increases in budgeting use (14-23%), knowledge (4-10%), and confidence (~16%) among initial non-budgeters. Importantly, these results were maintained in a 1.5-year follow-up, with over half of new budgeters in British Columbia and Newfoundland & Labrador continuing to budget over the long-term. These participants also showed an increase in confidence and an improved ability to meet financial commitments compared to non-budgeters (FCAC, 2019c).

Regarding information about specific groups, analyses using data from the **2014 Canadian Financial Capability Survey (CFCS; see Appendix I)** revealed that budgeting was positively associated with knowing how much money was needed for retirement in those of retirement or near-retirement age (FCAC, 2017b). Guided by a model from University of Bristol-based Professor Elaine Kempson (Kempson et al., 2006), FCAC performed a cross-sectional analysis of four financial skills related to financial confidence and knowledge in everyday life, including budgeting (FCAC, 2017b). This study revealed that sticking to a budget was positively related to knowing how much money is needed for retirement and is tied to a consumer's standard of living in retirement. Less well understood, however, is how long-term

budgeting can impact other key behaviours (e.g., saving, managing debt, navigating the marketplace)—for this, more longitudinal analyses will be needed⁹.

Analyses of other demographic groups are also essential to a more nuanced understanding of the effects of budgeting. For example, millennials (those born roughly from 1980 to 2000) may be generally more knowledgeable about budgeting and risk management compared to their lower-level understanding of retirement planning (Killins, 2017). In addition, although budgeting behaviour may be most important for the financial well-being of low-income consumers; at least one US study has suggested that budgeting is a very low priority in this group (Xiao & O’Neill, 2018).

Budgeting: Future directions

The following planned, or in-process, research initiatives are being undertaken to fill existing gaps in our current understanding of the use of personal budgets:

- Another goal of the above-mentioned project by **Dr. Karen Duncan and colleagues** (noted above under Debt Management), using 2014 CFCS data, is to explore the consumer characteristics of budgeters and non-budgeters. This research promises to extend our current understanding of budgeting in a Canadian context, and will also connect these findings to research on other financial behaviours.
- Work by **Chuck Howard** at the Texas A&M University, and his colleagues at St. Andrew’s University in the UK, is helping to quantify Canadian, the UK, and US consumers’ budget optimism, as well as how budgets can help people decrease their spending over time. Preliminary results are suggesting strategies and psychological variables that contribute to successful budgeting behaviours.
- **Dr. Zdravko Marjanovic and colleagues** (discussed above under Debt Management) are also planning to investigate how negative language around budgeting, which itself connotes restraint and limitation, may affect some consumers differently. They hypothesize that this project may help to target

⁹ Using the 2014 CFCS, FCAC explored the impact of budgeting behaviours on financial well-being. Preliminary analyses suggested that people use budgets because they face financial constraints, but such initial constraints may themselves reduce the probability of achieving positive financial well-being outcomes. In the future, budgeting research should use evidence from longitudinal data in order to help clarify these relationships (FCAC, 2015a).

certain individuals with framed messages better suited to their motivational style.

- **Marc Aubrey and Drs. Claude Fernet and Noémie Carbonneau**, at the Université du Québec à Trois-Rivières, are studying the behaviours and individual characteristics of budgeters. They created a scale to help identify how these characteristics might relate to an individual’s likelihood of adopting and using a budget—particularly investigating budgeting “intensity” (e.g., related to frequency of use and budget formality). Preliminary results have suggested that budget adoption is related to: perceived skill, financial concerns, and parental adoption; while socio-demographic and personality variables are not strongly related. Budget intensity appears related to: perceived skill, financial well-being, and budgeting interest.
- **FCAC** has released its next-generation [Budget Planner Tool](#). This tool was developed in consultation with **Dr. Dilip Soman** and leverages behavioural insights, such as nudges, social norms, gamification, and an understanding of biases, to make personal budgeting easy, fun, and user-friendly for the average financial consumer. It allows people to create a budget that is tailored to their personal financial needs and goals. Future research of the new Budget Planner Tool could help improve our understanding of how behavioural insights can facilitate financial consumers’ ability to create a budget and achieve their financial goals.
- **FCAC** also included questions on budgeting in the 2019 CFCS. Analyses of these questions will help to better understand differences in the characteristics of Canadians who have a budget compared to those who do not, the approaches used to create a budget, and reasons for not budgeting. It will also enable us to explore how budgeting is tied to effective money management and financial well-being.

Budgeting: Existing gaps

When considering the four themes noted above, it becomes apparent much of our current understanding is focused at the level of individual behaviour. We have a good sense that people who use budgets are better off financially, compared to those who do not. People who budget tend to be more confident in financial matters and are better prepared for expected (e.g., retirement) and unexpected (e.g., car repairs)

life events. When compared to the other research priorities, it is clear that there are fewer studies on budgeting.

As such, many questions remain—particularly as they pertain to Canadian consumers. We do not have a good understanding of how budgeting behaviours might differ across socioeconomic groups. There is a need to better understand the extent to which recently developed financial technology tools, such as online budgeting tools or smartphone apps, are affecting consumers' ability to manage their money. For instance, similar to the work above showing that millennials using mobile banking are more likely to overdraw on their financial accounts (Lusardi et al., 2018), it might well be that some people using budgeting apps are under the illusion that such automated budgeting is helping to improve their financial situation when the opposite may be true. In this sense, it could be useful to better understand the effects of different budgeting approaches (e.g., using mental accounting vs. apps vs. spreadsheets) on consumers' budgeting behaviours and their likelihood to reap long-term benefits. In addition, the impact that budgeting training and education has at the front line is also unclear—for instance, are these useful tools for financial counsellors and their clients?

In addition to projects underway, other less well-studied indirect factors may have an impact on budgeting behaviour. For instance, work by Dr. Erin Maloney and colleagues suggests that math anxiety prevent some people from engaging with simple mathematical challenges—such as those involved in creating and maintaining a budget (Ramirez et al., 2018). This is independent of math ability, meaning that people with high math anxiety perform worse than others, even when their skill level is the same. An open question remains about whether this avoidance and lack of confidence may be preventing people from budgeting or altering the perseverance of those who start.

