Competition Bureau Canada
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TECHNOLOGY-LED INNOVATION IN THE CANADIAN FINANCIAL SERVICES SECTOR

A MARKET STUDY

December 2017

Canada

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EXECUTIVE SUMMARY

"The future is now. Let's get it right by providing policymakers with the information they need to nurture a competitive environment that allows Canada's FinTech companies to innovate and grow."

– John Pecman, Commissioner of Competition

About this study

Financial technology (FinTech) has the potential to dramatically change the way financial products and services are accessed and used by Canadians. The innovative technologies being introduced by new entrants into the financial services sector promise to increase choice, improve convenience and lower prices for consumers and businesses alike.

Despite the attention that FinTech is generating, Canada lags behind its international peers when it comes to FinTech adoption. The Competition Bureau (Bureau) launched this market study into the financial services sector to understand why this is the case. Market studies are one of the tools used by the Bureau to promote competition in the Canadian economy. They allow the Bureau to examine an industry through a "competition lens" to highlight issues that may restrict competition and inform public policy on the regulation of markets.

The findings of this study are based on a review of publicly available information as well as submissions from FinTech start-ups, incumbent financial institutions, industry experts, regulators and industry/consumer associations. The Bureau conducted 130 stakeholder interviews and 10 information sessions, participated in 13 outreach events and hosted a FinTech workshop that brought together market players, regulatory authorities and policymakers, culminating in the release of a draft report for public comment. The Bureau used the collected information to assess the impact of FinTech innovation on the competitive landscape, identify the barriers to entry and expansion of FinTech in Canada and determine whether regulatory changes may be needed to promote greater competition and innovation in the financial services sector.

This study focuses on three broad service categories:

- retail payments and the retail payments system
- lending and equity crowdfunding
- investment dealing and advice

Retail payments and the retail payments system

Canadian consumers and businesses rely on retail payments to purchase goods and services, make financial investments, pay wages and send money to one another. Whether in the form of cheques, electronic point-of-sale (POS) debit transactions, electronic funds transfers or credit card transactions, payments are critical to Canada's economic activity. While a strong regulatory framework is needed to ensure that payments are made and received in a safe, secure and expedient way, regulatory constructs can sometimes have unintended consequences that slow innovation and reduce competition.

Influenced by the mobile and online experiences available in other sectors, today's financial services consumers are seeking seamless, instant and around-the-clock payment options. A number of new payment service providers (PSPs) have entered the market, using technology and innovative business models to meet that demand. Mobile wallets, for example, allow consumers to make retail payments with their phones, reducing or eliminating the physical limitations on the number of cards they can carry and use at any given time. Low-cost POS terminals and mobile credit card processing solutions have made it possible for merchants to accept a wider range of payment forms, greatly improving convenience for consumers. Other entrants have launched entirely new closed-loop systems for initiating payments and transferring funds that are making the financial institutions involved invisible to end users.

Still, there are many barriers to entry and growth facing new and incumbent firms alike. These include regulatory gaps between regulated PSPs and new, potentially unregulated firms attempting to enter the space, low public confidence and trust in alternative payment products and services, and insufficient incentives for consumers and merchants to switch to other payment methods. Some new entrants also lack easily available access to the core banking services and payments infrastructure required to underpin a FinTech product or service. Some barriers will need to be overcome by the FinTech firms on their own; others may require regulatory intervention.

Current regulations focus on incumbent and traditional PSPs, meaning non-traditional PSPs are not subject to specific requirements related to operational, financial and market-conduct risks. This regulatory uncertainty adds to the costs and risks faced by "non-bank" firms attempting to enter this sector, particularly smaller firms with limited resources. Progress, however, is being made. The Department of Finance Canada is developing a new regulatory oversight framework that should help promote innovation and competition in the financial services sector, and Payments Canada (the organization responsible for operating and overseeing Canada's national payment systems) has announced plans to develop a modernized, real-time retail payments system. If interoperability between payment platforms is built into this system, it will spur competition and innovation. However, because a system with high interoperability requires significant collaboration, a strong governance framework is needed to prevent incumbent members and early entrants from strategically developing rules that exclude others from entering this sector in the future.

Lending and equity crowdfunding

The availability and provision of financial credit is a key driver of economic activity in Canada. Small and medium-sized enterprises (SMEs) use financial credit to bridge cash flow gaps and make investments—but since the 2008 financial crisis, increasing risk aversion from financial institutions has led to a tightening of credit markets, particularly for SMEs. Many smaller and newer businesses have difficulty accessing financing from formal sources such as retail banks because these businesses lack the credit history or collateral needed to secure a loan. As a result, nearly half of Canadian SMEs rely on informal sources such as personal financing, loans from friends and family, retained earnings and personal savings—and almost one-third have turned to credit cards as a means of financing.

In response, FinTech firms offering new financing methods have entered this space to provide new forms of financing, with two main business models emerging: peer-to-peer (P2P) lending, which brings together lenders (institutional and retail investors) and borrowers (consumer and business) in an online platform to fund loans; and equity crowdfunding, which allows SMEs to raise capital from a large pool of investors through an online platform (in other words, they no longer need to build their own networks of contacts to find potential investors).

These new forms of SME financing have the potential to relieve some of the frictions faced by SMEs in obtaining financing, while at the same time allowing investors to access new products typically out of reach in traditional markets. Yet the providers of these platforms face significant barriers that may be inhibiting their market entry and growth.

For example, because Canada's regulated banking system is so strong—our financial institutions did not fail during the global financial crisis—Canadian SMEs may lack the desire or will to venture outside of that system and try new forms of financing. Consumer confidence is another major barrier to overcome: because there is a lack of clear regulation governing P2P lending, for example, it is not clear what happens to investors and borrowers in the event a platform fails.

There are also regulatory barriers. Due to the confederated nature of Canadian laws, subtle variations in laws exist from one province to the next. As a result, it can be difficult for FinTech-based financing platforms to navigate the various federal and provincial laws that might apply to their business models. At the same time, technology-driven financing platforms are subject to the same regulations as their bricks-and-mortar counterparts, despite potentially different risks associated with their business models. Finally, while some FinTech firms in this marketplace have partnered with incumbent financial institutions, these arrangements are subject to regulations governing outsourcing by federally regulated financial institutions, which have processes and policies that are difficult for many FinTech companies to follow.

Investment dealing and advice

Retail investors have many options in terms of the products available and number of firms offering investment services. While investment advice has traditionally been supplied in person by investment professionals, shifting customer demand and the advent of the mobile Internet have led to a new wave of tools for investors. FinTech entrepreneurs have entered this space using technology to appeal to consumers with entirely different preferences for advice services: some want basic advice or a "set-and-forget" portfolio, for instance, while others do not have the time or resources to meet with a financial advisor in person.

Leveraging less expensive exchange-traded funds and operating predominantly on a fee-only basis (rather than earning a commission from each fund), online advisors (also called "robo-advisors") have established themselves as low-cost alternatives to traditional advisors. Using model portfolios based on model investor profiles, they can reduce the time and cost of meeting with clients. Without the need to support a branch network of advisors, they can operate at a substantially lower cost, putting pressure on traditional advisors to lower their fees so they can remain competitive.

While a handful of robo-advisors have been successful, there are still many barriers to their growth. In any industry, consumers will consider switching to a competitive offering if they can easily understand the costs and benefits. This can be difficult in the investment dealing and advice industry, where fees are commonly embedded in the management expense ratio. Compounding this challenge, these fees are often not discussed or understood by investors. There are also tangible costs that may discourage switching such as the time and expense of setting up new accounts and transferring assets. In addition, robo-advisors may not be able to deliver the true online experience consumers might expect, particularly given that electronic forms and signatures are not yet accepted throughout the industry.

Certain regulatory requirements also inhibit the growth and competitive influence of robo-advisors. For example, investment dealers must ensure any investments offered are suitable for a client's risk tolerance and investment objectives. Holding a "meaningful discussion" to obtain the necessary information (as required by securities law) can be difficult in an online setting. Robo-advisors must also hire registered advising representatives to be involved in portfolio decision-making, increasing costs and impeding the development of automated solutions.

Similarly, robo-advisors must have an agent-for-service (i.e., someone present to accept legal documents should the corporation be sued) in each province where they provide services. Robo-advisors looking to keep costs low by operating from a single location (or even from the cloud) may find that even small hurdles like the agent-for-service requirement can contribute to increased operating costs.

Global reactions to FinTech innovation

Many FinTech entrants told the Bureau that other jurisdictions have more welcoming and innovation-conducive regulatory environments than Canada. The United Kingdom, the United States, Singapore, Germany, Australia and Hong Kong have been identified as leading FinTech hubs based on talent, funding availability, government policy and demand for FinTech. These countries have a unified financial sector regulatory framework. As such, many have been able to take a national, unified approach to encourage FinTech development.

Most of these countries are encouraging experimentation in a controlled environment and, at the same time, creating flexible regulatory frameworks proportional to the risks presented by FinTech innovation. For example, these other countries are increasingly establishing fora for regulatory experimentation and engagement between the private sector and regulators. Regulatory sandboxes, accelerators and innovation hubs can promote innovation and improve competition by reducing regulatory uncertainty as well as the sunk costs associated with navigating the regulatory framework, and by giving firms that would otherwise have abandoned entry in the early stages the ability to test their services and their ability to meet regulatory requirements. Numerous jurisdictions have also developed specialized regulatory frameworks or licensing regimes to reduce regulatory uncertainty and clarify how rules will be applied in the digital arena.

While some Canadian authorities have introduced similar initiatives such as regulatory sandboxes launched by securities regulators and working groups established by governments at all levels, there remains potential for more. For example, Canada lacks a clear and unified policy lead on FinTech. Such a body could combine federal, provincial and territorial expertise to facilitate FinTech development and improve the scope and applicability of existing initiatives.

"Open banking" is another concept currently being explored around the world. Regulators in the United Kingdom and Europe have been examining how access to data and banking infrastructure can help spur FinTech development, with the European Union's revised Payment Service Directive (PSD2) allowing third parties including FinTech firms, to access customer bank account data to develop more innovative services and make it easier for consumers to shop around for financial services. The Bureau encourages policymakers to continue to examine the experience of other jurisdictions and adopt best practices as they balance the potential risks with the competitive benefits.

Recommendations for regulators and policymakers

Financial sector regulators and policymakers have made significant progress in adapting Canada's regulatory environment to support innovation in the financial services sector. While regulation is needed to achieve important policy objectives such as consumer protection and a stable financial system, regulations should be modernized to promote greater competition and innovation for Canadians.

Based on the findings of this market study, the Bureau developed 11 broad recommendations for financial sector regulatory authorities and policymakers to ensure future regulatory change creates space for innovation in this important sector of the Canadian economy.

In brief, the recommendations are as follows:

1. **Regulation should be technology-neutral and device-agnostic**. Rules that can accommodate and encourage new and yet-to-be developed technologies open the door to more innovative offers today and down the road.

2. **To the extent possible, regulation should be principles-based.** Instead of prescribing exactly *how* a service must be carried out, a principles-based approach will allow regulators to be more flexible in their approach to enforcement as technology changes.

3. **Regulation should be based on the function an entity carries out.** This will ensure that all entities that perform the same function carry the same regulatory burden and consumers have the same protections when dealing with competing service providers.

4. **Regulation should be proportional to risk.** This requires a tiered approach: functions whose failure poses lower risks to the financial system should not necessarily face the same strict oversight as those whose failure poses higher risks. This will give smaller players a level playing field to innovate.

5. **Regulators should continue their efforts to harmonize regulation across geographic boundaries.** Differences in regulations across provinces can lead to increased compliance burden. Consistency, on the other hand, can facilitate entry and expansion of FinTech across Canada and abroad.

6. **Policymakers should encourage collaboration throughout the sector**. Mechanisms for doing so include the use of regulatory sandboxes and innovation hubs. Greater collaboration will enable a clear and unified approach to risk, innovation and competition.

7. **Policymakers should identify a FinTech policy lead for Canada to facilitate FinTech development.** This would give FinTech firms a one-stop resource for information and encourage greater investment in innovative businesses.

8. **Regulators should promote greater access to core infrastructure and services**. This includes access to the payments system (under the appropriate risk-management framework) and banking services to facilitate the development of innovative new FinTech services.

9. **Policymakers should embrace broader "open" access to systems and data through application programming interfaces.** With better access to consumer data (obtained through informed consent), FinTech can help Canadians overcome their inability or unwillingness to shop around and switch between service providers.

10. **Industry participants and regulators should explore the potential of digital identification verification**. This would reduce customer-acquisition costs for service providers, ultimately reducing the costs of switching for consumers and facilitating regulatory compliance where identity verification is needed.

11. **Policymakers should continue to review their regulatory frameworks frequently.** Doing so will ensure that these frameworks remain relevant in the context of future innovation and can achieve their objectives in a way that does not unnecessarily inhibit competition.

BACKGROUND

This study provides policymakers and regulators with recommendations to encourage competition and innovation in Canada's financial services sector.

Role of the Competition Bureau

The Competition Bureau (Bureau) ensures that Canadian businesses and consumers prosper in a competitive and innovative marketplace. As an independent law enforcement agency, headed by the Commissioner of Competition, the Bureau is responsible for the administration and enforcement of the *Competition Act*, *Consumer Packaging and Labelling Act* (except as it relates to food), *Textile Labelling Act* and *Precious Metals Marking Act*.

As part of its mandate, the Bureau participates in a wide range of activities to promote and advocate for the benefits of a competitive marketplace such as lower prices for consumers as well as increased choice and innovation. Market studies are one of the tools that the Bureau uses to advocate for competition. They allow the Bureau to assess an industry through a "competition lens" to highlight issues that may restrict competition. Advocacy initiatives, such as this market study, can be effective tools to help regulators and policymakers understand the competitive dynamics of an industry and the potential impacts regulations or policy may have on competition. In the context of this study, they provide information and analysis so that competition considerations can be balanced as appropriate with other legitimate policy objectives.

The Bureau's basic operating assumption is that competition is good for both business and consumers—and regulation should be minimally intrusive on market forces, allowing competition to drive innovation and improve outcomes for Canadians. At the same time, the Bureau recognizes that market failures do occur. In circumstances where market forces do not adequately correct market failures, regulation can be used to determine outcomes or control market dynamics. Regulation is also used to protect against negative externalities that may be left unaddressed by market forces. But, in some cases, regulation can have unintended consequences including decreased efficiency and competition in a marketplace. During periods of rapid technological change, regulation can inhibit innovation and new business models from challenging the *status quo*.

The analysis and recommendations found in this study report are made with these assumptions in mind.

Scope and premise of this study

The Bureau decided to study Canada's financial services sector for three primary reasons. First, during the Bureau's public consultations in 2013, financial services were identified as an area of focus for potential advocacy initiatives. Second, the sector itself is an important pillar in the Canadian economy. Financial services contribute approximately 7% to Canada's gross domestic product (as of May 2017) and financial services account for nearly 800,000 Canadian jobs (2015 figures). Third, financial services play a significant role in the day-to-day life of most Canadians, whether they are receiving or making payments, borrowing, spending, saving or investing.

While Canada's financial regulatory system is one of the most well-respected and sound regimes in the world, the global financial crisis in 2007–2008 led to a period of economic recession in Canada and around the world. The financial crisis damaged the reputation of the financial services sector and the sector appeared poised for an innovation disruption. A new wave of financial services businesses emerged: start-ups leveraging the latest technology (in particular the mobile Internet) to launch apps and digital services; seasoned technology companies extending their reach into new parts of the lives of their users; and incumbent institutions seeking to reduce transaction friction to defend and maintain customer relationships.

Today, new entrants and incumbents alike are using technology to innovate and change the way Canadians access and consume financial products and services. The promise of financial technology (FinTech) is that consumers and small- and medium-sized enterprises (SMEs) will benefit from streamlined processes, reduced friction, less need for intermediaries in certain transactions and more choice by unbundling products and services. Ultimately, FinTech's draw is the potential for a more competitive marketplace, lower prices and increased choice in products and services (as well as more value for money) for consumers and SMEs.

Despite the global attention FinTech is generating, Canada lags behind its peers in its adoption. According to Ernst & Young LLP in 2017, approximately 18% of digitally active consumers in Canada had used at least two FinTech products in the prior six months—roughly half the average (33%) of the other nations surveyed.[1]

The Bureau sought to understand why FinTech adoption appears to be higher in other jurisdictions than in Canada. Commentators attribute Canada's slow adoption to a number of factors including, lack of consumer awareness, lack of trust, consumer demand translating into actual usage and consumer comfort with existing service providers.[2] Many financial service providers, including FinTech start-ups, point to regulatory barriers and non-regulatory barriers as impediments to growth and adoption.

The Bureau's market study addresses five over-arching questions:

1. **What has been the impact of FinTech innovation on the competitive landscape for financial services?**
2. **What are the barriers to entry, expansion or adoption of FinTech in Canada?**
3. **Are the barriers regulatory or non-regulatory?**
4. **Are changes required to encourage greater competition and innovation in the sector?**
5. **What issues should be considered when developing or amending regulations to ensure competition is not unnecessarily restricted?**

To ensure relevance for Canadians, this study focuses on innovations that affect the way Canadian consumers and SMEs commonly encounter financial products and services, with a focus on three broad service categories:

- **Payments and payment systems:** This includes retail payment products and services (e.g. mobile wallets) as well as the infrastructure that supports these products and services (e.g. the clearing and settlement system)
- **Lending:** This includes consumer and SME lending (e.g. peer-to-peer or marketplace lending) and equity crowdfunding
- **Investment dealing and advice:** This includes do-it-yourself investing and portfolio management through online platforms (e.g. robo-advisors)

While the financial services industry is much broader than these three lines of business, these lines account for a significant amount of FinTech investment by incumbent institutions, entry by start-ups and growth in the Canadian marketplace. The Bureau did not include the following in this study:

- insurance (property and casualty, travel, health)
- currencies and crypto-currencies
- payday loans
- loyalty programs
- deposit-taking
- accounting, auditing and tax preparation
- corporate, commercial or institutional investing and banking (e.g. pension fund management, mergers and acquisitions)
- business-to-business services beyond those noted above (e.g. cash handling)
- mortgage lending

For each of the three areas studied—payments and payment systems, lending and investment dealing and advice—the Bureau drew conclusions and formed recommendations for financial sector policymakers, regulators, industry participants, SMEs and consumers.

Information gathering and analytical approach

To help inform this study, the Bureau relied on information from a number of different sources. It reviewed public information such as academic literature, media publications, studies and reports from government agencies and other sources. It also considered confidential information[3] gathered through written and oral submissions[4] from marketplace participants (incumbent financial institutions and new start-ups), industry and consumer associations, industry experts and domestic and foreign government agencies and regulators.

The Bureau thanks everyone who took the time to provide information and advance this study to completion.

In total, the Bureau conducted more than 130 interviews or meetings with 118 stakeholders and received 20 written submissions: one from an incumbent financial institution, 12 from FinTech start-ups and seven from industry and consumer associations. The Bureau also engaged in significant outreach to various stakeholders including 16 incumbent financial institutions, 35 FinTech start-ups, 26 domestic agencies and regulators and nine foreign regulatory authorities. A draft report was released for public comment in November 2017 resulting in 30 responses from individuals, businesses and associations.

In February 2017, the Bureau also hosted a one-day workshop in Ottawa, inviting FinTech stakeholders to discuss issues surrounding regulation and barriers to entry. The workshop proved to be an important opportunity for the

Bureau to advance the discussion of relevant marketplace issues from a variety of perspectives.

The Bureau's study uses competition principles to identify and analyse barriers to entry, innovation, competition and growth faced by FinTech.

With the current wave of FinTech still in its nascent stage, statistical data from which sound inferences could be made was not readily available. The Bureau relied primarily on submissions from and interviews with industry participants, regulators and industry groups as well as desk research to guide the analysis contained in this study. Given the absence, in many cases, of a counter-factual regulatory environment in Canada (i.e. the emergence of FinTech in an *unregulated* environment), this study also looks to certain international jurisdictions for insight into different regulatory approaches and their outcomes. Although some of the issues the Bureau learned about pre-date FinTech and even the Internet, the Bureau gained valuable context from these submissions, interviews and international benchmarking.

The Bureau examined the landscape through a competition lens to assess the likely impact of current regulation on innovation and competition, taking into account the important goals such regulation tries to achieve. From this analysis, the Bureau developed recommendations that focused on reducing or removing barriers to innovation and competition by supporting and encouraging FinTech development and growth.

The speed with which FinTech developments are occurring on a global basis may affect the relevance of some elements of the analysis. Nonetheless, the fundamentals of a competitive marketplace will continue to be relevant into the future and policymakers are encouraged to continuously consider the implications of their frameworks on competition.

Structure of this study report

This report is divided into six parts. The introduction provides the competition context, discusses the important role regulation plays in the financial services sector and presents, in brief, recommendations primarily for financial sector policymakers and regulators.

The three chapters that follow discuss each of the highlighted service categories: payments and payment systems, lending and investment dealing and advice. Each chapter is organized to contextualize the marketplace, discuss the potential impact of FinTech innovation in that service category, present existing barriers to entry that may prevent FinTech's potential from being realised and recommend to policymakers and regulators ways to reduce or remove those barriers.

The report then presents global reactions to FinTech and some of the solutions to encourage FinTech innovation around the world, accompanied by a discussion of the relevance that such measures could have for Canada.

Finally, the report presents the Bureau's conclusions.

INTRODUCTION

Competition generally leads to higher levels of efficiency and living standards, helps deal with the unexpected, provides resiliency and stokes innovation.

Why competition is important

The Bureau's basic operating assumption is that competition is good for both business and consumers and that regulation should be minimally intrusive on market forces, allowing competition to drive innovation and improve outcomes for Canadians. Competitive markets make the economy work more efficiently, strengthening businesses' ability to adapt and compete globally. They also provide consumers with competitive prices, more product choices and the information needed to make informed purchasing decisions. The Bureau believes that market forces should be relied upon as much as possible to deliver these outcomes.

While rapid technological advancement can accelerate innovation, regulation that does not keep pace can counteract that by impeding market forces from delivering competitive benefits. This can ultimately inhibit innovation and lead to higher prices and less choice for consumers. Regulatory compliance can act as a significant barrier for new competitors who wish to enter a market or for existing competitors who wish to innovate outside the confines of regulation.

Regulation must strike an appropriate balance between competition and the policy objectives it aims to achieve (e.g. safety, soundness and consumer protection). This balance will allow consumers and businesses to benefit from a competitive marketplace while mitigating market failures.

What makes for a competitive market

In a competitive marketplace, companies use different approaches to maximize their profits. Some reduce prices, while others exploit more efficient means of production to increase margins and reduce costs. Others gain market share through innovation, offering consumers differentiated products and services that deliver more value than those of their competitors. When companies attempt to increase profits by raising prices, they risk losing customers to their competition or attracting new competitors who see the opportunity for profitable market entry.

In markets that lack competition or where the threat of competitive entry is low, firms can maximize profits by increasing prices, without the same risk of losing customers. In these markets, the competitive drive to innovate, improve quality or become more efficient in production is largely lost. Consumers ultimately pay higher prices without a commensurate improvement in value.

Such uncompetitive outcomes are more likely when a market is characterized by a high concentration of suppliers, high barriers to entry and high costs of switching for customers. When a market is composed of a necessary good with very low price-elasticity (i.e. the rate at which demand decreases when prices increase), even firms with small market share can wield power.

There are a few key elements that create an environment in which competition can flourish: low barriers to entry; low costs of switching for customers; complete and accurate information; and a sufficient number of effective competitors. Without these elements, markets are likely to tend away from competitive outcomes.

Low barriers to entry

In markets with low barriers to entry, incumbent firms must keep prices low, exploit efficiencies and continuously innovate. If they do not, they face the risk of new entrants with better prices, more efficient production, more innovative offerings or some other value proposition for consumers coming into the market and decreasing their profits. In contrast, when barriers are high, incumbent firms are less likely to face the threat of competitive entry and can more easily earn profits in excess of what a competitive firm would earn, reducing the incentive to innovate. High barriers to entry effectively protect incumbent firms from future competition—and the innovation (from new entrants or incumbents) that may come with it.

Competitive entry can take different forms: a completely new firm (e.g. a start-up) entering with new products or services; an existing firm expanding the scope of its product or service offering (e.g. a mortgage lender that begins giving business loans); an existing firm expanding the geographic area in which it operates (e.g. a small bank that opens a new branch in a different town); or an existing firm increasing production or supply. Barriers to entry affect the timeliness, likelihood and sufficiency of competitive entry.

Whether they take the form of absolute restrictions on entry or individually small (but cumulatively large) deterrents, barriers to entry deter competition by making it too costly or risky to enter the market profitably.

Barriers to entry can include: regulatory barriers, high sunk costs (e.g. costs that cannot be recovered if the entrant later exits the market), economies of scale, network advantages, market maturity and incumbent control over key inputs.

Low costs of switching for customers

When consumers can switch between suppliers easily and for low or no cost, firms have the incentive to keep prices low or otherwise maintain value for their customers. If not, they risk losing customers to a competing firm. When it is difficult for customers to switch between suppliers (or when doing so does not generate sufficient benefits to outweigh the costs of switching), customers are less likely to switch even if prices increase. Firms that have more of these so-called "sticky" customers may have less incentive to compete vigorously.

Information and price transparency

To help customers make switching decisions and indeed purchasing decisions generally, information presented to consumers should be complete, accurate and presented in a manner that is easily understood. Where pricing and related information is opaque, confusing, false or misleading (e.g. where the general impression is contradicted by disclaimers) or the promise of responsive and reliable service is unclear, it is more difficult for consumers to properly assess the costs and benefits of switching. As a result, businesses do not have to compete as vigorously to keep customers.

Competitors

A competitive market needs competitors. Mature industries with high barriers to entry and sticky customers can often result in concentrated marketplaces with a few large suppliers and potentially a competitive fringe. As time passes, the incumbent firms, protected by barriers to competition, can sometimes tend toward oligopoly or in the extreme, monopoly—which can create anti-competitive outcomes.

Key barriers to entry and growth facing FinTech

As the Internet and mobile computing have become ubiquitous, consumer demand for new ways to deliver financial services has increased. Rather than visiting a branch for financial services, many consumers are seeking on-demand, digital transactions that can be conducted at their leisure.

Widespread use of the Internet would be expected to increase competition, given that one of the largest barriers to entry—the need for a branch network—is reduced.

However, many other barriers remain in the way of FinTech entry into the financial services marketplace, including:

- consumer awareness and demand for products
- start-up capital
- trust in incumbent institutions
- access to basic services and processes
- market maturity and reputation
- customer stickiness
- economies of scale and scope
- regulation (relating to the safety, soundness and security of the financial system)
- ensuring risks are mitigated (e.g. cybersecurity, privacy)

Consumer awareness and demand for products are barriers that all new businesses face. As consumers learn more about FinTech and begin to demand more innovative solutions in financial services, one would expect these barriers to be more easily overcome.

The lack of access to capital for FinTech start-ups is often cited as a significant barrier to entry in Canada—this was highlighted at the Bureau's FinTech workshop with some stakeholders suggesting that the dearth of investment focused on FinTech companies is contributing to the exodus of financial services sector innovators seeking more FinTech-friendly jurisdictions and putting Canada's global competitiveness at risk.

Consumers of financial services want to ensure their money is safe, their investments grow and their payments are made on time. Many of Canada's financial service providers have been in business for more than a century, with some dating back to before Confederation. As a result, new entrants can find it particularly challenging to win the trust of consumers and build reputations as safe and reliable service providers. For instance, a 2016 poll showed that 80% of Canadians view Canadian banks favourably and 93% view their own institution favourably. In addition, most of the target market is already served in some capacity by seemingly similar services (e.g. from their current service providers)—making market maturity, reputation and trust significant barriers that new entrants will need to overcome.

"Customer stickiness" refers to the willingness and ease with which customers can switch between service providers. The integration of financial services into our daily lives heightens the risks associated with the uncertainties inherent in trying a new product. Additionally, fees and penalties for switching increase the costs and difficulty for consumers, which makes adoption of new services or products less likely to happen quickly. FinTech entrants may find consumers' inability to easily switch to be a barrier to entry.

Related to customer stickiness, building "economies of scale" refers to the ability of FinTech companies to gain the necessary critical mass of users on all sides of transactions to make their services profitable and maintain the cost advantages expected from avoiding costly branch networks. Incumbent financial service providers have an advantage in that they have the customer base and capital to experiment with new offerings without the same consequences of failure. "Economies of scope" refers to the ability of firms that bundle a wide variety of services or products to enjoy a cost advantage over firms that offer a narrower set of services or products.

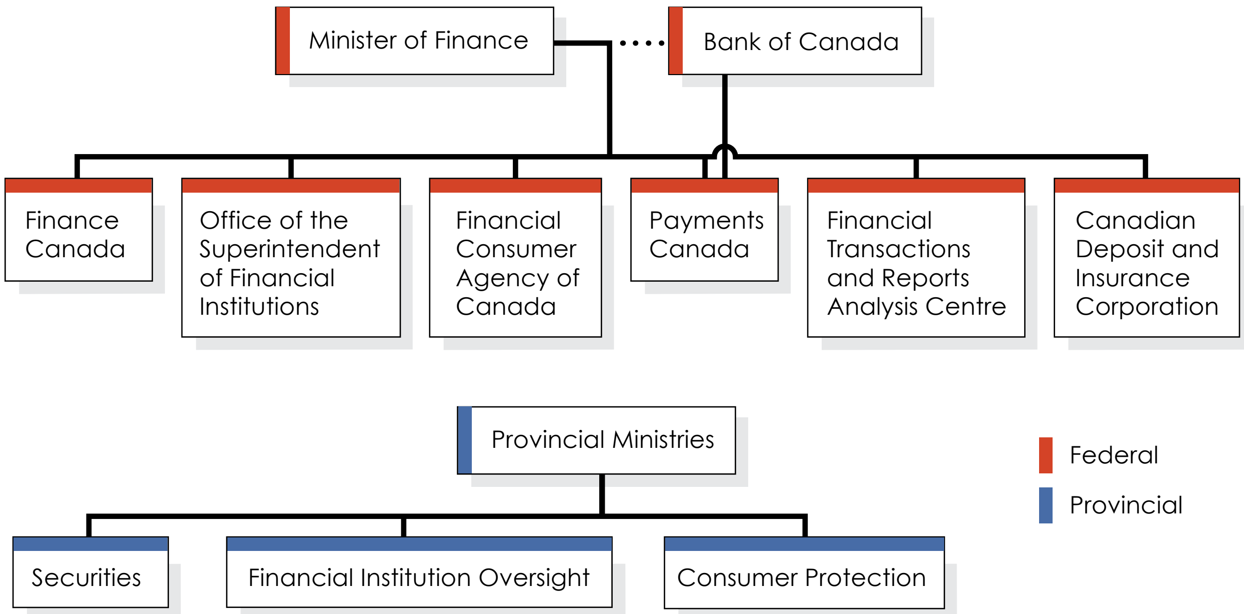
Finally, regulation may present a barrier to market entry and success for FinTech companies. The financial services and banking sectors are heavily regulated at the federal and provincial levels. Although these regulatory frameworks are unquestionably important in safeguarding consumers and mitigating risks to the financial system as a whole, they can inadvertently deter innovation and the competitive benefits that follow.

Given the impact regulation can have on entry and competition in the marketplace, the primary focus of this study is on the regulatory barriers to entry faced by FinTech. Throughout this study, the Bureau heard from many stakeholders about the issues different regulations pose for FinTech. The majority of regulatory barriers can be divided into four categories: (1) anti-money laundering regulations, (2) securities regulations, (3) payments regulations, and (4) other broadly applicable laws that may inhibit certain FinTech activities (such as the *Personal Information Protection and Electronic Documents Act*).

The role of regulation and regulators

The goal of most regulation is to correct for negative externalities that will not be corrected by market forces alone. Regulation also plays a role in mitigating risks that may be ignored when companies pursue higher profitability. Risks that regulation in financial services aims to mitigate include systemic risk (i.e. risk of financial system failure), prudential risk, institutional governance, risks to consumers and investors, asymmetry of information (between financial services consumers and suppliers) and financial illiteracy, counterparty risks in payments, privacy risk and abuse of the financial system to hide or facilitate criminal activity. In this context, financial services regulations exist to protect the systems in place and to govern the conduct of those who provide services.

Figure 1 – Canadian regulatory landscape



Regulation at the federal level

The **Minister of Finance** and the **Department of Finance Canada** are responsible for fiscal policy and financial sector regulatory policy and legislation. The Minister of Finance oversees a number of agencies and Crown corporations in the finance portfolio including the Office of the Superintendent of Financial Institutions (OSFI), the Financial Consumer Agency of Canada (FCAC), the Financial Transactions and Reports Analysis Centre of Canada (FINTRAC) and Canadian Deposit Insurance Corporation (CDIC). While the Minister of Finance sets policy and creates legislation, these agencies and corporations carry out the administration or enforcement of that legislation. Key statutes under the Minister of Finance's purview include the *Bank Act*, *Payment Card Networks Act*, *Proceeds of Crime (Money Laundering) and Terrorist Financing Act* and *Canadian Payments Act*.

The **Bank of Canada** is responsible for setting monetary policy in Canada, targeting inflation through manipulation of overnight interest rates (i.e. the rate at which financial institutions borrow from each other). It oversees major clearing and settlement systems, providing those systems with banking services (pursuant to the *Payment Clearing and Settlement Act)*; promotes financial stability globally with international bodies; and provides liquidity to the financial system. The Bank of Canada is also responsible for issuing currency. Some of the primary risks concerning the Bank of Canada include the safety, soundness, stability and efficiency of the financial system.

OSFI regulates and supervises more than 400 federally regulated financial institutions (FRFIs) and 1,200 pension plans to determine the soundness of their financial condition and whether they are meeting their obligations as set out in legislation. FRFIs include all banks in Canada as well as all federally incorporated or registered trust and loan companies, insurance companies, cooperative credit associations, fraternal benefit societies and private pension plans. OSFI's mandate is to protect depositors, policyholders and other creditors, while allowing financial institutions to compete and take reasonable risks.

The **FCAC** ensures that federally regulated financial institutions (i.e. those overseen by OSFI and the Department of Finance) comply with consumer protection measures set out in legislation and regulation. It also conducts research and promotes financial education and awareness of consumer rights and responsibilities.

FINTRAC is Canada's financial intelligence unit, assisting in the detection, prevention and deterrence of money laundering and terrorist activity financing. It provides a unique contribution to the safety of Canadians and the protection of the integrity of Canada's financial system through the enforcement of the *Proceeds of Crime (Money Laundering) and Terrorist Financing Act*.

The **CDIC** is a federal Crown corporation that contributes to the stability of the financial system by providing deposit insurance against the loss of eligible deposits at member institutions in the event of their failure. Premiums for deposit insurance are paid by member institutions.

In addition to direct government involvement, **Payments Canada**[5] has a legislative mandate and is responsible for the clearing and settlement infrastructure, processes and rules that are essential to the exchange of billions of dollars each day (i.e. interbank payments). Payments Canada operates three payments systems: the (1) Large Value Transfer System, (2) the Automated Clearing Settlement System and (3)the US Dollar Bulk Exchange. The organization also oversees the rules for this key payments infrastructure and ensures its smooth and efficient operation.

Regulation at the provincial and territorial level

Provincial and territorial governments are responsible for policy and regulatory development related to provincially- or territorially-regulated financial institutions (such as most credit unions) and securities.

Securities are regulated through 13 distinct provincial and territorial authorities, each administering separate laws and regulations. Alberta, British Columbia, Ontario and Québec are the four largest provincial regulators, supervising the vast majority of the securities market.[6] Most provinces and territories also have consumer protection legislation, some of which deals with financial transactions and agreements.

In relation to the three areas that are the focus of this study—payments and payment systems, lending and investment dealing and advice—securities laws have a significant impact on the entry and growth of FinTech. The goal of securities legislation is to foster fair and efficient capital markets and protect investors. Securities rules include regulation of the conduct of securities issuers and dealers as well as their reporting requirements and business structures. To harmonize, improve and coordinate securities legislation and regulation across jurisdictions, each of the provincial and territorial securities regulators have combined to create the **Canadian Securities Administrators** (CSA) umbrella organization.

In addition to provincial securities authorities, two self-regulating organizations, the **Investment Industry Regulatory Organization of Canada** (IIROC) and the **Mutual Fund Dealers Association of Canada** (MFDA), have oversight authority regarding the conduct of investment and mutual fund dealers.

Each of these regulatory or oversight authorities has an important role to play in ensuring that financial markets are safe, secure, efficient and useful to Canadians. They promote confidence in the financial system through consumer protection and literacy, while mitigating exposure to unnecessary risks. There is no doubt they are important and necessary to the operation of our financial system.

Summary of key recommendations

Throughout this study, the Bureau heard from a wide variety of stakeholders regarding innovation and competition in the financial services sector. Given the barriers identified in this study report, the Bureau recommends the following be adopted by financial sector regulatory authorities and policymakers to ensure that, wherever possible, regulatory responses to FinTech balance the need for protection against risk with competition and innovation:

1. **Regulation should be technology-neutral and device-agnostic**. Prescriptive rules regarding *how* a firm must comply with a regulation are often written with the technology of the day in mind. For example, consumers may still face instances where service providers require a 'wet' signature, verification of identification or collection of personal information in person or through a face-to-face conversation. These rules and policies may have made sense when transactions occurred in person at a branch, but the Internet and mobile computing have changed how consumers wish to consume services—and how providers provide them. Rules that can accommodate and encourage new (and yet-to-be developed) technologies open the door to more innovative offers down the road.

2. **To the extent possible, regulation should be principles-based**. Policymakers should aim to create regulation based on expected outcomes rather than on strict rules of how to achieve those outcomes. A regulation that prescribes exactly how an identity must be verified, for instance, can potentially limit an innovative service from using new, more effective ways of verifying customer identity such as biometrics or remote identity verification through third-party sources. If this same regulation was based on the notion that the service provider must verify the identity of a customer using sufficiently robust means or demonstrated diligence, it could encourage innovation in the marketplace. Principles-based regulation has the added benefit of allowing regulators the flexibility to issue guidance and be more flexible in their approach to enforcement as technology changes.

3. **Regulation should be based on the function an entity carries out.** Current regulations at the federal level apply only to certain entities defined within legislation. For example, regulations enforced by the FCAC apply only to FRFIs. Many FinTech entrants that may engage in similar activities but are not included in the list of FRFIs, do not fall under the same regulatory umbrella. As a result, there are varying levels of regulation for the same activity or function performed by different entities. This contributes to the potential imbalance created as entities have different standards to which they must adhere. Function-based regulation ensures that all entities have the same regulatory burden and consumers have the same protections when dealing with competing service providers.

4. **Regulators and policymakers should ensure regulation is proportional to the risks** that the regulation aims to mitigate. Deposit-takers who lend on fractional reserve, for example, may require more emphasis on prudential regulation than a payment app that allows users to store money to pre-order and pay for coffee and collect reward points. Similarly, within the same functional area (e.g. payments), regulations could be tiered such that functions whose failure poses lower risks to the system (e.g. paying for coffee) do not necessarily face the same strict oversight as functions whose failure poses higher risks the system (e.g. interbank settlement). Together with function-based, principles-based and technology-neutral regulations, proportional

regulation ensures that FinTech entrants will compete on a level playing field with incumbent service providers offering the same types of services. At the same time, it will reduce the risk of regulatory arbitrage.

5. Regulators should continue their efforts to **harmonize** regulation. Much work has been done to harmonize regulations across Canada regarding securities; however, differences continue to exist that can unnecessarily lead to increased compliance burden. For example, provincial regulators have introduced three different equity crowdfunding exemptions—and the rules and requirements to take advantage of each are different across jurisdictions. Regulators and policymakers should make best efforts to harmonize regulation across geographic boundaries.

6. Policymakers should **encourage collaboration throughout the sector**. More collaboration among regulators at all levels would enable a clear and unified approach to risk, innovation and competition. Greater collaboration among the public and private sector more broadly would foster greater understanding among regulators of the latest services—and of the regulatory framework among FinTech firms. Finally, pro-competitive collaboration between industry participants would help bring more products and services to market, while recognizing the potential for anti-competitive collaborations. Other jurisdictions (such as the UK, Australia and Hong Kong) have established regulatory sandboxes and innovation hubs, accelerators and precincts to facilitate such collaboration. Policymakers in Canada appear to be following suit (e.g. with regulatory sandboxes and concierge services in the securities space) and should continue to do so.

7. Policymakers should **identify a clear and unified FinTech policy lead** for Canada with federal, provincial and territorial expertise to facilitate FinTech development. Some jurisdictions, like Singapore and Switzerland, have created new offices to facilitate FinTech, while others have clearly identified policy leads. In Canada, such a body could serve as a gateway to other agencies, giving FinTech firms a one-stop resource for information and encouraging public and private investment in innovative businesses and technologies in the financial services sector.

8. **Regulators should promote greater access to core infrastructure and services** to facilitate the development of innovative FinTech services under the appropriate risk-management framework. Access to core infrastructure such as the payments system, would enable more market participants to deliver new overlay services to payments customers (e.g. bill payment applications, international remittances, foreign exchange services). Access to core services, such as bank accounts, is often a necessary input for FinTech firms to operate their services. When regulation is cited as the reason for denying such services, competition and innovation may be lessened.

9. **Policymakers should embrace broader "open" access to systems and data through application programming interfaces**. With more open access to consumers' data (obtained through informed consent and under an appropriate risk-management framework), FinTech can help consumers overcome their inability or unwillingness to shop around by paving the way for the development of bespoke price-comparison tools,[7] and other applications that facilitate competitive switching. This is the approach taken by the UK Competition and Markets Authority (CMA) in its "open banking" initiative to promote more competition in the banking sector. Clarifying the conditions under which access is granted would

support greater clarity of liability for consumer redress. And, by enabling more financial processes to be conducted without the need for a bricks-and-mortar branch network could improve options for customers in regions with little competition.

10. Industry participants and regulators should explore the potential for **digital identification** to facilitate client identification processes. Many services currently rely on verification of one's identity based on passwords and personal identifying information presented without a physical presence. Some Government of Canada services, for example, allow users to verify their identity using SecureKey or their existing banking credentials, relying on the fact that the user's bank has already verified their identity and the log-in credentials are unique to that person. Digital identification could help reduce the cost of customer acquisition for new entrants and incumbent service providers alike, while also reducing the costs of switching for consumers and facilitating regulatory compliance where identity verification is needed.

11. Policymakers should **continue to review their regulatory frameworks frequently and adapt regulation to changing market dynamics** (e.g. consumer demand and advances in technology). Reviewing regulatory frameworks ensures they remain relevant in the context of future innovation and can achieve their objectives in a way that does not unnecessarily inhibit competition. When consumers are faced with new products and services that they may not fully understand, they may be left exposed to harmful outcomes. Updating regulations to reflect new market dynamics can better ensure consumers are protected when using new or innovative financial products or services and technologies to access those services. Extending consumer protection principles to services enabled by FinTech can help reduce barriers and at the same time ensure that all consumers, regardless of technology, enjoy the same level of protections. Indeed, FinTech products can help promote greater financial literacy among consumers. Policymakers should explore ways to leverage technology to achieve these objectives.

The Bureau is confident that these recommendations, if adopted, would facilitate competition through innovation to the benefit of Canadians. Regulators and policymakers are encouraged to consider stakeholder involvement in the policy- and regulatory-development process to ensure the right risks are mitigated and competitors are not unduly excluded from participating in markets.

RETAIL PAYMENTS AND THE RETAIL PAYMENTS SYSTEM

If given the opportunity, FinTech innovation in retail payments will deliver consumer and business products and services that go beyond just finding a new way to tap the same credit card.

Background

In 2015, more than 20 billion transactions worth almost $9 trillion in retail payments were made in Canada. A payments system that is safe, secure and efficient is the backbone of our financial system. Payments are critical to Canada's economic activity and the daily lives of Canadians, with consumers and businesses making millions of retail payments each day via cash, cheques, debit and credit cards, electronic funds transfers, wire transfers and email money transfers.