In another research vein, behaviour- and brain-based evidence has supported the link between paying with money and negative emotion—suggesting that, in some sense, paying with money can be “painful” (Mazar et al., 2017; Shah et al., 2016). These findings raise questions for an increasingly cash-free society, in which people mostly use “pain-free” payment methods (e.g., debit or credit cards). For instance, although budgeting might become easier (using online or mobile applications with a direct link to financial accounts), the use of “pain-free” payment methods might implicitly promote spending and make it more difficult for many to stay within their budgets.

Once again, it is prudent to point out that the research and existing gaps outlined here, and in all other sections, are not meant to be exhaustive in scope. In fact, this document is meant to both guide and inspire researchers and other stakeholders to add their ideas to future work and discussions.

Budgeting: Key points summary

- Budgets allow consumers to more effectively plan for their future by helping them to manage their debt, navigate the financial marketplace, and save with confidence.
- Despite the benefits of budgeting, fewer than half of Canadians have a budget.
- Analyses of longitudinal data through the lens of demographic groups will help to provide a more nuanced understanding of the effects of budgeting both in the short—and long-term.
- Researchers are leveraging behavioural insights to make budgeting accessible and attractive for financial consumers and are exploring the characteristics of budgeters and non-budgeters as well as the role of confidence and language in influencing consumers' budgeting behaviour.
- Future research is needed to understand how budgeting behaviours differ across socioeconomic groups, the effects of different budgeting approaches on consumer behaviours and financial outcomes, and the indirect factors that have an impact on budgeting behaviour and people's ability to stay within their budget.

COVID-19 financial literacy research

With the unexpected onset of the COVID-19 global pandemic, researchers at academic institutions, as well as from industry, non-profit organizations, and government have sought to learn more about its impact on consumers' financial well-being, experiences, and behaviours. The following few paragraphs include a small sample of such efforts as they relate to the area of financial literacy.

The Government of Canada has followed the [outbreak closely](#) and created a [portal](#) about receiving financial help during COVID-19. [FCAC responded to the pandemic](#) by engaging with regulated entities and providing support and advice for consumers. Prosper Canada used their data on COVID-19 to develop a [Financial Relief Navigator](#) tool to help Canadians identify emergency benefits and relief supports for which they may be eligible.

FCAC also fielded two **COVID-19 surveys: the Canadian Financial Well-Being Monitor and Canadians' use of Bank Products and Services (see Appendix I)**. Beginning in the fall of 2020, they will be fielded monthly until the spring of 2021 and will survey 1000 Canadians at each time point. The aim is to monitor the effects

of the pandemic on consumers' financial well-being, experiences and behaviours as they relate to their personal finances and their interactions with financial institutions and products.

Dr. Hasler and colleagues recently released research on millennials financial preparedness and money management before COVID-19. The research found that many young adults in the US were ill-prepared to face the uncertainties of an economic crisis as well as navigate the complexity of today's financial landscape in general (Bolognesi et al., 2020). The team also developed and released more US-focused research and resources on how to build up financial resilience and literacy (Lusardi et. al., 2020) and created a [resource hub](#) for people in the US seeking information during this crisis.

Dr. Michaud and colleagues fielded a survey in Quebec to measure the impact of COVID-19 on the personal finances of consumers, as well any changes in mental health and expectations for the future (Achou et al., 2020). These survey data will also report on a number of quantitative financial aspects, such as amounts of assets and debts and changes in hours of employment.

Next steps

Financial literacy and financial well-being is a relatively new and vital field of study. The Financial Consumer Agency of Canada remains dedicated to serving, collaborating, and connecting the many communities that share our broad vision of strengthening the financial well-being of all Canadians. We continue to act as a key collaborator for creating, promoting, and supporting financial literacy research, and will continue to champion new initiatives that help to translate research findings into evidence-based policies and successful services and tools.

This Review of Financial Literacy Research in Canada has summarized some of the key Canadian research findings across many of the fundamental areas which make up the financial literacy and financial well-being landscape. The four **research priorities**—[managing debt](#), [navigating the financial marketplace](#), [building savings](#), and [budgeting](#)—were coupled with four **themes**—[mental and behavioural abilities](#), [social determinants of financial well-being](#), [financial technology](#), [research in practice](#)—which cut across the priorities and underscore the context-dependent nature of all research. This work has collectively offered answers to many pressing questions—but we must remember that this multidisciplinary field is still in its infancy. The Review's main goal is to highlight new findings and information which might help to better inform policy and practices at the front lines, as well as to help guide new lines of inquiry which will continue to underpin such work. We must also continue to ask questions about the effectiveness of old and new programs, from

which Canadians might benefit, and to encourage more research, data collection, and evaluation by all stakeholders to help answer such questions.

Contact us: If you are interested in learning more about financial literacy data (see Appendix I), or have any questions about the Review of Financial Literacy Research in Canada, please contact the Strategic Policy, Research and Experimentation Division at the Financial Consumer Agency of Canada: Research-Recherche@fcac-acfc.gc.ca

Appendices

Appendix I — Canadian data for researchers

The following datasets have been used to create new knowledge regarding the financial literacy and financial well-being of Canadian consumers. Together, they have led to numerous publications that have helped inform policies and practices across Canada.

Canadian Financial Capability Survey (CFCFS)—Designed to provide a portrait of Canadians’ knowledge, abilities and behaviours concerning personal financial management, it was fielded in 2009 and 2014 by Statistics Canada, and by FCAC in 2019.

Financial Well-Being Survey (FWBS)—Focusing on four key determinants of financial well-being: (1) the social and economic environment, (2) financial knowledge and experience, (3) psychological factors, and (4) financially capable behaviour, this survey was conducted in Canada in 2018 by FCAC.