Retail payments are the low-value, high-volume payments consumers and businesses make on a daily basis to purchase goods and services, make financial investments, pay wages and send money to one another. Most of these transfers require an underlying infrastructure with accompanying instruments, technical arrangements, procedures and rules to facilitate the exchange of value between the party making the payment (the payer) and the party receiving the payment (the payee). These elements make up the retail payments system.

At a high level, the retail payments space is composed of two key pieces: the infrastructure that ensures payments are cleared and settled (specifically, the Automated Clearing Settlement System [ACSS] and Large Value Transfer System [LVTS]) along with the various payment schemes and services (e.g. credit card networks, electronic transfers).

Given the critical importance of the payments system, a strong regulatory framework is needed to ensure payments are made and received in a safe, secure and expedient way. Yet, these important regulatory constructs can sometimes have unintended consequences that slow innovation and reduce competition.

Retail payments ecosystem

Retail payment systems are a combination of interrelated processes and networks. These networks have a vertical relationship, moving from downstream services to upstream payments infrastructure for clearing and settlement. For these systems to operate effectively and efficiently, they are bound by rules that all participants must follow.

How payments are made[8]

Different payment schemes use different processes, infrastructure and rules to effect payments.

Cheques are demands on a payer's account initiated by a payee. Upon deposit, the payee's financial institution submits a request for payment from the payer's financial institution through the ACSS, which is operated by Payments Canada. The payer's financial institution verifies the availability of funds in the payer's account and makes the payment; if sufficient funds are not available, the payer's institution returns the cheque and the payment will not be made. The risk of non-payment (counterparty risk) is borne by the payee.

Electronic point of sale (POS) debit transactions are demands from the financial institution of a payee (typically a merchant with a POS device) on the payer's institution. Unlike cheques, electronic debit transactions are considered "good funds" transactions, where the debit network provides the software that enables the payer's institution to authenticate and authorize the transaction at the point of sale, suspending the required funds from the payer's account and ensuring the payment will clear and settle through the ACSS. The debit network also eliminates the risk of double-spending by a debit card user by immediately "earmarking" the required funds. The counterparty risk of cheques is eliminated. Email money transfers operate in the same general way as payments using debit cards but they operate a proprietary network for clearing payments before being settled through the LVTS.

Electronic funds transfers (e.g. direct deposits, pre-authorized debit) are completed in a similar way to debit transactions. In the case of direct deposit, the payment is initiated by the payer and funds are immediately "withdrawn" from the payer's account. For a pre-authorized debit (e.g. automatic bill payments), the payee initiates a request to the payer's financial institution and funds are withdrawn, if available. In a payer-initiated electronic funds transfer, counterparty risk is eliminated; however, in a payee-initiated request, the payment will fail if funds are not available in the payer's account and counterparty risk is borne by the payee.

Cheques, debit transactions and electronic funds transfers through financial institutions are all cleared and settled through the ACSS.

Credit card transactions are requests from a payee's institution to the payer's issuing institution. As the funds are provided by the payer's financial institution (i.e. the card issuer), counterparty risk is all but eliminated.[9] The payer's institution then collects the outstanding debt from the payer, typically at a later date.

While the volume of transactions made with cash, debit and credit cards accounted for more than 75% of retail payments in 2015, these methods accounted for less than 10% of the value of all retail payments. Cheques and other paper instruments make up the largest proportion of the value of retail payments, with electronic funds transfers following closely behind. The general trend, however, is toward less reliance on cash and cheques in favour of credit cards and electronic funds transfers.

Open- and closed-loop payment schemes

Generally, there are two types of front-end payment schemes available to end users. Open-loop systems facilitate transactions between different account-holding institutions. The Interac® network, for example, operates an open-loop scheme cleared through the ACSS, while credit card networks (e.g. Visa, MasterCard) operate their own proprietary open-loop schemes. Closed-loop systems involve schemes where a payment service provider (PSP) holds all funds from both payers and payees at one institution. Payments between users of closed-loop networks (e.g. gift cards) are recorded as "book entry" transfers between payer and payee, without the use of a payments system like the ACSS.[10] Closed-loop schemes do not require the use of the ACSS to clear and settle transactions within the scheme, but require its use to bring funds into and out of the scheme.

Competition in retail payments

As payments move away from costly instruments such as cash and cheques, demands for payment services are changing. The demand for seamless, instant, convenient and around-the-clock payments is largely being influenced by the mobile and online experience of consumers in many other sectors. New PSPs are entering this space, using technology and innovative business models to meet these demands.

In terms of the FinTech ecosystem in Canada, the Toronto Financial Services Alliance notes entry by PSPs is significant. According to the Basel Committee on Banking Supervision, the retail payments industry has also attracted the most new entry from FinTech companies globally. These new entrants have the opportunity to increase competition in the marketplace. The Department of Finance Canada, for example, has noted that "the prominence of traditional providers of payment services, such as banks and debit and credit card networks, is being challenged by non-traditional providers."

To understand the potential of FinTech to provide effective competition in the retail payments space, it is important to understand how competition happens in the industry today.

Given the complexity of retail payments, competition occurs in a number of ways at various points along a payment journey: from the service that allows initiation of the payment, to the network used to facilitate the payment, to the institutions that process and clear transactions. At each stage of a payment, there is opportunity for innovation and competition to deliver better results for Canadians.

There are two key types of competition in the payments system: intra-network and inter-network competition.

Intra-network competition

Intra-network competition occurs between members within a particular payments system. In many cases, PSPs share upstream clearing and settlement infrastructure but compete downstream by offering payment services directly to end users (e.g. through cardholder benefits such as insurance or cashback privileges). Members of a clearing and settlement system, such as the ACSS, may also compete with one another to provide clearing and settlement services to smaller members, who may not be able to afford to clear and settle directly with the ACSS, or to institutions that are excluded from the ACSS.

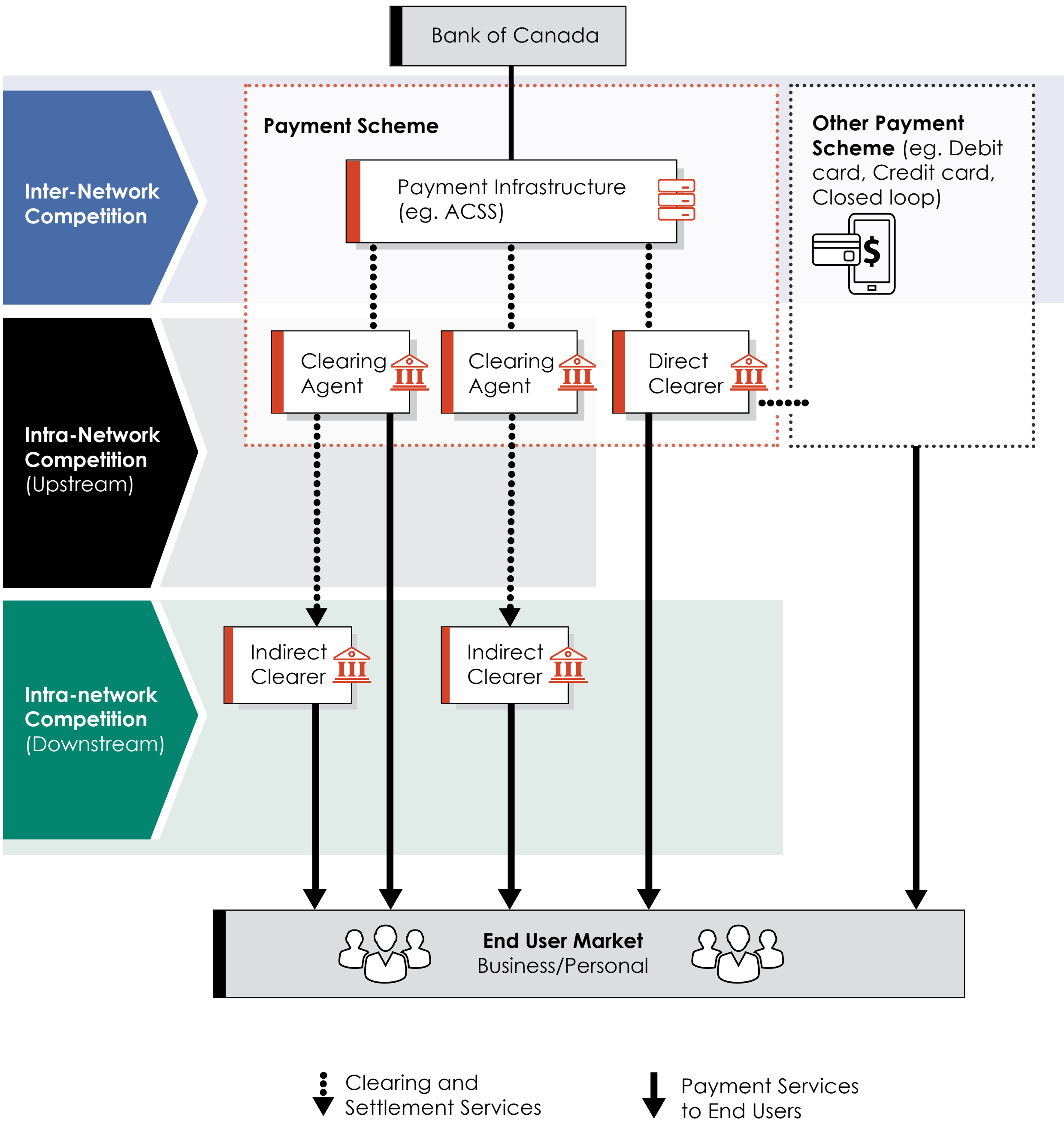
Downstream competitors provide an interface between the users of payment services and the clearing and settlement process. These downstream competitors offer a wide range of services to both consumers and businesses. The majority of competition in the retail payments space is downstream, with both new entrants and incumbents competing on price and service levels.

Despite a relatively high degree of consolidation, competition is generally strong in the "merchant acquiring" marketplace. Merchant acquirers provide the infrastructure and services that merchants use to accept and process retail payments. While some merchant acquirers are owned by financial institutions, non-financial institutions have entered this space in the past decade to provide merchant acquiring services. Given the large number of financial institutions that offer Interac® debit as well as Visa and MasterCard, non-financial institution merchant acquirers generally have a competitive choice for banking service partners.

Inter-network competition

Inter-network competition occurs between payment systems as a whole including the entire vertical chain of exchange, clearing and settlements functions. Payment systems often offer different features or qualities including security, convenience, reliability, timeliness, cost, the ability to draw on a credit facility and the ubiquity of users on both sides of the

Figure 2 – Overview of competitive dynamics in the retail payments space



transaction (i.e. the payers and payees using that network).[11] End users can choose between payment instruments that meet their specific needs but often have to accept a trade-off between features. Because no two retail payment instruments are seen as being perfect substitutes, the retail payments marketplace has several competing payment systems. Given the features of a certain payment instrument, however, end users can typically be serviced by multiple competing providers. Both facets of inter-network competition are important; research has shown that some payment systems take intensity of competition with similar systems and with other payment instruments into account when setting prices.

FinTech enters the payments space

The potential for FinTech in the payments space to circumvent traditional institutions is real. But to be successful, PSPs need to bring enough users on both sides of a payment to their service to offer a truly competitive option.

Downstream intra-network competition has seen a number of FinTech firms enter the space. Mobile payments, for example, are an innovation through which new competitors have emerged. Many PSPs, including financial institutions, have developed their own mobile wallet applications and technology companies, such as Apple (though iOS) and Google (through Android) have introduced mobile wallets that allow end users to make retail payments with their mobile phones at physical POS terminals. Mobile payments allow for increased competition from new entrants, as they can reduce or eliminate the physical limitations on the number of cards that can be carried or used feasibly by end users.

Recent innovations driven by competition from new players on the merchant acquiring side of the transaction include low-cost POS terminals and innovative business models that reduce payment processing costs. Mobile credit card processing products, for example, allow merchants who may have historically relied on cash or cheques to accept a wider variety of payment methods,[12] reducing counterparty risk for merchants and improving convenience for consumers.

Other FinTech innovators are offering products that combine payments with back-office features for merchants such as inventory management, bill collection or accounting integration; along with features that help consumers better track and manage spending or access ways of paying that are otherwise more convenient.

Unlike downstream intra-network competition, new entrants launching closed-loop systems compete as vertically-integrated PSPs. These entrants are increasingly providing competition for the initiation of payments, eliminating the visibility of financial institutions to end users. For example, PayPal operates a closed-loop system where payers and payees can transfer funds between themselves and make purchases from merchants who also use PayPal, without the use of a financial institution.[13] Only when a user decides to withdraw funds from their PayPal account (or load funds into their account) do financial institutions become a part of the payment journey. Similarly, some FinTech entrants providing international money transfer services use closed-loop models. Payments between two parties seeking to send and receive money in different countries are in effect made through two domestic transfers. The PSP transfers funds between the payer and itself in one country and, at the same time, transfers the reciprocal amount between itself and the payee in the other country. Again, this process avoids the need for a financial institution to initiate the exchange of funds.

Closed-loop systems, like e-wallets[14] and international remittance services, can provide enhanced convenience to end users by improving transaction speeds and providing a more customized, flexible payment experience (e.g. through loyalty and rewards programs).[15] Competition between payment systems can also reduce the overall price level for payment services, with new players offering systems that leverage technology and innovation to provide these services at lower prices than existing systems. In addition, the entry of FinTech can lead to lower prices on goods and services currently purchased through high-cost payment systems by reducing how much it costs merchants to accept payments.

Canadians are increasingly using credit cards as a payment method rather than a source of financial credit. This can be attributed to the features many credit card issuers provide on their cards: insurance, zero-liability, interest-free payment periods, security, the ability to conduct transactions online or over the phone, rewards programs and more. The funding for these services and features comes from part of the fee levied on merchants for all purchases made using credit cards.[16] Credit cards that provide "premium" benefits often carry a higher fee. If they are given the opportunity to develop the necessary scale, new FinTech entrants offering alternative payment methods may put downward pressure on these fees or provide better value in other dimensions (e.g. rewards or budgeting). To achieve that scale, short of direct price regulation, merchants must have the ability to adequately incentivize consumers to adopt alternative, less costly, payment methods.

FinTech entrants in the retail payments space, however, face significant barriers to entry that may slow innovation and, in the extreme, prevent these benefits from being achieved. Some of these barriers are directly attributable to regulation—that is, the regulations themselves may create barriers to entry. In other cases, the barriers are not attributable to regulation but may indeed benefit from a regulated solution.

Barriers to entry not directly attributable to regulation

The Bureau conducted extensive stakeholder engagement over the course of this study to identify the barriers to entry and growth faced by new firms entering the market as well as incumbent firms seeking to expand or compete with new entrants. These barriers include consumer behaviour and market maturity, the impact of network effects and the need for economies of scale and access to core banking services that are needed to underpin a FinTech product or service. Some of these barriers must be overcome by the firms wishing to enter on their own, while others may require regulatory intervention to be overcome.

Consumer behaviour

A key to success for a new PSP is penetration and adoption rates by both consumers and businesses. While innovations such as mobile payments are relatively new, early estimates suggest adoption and usage rates have been lower than initially estimated. The Canadian Bankers Association reported that in 2016 approximately 8% of Canadians used mobile payments in the past to make a purchase, with more than 70% believing they will still be using physical cards and cash 10 years from now.

Industry participants told the Bureau that consumers have a high degree of trust in the existing payment card infrastructure and believe that they are well serviced by it.[17] As a result, consumers' willingness to switch to a mobile wallet is currently limited. One industry participant suggested it will take years, rather than months, to change consumer behaviour. Some participants suggested that creating a digital copy of a user's credit or debit card on their mobile phone was not enough of an incentive to drive adoption. Research on mobile payment adoption in Canada has cited similar barriers.

Additionally, countries where mobile payments have grown significantly are relatively more cash-oriented than Canada and have "underbanked" populations driving adoption. Canadian consumers have generally enjoyed faster innovation in card-based products from incumbent institutions, including chip-and-pin and tap-and-pay functions, compared to other jurisdictions.

Aside from mobile devices, FinTech entrants are finding new ways for consumers to make payments online and for merchants to improve their e-commerce offerings by allowing more flexibility in payment options. There is broad consensus that e-commerce can drive innovation and competition from new entrants. For example, several innovative payment services have emerged over the last number of years in Europe, facilitating growth in e-commerce—often as a less costly alternative to card-based payments.

Consumer adoption of these services, however, is only one side of this two-sided market. Merchants in Canada have also been relatively slow to adopt new forms of payments or even e-commerce functionality.

A 2017 Bank of Canada research report highlights low rates of mobile payment acceptance by Canadian businesses. Only 5% of small and medium-sized businesses and 8% of large businesses in Canada indicated that they accept mobile payments.

One merchant association told the Bureau that the number of members accepting electronic payments through mobile and e-commerce platforms is still relatively low: less than 20% of its members offered such platforms, with little growth in the last five years. Another merchant association indicated that, while there had been some uptake, there had also been a "fair bit of reluctance" by some merchants to enable online payments. A 2016 report from Innovation, Science and Economic Development Canada highlights similar statistics.

The data on retail e-commerce sales paints a surprising picture. As a percentage of sales by Canadian retailers, e-commerce accounted for only 3.5% of total sales at its peak in December 2016. As a result, demand for new forms of payments may not be sufficiently significant to attract new entry. As for why this may be the case, merchant associations noted that control of consumers' payment data and related concerns such as security and liability were not adequately understood by or clear to merchants. Cost was also a key concern for merchant adoption of mobile and e-commerce platforms. Merchant concerns over the potential for penetration pricing[18] have also caused some delay in adoption.

To overcome this barrier, FinTech entrants will need to prove the utility of their product or service to a wide range of users on both sides of a transaction.

Incentives for competitive switching

There are also barriers to consumers and merchants switching between payment services driven largely by the distinct economic characteristics of retail payments. Network effects can cause firms in two-sided markets to employ strategies to attract users on both sides of a payment—consumers to use a particular payment method and merchants to accept it. Such strategies would take into account the relative elasticities of demand of both consumers and merchants—merchants typically accept multiple payment methods, while consumers tend to favour one in particular, in many cases credit cards.

Most payment-related innovations in the marketplace today are built on top of existing payment networks and there has been relatively less innovation in the form of new payment methods. For example, online debit and e-wallets accounted for only 4% of the value of all e-commerce transactions in Canada in 2015, with credit cards making up the remainder (96%). With approximately 77% of Canadians over the age of 15 having a credit card, Canada has one of the highest credit card penetration rates in the world, well ahead of the UK (62%), the US (60%), Australia (59%), Germany (46%) and the Netherlands (34%).

This preference by consumers can contribute to higher costs for merchants (and higher prices on goods and services if merchants recover these costs). For example, some rewards programs effectively pay consumers for using their credit card. However, these rewards programs are funded from part of the merchant's overall card-acceptance cost—the highest portion of which is comprised of an "interchange fee"—that merchants pay to accept credit card purchases.[19] As a result, credit card payments made in Canada are the most expensive form of retail payment for merchants to accept.[20]

The *Code of Conduct for the Credit and Debit Card Industry in Canada* (Code of Conduct), enforced by the FCAC, supports competition by allowing merchants flexibility in deciding which payment methods to accept. Yet many merchants still accept credit cards due to consumers' preference to use them (and potential for lost sales to competitors who do accept them), despite credit cards being the most expensive form of payment for merchants to accept.

Once a merchant decides which payment methods they will accept, they have "relatively limited influence on the use of payment methods at the POS." Rather, it is consumers who decide what payment method to use. While consumers are incentivized to switch payment methods, for example, through direct appeals (e.g. rewards, insurance, low or no-fee) from credit card issuers such as banks, consumers may not have sufficient incentive to change payment methods at the point of sale. Credit card issuers may also lack the incentive to promote *lower-cost* payment methods as they may lead to a reduction of interchange revenues earned from credit card usage. Interchange fee revenue, less the cost of funding rewards, makes up approximately one quarter of credit card revenues for Canada's major banks.

The Code of Conduct also states that merchants are able to provide discounts for using different methods of payment. However, until recently merchants lacked the ability to surcharge for the use of credit cards that may be costly to merchants but attractive to consumers. A 2017 settlement between the large credit card networks and a class of Canadian merchants will open the door to surcharging.

With few merchants providing discounts and only the recent introduction for potential surcharging, consumers do not see the benefit of using different payment methods (that are less costly for merchants) when they are earning rewards at no direct or obvious cost. There may actually be a cost—and it is borne by all consumers in the form of higher prices for goods and services.

Ultimately, when consumers favour a single payment method (as has been the case with credit cards), it creates a barrier to entry for competing payment methods. Furthermore that barrier is exacerbated by the need for a payment method to attract consumers *and* merchants. When merchants apply discounts or surcharges to influence consumer choice, new entrants may enter the market.

International policymakers have taken different approaches to address the competitive dynamics of the payments space. For example, reducing interchange fees in an effort to reduce barriers to entry and lower the costs for merchants to accept credit cards. Australia introduced new interchange standards in 2016 of 0.5% for credit cards and AUD$0.08 (approximately CAD$0.08) for debit cards, with merchants permitted to surcharge transactions up to their "cost of acceptance for that card system." Some industry participants indicated to the Bureau that the measures taken in Australia and elsewhere did not always achieve their intended outcomes, rather they led to other externalities that impacted consumers such as excessive surcharging. These stakeholders also noted to the Bureau that it was unclear whether any cost savings had been passed on to consumers, or whether consumer payment habits have changed to the degree that would have been anticipated. Despite this, in a 2016 report, the Reserve Bank of Australia concluded that PSPs continue to innovate, costs for accepting card-based payment methods have fallen and card usage continues to grow. At the same time, negative externalities such as excessive surcharging have been corrected using regulatory levers. The European Union introduced similar regulation in 2015 to cap interchange fees at 0.3% for credit cards and 0.2% for debit cards, while also banning surcharging.

An additional impediment to adopting or switching to a new payment service is the lack of interoperability between platforms and devices. In a two-sided market such as payments, a large base of users on both sides of the transaction is necessary. Too many options may leave consumers unclear on what payment options are accepted where—and merchants with too many payments services to manage efficiently. Interoperability will be essential to ensuring consumers are able to pay with the instrument of their choice and merchants are able to accept a wide variety of payment options with minimal hardware or administrative investment. To this end, some degree of collaboration between market participants may be necessary to create an environment where competition between PSPs can flourish.