CFCFS-Administrative Tax — The CFCFS data were linked to some administrative tax data for the first time in 2018. This project was undertaken by Statistics Canada and the Retirement and Savings Institute at HEC Montréal.

General Social Survey (GSS) — The GSS is administered every five years by Statistics Canada to collect nationally representative, cross-sectional data on the following six topic areas: caregiving, families, time use, social identity, volunteering and victimization.

Survey of Financial Security (SFS)—Designed to collect information from a sample of Canadian households on their assets, debts, employment, income and education, the SFS by Statistics Canada provides information on financial and non-financial assets, e.g., mortgages, vehicles, credit cards, student loans and other debts.

OECD/INFE Survey on Measuring Financial Literacy and Financial Inclusion—This tool allows for a comparison of the financial knowledge, attitudes and behaviour of adults, as well as indicators of financial inclusion and financial well-being across many countries worldwide.

Programme for International Student Assessment (PISA)—PISA is a collaborative effort among member OECD countries that surveys 15-year-old students around the world. Conducted every three years, PISA assesses students’ levels of knowledge and skills that are essential for full participation in modern societies. Canada participated in 2015 and 2018.

COVID-19 Surveys: Canadian Financial Well-Being Monitor and Canadians’ use of Bank Products and Services—These will be fielded monthly from fall of 2020 until spring of 2021; they look at changes in consumer financial well-being, experiences and behaviours.

For information about, or questions regarding, these datasets please contact FCAC at:

Research-Recherche@fcac-acfc.gc.ca

Appendix II—List of authors & contributors

Jerry Buckland, Professor, Menno Simons College
Karen Duncan, Associate Professor, University of Manitoba
Andrea Hasler, Assistant Professor, George Washington University
Dave Hayes, Financial Consumer Agency of Canada
Rebecca Kong, Financial Consumer Agency of Canada
Jodi Letkiewicz, Assistant Professor, York University
Bruno Lévesque, Financial Consumer Agency of Canada
Allison Meserve, Senior Manager, Research and Evaluation, Prosper Canada
Pierre-Carl Michaud, Professor, HEC Montreal
Nicole Rivest, Financial Consumer Agency of Canada
Nicole Robitaille, Assistant Professor, Queen's University
David Rothwell, Assistant Professor, Oregon State University
Bettina Schneider, Associate Professor & Associate VP Academic, First Nations University of Canada
Dilip Soman, Professor & Canada Research Chair, University of Toronto
Brenda Spotton Visano, Professor, York University
Ruth Stephen, Financial Consumer Agency of Canada
Steve Trites, Financial Consumer Agency of Canada
Jiaying Zhao, Assistant Professor, University of British Columbia

Appendix III—Glossary of key terms

Emergency expenses—emergency expenses are unexpected expenses that occur from an unexpected situation or a sudden decrease in income. Examples of an emergency expense include a car breakdown, an urgent visit to the veterinarian, job loss, or health problems that prevent you from working.

Financial confidence (also self-efficacy)—Financial confidence means having the self-assurance to make important decisions (Social Research and Demonstration Corporation, 2016b).

Financial literacy—Financial literacy refers to the knowledge, confidence and skills necessary to make responsible financial decisions (FCAC, 2015b).

Financial technology (Fintech)—Financial technology refers to technology-led innovation in the financial services sector which is transforming what financial services are, and how they are delivered to consumers (Competition Bureau, 2018).

Financial well-being—Financial well-being is the extent to which you can comfortably meet all of your current financial commitments and needs while also having the financial resilience to continue doing so in the future (FCAC, 2019d).

Policymaker — “A policy is a set of statements of principles, values, and intent that outline expectations and provides a basis for consistent decision-making and resource allocation in respect to a specific issue” (Canada.ca, 2017). From this, in the broadest sense, a policymaker is any person (e.g., politician, bureaucrat, or institutional leaders) who plays a role in developing and implementing policy.

Practitioner—While there is no singular definition for this term, or for the term “financial practitioner” specifically, it generally refers to “someone involved in a skilled job or activity” (Cambridge Dictionary, n.d.) who works mainly with clients in the public space and often acts as a “choice architect”—organizing and presenting the context in which people make decisions (Thaler & Sunstein, 2008; Ly et al., 2013).

Registered Retirement Savings Plan (RRSP) — A Registered Retirement Savings Plan is a savings plan designed to help Canadians save for retirement. Money earned in an RRSP is usually exempt from tax as long as the funds remain in the plan but is generally subject to tax when taken out.

Scarcity—Scarcity is the condition of having insufficient resources to cope with demands (Zhao and Tamm, 2018).

Seniors/Older adults — In Canada, there does not exist a universal age parameter for seniors/older adults. However, the terms “older adults” and “seniors” can generally be considered to be those aged 55 and older, and 65 and older, respectively. In 2018, seniors composed just under one fifth of Canada’s population (Statistics Canada, 2019d).

Tax-Free Savings Account (TFSA) — A Tax-Free Saving Account is a savings account available to individuals aged 18 and older to help them set money aside tax-free throughout their lifetime. Contributions to a TFSA are not deductible for income tax purposes. Any amount contributed as well as any income earned in the account is generally tax-free, even when it is withdrawn (FCAC, 2016c).

Youth — In Canada, there does not exist a universal age parameter for youth, however, youth can generally be considered to be those under the age of 30 (Statistics Canada, 2019a). In 2018, youth composed just over one third of Canada’s population (Statistics Canada, 2019c). From an international perspective, the United Nations has, for statistical purposes, defined this term as people between the ages of 15 and 24 (UN, n.d.).

Appendix IV—FCAC tools

[Budget Planner](#) — A free interactive tool that allows you to create a personalized budget that you can save online and update later.

[Financial Goal Calculator](#)—Calculate how to pay down your debt and reach your savings goal.

[Retirement Income Calculator](#) — A step-by-step calculator to help you estimate your retirement income, employer pensions and other sources of income.