Access to banking services for new entrants

Many new firms employ business models that leverage the existing payments infrastructure, inserting themselves between the deposit-taking institution and the payment-making customer. While new closed-loop systems (e.g. e-wallets) do not leverage existing payment networks directly, they still rely on them to transfer value in and out of the system or to hold funds within the system. At times, FinTech entrants are competing with the financial institutions from which they require these services.

During this study, several FinTech entrants expressed difficulty in obtaining the basic banking services required to operate.

In particular, some PSPs or money-transfer firms (e.g. peer-to-peer transfers, closed-loop foreign exchange networks) operate as money services businesses (MSBs), a category of business defined by FINTRAC. With few institutions willing to provide services to MSBs, these entrants have faced delays in getting banking services set up as well as the termination of their services with little or no explanation.

Large institutions routinely engage in "de-risking" their portfolio of accounts; some simply refuse to provide services to MSBs. In some cases, the Bureau heard that these institutions' policies stem from their approach to meeting their obligations under the *Proceeds of Crime (Money Laundering) and Terrorist Financing Act* or PC(ML)TFA, Canada's anti-money laundering (AML) and counter-terrorist activity financing (CTF) law. As such, many choose not to deal with MSBs or aim to reduce their risk of non-compliance with the PC(ML)TFA by terminating service to businesses that operate as MSBs, despite MSBs being subject to the PC(ML)TFA themselves.

While banking services are critically important for any new business, entrants in the retail payments space are in a unique position: they are direct competitors to some financial institutions' products and services but still rely on those institutions' services to meet the needs of their end users. As such, incumbents are in a position where they can effectively block the entry of any new competition.

There can be legitimate reasons for a financial institution to refuse to provide account services to a business or PSP (e.g. to meet obligations of the PC(ML)TFA regarding excess risk). At the same time, financial institutions *could* potentially use their position to refuse to provide account services for competitive reasons.[21] The lack of transparency in the reason for these decisions or the availability of recourse for those denied account services makes it unclear what needs to be remedied in order to obtain service.

The refusal of banking services can add to the sunk and ongoing costs of entry for new firms, resulting in ineffective or delayed entry.

These issues are not unique to Canada. Regulators in other jurisdictions have taken note of the increasing difficulty MSBs and FinTech firms face when opening and maintaining a bank account. The US Financial Crimes Enforcement Network released a statement in 2014 outlining its expectations of banks regarding MSBs. In 2017, the Hong Kong Monetary Authority published tips on how FinTech start-ups can help themselves when it comes to opening bank accounts. As well, the UK's Financial Conduct Authority (FCA) commissioned a study into the recent wave of de-risking of FinTech firms by UK banks, which raised competition concerns similar to those heard during the Bureau's study.

In each case, regulators have issued statements or regulatory measures signalling their support for FinTech start-ups seeking to obtain basic banking services. The FCA suggests that "banks should not use AML as an excuse for closing accounts when they are closing them for other reasons." Policymakers at the EU level have gone a step further with the revised *Payment Services Directive*, stating that registered third-party payment services must have access to banks' payment accounts services in an "objective, non-discriminatory and proportionate manner." In light of this requirement, many PSPs already have legal status in the EU, under the European Commission's first *Payment Services Directive*; the revisions have clarified the liabilities faced by both PSPs and their financial institutions.

Barriers to entry attributable to regulation

Regulation in the retail payments space covers the core infrastructure (such as the ACSS) and the schemes using that infrastructure. Consumer protection regulation also covers the credit and debit payment card networks. Given the risks associated with failure or misuse of the payments system, appropriate regulation is imperative. Unfortunately, regulation can unintentionally create barriers to innovation and competition.

A new oversight framework for retail payments

In 2015, the Department of Finance Canada released a consultation paper proposing a new oversight framework for national retail payments systems:

> *"The current oversight of payment systems in Canada is focused on the core national payment clearing and settlement systems and, to a lesser extent, on retail payment systems supported by regulated financial service providers such as debit and credit card networks. This leaves other non-bank retail payment services providers without specific regulation or oversight, resulting in an inconsistent approach for addressing similar risks posed by the activities of different payment service providers."*

The Department of Finance Canada outlined its proposed *New Retail Payments Oversight Framework* in 2017—guided by the four principles of *necessity, proportionality, consistency* and *effectiveness*—and invited comments on its components, specifically asking whether the framework would sufficiently promote innovation and competition.

The Bureau believes it will do so and applauds the Department of Finance Canada's initiative to develop a new regulatory oversight framework for retail payments.

Until this new oversight framework is finalized, however, new "non-bank" firms attempting entry continue to face a degree of regulatory uncertainty and the gaps between oversight for existing PSPs and new entrants remain. As the Department of Finance Canada notes, non-traditional PSPs are not subject to any specific regulatory requirements to address operational, financial and market conduct risks. Rather, the current oversight framework focuses on incumbent and traditional PSPs (e.g. national retail payment systems, deposit-taking institutions, payment card networks).

Regulatory uncertainty adds to the sunk costs as well as the risks involved in entering a market, particularly for smaller firms with limited resources. New entrants expressed their desire for appropriate regulatory oversight. Having "clearly defined parameters for market players" is an important step toward enabling effective competition. Reducing the costs, time and risks associated with market entry will encourage competition and spur innovation.

At the same time, incumbent industry participants noted that new entrants were not subject to the same regulatory oversight despite providing materially similar services. In a staff discussion paper from the Bank of Canada, some suggested this allows new entrants to innovate outside the regulatory purview, putting incumbents at a competitive disadvantage.

Regulation can also play an important role in facilitating the entry of non-banks and other new firms into the retail payments marketplace by promoting public confidence in alternative payment products and services. New entrants believe end users would be more likely to switch services if they knew alternative providers were subject to the same regulations as incumbents. Because many issues pertaining to retail payments remain unaddressed by regulation, the industry relies on contractual agreements between end users and PSPs in areas such as consumer protection.[22] Regulation, in this case, may help entrants overcome trust barriers by instilling confidence in different payment schemes. Clear disclosures and adequate dispute-resolution mechanisms will help customers make informed decisions about the costs and benefits of switching, allowing new entrants to increase competitive pressure in the marketplace.

Regulation should, however, be minimally intrusive to market forces. Over the course of the Bureau's study, industry participants suggested how policymakers could achieve an appropriate balance between regulation and competition. Many of these are included in the Bureau's overarching recommendations from this study including:

- **technology-neutral** or device-agnostic regulations that allow for new technologies
- regulation based on **principles** or expected outcomes rather than strict rules on *how* to achieve the desired outcome
- regulation based on the **function** an entity carries out
- regulation that is **proportional to the risks** it aims to mitigate

While regulation can reduce some barriers to entry by instilling confidence and bridging the trust gap, it can also erect other barriers to entry for new firms and inadvertently inhibit competition and innovation.

Many industry participants—new entrants and incumbents alike—said regulation should be based on the *function* a firm carries out rather than the definition of an entity in a regulation. Function-based regulation can ensure fair competition by mitigating confusion in the applicability of regulation to new entrants and ensuring all firms are subject to similar regulatory oversight. The Bureau applauds the Department of Finance Canada's work outlining the regulatory functions of retail payments in its consultation paper.

The framework should also be proportionate in nature. While many firms perform similar functions, they may not pose the same level of systemic risk. Therefore, requirements that apply equally to all firms (e.g. prudential requirements) can actually create a barrier to entry for new and innovative firms, which have lower payment volumes, smaller customer bases and fewer capital resources. The Bureau welcomes a tiered approach to regulatory measures and views industry participants as well positioned to inform the setting of specific requirement tiers.

Access to core payments infrastructure

There has been relatively little entry by open- or closed-loop system operators offering new POS, peer-to-peer or business payment options, especially compared to the number of players entering the downstream market and leveraging existing payment systems. Yet Payments Canada's recent stakeholder consultations found that Canadians are increasingly frustrated with their available options.[23] The lack of new payment choices is partly due to the significant "first-mover" advantages held by the existing systems (e.g. credit card networks, Interac® debit, Interac® e-Transfer), which can leverage network effects and economies of scale to maintain market share. These advantages are amplified by the fact that new PSPs cannot access the core clearing and settlement systems underpinning these networks.

While firms who invest in building out their networks should benefit from their investments, access to the underlying payments infrastructure around which these networks are built continues to be a barrier to effective competition by new entrants. Gaining access to the ACSS, for example, requires membership in Payments Canada. The *Canadian Payments Act* outlines institutional restrictions on required and eligible membership.[24] Payments Canada members then face additional restrictions to accessing the exchange, clearing and settlement functionality of the ACSS as "direct clearers."[25]

Restrictions on participation and operational risk requirements exist to ensure that participants do not pose risk to other participants, the system or the Bank of Canada.[26] The restrictions for direct clearers in the ACSS, for example, exist because of its design as a deferred net settlement (DNS) arrangement for clearing and settlement. This DNS arrangement exposes direct clearers in the ACSS to credit default risk with every batch entry. Given the critical importance of direct settlement and the size of the average daily obligations cleared in the ACSS, direct clearers must be able to assume a significant degree of credit risk. The current direct clearers are large deposit-taking institutions that are all subject to substantially similar regulation. As a result, there is a high degree of mutual trust among the small number of participating institutions to extend credit to each other. In a less homogenous pool of direct clearers, individual participants may use significantly different mechanisms for managing risk, resulting in a more complex and inefficient payment system.

Specifically, potential direct clearers in the ACSS must maintain a settlement account and loan facility with the Bank of Canada. They must also have payment volumes of at least 0.5% of the total volume of payments cleared through the ACSS in the past fiscal year.[27] The number of direct clearers has effectively been limited to just 12 institutions due to the volume threshold of payments cleared through the ACSS.

In contrast, an "indirect clearer" in the ACSS is a Payments Canada member that does not maintain a settlement account or loan facility at the Bank of Canada. Indirect clearers establish a settlement account and loan facility with a direct clearer, which acts as its "clearing agent." The clearing agent is also appointed to exchange and clear payment items for the indirect clearer.[28]

These restrictions (and the limited direct participation resulting from them) can, however, have a negative impact on competition. FinTech entrants, indirect clearers and direct clearers all compete in end user markets and as a result, can face a significant degree of agency risk by not connecting directly to the system. Those directly accessing the system can act strategically to attain a competitive advantage for themselves—for example, by raising their downstream competitors' costs.

A direct clearer can also use non-price discrimination to restrict competition in the downstream market by affecting the level of service its indirect clearer can provide to end users. While this may be inadvertent, clearing agents have a stronger incentive to impose costs strategically when they compete directly in end user markets with indirect clearers.[29]

In the past, indirect clearers selected end user markets in a way that minimized or avoided direct competition with clearing agents.[30] However, a large number of the new entrants in the payments space provide services in direct competition with incumbent direct clearers and clearing agents. In response, an increasing number of financial institutions may be unwilling to provide their competitors with access to the ACSS.[31] This directly affects the ability of FinTech entrants to compete with incumbents for end users. In the event that FinTech entrants have been able to secure services from a financial institution, they face an increased level of agency risk that then influences their down-stream service level and competitiveness.

As they are currently ineligible for membership in Payments Canada, FinTech entrants with whom the Bureau spoke said they cannot access the ACSS directly in any capacity (whether for exchange, clearing or settle-ment). In many cases, direct access to only the exchange function would be sufficient to alleviate this major barrier to entry. This kind of access would allow PSPs to deliver payment items directly to the system that would be cleared and settled between two financial institutions or, in the case of a closed-loop system, transferred into the system. As a result, FinTech entrants would have greater room to innovate by reducing the agency risk faced by "non-bank" PSPs, ultimately improving compe-tition by providing more choice in payments services for consumers and businesses.

As exchange, clearing and settlement are distinct functions defined in the ACSS by-laws, the access criteria for these functions do not necessarily need to be the same.

Indeed, many payment systems around the world allow for non-financial institutions to exchange payments directly. For example, the criteria for accessing the exchange function could be more lenient than access to clearing or settlement.

Payments Canada suggests that they may explore allowing non-financial institutions to access exchange systems with sponsorship by an entity with a settlement account.[32] Allowing direct access to exchange systems for a broad range of entities such as FinTech companies, current indirect clearers and non-financial institutions, can increase competition in retail payments. A similar model in the UK resulted in a significant increase in the number of new entrants pursuing this method of direct access. The Bureau applauds Payments Canada's work to pursue this objective.

Firms choosing to pursue sponsored access will still need to obtain settlement services from a direct clearer; and some participants may still choose to access the system indirectly owing to the potential back-office cost savings.[33] While many of the ACSS direct clearers act as clearing agents, only two actively pursue the business of providing services to indirect clearers or those excluded from Payments Canada. Limited choice in clearing agents reduces the ability of indirect clearers to switch easily between clearing agents resulting in little competition between clearing agents. Some industry participants suggested that by easing the barriers to entry for direct clearers, compe-tition between clearing agents would improve, either as the result of the entry of one or more firms focused on providing wholesale services or simply due to the legitimate threat of entry of a new player.[34]

Payments Canada has also indicated that it is exploring ways to make access more open by replacing the current volume requirement to become a direct clearer with an alternative risk-based measure. The Bureau applauds this decision and supports Payments Canada's initiative. It is important to ensure the various forms of risk with the payment system are adequately mitigated and controlled and Canada may learn from the experience in other jurisdictions, where regulators have explored how to implement controls that achieve a better balance between competition and the safety and soundness of the system.

The Bank of Canada and the Department of Finance Canada, in a 1997 discussion paper presented to Payments Canada (then the Canadian Payments Association), highlighted similar competition issues caused by access restrictions and a potential lack of competition between clearing agents. As a result, Payments Canada membership criteria was amended in 2001 through the *Canadian Payments Act* to make three new classes of financial institutions eligible including life insurance companies, securities dealers and money market mutual funds.[35] This, however, resulted in little change to the membership of Payments Canada that remains today. The Bureau recognizes the inherent complexities in amending membership criteria but a different approach such as institution-independent membership criteria, may encourage growth in membership in the future.

The 1997 paper highlighted that "many participants in the financial industry argue that the new competitive opportunities, and accompanying benefits for consumers, could be realized most fully only if they are able to have more direct involvement in the payments system."

Canada is now in a similar situation with the emergence of FinTech. Broader access to the ACSS, altering the Payments Canada membership criteria and creating a regulatory framework based on the functions carried out by a PSP can help mitigate the competitive impacts noted above, and increase the level of competition and innovation in payment services to the benefit of consumers and business.

Payments Canada modernization

Recognizing that improvements could be made to its national payments systems, Payments Canada has announced plans to build a new real-time retail payments system. This "real-time rail" will be beneficial as many firms struggle with the high barriers to entry associated with establishing a competing retail payments system to meet demand. Like the existing payments system, it will be important to open access to a range of participants who wish to initiate or deliver payments into the system to drive intra-network competition—not just in payment acquisition, but also from new players who wish to provide payment initiation such as mobile and e-wallets, bill payment providers and POS providers. The Bureau is encouraged that "more open, risk-based access" is an expected outcome of Payments Canada's modernization project.

Interoperability between platforms, if built into the real-time rail, can also spur competition and innovation from competing payment systems or infrastructures, driving inter-network competition. Once a network is in place, it is increasingly difficult for a firm to establish a competing network, as it would need to connect to enough financial institutions and end users on both sides of the market to establish a critical mass to support effective entry.

Interoperability can reduce the barriers to entry for new schemes, networks and infrastructure providers by helping them overcome challenges associated with network effects and economies of scale. It can also reduce barriers to switching between infrastructure providers or systems for financial institutions and PSPs providing services to end-users. The Single Euro Payment Area, for example, has created a marketplace where multiple infrastructure providers compete to process payments for PSPs throughout the Eurozone. This level of competition is achieved through interoperability, with all infrastructure providers having adopted a common messaging standard.

Payments Canada will adopt the ISO20022 payment messaging standard, which is already in use in many other jurisdictions around the world, as part of its modernization project. The adoption of ISO20022 will effectively lower the barrier to entry for infrastructure providers and payment schemes in jurisdictions utilizing that same standard, making it easier for them to enter the Canadian marketplace and provide services to end users, financial institutions and PSPs.

A system with high interoperability, however, will require significant collaboration and coordination. Collaboration, in this context, can pose competition concerns. Competitors that collaborate upstream in designing the system may wish to reduce competition downstream for retail payment instruments and services by designing rules or technical specifications that prevent the entry of new or innovative firms.[36] According to a London Economics report entitled *Competition and Collaboration in UK payment systems* such rules may raise the cost of entry or assign a proportionately larger compliance cost to smaller firms. Given the collaboration necessary in any core system development, it is important that competition and innovation are encouraged in the downstream market and that system participants do not abuse their position in a way that would block the entry of a new player or harm their ability to provide a service.

A strong governance framework for the development of the real-time rail will prevent incumbent members and early entrants from strategically developing rules that exclude future entry. In particular, governance should be independent of membership but take into consideration a wide range of stakeholders including incumbent and new entrant PSPs, merchants and consumers.

Internationally, many jurisdictions have also separated the scheme level (e.g. financial institutions, PSPs) from the clearing and settlement infrastructure to drive competition between different infrastructure providers offering services to banks and card schemes. Part of this process in other countries' payments modernization projects has also involved competitive tendering for the building of the initial infrastructure.

While restrictions on participation and operational risk controls are necessary in any core payment system, they may present a barrier to entry for new firms and increased competition. The design of the system, however, can have an impact on the necessary risk controls because different designs entail different risks. There is a trade-off between credit and liquidity risk, for example. On the one hand, while a DNS system like the ACSS poses credit risk, the liquidity requirements on participants are lower. On the other hand, a real-time settlement arrangement reduces credit risk but is costlier in regards to liquidity. Risk controls such as collateralization in a real-time settlement model can result in systems with higher levels of access, supporting competition and innovation. As Payments Canada continues its modernization journey, the Bureau agrees with the Bank of Canada that a real-time settlement model may prove the best path to pursue. A real-time settlement arrangement can and should support better access to the system, including clearing and settlement, provided an entity meets the relevant risk-mitigation requirements.

International developments

Improving access to national payment systems is a key goal for policymakers internationally. Authorities in Australia and the UK have stressed the importance of competition in clearing and settlement services to ensuring an innovative payments ecosystem. In the UK, the Bank of England is extending access to its high-value core payments system to a range of non-bank PSPs to allow them to better compete with banks (access will not be open to all PSPs, however). Non-bank PSPs have regulatory status under UK and EU law as either e-money or payment institutions.

Policymakers abroad are trying to ensure regulation is designed in a way that promotes new entry. Core payments infrastructure is also becoming accessible to new entrants who may not be deposit-taking institutions.

If the Canadian payments system is to remain competitive, policymakers in this country must keep pace with their international counterparts. Many FinTech firms with whom the Bureau spoke believe the regulatory environment in other jurisdictions such as the EU, the UK and Australia, is more welcoming and conducive to innovation. While it remains to be seen what will come of the policy choices being made in these jurisdictions, Canadian policymakers may be well served to consider the direction of some of our peers.

Australia

Submissions made by industry participants to Australia's *Financial System Inquiry* noted that Australia's retail payments regulation was fragmented, complex, lacked clarity and was not always applied on a functional basis. The *Financial System Inquiry* suggests that clearly graduated, functional regulation would facilitate innovation and competition in the payments system. Functional frameworks provide competitive neutrality, while graduation can reduce barriers to innovation and ensure regulation is risk-based.

A national real-time payments infrastructure is also being developed in Australia. The New Payments Platform (NPP) will open access to the system to a wide range of participants. "Connected institutions" will be able to connect to the NPP to send payment initiation messages (but not clear or settle) and are not required to be a deposit-taking or financial institution. "Overlay service providers" can also develop payment services, adding features or functionality to a standard payment message without having to be a financial institution. While overlay services are designed to introduce competition and innovation, they are subject to review and approval by the NPP's Board of Directors. Industry participants in Australia expressed concern that the Board of Directors was composed primarily of incumbents who may benefit from restricting new entrants' access to the NPP.

The Australian Competition and Consumer Commission (ACCC) responded to these complaints in a recent decision, suggesting the NPP's governance was transparent and contained adequate checks and balances to mitigate incentives for incumbents to act anti-competitively. The operators of the NPP also told the ACCC that they expect a competitive market for wholesale services to develop, with many direct participants' business models expected to focus on providing connection services to new entrants. Considering the potential anti-competitive detriment to be limited, the ACCC authorized the regulations governing the operation of the NPP in April 2017.

European Union

Perhaps the most significant regulatory developments are occurring in the EU. The *revised Payment Services Directive* (PSD2) aims to reduce the barriers to entry faced by new entrants providing payment services.

PSD2 introduces a new licence for innovative PSPs that have emerged in several EU member states but were not recognized under the original *Payment Services Directive*, which came into force in 2007. This gap in regulation created legal uncertainty and regulatory challenges. The European Commission, in an impact assessment, found that closing regulatory gaps in the original *Payment Services Directive* is expected to encourage entry and stimulate competition in electronic payments.

Restrictions on access to crucial parts of the existing payments infrastructure applied by incumbent PSPs based on their market position present another major barrier to entry for new firms.

In many cases, banks in the EU have blocked third parties from accessing consumer payment accounts. The German Banking Industry Committee, for example, drafted terms and conditions for online banking that prevented customers from using their banking credentials in non-bank payment systems. In May 2016, the Bundeskartellamt (Germany's competition authority) declared this rule to be in violation of German and EU competition law, stating it "significantly impeded and continues to hinder the use of non-bank and innovative payment solutions… which provides [*sic*] a lower-priced alternative to the payment solutions already established in the market."

Providing objective, proportionate and non-discriminatory access to payments infrastructure will level the playing field for all PSPs. PSD2 sets out a clear legal framework for the conditions under which third party PSPs can access consumer payment accounts, without being required to use a specific business model by the account-holding financial institution. It will also establish the obligations and liabilities of both parties. Provisions for the non-discriminatory treatment of a PSP using the technical infrastructure of any payment system are also included.