[Credit Card Payment Calculator](#)—Find out how long it will take to pay off your credit card and explore options to pay it back faster.

[Canadian Financial Literacy Database](#) — A one-stop source for resources and events from Canadian organizations on budgeting, saving, investing, and more.

[Financial Wellness in the Workplace](#)—Strategies and resources based on best practices to help employers build financial wellness programs to improve the financial well-being of their employees.

[Your Financial Toolkit](#)—An online learning program providing financial information and tools for adults.

[Financial Basics Workshop](#) — A money management workshop to help young adults make smart financial decisions.

Appendix V—Suggested citation of the Review of Financial Literacy Research in Canada

Financial Consumer Agency of Canada. (2019). Review of Financial Literacy Research in Canada: An Environmental Scan and Gap Analysis. Retrieved from <https://www.canada.ca/en/financial-consumer-agency/programs/research/review-financial-literacy-research.html>

Appendix VI—References

- Achou, B., Boisclair, D., D'Astous, P., Fonseca, R., Glenzer, F., Michaud, P.-C. (2020). Impacts of the pandemic on personal finances: A preliminary assessment. CIRANO. Retrieved from <https://cirano.qc.ca/en/summaries/2020PE-25>
- An, J., Kim, M., & Soman, D. (2016). Financial behaviour online: It's different! *Research Report Series Behavioural Economics in Action*. Rotman School of Management, University of Toronto.
- Babiarz, P., Robb, C.A. (2014). Financial literacy and emergency saving. *Journal of Family and Economic Issues* 35(1): 40-50.
- Bank of Canada. (2019). Financial System Review—2019. Retrieved from <https://www.bankofcanada.ca/2019/05/financial-system-review-2019/>
- Bédard, N., & Michaud, P.C. (2018). Playing with fire? Debt near retirement in Canada. Working paper, Cahier de recherche #18-14. Retrieved from: http://ire.hec.ca/wp-content/uploads/2018/12/cahier_18_14_playing_fire_debt_near_retirement_canada.pdf
- Ben-Ishai, S., & Stanley, T. (2017). Millennials in crisis: Myth-busting millennial debt narratives. *Osgoode Hall Law Journal*, 54(4), 1051-90.
- Boisclair, D., Lusardi, A., & Michaud, P.C. (2017). Financial literacy and retirement planning in Canada. *Journal of Pension Economics and Finance*, 16(3), 277-296.
- Bolognesi, A., Hasler, A., Lusardi A. (2020). Millennials and money: Financial preparedness and money management practices before COVID-19. *TIAA Institute*. Retrieved from <https://gflec.org/wp-content/uploads/2020/08/Millennials-and-Money-Technical-Report-August2020.pdf?x38887>
- Boyer, M.M., d'Astous, P., & Michaud, P.C. (2019). Tax-sheltered retirement accounts: Can financial education improve decisions? Working paper. Retrieved from http://ire.hec.ca/wp-content/uploads/2019/02/cahier_19_02_tax-sheltered_retirement_accounts_financial_education_decisions.pdf
- Boyer, M.M., De Donder, P., Fluét, C., Leroux, M.L., Michaud, P.C. (2020). Long-term care insurance: Information frictions and selection. *American Economic Journal: Economic Policy* 12: 134-69. Retrieved from <https://www.aeaweb.org/articles?id=10.1257/pol.20180227>

Brzozowski, M., & Spotton Visano, B. (2019). "Havin' money's not everything, not havin' it is": The importance of financial satisfaction for life satisfaction in financially stressed households. *Journal of Happiness Studies*, 1-19.

Buckland, J., McKay D., Reimer, N. (2016). Financial inclusion and Manitoba Indigenous Peoples: Results from an urban and a rural case study. Canadian Centre for Policy Alternatives. Retrieved from <https://www.policyalternatives.ca/publications/reports/financial-inclusion-and-manitoba-indigenous-people>

Buckland, J., Henderson, G.E., Schachter, K., Eaton, G., & Chung, S. (2018a). The regulation of group plan RESPs and the experiences of low-income subscribers. Seed Winnipeg Inc. Retrieved from [http://seedwinnipeg.ca/files/The Regulation of Group Plan RESPs and the Experiences of Low-income Subscribers.pdf](http://seedwinnipeg.ca/files/The%20Regulation%20of%20Group%20Plan%20RESPs%20and%20the%20Experiences%20of%20Low-income%20Subscribers.pdf)

Buckland, J., Robinson, C., & Spotton Visano, B. (Eds.). (2018b). Payday lending in Canada in a global context: a mature industry with chronic challenges. *Palgrave Macmillan*, pp. 245.

Buckland, J. (2018). Building financial resilience: Do credit and finance schemes serve or impoverish vulnerable people? *Palgrave Macmillan*, pp. 270.

Cambridge Dictionary. (n.d.). "Practitioner". Retrieved from <https://dictionary.cambridge.org/dictionary/english/practitioner>

Canada Interest Rates. (2019). Trading economics. Retrieved July 26, 2019 from <https://tradingeconomics.com/canada/interest-rate>

Canada.ca. (2017). Introduction to policy. Retrieved from <https://www.canada.ca/en/heritage-information-network/services/digital-preservation/concepts-developing-policies/introduction-policy.html>

Canadian Bankers Association. (2018). Focus: How Canadians bank. Abacus Data. Retrieved from <https://cba.ca/technology-and-banking>

Canadian Marketing Association. (2018). Data privacy: What the Canadian consumer really thinks. *A report by Foresight Factory*. Retrieved from <https://www.the-cma.org/about/blog/data-privacy-study-what-the-canadian-consumer-really-thinks>

Canadian Mortgage and Housing Corporation (CMHC). (2019). Mortgage and consumer credit trends: National report – Q2 2019. Retrieved from

<https://www.cmhc-schl.gc.ca/en/data-and-research/publications-and-reports/mortgage-and-consumer-credit-trends>

Canadian Payroll Association (CPA). (2017). Survey: Half of workers say financial stress impacts work performance. *News release*. Retrieved from <https://www.payroll.ca/PDF/News/2017/FLM2017EN.aspx>

Canadian Payroll Association (CPA). (2018). Survey finds employed Canadians failing to take advantage of improved financial picture to reduce debt or save more for retirement. Retrieved from <https://payroll.ca/PDF/NPW/2018/Survey/180820-CPA-NPW-Survey-National-News-Release-FINAL.aspx>

Canadian Payroll Association (CPA). (2019). NPW 2019 Employee Research Survey, national press release results. Retrieved from <https://payroll.ca/PDF/NPW/2019/Media/CPA-2019-NPW-Employee-Survey-as-at-June-25-2019-v1.aspx>

Center for Social Development. (2015). Report to the community. *Washington University in St. Louis: George Warren Brown School of Social Work*. Retrieved from <https://cpb-us-w2.wpmucdn.com/sites.wustl.edu/dist/a/1278/files/2018/04/CSD-REPORT.WebEdition.1.12.2016-1qop3n9.pdf>

Competition Bureau Canada. (2018). Canada's progress in fintech: Regulatory highlights following the Competition Bureau's Market Study. Retrieved from <https://www.competitionbureau.gc.ca/eic/site/cb-bc.nsf/eng/04392.html>

Consumer Financial Protection Bureau (CFPB). (2015). Financial well-being: The goal of financial education. Retrieved from <https://www.consumerfinance.gov/data-research/research-reports/financial-well-being/>

Despard, M.R., Friedline, T., Martin-West, S. (2020). Why do households lack emergency savings? The role of financial capability. *Journal of Family and Economic Issues*, 41: 542-557.

Duncan, K.A., Shooshtari, S., Roger, K., Fast, J., & Han, J. (2016). Care-related out-of-pocket expenditures in Canada. *Journal of Financial Counseling and Planning*, 27(2), 277-296.

Edenhoffer, K. (2018). Toronto on the Global Stage: 2018 Report card on Canada and Toronto's financial services sector. *Ottawa: The Conference Board of Canada*.

Retrieved from <https://www.conferenceboard.ca/e-library/abstract.aspx?did=10009>

Engert, W., Fung, B.S.C., & Hendry, S. (2018). Is a cashless society problematic? Staff discussion paper. *Bank of Canada*. Retrieved from <https://www.bankofcanada.ca/wp-content/uploads/2018/10/sdp2018-12.pdf>

Feng, B., Oyunsuren, J., Tymko, M., Kim, M., & Soman, D. (2018). How should organizations best embed and harness behavioural insights? A playbook. *Toronto, Canada: Behavioural Economics in Action at Rotman (BEAR) Report series*, available at <http://www.rotman.utoronto.ca/bear>

Fernbach, P.M., Kan, C., & Lynch, J.G. Jr. (2015). Squeezed: Coping with constraint through efficiency and prioritization. *Journal of Consumer Research*, 41(5), 1204-1227.

Fiksenbaum, L., Marjanovic, Z., & Greenglass, E. (2017). Financial threat and individuals' willingness to change financial behaviour. *Review of Behavioral Finance*, 9(2), 128-147.

Financial Consumer Agency of Canada. (2015a). Managing money and planning for the future: Key findings from the 2014 Canadian Financial Capability Survey. Retrieved from <http://publications.gc.ca/site/eng/9.805000/publication.html>

Financial Consumer Agency of Canada. (2015b). National strategy for financial literacy—Count me in, Canada. Retrieved from <https://www.canada.ca/en/financial-consumer-agency/programs/financial-literacy/financial-literacy-strategy.html>

Financial Consumer Agency of Canada. (2016a). Backgrounder: Sustained behaviour change through financial education: A budgeting longitudinal study using mobile technology. Retrieved from <https://www.canada.ca/en/financial-consumer-agency/programs/research/financial-education-budgeting-longitudinal.html>

Financial Consumer Agency of Canada. (2016b). Payday loans: Market trends. Retrieved from <https://www.canada.ca/en/financial-consumer-agency/programs/research/payday-loans-market-trends.html>

Financial Consumer Agency of Canada. (2016c). The tax-free savings account. Retrieved from <https://www.canada.ca/en/revenue-agency/services/tax/individuals/topics/tax-free-savings-account.html>

Financial Consumer Agency of Canada. McKay, M., Leigh-Mossley, J. (2017a). Initiating budgeting behaviour among non-budgeters: A financial literacy pilot using

mobile technology. Retrieved from <https://www.canada.ca/en/financial-consumer-agency/programs/research/pilot-mobile-technology.html>

Financial Consumer Agency of Canada. Simhon, Y., and Trites, S. (2017b). Financial literacy and retirement well-being in Canada: An analysis of the 2014 Canadian Financial Capability Survey. Retrieved from <https://www.canada.ca/en/financial-consumer-agency/programs/research/financial-literacy-retirement-well-being.html>

Financial Consumer Agency of Canada (2017c). National research plan for financial literacy 2016-2018. Retrieved from <https://www.canada.ca/en/financial-consumer-agency/programs/research/national-research-plan-2016-2018.html>

Financial Consumer Agency of Canada. (2018). Backgrounder: Preliminary findings from Canada's Financial Well-Being Survey. Retrieved from <https://www.canada.ca/en/financial-consumer-agency/programs/research/backgrounder-preliminary-findings-canada-financial-wellbeing-survey.html>

Financial Consumer Agency of Canada. (2019a). Home equity lines of credit: Consumer knowledge and behaviour. Retrieved from <https://www.canada.ca/en/financial-consumer-agency/programs/research/home-equity-lines-credit-consumer-knowledge-behaviour.html>

Financial Consumer Agency of Canada. (2019b). Highlights: Key findings from the Survey on Banking of Canadians. Retrieved from <https://www.canada.ca/en/financial-consumer-agency/programs/research/highlights-survey-banking-of-canadians.html>