United Kingdom

In the UK, the Payment Systems Regulator (PSR) views access to payment systems as a key enabler of competition and innovation in payments, noting that PSPs should be able to access systems on a fair, open and transparent basis and be able to do so in the way that they choose. The PSR has undertaken extensive work to ensure effective competition in the payments market by lowering barriers to entry and increasing the options available for payment systems access.

In the UK, a near real-time retail payments infrastructure exists in the Faster Payments Service (FPS). More than 1,000 non-bank PSPs rely on the functionality of the FPS, with many of them accessing the system indirectly. The PSR published a market review into the supply of indirect access to payment systems in July 2016, highlighting specific concerns with the quality and limited choice of indirect access to payment systems as well as barriers to switching between indirect access providers. In a speech by the Governor of the Bank of England, Mark Carney, entitled *Enabling the FinTech transformation: Revolution, Restoration, or Reformation?,* the Bank of England also expressed concern that the reliance on access provided by banks, which are often the direct competitors of new PSPs, limits these firms' growth, potential to innovate and competitive impact.

The PSR, however, was encouraged by significant improvement in the choices available to non-bank PSPs, as noted in its 2017 access and governance report on payment systems. Eleven new direct participants are expected to join the FPS in 2017, with at least four intending to become indirect access providers representing a significant increase in choice for non-bank PSPs. The FPS has also introduced licensed aggregators, who are typically FinTech vendors that provide a direct connection to the payments infrastructure for many smaller non-bank PSPs, enabling access for firms with insufficient payment volume for direct access. The PSR, the FCA and the Bank of England are also working together to extend direct access to central bank settlement accounts to non-banks, which will provide an alternative to relying on a sponsor bank for settlement.

Conclusions and recommendations

The keys to encouraging competition and continued innovation in the payments services space are access, awareness and ability to induce switching. Specifically, broader access to core infrastructure such as the ACSS and the forthcoming real-time rail must be provided, along with access to banking services for PSPs; greater awareness of product and service options must be fostered among consumers and merchants; and merchants need the ability to apply discounts or surcharges to encourage consumers to choose alternative or lower-cost payment methods that would benefit both merchants (e.g. in the form of lower payment acceptance costs) and consumers (e.g. in the form of rewards or convenience).

The Bureau has prepared several recommendations that policymakers, regulators and Payments Canada should consider continuing to ensure the payments system stays safe, secure and efficient. However, the responsibility to achieve these goals must be shared among policymakers, regulators, Payments Canada, industry participants, consumers and merchants.

Recommendation 1

Regulators should allow PSPs and financial institutions to participate in pro-competitive collaborations while recognizing the potential risks of such collaboration. Agreements or arrangements that have the potential to prevent or lessen competition should be approved only in exceptional circumstances and where necessary to meet policy objectives.

Recommendation 2

Merchants should make use of their ability to use discounts or other incentives to encourage adoption of alternative or lower-cost payment methods that benefit both merchants and consumers. Regulators should continue to permit merchants to do so.

Recommendation 3

A clear delineation of the regulatory and legal responsibilities between a PSP and the financial institution supplying its accounts is necessary. To allow new entrants to introduce services without creating incentives for financial institutions to thwart these efforts, it is important that PSPs and financial institutions understand their responsibilities and liabilities and that those responsibilities and liabilities are appropriately allocated. Adhering to regulatory requirements, such as AML/CTF and the new retail payments oversight framework, should afford FinTech entrants the opportunity to maintain bank accounts and access established payments infrastructure.

Recommendation 4

When terminating or refusing to provide account services to a business, such as an MSB, financial institutions should be required to provide their reasoning along with supporting evidence. Applicants who are refused or clients who have their accounts terminated should have a suitable course of redress if they have been unduly terminated or refused, such as the Ombudsman for Banking Services and Investments.

Recommendation 5

Policymakers should consider replacing the current volume requirement for direct clearers in the ACSS in favour of a more objective, risk-based measure. They should also continue to explore alternative measures that promote competition. Such a change would result in an increase in the number of financial institutions participating as direct clearers and clearing agents and likely improve competition for clearing and settlement services for smaller clearers and participants.

Recommendation 6

Payments Canada should consider allowing non-financial institutions to access the exchange function of payment systems such as the ACSS and in the future, the real-time rail. Some industry participants suggested the ability to access exchange systems to deliver and process their own payments would be sufficient to increase competition. To the extent that broader access requires a change to Payments Canada membership, policymakers are encouraged to consider such a change.

Recommendation 7

Payments Canada should explore the possibility of providing an application programming interface (API) or a direct technical interface or access point for eligible participants, particularly for the real-time rail. A direct technical access point can lower the cost of entry for new PSPs while encouraging competition between payment systems by reducing switching costs for financial institutions and PSPs.

Recommendation 8

Payments Canada should assess the possibility of moving toward a real-time settlement model for its core clearing and settlement system in an effort to provide broader direct access to the payment systems operated by Payments Canada for PSPs and financial institutions.

LENDING AND EQUITY CROWDFUNDING

Small and medium-sized enterprises are key drivers of economic growth—and their success is crucial to Canada's long-term prosperity.

Background

The availability and provision of financial credit is a key driver of economic activity in Canada. SMEs use financial credit to bridge cash flow gaps (e.g. between the purchase of inventory and its sale) and make investments (e.g. in equipment or real estate). Consumers use financial credit to help bridge gaps in cash flow and to obtain everything from a car or home to an education.

Canadian consumers have generally been well served by financial institutions in terms of credit availability, enjoying easy access to mortgages, home equity lines of credit, personal lines of credit and loans, car loans, student loans, credit cards and payday loans. As such, this study focuses on SME financing.

Since the 2008 financial crisis, increasing risk aversion has led to a tightening of credit markets, particularly for SMEs. In response, FinTech lenders have entered the marketplace to provide new forms of SME financing with two main business models emerging:

- **peer-to-peer (P2P) lending** (also called debt-crowdfunding, loan-based crowdfunding or marketplace lending), which brings together lenders (institutional and retail) and borrowers (consumer and SME) in an online platform to fund loans
- **equity crowdfunding**, which allows SMEs to raise capital from a large pool of investors through an online platform

These new forms of SME financing have the potential to help relieve some of the frictions faced by SMEs in obtaining financing, while at the same time allowing lenders and investors to access new products that have typically been out of reach in traditional markets.

While these new products have the potential to stimulate economic activity, providers of these services have faced significant barriers that may be inhibiting their entry and growth.

SME financing ecosystem

Like retail payments, the SME lending marketplace is a two-sided market. In its simplest form, a loan requires one or more lenders and one or more borrowers. Inefficiency arises when lenders cannot find borrowers and *vice versa*. Just because someone needs a loan does not mean they will find someone to lend funds to them. Similarly, just because someone has funds to lend does not mean they will find a creditworthy individual to borrow from them.

Generally speaking, SMEs rely on several sources of financing, which can be broadly divided into formal and informal sources. Informal financing sources include owners' savings, personal loans taken out by owners and loans from friends and family. Formal financing comes from debt financing (including business loans and lines of credit),[37] lease financing (including business term loans),[38] equity financing[39] and trade credit and government grants.

In 2014, 72% of SMEs that received debt financing obtained it from chartered banks, while 25% received it from credit unions. While these deposit-taking institutions comprise the majority of SME lending, they are not the only source of capital for SMEs. Alternative lenders who do not rely on deposits also provide credit to SMEs, as do an entrepreneur's friends and family from whom they may borrow.

SMEs can also raise capital by selling equity in their business to investors. However, without a network of investors to whom they can pitch their business, raising equity outside of friends and family is currently out of reach for many SMEs. FinTech firms may be able to provide SMEs with new tools for reaching ready investors on a large scale.

Approval rates of SME lending in Canada

Market participants indicated that traditional lending channels (mainly retail banks) often do not meet the financing needs of many Canadian SMEs. Smaller and newer businesses have more difficulty accessing financing than larger or more established SMEs because they often lack the credit history and collateral required to secure a loan from formal sources. According to a survey by the Department of Industry Canada (now Innovation, Science and Economic Development Canada), 12.8% of SMEs who requested debt financing in 2014 were rejected. The loan rejection rate for businesses with five or fewer employees was 22.3% in 2015, according to the Canadian Federation of Independent Businesses. The loan rejection rate for SMEs with between five and 49 employees was 12.6% in 2015.

Many small businesses are rejected by traditional financial institutions because they do not meet the tight lending requirements. The top reasons given by credit providers who declined debt-financing requests were insufficient sales or cash flow (35.1%), insufficient collateral (30.3%) or a project being "too risky" (26.9%). In some cases (8.9%), no reason was provided by the credit provider. While prudential lending practices ensure that financial institutions are not taking excessive risks, they may also contribute to early failure or exit of SMEs.

Banks require and analyze the same information whether they are considering a $100,000 loan or a $1 million loan (e.g. business plans, forecasts and projections, financial statements, creditworthiness). The process is manual and costly, making small loans (under $250,000) less attractive for banks.[40]

As a result, 49% of SMEs in Canada rely on informal financing sources such as personal financing, personal loans from family and friends, retained earnings and personal savings.[41] Of greater concern is the 30% of SME owners who have turned to business and personal credit cards as a means of financing as well as those who have turned to alternative or private lenders who can charge interest rates in excess of 20%.

Competition in lending and equity crowdfunding

Lenders earn profit on the differential between the interest rate they are repaid by a borrower and the interest rate paid to the source of funds (or their cost of capital). Banks and other deposit-taking institutions have a competitive advantage in the lending space because their cost of capital has been relatively low in recent years.

Banks and other deposit-taking institutions use the money that consumers and SMEs hold in their savings and chequing accounts to fund loans to borrowers. The bank plays "match-maker" between a large number of deposit holders and borrowers, filling a role that any one deposit holder is unlikely to be able to achieve on their own. As interest rates paid on deposits drop, banks are able to offer more attractive loan interest rates to potential borrowers. Although some depositors may seek to earn higher returns and pursue investments other than deposits, many Canadians still require a funded chequing or savings account to pay their bills, receive their wages and access cash when needed. As a result, banks are able to secure funds to issue loans at relatively low cost. At the same time, deposits at FRFIs are insured (up to $100,000), as are most other regulated deposit-taking institutions (through equivalent provincial insurance plans). The risk of losses due to non-payment by a borrower is very low for depositors, making a bank an attractive place for Canadians to hold their money.

Banks and other deposit-taking institutions typically face the same cost of capital and therefore have very similar loan interest rates to one another. They compete on other, non-price dimensions such as product bundling (e.g. combining payment services and account services for a discount) or different repayment terms. Larger banks also have the added benefit of access to their own internal capital, while smaller banks must use the standard OSFI approach.

Lenders not relying on deposits depend on other sources of capital to fund their loans. Typically, they cannot offer the same liquidity as a bank, nor can they offer the same security by way of deposit insurance. Generally speaking, alternative lenders will issue debt notes to investors who provide the capital to fund the loans. The risk of losses due to borrower default is borne almost entirely by the investors. Alternative lenders must attract capital away from the relative safety and security of a bank with higher rates of return. As such, they often have higher loan interest rates.[42] Additionally, some alternative lenders may not have access to capital markets to fund SME loans, as such loans are rarely recognized as a distinct asset class from consumer credit.[43]

For SMEs looking for financing, banks and other deposit-taking institutions are often the first choice as the interest rates at a bank are likely to be more favourable than an alternative lender (due to the banks' lower cost of capital). This same low cost of capital, however, has pushed some depositors to seek other places to earn return on their money.

For equity investments, the options for SMEs are few and far between. Typically, SMEs rely on a network of contacts to generate equity investment. However, it is often not worth the effort to seek and secure investments without such a network. Most SMEs therefore rely on debt financing, at least at the outset. FinTech solutions in crowdfunding may help ease the process of obtaining equity investment.

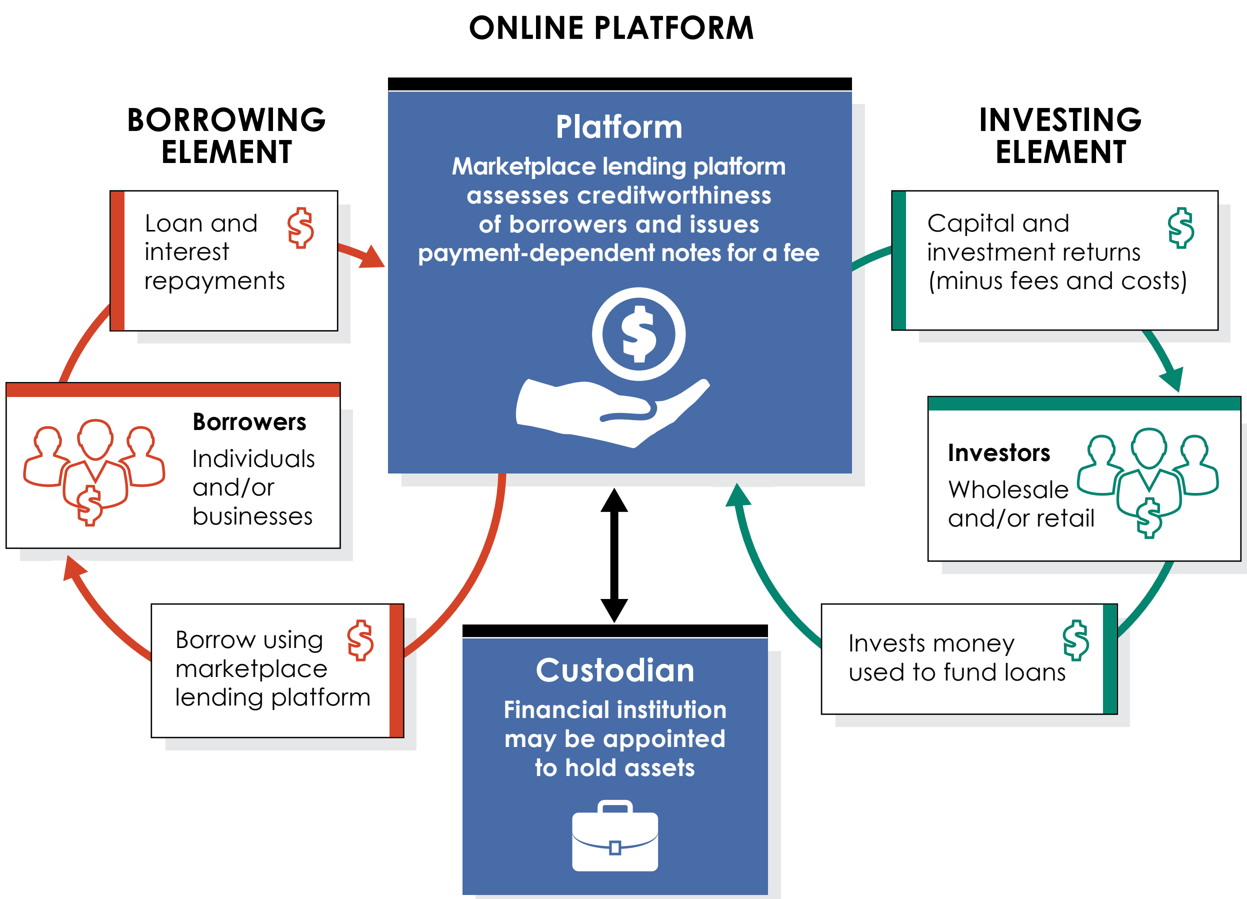
FinTech enters lending and crowdfunding space

New online alternative platforms have emerged in recent years, leveraging technology and online networks to match SMEs looking for capital with others who have money and are looking for alternative investments. Others have entered the marketplace using more traditional models but with improved application and approval processes that make it easier for SMEs to apply for and obtain credit.

P2P lending platforms operate in much the same way as traditional lenders in that they play "matchmaker" between borrower and lender. The difference is that they leverage technology to allow borrowers to appeal directly to lenders or investors. By using technology to evaluate borrowers' credit risk, many P2P platforms can quickly evaluate risk and assign a rating to a potential loan. When a loan is posted to the platform, individual investors can pledge funds to the loan, making their decision based on information provided by the borrower about why they are seeking the loan as well as the risk rating or interest rate set by the platform. The P2P lending platform typically earns an origination fee on the loan rather than an interest rate differential (although some platforms will also take an interest rate differential). Some online lenders use their own capital to fund loans—capital that is often provided by large institutional investors or financial institutions rather than by retail investors.

P2P lenders are appealing to borrowers who have been denied by traditional lending institutions or who do not have the resources to submit to a bank's rigorous approval process. They are also a good match for lenders looking to participate directly in the credit market rather than through a bank or investment fund. However, the borrowers who may be attracted to P2P lending platforms may be riskier borrowers, reducing lender confidence in these platforms. In some jurisdictions, where P2P lending is more mature, regulators have moved to curb high-risk lending in their markets. For example, the UK's FCA in 2017 wrote to P2P lenders operating in the UK concerning the practice of issuing loans to individuals or businesses that then would loan those funds further to others.

Figure 3 – Peer-to-peer lending platforms at a glance



Despite presenting interesting opportunities for investors and borrowers, the market for P2P lending is still quite small in Canada, comprising less than $25 million (2016) of the more than $53 billion in SME credit issued (2014). While growth is expected, the trust that depositors have in Canadian deposit-taking institutions, low cost of capital those institutions enjoy and perceived risks associated with P2P lending, it is unlikely that P2P lending in Canada will grow to be a significant threat to traditional lenders in the near term. This is not the case elsewhere, however. In the UK, P2P lending accounted for more than £3 billion (approximately CAD$5 billion) in credit issued in 2015. Globally, the emergence of technology-led online lending platforms was spurred by the 2008 financial crisis. During that time, some banks in the UK and elsewhere failed and the credit market tightened leading many borrowers to seek alternative credit sources and investment vehicles. Because the financial crisis did not impact Canada on the same scale, demand for alternative credit has been lower.

Similar to P2P lending platforms, equity crowdfunding platforms operate by playing matchmaker between potential investors and SMEs looking to raise capital. The difference is that SMEs are issuing equity in their company to investors through the equity crowdfunding platform (i.e. they are giving up a stake in their business in return for capital). Investors in equity crowdfunding are purchasing shares in a company, which brings different risks than a loan. In particular, because the equity acquired may not be liquid or transferrable (depending on the type of equity), an equity crowdfunding investor may be holding that equity for a very long time.

By presenting a new business model for retail investors, equity crowdfunding opens a marketplace that was typically restricted to those with greater knowledge of new offerings or an entrepreneur's contact network. It also opens new opportunities for SMEs, which no longer require their own network of contacts to find investors. Nonetheless, equity crowdfunding is not without risks. With less disclosure than a typical public capital raise, equity crowdfunding platforms may be susceptible to fraudulent campaigns because investors have less information about the companies raising capital on such platforms. Given the nature of the securities acquired by investors through an equity crowdfunding platform, investors may also not be aware of their rights and responsibilities with respect to the equity they acquire.

Other FinTech firms in the lending space have entered the market using a collaborative approach with existing financial institutions. These entrants are leveraging technology, computer algorithms and big data to improve efficiency in credit adjudication—simplifying and speeding up the application and approval process for lenders. These improvements have caught the eye of traditional lenders, who are beginning to enter into partnerships with FinTech firms to better serve their customers. Throughout this study, the Bureau heard that while incumbent financial institutions have the customers, FinTech entrants bring the technology; by working together, they can better serve SMEs seeking financing.

Although P2P lending and equity crowdfunding platforms have the potential to provide financing to SMEs at a lower resource cost and to open new and interesting investment opportunities, barriers to achieving this potential remain.

Barriers to entry not directly attributable to regulation

Compared to some of its peers, Canada fared well during the global financial crisis. The large financial institutions in this country did not fail, largely due to Canada's strong regulatory regime and the sound business practices of those institutions. Because our financial institutions did not fail, demand for P2P lending and equity crowdfunding is significantly lower in Canada than in jurisdictions where the financial crisis had a greater impact or where regulatory regimes were insufficient to prevent widespread bank failure. In those jurisdictions, regulators responded by strengthening restraints on financial institutions, effectively causing a contraction in available SME credit. As a result, demand for P2P lending and equity crowd-funding increased significantly faster than in Canada.[44]

Canadians justifiably have confidence in the strength and resilience of our regulated banking system and may therefore lack the desire or will to venture outside that system.

Additionally, banks and other deposit-taking institutions have a significant competitive advantage with respect to the source of capital, relying on deposits (or their own internal capital) to fund lending activities rather than investments from risk-averse investors. To attract lenders, P2P lending platforms must offer a more competitive, risk-adjusted return than other investment avenues. For example, if a P2P platform offers a lower return than a savings bond, guaranteed investment certificate or very safe mutual fund, it is unlikely that an investor would choose to fund a P2P loan. At the same time, P2P lending platforms must compete against other lenders for borrowers, meaning they need to keep rates as low as possible to attract borrowers. This is not in itself a barrier to entry or growth; it is simply the reality facing the P2P lending model.

Consumer confidence in these FinTech platforms, however, does present a barrier that is not caused by regulation but may potentially be overcome through regulation. One of the issues raised throughout this study was that FinTech lenders suffer from a lack of clear regulation to govern their business. For example, it is not clear what happens to investors and borrowers in the event that the P2P lending platform fails, with investors lacking guidance on how to collect on debts without the platform intermediating. Another issue that can lead to a lack of confidence is the principal-agent problem inherent in a platform that shifts risk to individual investors—that is, the platform may underprice risk or approve or facilitate loans to overly risky borrowers, collecting the origination fee while shifting the default risk entirely onto investors.[45] Finally, equity crowdfunding and P2P lending platforms are attractive not only for legitimate borrowers but also potentially fraudulent ones. The relative anonymity offered, combined with the self-reporting nature of much of the information required about a borrower, can increase the risk of making investments based on false information.[46] Investors may see these risks as too great to leave the relative safety of their existing portfolio.

Barriers to entry attributable to regulation

The FinTech marketplace lending space currently suffers from both too much and not enough regulation. At the time of writing, Canada does not have any laws, federal or provincial, that specifically govern both sides of P2P lending platforms (i.e. the lender and the borrower). Instead, the activity of lending is subject to a number of separate federal and provincial statutes depending on the type of activity conducted or, in some cases, the entity that conducts it. Most applicable regulation on the provincial side is enshrined in securities law and designed to protect investors in marketplace lending platforms. Although regulators have recently made efforts to apply more flexible approaches to regulatory compliance—in areas such as electronic client on-boarding—emerging business models in the FinTech lending space are for the most part subject to the same regulation that applies to their bricks-and-mortar counterparts.

One key element of the Canadian landscape that has challenged FinTech lenders is the confederated nature of Canadian laws—concurrent laws in different jurisdictions creating subtle variations from one province to the next. There is a high degree of complexity when navigating the various federal and provincial laws that could possibly apply to a FinTech lender's specific model depending on the provinces in which it operates, the nature of the entity providing the services, the business activities in which it engages and the investors and borrowers to whom it provides services.

Technology-neutral and device-agnostic cost-of-credit disclosure

Several jurisdictions have regulations that set out a lender's obligation to disclose the cost of a credit facility clearly and plainly to borrowers. At the federal level, the FCAC enforces these regulations, which apply only to FRFIs. These regulations are sometimes written in a way that contemplates credit agreements delivered on paper rather than electronically or through a computer application.

For example, many federally-regulated banks are required to ensure certain disclosure information is presented in an "information box" that must be surrounded by "sufficient margins above, below and to either side of the text such that sufficient white space is provided around the text." While such a requirement is reasonable, it may be difficult to ensure sufficient white space is available on the screen of a mobile phone or tablet computer in the same way as a legal-sized sheet of paper. While the regulation as written may be technology-neutral, compliance across different delivery media may be prohibitively difficult.

Money services businesses

As with payment service providers, if a P2P lender operates a platform in which funds are transferred through an electronic funds transfer network, it may be characterized as an MSB. While P2P lending involves a loan being funded by an individual investor (or group of investors), the mechanism by which funds are transferred varies in practice. As a result, the determination of whether a P2P lender or equity crowdfunding platform is an MSB—and therefore subject to an MSB's client identification and reporting requirements—will depend on the specific business model involved, leaving some P2P lending and equity crowdfunding platforms in a position of regulatory or legal uncertainty.

FINTRAC has provided guidance on the interpretation of MSBs as they relate to crowdfunding,[47] but this uncertainty may increase, at a minimum, the perception of the risk to a platform, causing entrepreneurs to decide the risk is not worth their effort and deploy their capital elsewhere. As a result, Canadians could miss out on this innovative opportunity.

Securities regulation and the prospectus requirement

Securities regulators in Canada have indicated that P2P lending and equity crowdfunding platforms are in the business of dealing in securities. For equity crowdfunding, several provinces have introduced a regulatory framework for dealing with retail investors, which allows entry by these platforms and sets out their responsibilities to investors. These guidelines provide clarity to both the platform and potential investors.

For P2P lending, unless otherwise exempt by securities regulators (as has happened in one instance), platforms are subject to stringent know-your-client (KYC) and know-your-product (KYP) rules. In dealing in securities, they are also required to conduct suitability assessments for every investor and every loan on the platform.

In addition, securities regulators have indicated that a P2P lending platform, unless relying on an exemption in the law or a condition of registration, may need to prepare and file a prospectus[48] for each loan on which they intend to sell securities to investors.

The potential need to file a prospectus for each loan could make market entry cost-prohibitive for an upstart firm as borrowers may avoid P2P lending in the face of the costs of preparing a prospectus. For example, if an SME was looking to take out a $50,000 loan, the resources required to prepare the prospectus could exceed the value of the loan itself.

As a result, FinTech lenders almost always seek exemptions from the prospectus disclosure and registration requirements. All P2P lending platforms operating in Canada at the time of writing rely upon existing exemptions (for instance, the accredited investor or offering memorandum exemption) or have specific exemptions as conditions of their registration.

Many of the exemptions vary from one province or territory to the next. This fragmentation can slow innovation and impede the ability of a firm to expand nationally in a reasonable timeframe. Since 2015, securities regulators have introduced three different regimes to fill regulatory gaps regarding equity crowdfunding. These crowdfunding exemptions establish a clear regulatory framework for those looking to establish crowdfunding platforms, helping alleviate regulatory uncertainty.

As these exemptions are generally targeted toward certain types of investors, relying solely upon narrow exemptions or discretionary exemptive relief may create additional hurdles for FinTech lenders who later wish to gain broader access to markets and attract different types of investors outside their existing exemption category.

Barriers to collaboration

Some FinTech firms in the lending industry have designed tools and services to improve efficiency and cut costs in the loan application and approval process. Many of these firms have partnered with existing financial institutions to provide loans to SMEs and consumers. These arrangements, however, are subject to regulations governing partnerships and outsourcing by FRFIs.

During this study, some FRFIs expressed concerns about compliance with federal third-party oversight rules. Some FRFIs are concerned they could be held responsible for the activities of their vendors and partners. This fear may prevent them from collaborating with FinTech firms on a more productive level.

One challenge with such partnerships is the significant difference in regulatory environments for established financial institutions and FinTech companies. Regulated financial institutions typically have processes, policies and standards that create challenges for FinTech firms, whether as partners or service providers.

An arrangement between a FinTech company and an FRFI may be characterized as a "material outsourcing arrangement" that requires compliance with OSFI's Guideline B-10, *Outsourcing of Business Activities, Functions and Processes*. This guideline sets out OSFI's expectations for an FRFI with respect to outsourcing arrangements that can hinder their ability to collaborate with FinTech firms to provide services to their clients. These rules are important to mitigate the potential for regulatory arbitrage and ensure that the risks from third-party service providers do not spread through the entire system and that FRFIs are accountable for their outsourced operations. They may, nonetheless, have a deterrent effect on innovation. FRFI regulators should consider the impact of rules surrounding outsourcing and partnership agreements on competition, innovation and collaboration to ensure that the rules do not unnecessarily hinder FRFIs from tapping into FinTech ingenuity.

Although the barriers to entry for P2P lending and equity crowdfunding platforms may be significant, financial sector regulators are working toward solutions that embrace FinTech and what it has to offer. In particular, securities regulators have launched programs to help FinTech firms better understand the law and regulators' expectations. These initiatives are a positive step forward in embracing competition and innovation.

A Canadian FinTech Sandbox

In 2017, the Canadian Securities Administrators (CSA) launched its *Regulatory Sandbox* initiative, which focuses on innovative technology-focused or digital business models whose activities trigger the application of securities laws. These models range from online platforms (such as crowdfunding portals, marketplace lenders and angel investor networks) to those using artificial intelligence for trades or recommendations, ventures based on cryptocurrency or distributed-ledger technology and technology service providers to the securities industry. The aim of this initiative is to facilitate the ability of these businesses to offer innovative products and services across Canada, while ensuring appropriate investor protection.

Through its sandbox, the CSA is considering applications, including for time-limited registrations and exemptive relief, on a co-ordinated and flexible basis to provide a harmonized approach across Canada for admissible start-ups or incumbents, while providing flexibility and rapidity in the treatment of registration and other applications. The sandbox also functions as an information- and expertise-sharing forum for regulators. The CSA sandbox has a fully dedicated team with expertise in regulatory matters. The team monitors developments closely and regulatory change is informed by its frontline experience with live models and applications.

International developments

Demand for P2P lending and equity crowdfunding in Canada is low compared to its peer jurisdictions, largely due to Canada's relatively better performance during the financial crisis. In addition, fewer Canadians are unserved or underserved by existing financial institutions than in our peer jurisdictions. As a result, Canadian regulators are in the enviable position of being able to observe and learn from the outcomes of P2P lending regulation in other jurisdictions.

United Kingdom

In the UK in 2015, revenues in the FinTech sector reached £6.6 billion (approximately CAD$11 billion) and investment in FinTech companies reached £524 million (approximately CAD$875.5 million). The UK is perhaps the most developed market for P2P lending, where P2P lending has become an increasingly important channel of finance for SMEs. In 2015, for example, the Peer-to-Peer Finance Association reported that approximately £2.6 billion (approximately CAD$4.4 billion) was loaned through P2P loans and equity crowdfunding in the UK.

One explanation behind the growth of P2P lending is significant government backing. In October 2014, the UK's FCA launched the *Innovation Hub* as part of its *Project Innovate* program, with the objectives of adding greater flexibility to its regulatory framework and removing barriers to entry for innovative businesses. Among other initiatives, the UK government legislated in 2015 that eligible SMEs that had unsuccessfully applied to a designated bank for a loan, overdraft, invoice finance, asset finance (excluding operating leases) or credit cards, be referred to a designated "finance platform."

The UK also announced a specialized regulatory framework for "loan-based crowdfunding platforms" (which includes P2P lending platforms) and "investment-based crowdfunding platforms" (which includes equity crowdfunding platforms). It follows on the heels of the government amending the *Financial Services and Markets Act Order 2013* to include "operating an electronic system in relation to lending." The specialized framework:

- establishes minimum capital standards for companies looking to enter the P2P lending market

- requires platforms to design a business model that protects clients' money from the platform's creditors
- establishes rules for firms to disclose "relevant and accurate information" to customers, having regard to relevant information considerations (although specific terms or disclosure practices are not mandated)
- requires platforms to create a resolution plan to maintain loan repayments in the event the platform fails

The FCA also introduced rules applying to all firms that are designed to be proportionate and technology-neutral and to reduce the need for the FCA to apply individual restrictions to investment-based crowdfunding platforms' operating licences. The new rules include restrictions on marketing, allowing platforms to communicate direct offers only to consumers who take regulated financial advice, are high net worth or "sophisticated" investors, or confirm they will invest no more than 10% of their net assets in non-readily realizable securities. The rules also require clients not seeking regulated advice to pass an "appropriateness test" in line with the provisions of the EU's *Markets in Financial Instruments Directive*.

The FCA has also moved to grant full authorization for banking licences to certain P2P lenders, which essentially permits customers to hold loans and investments in P2P lending platforms within an "innovative finance individual savings account." Granting full authorisation for banking licenses to certain P2P lenders recognizes the importance of P2P lending as an investment and offers consumers access to returns that will be tax-free.

European Union

P2P lending is largely fragmented at the EU level and the regulatory framework varies according to local member state rules. However, the *Consumer Credit Directive* is one piece of legislation that provides limited harmonization in this area. The *Consumer Credit Directive* sets out some basic transparency and consumer protection rules including the ability to withdraw from a credit agreement within 14 days and the ability to repay the credit early at any time.

While there is no broad EU framework that covers P2P lending, certain countries have specific, local P2P lending regulatory regimes including France, the Netherlands and Spain.

United States

In 2016, the US Office of the Comptroller of the Currency (OCC) announced its plans to issue special-purpose national bank charters for FinTech companies. This will allow FinTech companies that collect deposits, issue cheques or make loans (among other traditional banking activities) to operate under a single national standard to enable them to act throughout the US in exchange for rigorous oversight by the OCC. In conjunction with this announcement, the OCC also released a publication, *Exploring Special Purpose National Bank Charters for FinTech Companies.* However, many state regulators are opposed to the OCC's special-purpose FinTech charters and several have commenced litigation.

More recently, the US Congress passed the *Financial Choice Act*, which seeks to amend a number of the elements of the *Dodd-Frank Act* (enacted in response to the 2008 financial crisis). As proposed, the *Financial Choice Act* would eliminate: limits on how much a company can raise using crowdfunding; requirements for financial statements or other types of disclosure by the issuer; requirements for the issuer to file annual reports after completing a raise; and the risk of inadvertently becoming a reporting issuer, as purchasers of these securities are not counted toward the non-accredited shareholder limit. While it is unclear if the US Senate will approve the *Financial Choice Act* in its current form, Canadian securities regulators should consider whether some of the proposed reforms could be helpful in this country.

Australia

Under Australian law, providers of marketplace lending products generally need to hold an Australian Financial Services (AFS) licence (as is the case with all businesses providing financial services in Australia) and an Australian credit licence (as is the case with all businesses engaged in credit activities). Both of these licences are granted by the Australian Securities and Investments Commission (ASIC). Some providers may seek to rely on exemptions by either acting as a representative or relying on an intermediary authorization. ASIC has the power to give relief in circumstances where it can be demonstrated it would be unreasonably burdensome to comply with the applicable requirements.

In December 2016, ASIC launched its version of a regulatory sandbox. Under Regulatory Guide 257, *Testing fintech products and services without holding an AFS or credit licence*, ASIC opened an avenue for firms seeking to test products before obtaining an AFS licence. Among other measures, it introduced a "fintech licensing exemption" that allows eligible businesses (after notifying ASIC) to test certain products and services for 12 months without the need to apply for a licence. Following testing, businesses provide ASIC with a short report that includes information about clients and complaints as well as regulatory requirements identified as barriers to viability.

Changes in securities legislation have also been introduced in Australia to allow more companies to crowdsource equity funds though a new category of licensed intermediaries. The new framework allows unlisted public companies with less than AUD$25 million (approximately CAD$24.4 million) in assets and annual revenue to raise capital via equity crowdfunding platforms up to AUD$5 million per year (approximately CAD$4.9 million), while retail investors can invest up to AUD$10,000 (approximately CAD$9,758) per company per year. It also includes a cooling off period for investors of five business days.

Conclusions and recommendations

P2P lending platforms and equity crowdfunding platforms have significant barriers they will need to overcome to be successful. P2P lenders and equity crowdfunding platforms need a compelling business model to attract investors away from traditional investment options, trusted relationships with their institutions and to overcome the challenges associated with the low cost of capital FRFIs enjoy. They also need to address the lack of consumer trust or confidence in their platforms resulting from an uncertain regulatory framework and unclear consumer protection regime.

Regulators have an opportunity to build a framework that ensures this sector can continue to innovate and succeed in the future, while continuing the fundamental role they play in consumer and investor protection.

Recommendation 1

Securities regulators should continue to provide clarity and guidance regarding the regulatory framework for P2P lending including the requirements and process to obtain exemptive relief from KYC, KYP, suitability and prospectus requirements, as appropriate, provided the necessary consumer protections are in place.

Recommendation 2

Consumer protection regulators should ensure their guidance and regulations are technology-neutral and device-agnostic. Regulations should be written to achieve principles rather than to prescribe how those principles are met.

Recommendation 3

Securities regulators should continue to harmonize their approach to prospectus exemptions for innovative business models, including P2P lending and equity crowdfunding, to ensure differences in their laws do not unduly inhibit competition and innovation.

Recommendation 4

Regulators contemplating "sandboxes" should look to other jurisdictions, such as the UK and Australia, for best practices and lessons learned with respect to FinTech lenders.

Recommendation 5

FRFI regulators should consider the impact that rules related to outsourcing and partnership agreements may have on competition, innovation and collaboration to ensure these rules do not unnecessarily hinder an FRFI from tapping into FinTech ingenuity, and appropriate risk-management frameworks are in place.

INVESTMENT DEALING AND ADVICE

Affordable, automated investment advice can help Canadians grow their savings and encourage diverse participation in financial markets.

Background

In 2015, Canadians' holdings of investment fund securities[49] approached $1.5 trillion, nearly three times their holdings of equities and bonds combined. Given the critical importance of saving for the future, a massive industry of financial professionals exists to help Canadians achieve their savings goals by giving advice, planning and allowing Canadians to access financial markets. Receiving financial advice has generally been shown to improve financial results for households.

Financial advice is a broad term that includes a number of services provided to consumers, businesses and other entities. It encompasses the sale of securities or other investment products, insurance advice, debt counselling, wealth and estate planning and other services across the entire financial scope of a client's life.

This study looks specifically at that segment of the advice industry that has been affected by technology—particularly the advent of online advisory services and online investment platforms for retail customers (i.e. individuals rather than businesses or large programs like pensions or group insurance)—a subset of the diverse services offered by financial advisors.

Retail investors currently have many options when it comes to purchasing investments, with varying levels of research, advice and investor control and differences in how advisors are compensated.

Traditionally, advice was supplied in person and decisions were made by investment professionals. Shifting customer demand, combined with the advent of new technologies and the mobile Internet, has led to a new wave of tools for retail investors. In just the past few years, FinTech entrepreneurs have entered the marketplace with products and services designed to take advantage of this shift, targeting customers who may not want or have time to meet and discuss financial plans with an advisor during the day.

A handful of these so-called “robo-advisors”—more accurately “online advisers” (as opposed to bricks-and-mortar advice delivery)[50]—have been successful. However, there remain impediments to their growth and their ability to put downward pressure on pricing. Some of these barriers, as with the payments and lending sectors, can be attributed directly to regulation, while others cannot.

Investment advice ecosystem

The industry today has many options for retail investors in terms of the products available, the way in which the products are bought and sold and the number of firms offering investment services. Despite the plethora of options, in 2015, 78% of investment products were issued by deposit-taking institutions (such as banks) and insurers.[51] Branch delivery (through a deposit-taking institution or insurer) was the most popular form of distribution accounting for approximately 32% of distribution, with other financial advisors and planners making up 31% of distribution. According to the CSA, only approximately 4% of funds were distributed through online or discount brokerages in 2015.

Product and service offering

Retail investors can access funds and advice in a variety of ways, from do-it-yourself (DIY) investing to full-service portfolio management. Each channel offers a different set of characteristics. The products available to investors also differ, ranging from directly-held equity to mutual funds to lower cost exchange-traded funds.

This study focuses on mutual and exchange-traded funds, given their popularity in Canada.

Mutual funds are products that contain equities, bonds, money, treasury bills, other mutual funds or a combination thereof. Investors can purchase partial units and benefit from liquidity in that they can sell the mutual fund back to the issuers at any time. Mutual funds typically have an embedded fee, called the management expense ratio (MER), expressed as a percentage of the net asset value of the fund. The MER covers the costs of managing the fund, trading securities within the fund and, depending on how the fund was purchased, compensating the investment dealer who sold the product.

Exchange-traded funds (ETFs) are similar to mutual funds in that they can contain similar types of securities. Unlike mutual funds, they are traded on an open exchange, meaning only full units can be bought and sold. Additionally, ETFs may not provide the same liquidity as a mutual fund; to sell an ETF, a buyer must be found[52] and, even when one is found, they may not want to buy the entire volume the seller wishes to sell. ETFs also carry MERs but they are usually significantly lower than those of mutual funds—meaning they are less expensive—in part because they are not typically actively managed and also because they are delivered via an exchange, so there is no embedded commission.

Discount brokers (or the DIY channel) offer investors access to products with no personalized advice. Investors conduct their own research and make their own trading decisions. These trades are executed by a registered brokerage that is a member of IIROC. Typically, the DIY channel offers investors access to most securities available to be purchased (unless the security has specific limits on distribution). Investors will generally pay a commission on each trade, which may differ based on the type of investment fund purchased. These fees vary from one brokerage to another. Fees for the products themselves depend on the type of investment; however, in the case of mutual funds, DIY investors have access to the lower-fee D-series funds, which typically carry MERs exclusive of embedded commissions.

Full-service firms vary in the actual services offered. Some provide advice and recommendations to investors based on conversations and their own expertise, but the investment decisions are made by the investor. Portfolio managers are full-service advisors, some of whom make investment decisions on behalf of investors based on their expertise and client knowledge; others simply provide advice and the investor is left to decide. Robo-advisors in Canada fall into the portfolio manager category. These types of advisors can be independent or affiliated with an institution (such as a bank, insurer or investment group). Traditional full-service advisors and portfolio managers will often also provide complementary products and services along with their advice on investment products, such as insurance advice and sales, advice on debt management or financial behaviour. Full service advisors are typically compensated in one (or a combination) of four ways:

- **salary** paid by the advisor's firm[53]
- **sales fees or commissions** (in the case of mutual funds, these are embedded in the MER); the vast majority of funds are sold on a commission basis
- **fee-only**, where the investor pays the advisor directly (in the case of mutual funds, fee-only advisors do not receive commissions from the fund issuer, resulting in a lower MER)
- **fee-based**, which combines a fee paid by the investor and a commission paid by the advisor's firm or MER

The robo-advisors in today's marketplace typically operate on a fee-only basis.

Competition in investment dealing and advice

Investment dealers and advisors compete on both price and non-price elements. These include fees charged, customer service (e.g. availability of the advisor to answer questions, opening hours of their offices), the way advice is delivered and the success of the investment portfolio or the investment's performance based on the advice offered. In addition, investment dealers and advisors may offer a number of complementary services to their clients such as estate planning, insurance dealing, the provision of basic investment education and coaching in financial behaviour.

Price transparency and the principal-agent issue

Retail investors often find themselves without the ability to accurately compare the cost of advice, as embedded commissions are not readily determined from mutual fund marketing materials.[54] As a result, advisors who are paid through embedded commissions are often able to offer advice for "free" to the investor. Of course, this is not always the case—and investors dealing with such advisors may be paying much more than they would with a fee-only advisor or by purchasing funds directly. At the same time, by embedding commissions, advisors are able to offer financial advice and investment dealing services at no upfront cost to investors, potentially increasing access to advice for Canadians, particularly those with lower investible amounts, little financial literacy or who lack the time to conduct their own research and trading. Nonetheless, the lack of transparency into mutual fund commissions makes it difficult to comparison-shop for financial advice, reducing the effectiveness of competing advisors.

The opacity of embedded commissions has also exacerbated the principal-agent problem that can exist in industries where customers rely on a supplier's expertise to make decisions. When two substantially similar funds are available and suitable for a client, for instance, the advisor may be incentivized to recommend the fund with the higher commission, acting on the lack of transparency. Similarly, advisors representing large fund issuers (e.g. large banks and insurers) may have increased incentives to recommend the funds issued by their firm, rather than those that may cost less. Ultimately, the investor ends up paying more (and saving less) than in a market with price transparency and faces a product selection that is limited to a subset of what is actually available.

To address this issue, securities regulators in each province and territory collaborated to require increased disclosure of fees and commissions paid to advisors. The details of these requirements are contained in the *Client Relationship Model 2* (CRM2), which came into effect in 2016. With CRM2, investors now receive periodic statements showing the amount they paid for advice, whether or not they actually received advice. This is an important first step to facilitating competitive switching. However, despite regulation requiring such disclosure at account opening, a recent mystery shopping exercise found that fees were discussed with clients only about half the time and advisor compensation was discussed only about a quarter of the time. Given the asymmetry of information inherent in the investor-client relationship, to truly provide transparency, such costs should be available in all fund marketing materials in a clear and understandable way, taking into account that many retail investors lack strong financial literacy.