Financial Consumer Agency of Canada. (2019c). Sustained behaviour change through financial education: A budgeting longitudinal study using mobile technology. Retrieved from <https://www.canada.ca/en/financial-consumer-agency/programs/research/financial-education-budgeting-mobile-technology-follow-up-study.html>

Financial Consumer Agency of Canada. (2019d). Financial well-being in Canada: Survey results. Retrieved from <https://www.canada.ca/content/dam/fcac-acfc/documents/programs/research-surveys-studies-reports/financial-well-being-survey-results.pdf>

Financial Consumer Agency of Canada. (2019e). Canadians and their money: Key findings from the 2019 Canadian Financial Capability Survey. Retrieved from <https://www.canada.ca/content/dam/fcac-acfc/documents/programs/research-surveys-studies-reports/canadian-financial-capability-survey-2019.pdf>

- Financial Planning Standards Council (2018). OMNI Report: Financial stress. Retrieved from http://fpsc.ca/docs/default-source/FPSC/news-publications/fpsc_financial-stress-survey.pdf
- Fisch, J.E., Lusardi, A., & Hasler, A. (2020). Defined contribution plans and the challenge of financial literacy. *Cornell Law Review*, 105: 741-96. Retrieved from <https://www.cornelllawreview.org/2020/03/05/defined-contribution-plans-and-the-challenge-of-financial-illiteracy/>
- Fonseca, R., & Lord, S. (2019). Canadian gender gap in financial literacy: Confidence matters. CIRANO Working Papers 34. Retrieved from https://economie.esg.uqam.ca/wp-content/uploads/sites/54/2020/01/2019-12_docdt_eco.compressed.pdf
- Global Financial Literacy Excellence Center (GFLEC). (2019). Raising awareness of the importance of personal finance in school: New insights. GFLEC Insights Report. *GFLEC—The George Washington University School of Business*. Retrieved from https://gflec.org/wp-content/uploads/2019/05/GFLEC-Insights-Report_Raising-Awareness-of-the-Importance-of-Personal-Finance-in-School-1.pdf?x37292
- Hamilton, H.A., Wickens, C.M., Ialomiteanu, A.R., & Mann, R.E. (2019). Debt stress, psychological distress and overall health among adults in Ontario. *Journal of Psychiatric Research*, 111, 89-95.
- Hardy, E., Khan, H., Audet, M., & Soliman, M. (2018). Increasing take-up of the Canada Learning Bond—August 2018. *Government of Canada*, retrieved at <https://www.canada.ca/en/innovation-hub/services/reports-resources/behavioural-insights-project.html>
- Hasler, A., Lusardi A., & Oggero, N. (2018). Financial fragility in the US: Evidence and implications. *GFLEC Working Paper Series*, WP 2018-1. Retrieved from <https://gflec.org/wp-content/uploads/2018/04/Financial-Fragility-in-the-US.pdf?x37292>
- House, J., Robitaille, N., & Mazar, N. (2018). Effectiveness of repeated implementation intention-interventions on organizations' likelihood to file their overdue taxes. *Rotman School of Management*, Working Paper No. 2997993. Retrieved from <https://ssrn.com/abstract=2997993>
- Hurla, R., Kim, M., Singer, E., & Soman, D. (2017). Applying findings from financial literacy to encourage responsible gambling. Research paper prepared for Gambling Research Exchange Ontario (GREO). *Research Report Series Behavioural Economics in Action*. *Rotman School of Management, University of Toronto*. Retrieved from

<https://www.rotman.utoronto.ca/-/media/Files/Programs-and-Areas/BEAR/White-Papers/BEAR-ResponsibleGambling1.pdf?la=en>

Innovate Financial Health. (2020). Supporting financial health fintechs in Canada: trends, challenges, and opportunities. Toronto: Innovate Financial Health. Retrieved from <https://www.innovatefinancialhealth.com/wp-content/uploads/2020/06/Innovate-Financial-Health-Supporting-Financial-Health-Fintechs-in-Canada.pdf>

Islam, K., Simpson, W. (2017). Payday lending and microcredit: Two faces of the same problem? *Journal of International Development*, 30, 584-614. Retrieved from <https://onlinelibrary.wiley.com/doi/abs/10.1002/jid.3339>

Kempson, E., Collard, S., & Moore, N. (2006). Measuring financial capability: An exploratory study for the Financial Services Authority. In E. C. Institute (Ed.), *Consumer Financial Capability: Empowering European Consumers*, Brussels, pp. 39-76.

Kettle, K.L., Trudel, R., Blanchard, S.J., & Häubl, G. (2016). Repayment concentration and consumer motivation to get out of debt. *Journal of Consumer Research*, 43(3), 460-477.

Khan, M.N., Rothwell, D.W., Cherney, K., & Sussman, T. (2017). Understanding the financial knowledge gap: A new dimension of inequality in later life. *Journal of Gerontological Social Work*, 60(6,7), 487-503.

Killins, R.N. (2017). The financial literacy of Generation Y and the influence that personality traits have on financial knowledge: Evidence from Canada. *Financial Services Review*, 26(2), 143-165.

Letkiewicz, J., Robinson, C., & Domian, D. (2016). Behavioural and wealth considerations for seeking professional financial planning help. *Financial Services Review*, 25, 105-126.

Luo, A., Chung, Y., Shah, A., & Soman, D. (2016). Financial literacy in a box (FLIB) initiatives. Retrieved from <http://www.rotman.utoronto.ca/FacultyAndResearch/ResearchCentres/BEAR/Our-Research/Summer-Projects>

Lusardi, A., de Bassa Scheresberg, C., Avery, M. (2018). Millennial mobile payment users: A look into their personal finances and financial behaviours. GFLEC Insights Report. *GFLEC—The George Washington University School of Business*. Retrieved from <https://gflec.org/initiatives/millennial-mobile-payment-users/>

Lusardi, A., & Hasler, A. (2019). Millennial's engagement with online financial education resources and tools: New survey insights and recommendations. GFLEC Insights Report. *GFLEC—The George Washington University School of Business*. Retrieved from https://gflec.org/wp-content/uploads/2019/04/Millennial-Engagement-with-Online-Financial-Education-Resources_FINAL.pdf?x37292

Lusardi, A., Hasler, A., Yakoboski, P.J. (2020). Building up financial literacy and financial resilience. *Mind & Society*. Retrieved from <https://link.springer.com/article/10.1007/s11299-020-00246-0#citeas>

Ly, K., Mazar, N., Zhao, M., Soman, D. (2013). A practitioner's guide to nudging. *Research Report Series, Behavioural Economics in Action, Rotman School of Management*, University of Toronto.