Robo-advisors enter the investment advice space

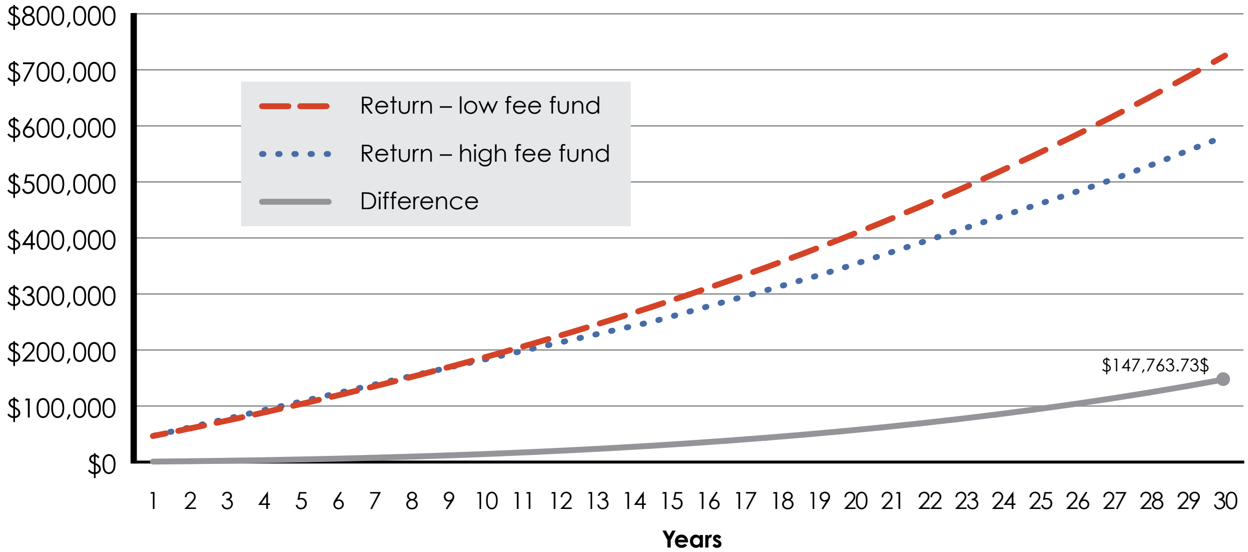
Responding to shifting demand, robo-advisors have targeted consumers seeking basic advice, "set-and-forget" portfolio management in an online experience. Robo-advisors offer a limited suite of services that may not include the personal relationship with an individual advisor, or the complementary services a full-service advice firm may offer. Using lower cost ETFs and operating predominantly on fee-only or fee-based models, robo-advisors have established themselves as low cost alternatives to incumbent advisors. Leveraging technology to collect information and using investment strategies based on model portfolios, these new FinTech competitors have been able to cater to those seeking advice and portfolio management but who may not have or want to spend the resources needed to meet with a financial advisor in person.

The difference between mutual funds with embedded commissions and those purchased directly can be significant. In 2015, data aggregator Morningstar found the typical advice portion of MERs on Canadian mutual funds to be around 100 basis points (1%) for equity funds. That is the difference between $60 and $50 on a $1,000 investment over just one year, or $300 over a 30-year period—or 30% of the original $1,000 investment (excluding reinvestment of the savings).

To illustrate this impact, see Figure 4 for a graph which represents the difference in fees an investor would pay on two similar funds. The first charges a higher fee (e.g. a 2% MER) and the second charges a lower fee (e.g. a 0.5% advice fee and MER of 0.25%). This reflects well the difference between a traditional mutual fund dealer, where investors commonly pay an MER of approximately 2%, and a robo-advisor, where a set fee is charged and low-fee ETF are used to build portfolios.[55]

The lower fees charged by robo-advisors can potentially reduce the barriers faced by investors with lower net wealth. These robo-advisors could reach consumers not yet receiving advice and areas where there is currently limited competition.

Figure 4 – Initial investment of $20,000, with $1,000 monthly contributions over 30 years



*Assuming: 4.5% average market growth

Using technology to keep fees low

Robo-advisors have the potential to take advantage of substantially lower costs and fees. By leveraging technology and employing process automation, robo-advisors can decrease the marginal cost of managing an additional portfolio. Using model portfolios based on model investor profiles, they can greatly reduce the time and cost of meeting with clients. Without the need to support a branch network of advisors and multiple offices, robo-advice platforms may be able to operate at a substantially lower cost than traditional operators in this industry, putting pressure on other firms to lower their fees to remain competitive. And while the development of algorithms and user interfaces may impose larger sunk costs than start-ups employing a traditional advisory model, subsequent marginal cost per client may be substantially lower.[56]

Scale plays a large part in the cost efficiencies to be gained. The ability of robo-advisors to continue reducing prices relies on sustaining and increasing the customer base while maintaining the productivity efficiencies of automation. As robo-advisors employing these new business models face high sunk costs relating to regulatory approval and software development, they must be able to gain the scale necessary to recoup these costs if they are to remain effective competitors.

Product differentiation and non-price competition

The benefit of competition from FinTech firms in this industry extends beyond offering investment advice at a low price. Robo-advice platforms offer a number of services that are different from those of traditional advisors and may therefore appeal to investors with entirely different preferences for advice services. For example, the onboarding process might be entirely automated and done electronically (depending on the quality of the questionnaire and robustness of the process) attracting more technologically-engaged investors and those less inclined to meet with an advisor in person. Robo-advisors are less likely to appeal to those investors seeking an in-person meeting or a direct relationship with an advisor for more personalized advice.

This potential shift in consumer preference—toward fast and simple online services—has been recognized by traditional advice providers. Large financial institutions have developed automated advice platforms offering electronic onboarding and DIY options to their customers. Others are now partnering with new robo-advisors to reach the segment of the market to which this service model appeals.

Although a handful of robo-advisors have entered the marketplace, certain impediments persist that reduce the potential competitive impact FinTech can have in this industry.

Barriers to entry not directly attributable to regulation

A vital element of a competitive market is the ability for consumers to easily switch between suppliers of a good or service. If it is easy for consumers to switch, they are more likely to do so if a more competitive offer exists. In response to this ever-present threat, firms must ensure their prices and services deliver value to their customers; if they do not, firms risk losing customers to a competitor. In a competitive market, firms will innovate to stay ahead of competitors and attract and retain customers.

Transparency in pricing

To determine whether or not a competitive switch will bring lower costs, consumers must be able to easily determine the price of a good or service.

For many goods and services, prices are clearly advertised and consumers understand what they will receive for what they pay. In the investment dealing and advice industry, however, these fees are often not discussed between investment dealers and consumers[57] or are embedded in the MER, effectively skewing the consumer's perception of the price of advice. One FinTech bank found that almost half (47%) of investors are unaware that their advisor is compensated for their advice.

Without the ability to easily compare the prices paid for advice, investors are unable to determine if they are receiving the most competitive offer.

The amendments to client disclosure in CRM2 are an important step toward fee transparency and greater clarity in interactions between advisors and clients. Incumbents and new entrants with whom the Bureau spoke were generally in favour of the initiative. Although it may be too early to tell, increased disclosure of the costs of advice can be expected to drive at least some competitive switching. There is some evidence that increased clarity in investor disclosure has led to greater levels of consumer awareness of the cost of advice.

In its submission to the Bureau, a consumer advocacy group said that it believes "the online-based financial advisory services sector is poised to take advantage of the frustration experienced by some Canadian investors when they discover the cost of their financial service advice." In fact, they speculate that competition will increase, as industry stakeholders identify a potential loss of business and react aggressively, as was seen in the US.[58]

Increased fee transparency may also help overcome the principal-agent problem that exists in the industry by reducing the asymmetry of information between the investment dealer and client and by making it easier for investors to compare similar-looking products and services.

Financial literacy and trust

If Canadians lack the financial literacy to understand the impact of lower fees on their overall savings and investment growth, increased disclosure alone may not be sufficient to encourage them to shop around for advice. Surveys have shown that Canadians have low levels of financial literacy when it comes to investments and how they work. As a result, they put a lot of trust in their financial institutions and advisors.

This issue has been noted by the CSA, which stated the following in a consultation paper on embedded commissions: "To the extent that clients do not rely on disclosure for their investment decisions, the resulting benefits of the disclosure may be limited as they may not be fully informed with respect to all account fees and performance and may not fully or effectively question or assess the services provided."

Further, disclosure goes beyond price. For consumers to be able to compare service levels, it is important that they understand what services are and are not available from a particular advisor. Some advisors are limited in the products they offer, whether in the types of funds they sell or the issuers they represent. Likewise, a robo-advisor may not offer financial coaching or full retirement planning advice. Consumers must be able to easily compare the levels of service and offerings between advisors.

Cost of switching

In addition to the effort involved in switching financial advisors—finding and comparing prices, determining services offered and quality—there are sometimes more tangible costs to consumer switching. These include the time to set up new accounts, the costs and time associated with transferring assets or accounts (and potentially costs or penalties involved in selling investments early or cashing out if necessary) and, in some cases, account closure fees.

The Bureau heard from some robo-advisors that transferring funds to their firm can take a long time, with manual transfers taking up to a month to complete. The Bureau was also informed that there are rules governing account transfers and switching with the Account Transfer Online Notification system (ATON),[59] with the maximum time experienced usually being 10 business days. Although the process is completed through computer networks, many institutions still require a completed paper form to effect the transfer. Some assets may not even be able to be transferred, either because the product itself is proprietary and not offered by competing advisors (such as some guaranteed interest certificates) or because the accepting advisor does not sell those types or lines of investments. Some investors will therefore resort to a manual transfer (cashing out investments at one institution, then depositing and re-purchasing investments at another), though limits and hold periods can slow the process.[60] In a digital age when consumers have grown accustomed to instantaneous solutions at the click of a button, many may be deterred by this wait or the need complete paper forms. This is especially true when they are registering for an online-only service and have typically done all their transactions online.

The Bureau also heard that some financial institutions charge fees to consumers to transfer or close accounts. These fees can present themselves as a flat fee as well as a fee per trade and per share. In cases where multiple products are transferred, this can cost a significant amount of money.[61] As an example, a simple transfer or closure of a tax-free savings account (TFSA) at a bank can cost a client $50. When a client owns an investment account, a TFSA investment account and a registered retirement savings plan with similar fees, switching for non-complex products can add up to $150. It is possible that the fees for switching may appear to outweigh the benefits of switching, deterring a consumer from doing so. However, this may be a misguided assumption, emphasizing the importance of increased financial literacy.

Technological impediments to switching

When switching to a robo-advisor, part of the rationale may be the expectation of an online, fully electronic experience. However, barriers may present themselves. In particular, electronic forms or signatures are not yet accepted throughout the industry. While regulators and self-regulating organizations have generally authorized the use of electronic delivery for documents and e-signatures, a number of industry participants informed the Bureau that some traditional advisors continue to require forms to be submitted in-person or via means other than electronic delivery, with a "wet" signature needed to transfer certain accounts.

Laws of general application to e-commerce recognize e-signatures. Federal legislation defines an e-signature as "a signature that consists of one or more letters, characters, numbers or other symbols in digital form incorporated in, attached to or associated with an electronic document." Provincial e-commerce laws do not necessarily prescribe a form for an e-signature and consider it as equivalent to a wet signature. For instance, British Columbia defines an e-signature as "information in electronic form that a person has created or adopted in order to sign a record and that is in, attached to or associated with the record."

There are exceptions where an e-signature is not considered equivalent—for example, for documents related to wills, trusts, powers of attorney (over a person's financial affairs or personal care) or transfers of lands. These continue to require "wet" signatures—and in the advice context, so does designating a beneficiary for a registered account.

Certain market participants may be hesitant to accept electronic forms and signatures because of potential uncertainty that exists[62] or because of variances in provincial e-commerce regulations. Combined with the remaining exceptions to the use of wet signatures, this may discourage industry participants from accepting electronic documents and signatures, imposing a barrier on electronically-based service providers. At the same time, this low adoption rate may also simply be a matter of traditional advisors not yet having made the investment in the technology needed to accept and process electronic forms and signatures.

Barriers to entry attributable to regulation

The activities of participants in the securities industry are regulated at the provincial and territorial level by the relevant securities regulators. Two of the cornerstones of securities regulation are investor protection and capital market efficiency. Securities regulators oversee securities trading, dealer registration and disclosure compliance; engage in investor education initiatives; and enforce securities legislation and regulation. Additionally, securities dealers are governed by a self-regulatory organization depending on the type of dealer—for example, IIROC governs the conduct of investment dealers and the MFDA governs the conduct of mutual fund dealers. Registration requirements are set out in a harmonized instrument (National Instrument 31-103). While registration itself does not present a significant barrier to entry for FinTech robo-advisors, some of the regulatory requirements imposed on registered investment dealers may create unintentional barriers for robo-advisors, inhibiting their ability to grow and compete with traditional advisors and institutions.

Suitability obligation

Under securities law, investment dealers owe a duty of care to ensure any investments offered are suitable for a particular client. Suitability is typically determined by an advisor through conversations with clients to understand their risk tolerance, investment objectives and investment time horizon. To meet the suitability requirement, an advisor must gather sufficient information on a client to meet the KYC standard and also understand the products they are selling sufficiently to meet the KYP standard.

The suitability requirement provides some level of investor protection by ensuring investors are not recommended or sold products that do not match with their investment objectives. For example, a leveraged portfolio of volatile equities would likely be deemed unsuitable for a risk-averse investor with a short time horizon who wishes to preserve capital. The KYC and KYP requirements ensure the advisor has the information needed to protect the investor from this type of scenario.

Suitability, however, does *not* mean an advisor must offer the lowest-cost investment that is suitable. Consider two identical funds both suitable for an investor: the first has a low MER and low embedded commission and the second has a higher MER with a higher embedded commission. The advisor is not obligated to recommend the less expensive option to the investor; in fact, they likely have the incentive to recommend the higher commission fund, assuming this hypothetical client, like many Canadian retail investors, does not understand the fees or the fact that they are paying for this advice.

Although the suitability, KYC and KYP obligations are important consumer protection measures, they may be creating a barrier to competition from robo-advisors. Traditionally, advisors meet the KYC requirement and perform suitability assessments through conversations, meetings and phone calls with clients. Robo-advisors, on the other hand, use online questionnaires and text-based chats to collect KYC information. Securities regulators have generally embraced this way of doing business, issuing guidance in 2015 to online portfolio managers setting out expectations for the collection of KYC information online. Securities regulators should be applauded for these efforts.

Issues arise, however, on two fronts. First, robo-advisors who have received approval to do business in Canada must have registered advising representatives (AR) who are actively involved in portfolio decision-making. That is, an AR is involved in matching clients to portfolios, rebalancing portfolios, making buy and sell decisions and any process that requires a suitability assessment. This may impede the development of more automated portfolio matching based on model portfolios and model investor profiles derived from KYC information. It may also lead to higher costs for robo-advisors as they grow. Instead of reducing their marginal costs by leveraging technology, robo-advisors could end up with increased marginal (and fixed) costs as they hire ARs to meet this obligation—effectively dissipating the competitive advantage of automation.[63]

Second, the guidance from securities regulators requires that robo-advisors' KYC questionnaires amount to a "meaningful discussion" by using behavioural questions to establish risk and KYC information, prevent clients from advancing before answering questions, test for inconsistencies and offer investor education about terms and concepts used. In addition, these questionnaires must involve more than just "ticking the box."

While robo-advisors can use technology and algorithms to meet these requirements, they are subject to the same rigorous oversight as traditional advisors. Regulators tasked with ensuring these crucial investor protection measures are followed properly may benefit from the use of technology as well. Online questionnaires that create an exact record of an exchange between the robo-advisor and the client can make it easier to verify the robustness of the KYC information gathering process to ensure it was done appropriately and accurately; in comparison, the task of verifying exactly what was asked and said during an in-person conversation may be more difficult.

Securities regulators have identified a number of FinTech-related risks in this area including cyber security risks, improper questionnaires and flawed algorithms (for KYC and also for matching portfolios and investors). Most importantly, however, appears to be the need for investor recourse and enforcement. These issues relate to responsibility for the advice given or actions taken by the robo-advisor. Although securities regulators have not yet been approached with a proposition for fully-automated advice, given these risks, the prospect of fully-automated advice is not something Canadians should expect in the near term. As robo-advisors grow, so too will their costs—and they may be left with an inability to further exploit the technology they are attempting to leverage to outprice the competition.

Identity verification

Like MSBs and lenders, securities dealers (including robo-advisors) are subject to AML and CTF laws and regulations. With respect to robo-advisors, the identity-verification requirements of the PC(ML)TFA may present unique challenges *vis-à-vis* traditional advisors or institutions with a branch network. While the Bureau has heard that the PC(ML)TFA requirements are onerous and favour brick-and-mortar establishments (where verifying identity can be as simple as showing a driver's licence), recent developments have greatly improved the ability of advisors to meet identity-verification requirements entirely electronically.

In 2016, following amendments to the PC(ML)TFA, FINTRAC updated its guidance regarding the verification of identity. In particular, it added the possibility of relying on a credit file that has been in existence for at least three years as well as a dual process where identity could be verified from two reliable and independent sources. The dual-process method could be done in an entirely electronic method, by using, for example, a micro-deposit and a credit file that has existed for at least six months.

Fragmentation between jurisdictions

Several robo-advisors indicated that Canada is a relatively small country in terms of potential customers. From a service provider's perspective, fragmented regulation will harm innovation.[64] With fragmentation, a small market is essentially subdivided into smaller markets. The incremental burden of each additional layer of regulation impedes the entry of smaller players when compared to established players who have been present for a longer period of time and have established compliance frameworks.

In a national landscape with a number of internal jurisdictions, even if the majority seek to promote innovation, a firm operating across all jurisdictions will likely follow the most restrictive rules and regulations to simplify compliance. In this scenario, the spread of FinTech innovations across jurisdictions can be slowed significantly. This stresses the importance of harmonization in promoting innovation and competition in this sector, for example, through initiatives such as the regulatory sandbox recently introduced by the CSA. An incumbent may wish to implement a new business model or use new technology. However, the compliance costs associated with even subtle jurisdictional differences may impede it from doing so.[65] The institution must evaluate the cost of applying one set of restrictive compliance standards nation-wide versus the cost of applying up to 13 different compliance standards across national operations to deal with potentially different enforcement approaches to the same or similar regulation.

There are economies of scale in compliance. Smaller entrants and market participants indicated to the Bureau that they do not have the established compliance teams of larger incumbents.[66] While regulatory authorities have launched initiatives such as the OSC's *LaunchPad*, the *FinTech Support Team* at l'Autorité des marchés financiers (AMF), British Columbia Securities Commission's *Tech Team* and the *CSA Sandbox*, in addition to the number of hubs that have emerged to pool resources, the burden will always be heavier on smaller participants. However, the Bureau was also advised that larger market participants face diseconomies of scope, given that they often offer more products and more diverse services to their clients—and therefore face additional burden due to the number of regulatory regimes to which they are subject for each product or service offered.[67]

Due to the provincial nature of regulation in this industry, participants must register in each province in which they wish to sell their services. In terms of securities regulation, this process is simplified by the "passport" system in place between most securities regulators. However, to meet their requirements under corporate registration law, participants, including robo-advisors, must at the very least, have an agent-for-service in each province where they provide services to clients and must pay registration fees in each province. The purpose of the agent-for-service is to have a person present to accept service of process should the corporation be sued in a particular province.

Although they gain no competitive advantage from having a physical presence in each province in which they operate (such as facilitating identity verification for AML purposes or offering a physical point of sale), online-based service providers are expected to invest in an agent-for-service and register in each jurisdiction in which they wish to operate.[68]

A robo-advisor seeking to keep costs low by leveraging technology to operate from a single location across Canada (or even in the cloud) may find that even small hurdles such as the agent-for-service requirement can contribute to cost inflation.

International developments

Canada's federalist system presents unique challenges for regulators and FinTech robo-advisors looking to enter the market. Yet, the issues regarding KYC, suitability, automation and identity verification are not unique to Canada. Regulatory authorities around the world have tackled similar issues in the securities context and may provide some useful guidance.

Regarding the automation of KYC and suitability requirements, Canada lags behind its peers. Of the 17 jurisdictions that contributed to the International Organization of Securities Commissions (IOSCO) survey on automated advice, 11 reported that there are automated advice firms operating within their borders. Of those, only three—Canada, Indonesia and South Korea—have only hybrid model firms as opposed to a mix of hybrid and purely automated models. In Indonesia, this is the result of business decisions by market participants. In South Korea, at the time of this study's publication, the regulatory restrictions on fully automated advice were in the process of changing.

In the UK, the FCA has issued guidance to address not-in-person KYC information collection, placing a clear onus on questionnaires and their design to ensure they collect sufficient information to understand the client.

In Australia, ASIC released *Regulatory Guide 255 Providing digital financial product advice to retail clients* in 2016. It provides guidance on collecting KYC information through online questionnaires and outlines expectations for how firms should monitor their systems to ensure they meet ASIC's suitability requirements. In particular, Regulatory Guide 255 states that a licenced advice provider must ensure there are people within their firm who understand the technology used to provide advice and are able to review the advice generated by the algorithms. While an individual is not required to review each transaction or planning decision, there must be someone available to ensure the consumer protection standards of suitability, KYC and KYP are met and implemented. The guide further adds that regular verifications should be conducted on the algorithms and the recommendations issued by the firm's software. It also sets out clear expectations for the information that should be provided to customers regarding the limitations of the advice provided and also for filtering out clients to whom such advice is not appropriate.

Conclusions and recommendations

Canadian securities regulators are to be commended for their efforts to embrace FinTech. Since launching this study, significant progress has been made by securities regulators with regard to FinTech innovation not only within Canada, but through partnerships with foreign jurisdictions.

Initiatives such as the OSC LaunchPad, CSA Regulatory Sandbox, the British Columbia Securities Commission's Tech Team and the AMF's FinTech Support Team are examples of progress. The Bureau applauds these efforts and encourages securities regulators to continue to incorporate a desire to improve competition and encourage innovation in their work.