Maroto, M. (2019). Sharing or limiting the wealth? Coresidence, parental support, and wealth outcomes in Canada. *Journal of Family and Economic Issues* 40: 102-16.

Maroto, M. (2018). Saving, sharing or spending? The wealth consequences of raising children. *Demography* 55(6): 2257-82.

Mazar, N., Plassmann, H., Robitaille, N., Lindner, A. (2017). Pain of paying? – A metaphor gone literal: Evidence from neural and behavioural science. *Rotman School of Management, Working Paper No. 2901808*. Retrieved from https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2901808

Messacar, D. (2017). The effects of education on Canadians' retirement savings behaviour. *Statistics Canada, Analytical Studies Branch Research Paper Series*. Retrieved from <https://www150.statcan.gc.ca/n1/pub/11f0019m/11f0019m2017391-eng.htm>

McGregor, S.L.T. (2018). Status of consumer education and financial education in Canada (2016). *Canadian Journal of Education*, 41(2), 601-632.

Michaud, P.-C., Décarie, Y., Glenzer, F., Laliberté-Auger, F., Staubli, S. (2020). Hausser l'âge d'admissibilité aux prestations du Régime de rentes du Québec ? *Étude IRPP*, Montréal, Institut de recherche en politiques publiques. Retrieved from <https://irpp.org/wp-content/uploads/2020/08/Hausser-l%E2%80%99%C3%A2ge-d%E2%80%99admissibilit%C3%A9-aux-prestations-du-R%C3%A9gime.pdf>

Muir, K., Hamilton, M., Noone, J.H., Marjolin, A, Salignac, F., & Saunders, P. (2017). Exploring financial wellbeing in the Australian context. *Centre for Social Impact & Social Policy Research Centre—University of New South Wales Sydney, for Financial Literacy Australia*. Retrieved from

<http://unsworks.unsw.edu.au/fapi/datastream/unsworks:46552/binae915e74-4141-4f22-a6da-9ee5ea27e7c3?view=true>

Ontario Securities Commission. (2018). Retirement preparedness: A cross-country checkup. Retrieved from <https://www.getsmarteraboutmoney.ca/resources/publications/research/retirement-preparedness-a-cross-country-checkup/>

Organization for Economic Cooperation and Development (OECD). (2017). PISA 2015 Results (Volume IV): Students' financial literacy. *OECD Publishing, Paris*. Retrieved from <http://www.oecd.org/finance/financial-education/pisa-2015-results-volume-iv-9789264270282-en.htm>

Organization for Economic Cooperation and Development (OECD). (2020). PISA 2018 results (Volume IV): Are students smart about money? *OECD Publishing, Paris*. Retrieved from https://www.oecd-ilibrary.org/education/pisa-2018-results-volume-iv_48ebd1ba-en

Pérez-Roa, L. (2019). From “good credit” to “bad debt”: Comparative reflections on the student debt experience of young professionals in Santiago, Chile, and Montreal, Canada. *Economic Anthropology*, 6: 135-146.

Poloz, S. (2018). Canada's economy and household debt: How big is the problem? Bank of Canada, Remarks to the Yellowknife Chamber of Commerce. Retrieved from <https://www.bankofcanada.ca/2018/05/canada-economy-household-debt-how-big-the-problem/>

Poon, J., Kim, M., Rooney, P., & Han, L. (2017). Human behaviour and the life insurance application journey. *Research Report Series Behavioural Economics in Action*. Rotman School of Management, University of Toronto. Retrieved from <https://www.rotman.utoronto.ca/-/media/Files/Programs-and-Areas/BEAR/White-Papers/BEAR-LifeInsurance.pdf?la=en>

Prosper Canada. (2016). Financial literacy outcome evaluation tool. Retrieved from <http://outcomeeval.org/>

Prosper Canada. (2018). First Nations financial wellness project. Retrieved from <http://prospercanada.org/Our-Work/Centre-for-Financial-Literacy/First-Nations-Financial-Wellness-Project.aspx>

Ramirez, G, Shaw, S, & Maloney, E.A. (2018). Math anxiety: Past research, promising interventions, and a new interpretation framework. *Educational Psychologist*, 53(2), 1-20.

Reynolds, J. (April 4, 2019). Fintech innovation—an imperative for the success of Canada’s financial sector. *The Globe and Mail (newspaper)*. Retrieved from <https://www.theglobeandmail.com/business/commentary/article-fintech-innovation-an-imperative-for-the-success-of-canadas/>

Robson, J., & Loucks, A. (2018). Millennial money: Financial independence and well-being for the next generation (Part 2: Research and recommendations). *Public Policy Forum*. Retrieved from <https://ppforum.ca/publications/millennial-money-financial-independence-and-well-being/>

Robson, J., & Peetz, J. (2020). Gender differences in financial knowledge, attitudes, and behaviors: Accounting for socioeconomic disparities and psychological traits. *Journal of Consumer Affairs*. Retrieved from <https://onlinelibrary.wiley.com/doi/abs/10.1111/joca.12304>

Rothwell, D.W., Khan, M.N., & Cherney, K. (2016). Building financial knowledge is not enough: Financial self-efficacy as a mediator in the financial capability of low-income families. *Journal of Community Practice*, 24(4), 368-388.

Rothwell, D.W., & Robson, J. (2018). The prevalence and composition of asset poverty in Canada: 1999, 2005, and 2012. *International Journal of Social Welfare*, 27(1), 17-27.

Rothwell, D. W., & Wu, S. (2019). Exploring the relationship between financial education and financial knowledge and efficacy: Evidence from the Canadian Financial Capability Survey. *Journal of Consumer Affairs* 53(4), 1725-1747.

Rothwell, D.W., Giordano, L.S., & Robson, J. (2020). Public income transfers and wealth accumulation at the bottom: Within and between country differences in Canada and the United States. *Social Policy & Administration*, retrieved from <https://onlinelibrary.wiley.com/doi/abs/10.1111/spol.12629>

Schneider, B. (2018). Financial empowerment: Personal finance for Indigenous and non-Indigenous people. *Saylor Academy, University of Regina Press: Regina*.

Shah, A.M., Eisenkraft, N., Bettman, J.R., & Chartrand, T.L. (2016). Paper or plastic: How we pay influences post-transaction connection. *Journal of Consumer Research*, 42(5), 688-708.

Social Research and Demonstration Corporation (SRDC). (2016a). The role of financial literacy in financial decisions and retirement preparedness among seniors and near-seniors. Report prepared by the SRDC for FCAC. Retrieved from <http://www.srdc.org/media/199921/fcac-full-report-on-retirement-preparedness-en.pdf>

Social Research and Demonstration Corporation (SRDC). (2016b). The link between financial confidence and financial outcomes among working-aged Canadians. Report prepared by the SRDC for FCAC. Retrieved from <https://financialcapability.gov.au/files/thelinkbetweenfinancialconfidenceandfinancialoutcomes-canada-2016.pdf>

Statistics Canada. (2013). The evolution of Canadian wages over the last three decades. Retrieved from <https://www150.statcan.gc.ca/n1/pub/11f0019m/2013347/part-partie1-eng.htm>

Statistics Canada. (2015a). Population projections for Canada, provinces and territories 2009-2036. Retrieved from <https://www150.statcan.gc.ca/n1/pub/91-520-x/2010001/aftertoc-aprestdm1-eng.htm>

Statistics Canada. (2015b). Student loans and debts. Retrieved from <https://www150.statcan.gc.ca/n1/pub/81-595-m/2014101/section04-eng.htm>

Statistics Canada. (2016). Survey of Financial Security: Table 3—Percentage of Canadian families that are debt-free by age group. Retrieved from <https://www150.statcan.gc.ca/n1/daily-quotidien/171207/t003b-eng.htm>

Statistics Canada. (2018a). Impact of cybercrime on Canadian businesses, 2017. Retrieved from <https://www150.statcan.gc.ca/n1/daily-quotidien/181015/dq181015a-eng.htm>

Statistics Canada. (2018b). Tuition fees for degree programs, 2018/2019. Retrieved from <https://www150.statcan.gc.ca/n1/daily-quotidien/180905/dq180905b-eng.htm>

Statistics Canada. (2019a). A portrait of Canadian youth: March 2019 updates. Retrieved from <https://www150.statcan.gc.ca/n1/pub/11-631-x/11-631-x2019003-eng.htm#a1>

Statistics Canada. (2019b). [Table 14-10-0307-01 Employee wages by occupation, annual, inactive](#)

Statistics Canada. (2019c). [Table 17-10-0005-01 Population estimates on July 1st, by age and sex](#)

Statistics Canada. (2019d). Seniors and aging statistics. Retrieved from https://www.statcan.gc.ca/eng/subjects-start/seniors_and_aging

Statistics Canada. (2020a). [Table 38-10-0235-01 Financial indicators of households and non-profit institutions serving households, national balance sheet accounts](#) (The value quoted was from Q1 2020.)

Statistics Canada. (2020b). [Table 36-10-0112-01 Current and capital accounts—Households, Canada, quarterly](#)

Thaler, R.H., Sunstein, C.R. (2008). *Nudge: Improving decisions about health, wealth, and happiness*. New Haven, CT, US: Yale University Press.

United Nations (UN). N.d. What does the UN mean by 'youth' and how does this definition differ from that given to children? *United Nations, Department of Economic and Social Affairs, Youth*. Retrieved from <https://www.un.org/development/desa/youth/what-we-do/faq.html>

Varatharasan, N., Fremont, A. (2020). Providing one-on-one financial coaching to newcomers: Insights for frontline service providers. Toronto: Prosper Canada. Retrieved from <https://prospercanada.org/getattachment/5d16ddfc-ff3a-4604-ac25-a3d7c9537415/Providing-one-on-one-financial-coaching-to-newcome.aspx>

Xiao, J.J., & O'Neill, B. (2018). Mental accounting and behavioural hierarchy: Understanding consumer budgeting behaviour. *International Journal of Consumer Studies*, 42(4), 448-59.

Yakoboski, P., Lusardi, A., & Hasler, A. (2018). Millennial financial literacy and fin-tech use: Who knows what in the digital era. *TIAA Institute*. Retrieved from https://www.tiaainstitute.org/sites/default/files/presentations/2018-09/TIAA%20Institute-GFLEC_Millennial%20P-Fin%20Index_September%202018.pdf

Yakoboski, P., Lusardi, A., & Hasler, A. (2019). Financial literacy in the United States and its link to financial wellness. *TIAA Institute*. Retrieved from https://www.tiaainstitute.org/sites/default/files/presentations/2019-03/TIAA%20Institute-GFLEC_P-Fin%20Index%20Report_April%202019_FINAL.pdf

Yakoboski, P., Lusardi, A., & Hasler, A. (2020). Financial literacy and wellness among African-Americans: New insights from the personal finance (P-Fin) index. *The Journal of Retirement*, 8: 22-31. Retrieved from: <https://jor.pm-research.com/content/8/1/22>

Zhao, J. & Tomm, B.M. (2018). Psychological responses to scarcity. *Oxford Research Encyclopedia of Psychology*. New York: Oxford University Press.