Recommendation 1

Regulators should continue their efforts to increase price transparency and plain-language disclosure. Prices for advice should be clear and easily understood by Canadians. Fees should be presented up front (i.e. in advance of purchase) and consumers' attention should be drawn to these fees.

Recommendation 2

Regulators should continue their financial literacy and consumer education efforts. In addition, consumers should be encouraged to ask about the fees they pay and to shop around. All prices and fees, including the components of the MER, should be made clear to consumers prior to the purchase of a product.

Recommendation 3

Regulators should encourage the use of technology to facilitate account switching. The use of APIs may facilitate the creation of rich databases of price and fee information to facilitate shopping around. Similarly, the use of APIs to access consumers' portfolio information can help make switching easier. Regulators should reduce barriers to switching by allowing and encouraging firms to leverage technology such as e-signatures and digital identity verification to facilitate client onboarding.

Recommendation 4

Regulators should continue to collaborate with robo-advisors on the design of regulation to facilitate entry of these low-cost alternatives to traditional advice—for example, by providing clarity and certainty in interpretation and expectations. Regulators should review their regulations periodically to ensure they do not place unnecessary burden on market participants.

Recommendation 5

Regulators should consider providing firms with more freedom to automate additional processes including analysis of KYC information and portfolio matching for suitability and portfolio rebalancing. The risks related to recourse, redress and enforceability can continue to be managed by designating responsible individuals within a firm.

Recommendation 6

Regulators should continue to promote the existing passport system to facilitate Canada-wide entry by FinTech companies and continue efforts to ensure such systems adapt and remain relevant in an increasingly digital world.

GLOBAL REACTIONS TO FINTECH INNOVATION

The Canadian federalist system presents unique challenges for regulation in the financial services sector—challenges highlighted by FinTech's position in the "borderless" Internet.

FinTech abroad

Many FinTech entrants indicated that other jurisdictions have more welcoming and innovation-conducive regulatory environments than Canada. In a study on international FinTech ecosystems, Ernst and Young LLP identified the UK, the US, Singapore, Germany, Australia and Hong Kong as the world's leading FinTech hubs—based on talent, funding availability, government policy and demand for FinTech from consumers, businesses and financial institutions. With the exception of the US, these countries have a similar competitive dynamic in the financial services sector: the sector is highly concentrated, dominated by a small number of large financial institutions with a competitive fringe of smaller players.

Various international jurisdictions including those listed above, are examining competition in the financial sector. The emergence of FinTech in these countries has prompted policymakers to reassess their current financial sector frameworks.

Some of the primary driving forces behind the growth of FinTech in these countries are common to Canada. The pace of technological innovation, for example, is allowing new entrants to innovate and compete with a relatively homogenous incumbent financial sector and the growing use of mobile and online banking is increasing consumers' comfort, albeit slowly, in interacting with digital-only providers. However, several factors that are driving FinTech growth and adoption in other countries are lacking in the Canadian context.

The global financial crisis had a considerable impact on relationships between end users (consumers and businesses) and their financial institutions in the US and the UK. Many countries' post-crisis policies were designed to prevent a future crisis by promoting financial stability and prudential regulation that, in some jurisdictions, may have come at the expense of competition in the sector. The Netherlands, the UK and the US nationalized some of their banks; Germany, the UK and the US also moved to purchase or ring-fence toxic assets following the crisis. Many governments intervened on the basis that the financial sector as a whole was "too important to be weakened," not allowing their intervention to be disciplined by competition policy considerations.

In contrast, FinTech development in Asia and Africa has been prompted primarily by the pursuit of broader economic development. FinTech is leveraging the growing ubiquity of technology and consumer trust to deliver financial services through new channels and providers to underserved citizens.

Renewed focus on competition

The pendulum has begun to swing back toward an approach to financial policymaking that considers competition as important as other policy objectives such as safety and stability. A number of reports by the Organisation for Economic Cooperation and Development (OECD), for example, contributed to a growing concern for competition in the financial sector. These reports highlight the importance of competition to enhance the effectiveness of the financial system, which, in turn, allows for long-term economic growth. The World Bank also suggests that the importance of competition "should not be sacrificed for the sake of stability."

The European Commission and the Dutch Authority for Consumers and Markets are in the process of soliciting public comments on competitive forces in the financial sector, while the financial sectors in Australia and the UK have completed numerous reviews leading to broad reforms and policies designed to improve competition. The Bundesfinanzministerium in Germany also commissioned a comprehensive report on that country's FinTech market, concluding that the future development of FinTech will depend on market forces.

Following the financial crisis, the UK significantly overhauled its financial sector regulatory framework, establishing a "twin peaks" regulatory structure comprising the Prudential Regulation Authority (PRA) and the FCA. The FCA was given a primary objective to "promote effective competition in the interests of consumers," including ensuring regulations "allow competition in financial markets to thrive." The PRA also has a secondary objective to "facilitate effective competition in relevant markets, so far as reasonably possible."[69] While the FCA's competition mandate is most visible in its work on market studies within the financial sector, the FCA has also sought to embed competition throughout its regulatory activities.

A pair of Australian studies—the *Review of the Four Major Banks* and the *Financial System Inquiry*—concluded that competition in the financial and banking sectors had decreased since the financial crisis, highlighting a lack of consideration of competition by regulators. This led to recommendations to bolster both financial regulators' consideration of competition and the ACCC's understanding of financial services.

Approach to FinTech development

Jurisdictions around the world are developing their approaches to FinTech innovation. Unlike Canada, these countries do not have the added challenge of a federalist system. As such, many have been able to take a national, unified approach to encourage FinTech development. Typically, their response has been to encourage experimentation in a controlled environment and to create regulatory frameworks that are flexible and proportional to the risks presented by FinTech innovation.

The common element across these jurisdictions is the clear identification of a policy lead on FinTech, which is something Canadian policy-makers should consider going forward.

Collaboration and experimentation

Other countries are increasingly establishing fora for regulatory experimentation and engagement between the private sector and regulators. The UK's *Project Innovate*, for example, combines its innovation hub with a specialized staff unit to provide feedback to firms developing automated advice models. Singapore's *Smart Financial Centre*, meanwhile, is dedicated to facilitating collaboration among a diverse range of stakeholders: new entrants, financial institutions, academia and think tanks, legal professionals and government agencies. Both countries have also adopted regulatory sandboxes for experimentation.

International organizations such as the Financial Stability Board (FSB), Basel Committee on Banking Supervision (BCBS) and IOSCO play key roles in the development of regulatory frameworks for the financial services sector.

Earlier this year, the IOSCO Committee on Emerging Risks collaborated with other IOSCO committees on a study of the evolution of FinTech including its intersection with securities markets regulation. In June 2017, the FSB released the results of its analysis of the financial stability implications from FinTech, outlining a number of supervisory and regulatory issues including the importance of international cooperation among regulators to examine whether the current oversight framework is sufficient to manage the operational risk of third-party service providers (e.g. cloud computing and data services).

In August 2017, the BCBS released its consultation document, *Sound practices: Implications of fintech developments for banks and bank supervisors*, which explores 10 recommendations on supervisory issues for consideration by banks and their supervisors including ensuring "frameworks are sufficiently proportionate and adaptive to appropriately balance ensuring safety and soundness and consumer protection expectations with mitigating the risks of inadvertently raising barriers to entry for new firms or business models." Based on its survey of banking supervision approaches—noting that many have been put in place only within the last two years—the BCBS encourages learning from practices such as innovation hubs, accelerators, regulatory sandboxes and other forms of interaction to facilitate innovation. See Table 1 for a reproduction of the BCBS' presentation of jurisdictions' initiatives.

Innovation hubs provide guidance to businesses on how to navigate the regulatory framework, ranging from hosting and attending industry events to informal assistance when applying for authorization. They may take the form of a single point of contact, dedicated newly created units and identified networks of experts.

Accelerators are fixed-term education or mentorship programs, typically founded by the private sector. These programs may culminate in a public pitch event or demo day for selected firms to present use cases or solutions to a problem, sometimes with the involvement of funding support or authorities' endorsement.

A **regulatory sandbox** refers to the live testing of new products or services in a controlled environment. More than just dialogue or informal exchange, they involve the supervisor's active cooperation during the test period and have the added implication of legally provided discretion for authorities. Their use depends on the jurisdiction and typically entails an application and selection process by the regulator according to specific criteria (e.g. innovations with a consumer benefit that do not easily fit into the existing legal framework and are ready for the market). Sandboxes can also grant temporary relief from certain regulatory obligations (e.g. in the form of restricted licences). It is important to note that "sandbox participants must typically inform consumers and all relevant stakeholders that the company is providing the service under a sandbox regime" and they must work to ensure the confidentiality of customer data during testing.

These approaches lower barriers to entry, encourage innovation and improve competition by:

- reducing regulatory uncertainty and lowering the immediate sunk cost of navigating the regulatory framework and obtaining the right approval
- allowing some firms that would otherwise have abandoned entry in the early stages to test their services and ability to meet regulatory standards
- improving regulators' understanding of the market resulting in policy- and decision-making that better facilitates new business models or technologies

The FCA published a report in October 2017 detailing some of the lessons learned from the early stages of operation of the UK's regulatory sandbox. While it is still early to draw robust conclusions on the sandbox's overall impact, a number of indicators suggest it is beginning to have a positive impact on the price and quality of financial services in the UK and progressing towards promoting competition in the market.

Table 1 – Innovation hubs, regulatory sandboxes and accelerators outside Canada

<table>
<tr><th></th><th>Innovation hub</th><th>Regulatory sandbox</th><th>Accelerator</th></tr>
<tr><td>Australia</td><td colspan="3">Australian Securities and Investments Commission</td></tr>
<tr><td>Belgium</td><td>National Bank of Belgium
Financial Services and Markets Authority</td><td></td><td></td></tr>
<tr><td>European Commission</td><td>Single Supervisory Mechanism[70]</td><td></td><td></td></tr>
<tr><td>France</td><td>Autorité de contrôle prudentiel et de résolution</td><td></td><td>Banque de France</td></tr>
<tr><td>Germany</td><td>Bundesanstalt für Finanzdienstleistungsaufsicht</td><td></td><td></td></tr>
<tr><td>Italy</td><td>Bank of Italy</td><td></td><td></td></tr>
<tr><td>Hong Kong</td><td colspan="2">Hong Kong Monetary Authority</td><td></td></tr>
<tr><td>Japan</td><td>Bank of Japan
Financial Services Agency</td><td></td><td></td></tr>
<tr><td>South Korea</td><td colspan="2">Financial Services Commission</td><td></td></tr>
<tr><td>Luxembourg</td><td>Commission de Surveillance du Secteur Financier</td><td></td><td></td></tr>
<tr><td>Netherlands</td><td colspan="2">De Nederlandesche Bank/Autoriteit Fianciële Markten</td><td></td></tr>
<tr><td>Singapore</td><td colspan="2">Monetary Authority of Singapore</td><td></td></tr>
<tr><td>Switzerland</td><td colspan="2">Swiss Financial Market Supervisory Authority</td><td></td></tr>
<tr><td>United Kingdom</td><td>Bank of England
Financial Conduct Authority</td><td>Financial Conduct Authority</td><td>Bank of England</td></tr>
</table>

It is clear that collaboration between regulators and industry, in some form, is part of the solution to finding balance, a theme that also resonated during the Bureau's February 2017 FinTech workshop.

Flexible and proportional regulatory frameworks

Numerous jurisdictions have developed specialized regulatory frameworks or licensing regimes to respond to regulatory uncertainty and clarify the application of rules in the digital world. For example, the US OCC intends to issue special-purpose national bank charters to FinTech companies that would allow it to undertake some traditional banking activities—collecting deposits, issuing cheques, making loans—provided they meet the national standard for operations in the US, including rigorous oversight and minimum capital requirements. For equity crowdfunding and P2P lending, a number of jurisdictions have introduced tailored regulatory regimes rather than placing these business models under existing regulation, with the UK's specialized regulatory framework for "loan-based crowdfunding platforms" serving as one example.

The aforementioned 2017 BCBS survey of bank supervisors found that licensing regimes typically have a range of options that vary by entity or type of activity. However, in most jurisdictions, traditional financial services are covered by one type of licence—reflective of activities typically conducted by banks (e.g. lending, deposit-taking)—while other types of licences cover financial services involving non-banks (e.g. payment services, investment services). New products or services are more likely to be subject to limited licensing, supervisory precedents or no licensing at all. The EU's licensing regime, for example, takes a graduated approach, expanding its scope based on the scope of services provided.

Limited and restricted licensing adjusts the regulatory parameter according to the activity in question, potentially offering new entrants, over time, a gateway to broaden their service offerings toward attaining full bank licences and benefit from the economies of scope already available to more traditional services providers.

Open banking, open access and standard-setting

The concept of "open banking" has been echoed in the financial services sector over the past year without a consistent understanding of its meaning. Some believe it means opening the banking sector completely and dismantling existing financial institutions; others think it means absolute portability of all products everywhere. Open banking, as the Bureau understands it, is the concept of providing limited open access to consumer data through an API, with consent of the consumer, to offer better, more competitive alternatives.

The UK CMA published a detailed study on competition in the retail banking market in 2016. Among its conclusions, the CMA found that banking customers face substantial barriers to searching for information on different banking products as well as barriers to switching between providers, resulting in low levels of customer engagement and poor competition.

Regulators in the EU have also been examining access to data and banking infrastructure in the development of FinTech. PSD2 represents a fundamental shift in approach, allowing third parties, including FinTech firms, to access customer bank account data to develop services. Certain third parties will also be able to transfer value from a customer's bank account.

Regulators in other countries, such as Singapore and Australia, have expressed interest in developing frameworks that put consumers in control of their data. Similarly, the Consumer Financial Protection Bureau in the US has developed a set of consumer protection principles for consumer-authorized data sharing.

The UK and the EU have moved toward open banking standards (through open APIs) to encourage product comparison by consumers and the development of third-party applications or overlay services. The CMA's 2016 report, *Making banks work harder for you*, concluded that older and larger banks do not have to compete hard enough for customers' business, while smaller, newer banks find it difficult to grow, meaning many people pay more than they should and do not benefit from new services or from switching providers.

In response, the CMA is implementing a series of wide-reaching reforms including a requirement for banks to implement an open banking standard by early 2018. This standard could not only reduce or remove frictions but also "change the nature of the customer journey," for example, by:

- unbundling products typically sold together
- removing incumbency advantages based on access to consumer transaction history for SME loans
- overcoming customer inertia (or "stickiness") by automatically transferring cash from accounts paying low interest to ones that earn higher interest, and
- enabling consumers to manage and move funds between different accounts with different banks through a single provider

The regulation is directed at helping third parties earn consumers' trust. Similarly, Singapore aims to open its banking platforms via APIs to enable faster innovation and integration of IT systems within their financial sector.

The Bureau has long recognized the value that the development of standards (through formal standards development organizations) can provide to competition, such as increasing efficiency and consumer choice, reducing barriers to entry and fostering interoperability and innovation. However, developing standards can raise competition concerns; they could create regulatory "moats" that reduce price and non-price competition, foreclose innovative technologies and restrict firms' ability to compete by denying or providing access on discriminatory terms. Ensuring broad and diverse representation and engagement in the development of standards is critical.

Open banking in the UK and PSD2 in the EU do not come into effect until 2018. It is too early to know what may come from such proposals, but the potential impact on competition and innovation is promising. While Canada's complex federalist system make it more difficult to follow the lead of other jurisdictions, the Bureau encourages policymakers to continue to examine the experience of peer jurisdictions and adopt best practices as they balance the potential risks with the competitive benefits.

CONCLUSION

"[FinTech] will disintermediate functions, not firms. It will intermediate some of the financially excluded. It will increase competition. It will test regulators."

– Hon. Dr. Kevin G. Lynch

FinTech has the potential to significantly change the way Canadians access financial services. It promises to increase choice and convenience, while also lowering prices and frictions existing in the marketplace today. Regulators must nonetheless ensure that they keep pace with and embrace innovation.

As was noted by the Senior Deputy Governor of the Bank of Canada, Carolyn Wilkins, at the Bureau's FinTech workshop:

> *"Innovation in financial services is a huge opportunity to improve the financial system by leveraging the technology and new business models to increase access to financial services, increase the efficiency of the services that are being provided by replacing legacy systems, and perhaps creating a little bit more competition and more contestability of markets in the services, so that businesses and households can benefit from that. (…) With great opportunity comes the responsibility to manage the risks that are associated with new technologies and new services that are being provided so that they indeed do reap the benefits for households and for businesses."*

Striking this balance is not an easy task. Regulators and policymakers carry a heavy burden in protecting Canadians while, at the same time, embracing Canadian entrepreneurial spirit and adapting to continuous change and uncertainty. The World Economic Forum recently concluded a four-year project into disruptive innovation in financial services, finding that "although fintechs have failed to disrupt the competitive landscape, they have laid the foundation for future disruption." The Bureau encourages regulators to view the impact of current and future regulation through a competition lens to help Canadians realize the promise of that foundation.

The Bureau is encouraged by significant steps taken by regulators at the federal and provincial levels to welcome FinTech to the sector such as the Department of Finance Canada's inclusion of FinTech, open banking and competition matters in its ongoing regulatory framework reviews; the various sandbox and concierge services being introduced by securities regulators; and working groups and strategies to support FinTech that have been established at provincial and federal levels of government.

The Bureau is hopeful that regulators and policymakers will accept its continued invitation to help ensure legislation and regulations do not unnecessarily impede competition and innovation in this important sector.

ABBREVIATIONS

ACCC	Australian Competition and Consumer Commission
ACSS	Automated Clearing Settlement System (operated by Payments Canada)
AFS	Australian Financial Services (Australia)
AMF	Autorité des marchés financiers (Québec)
AML	Anti-money laundering
AR	Advising representative
ASIC	Australian Securities and Investments Commission (Australia)
ATON	Account Transfer Online Notification system
BCBS	Basel Committee on Banking Supervision
Bureau	Competition Bureau of Canada
CDIC	Canadian Deposit Insurance Corporation
CMA	Competition and Markets Authority (UK)
CRM2	Client Relationship Model 2
CSA	Canadian Securities Administrators
CTF	Counter-terrorist activity financing
DIY	Do-it-yourself
DNS	Deferred net settlement
ETF	Exchange-traded fund
EU	European Union
FCA	Financial Conduct Authority (UK)
FCAC	Financial Consumer Agency of Canada
FinTech	Financial technology (used throughout this study report to refer to the innovative technologies being introduced by a financial services firm—not a firm itself)
FINTRAC	Financial Transactions and Reports Analysis Centre of Canada
FPS	Faster Payments Service (UK)

FRFI	Federally-regulated financial institution
FSB	Financial Stability Board
IIROC	Investment Industry Regulatory Organization of Canada
IOSCO	International Organization of Securities Commissions
KYC	Know your client
KYP	Know your product
LVTS	Large Value Transfer System (operated by Payments Canada)
MER	Management expense ratio
MFDA	Mutual Fund Dealers Association of Canada
MSB	Money services business
OCC	Officer of the Comptroller of the Currency (US)
OECD	Organisation for Economic Co-operation and Development
OSFI	Office of the Superintendent of Financial Institutions
P2P	Peer-to-peer
PC(ML)TFA	*Proceeds of Crime (Money Laundering) and Terrorist Financing Act*
POS	Point of sale
PRA	Prudential Regulation Authority (UK)
PSD2	Revised Payment Services Directive (EU)
PSP	Payment service provider
PSR	Payment Systems Regulator (UK)
Robo-advisor	An investment advisor with whom retail investors interact remotely via the Internet
SME	Small- and medium-sized enterprise
TFSA	Tax-free savings account
UK	United Kingdom of Great Britain and Northern Ireland
US	United States of America

FOOTNOTES

1 Ernst & Young LLP also reported figures for China (69%), India (52%), Australia (37 %), Hong Kong (32%), Singapore (23%), the United Kingdom (42%) and the United States (33%).

2 HSBC found that 81% of Canadian respondents thought their bank was "good enough for what I need it for."

3 The confidential information the Bureau collected is protected pursuant to section 29 of the *Competition Act*. In order to preserve the confidential nature of this information, reference to such information has been aggregated or anonymized throughout this report.

4 The Bureau gathered oral submissions through in-person meetings and telephone interviews.

5 Payments Canada is legally referred to as the Canadian Payments Association under the *Canadian Payments Act*.

6 These four provinces supervised approximately 95% of the market in 2014.

7 Such tools would be able to provide price comparisons based on a consumer's actual behaviours, patterns and usage rather than their own perceived usage.

8 This is a very brief description of how payments are made and processed.

9 The merchant, however, still faces some counter-party risk in the case of unauthorized or fraudulent transactions.

10 Users load gift cards with money that is then held by the payee but linked to that card. When the card is used for a payment, the payee simply marks the funds as moving from the card's account to the payee's account, but no funds actually move.

11 Cash, for example, is certain, timely and convenient—but it is not secure and does not offer a credit facility.

12 For example, vendors at a farmers' market or a plumber who unclogs your drain.

13 Indeed, one of the important innovations that PayPal brought to the marketplace was the ability for consumers to purchase products online *without* a credit card and allowed small vendors (such as artists, for example) to accept payments online without the need to be a member of an existing credit or debit card network.

14 E-wallets are distinct from mobile wallets or mobile payments in that the transfer of funds is not based on an underlying debit or credit card transaction.

15 Payments Canada research found that, among e-wallet users in Canada, 83% say convenience is the greatest benefit.

16 Merchants pay what is known as a "merchant service fee," part of which is comprised of an "interchange fee." In 2014, following litigation by the Bureau, Visa and MasterCard submitted separate and individual voluntary proposals to the Minister of Finance to reduce their credit card fees to an average effective rate of 1.5%.

17 This includes payment cards with contactless functionality. Contactless payments as a whole grew 70% in volume and value in 2015.

18 A type of dynamic pricing, penetration pricing occurs when a platform offers its product initially at a low price but then raises the price after establishing a significant base of customers. Penetration pricing is a natural outcome in two-sided markets.

19 In 2015 Canada's "big six" banks were estimated to have collected more than $5 billion in interchange fees, 56-58% of which went to funding rewards programs.

20 Bank of Canada research found that it cost Canadian merchants $10 billion to accept POS payments in 2014, $6.2 billion of which was incurred for accepting credit cards.

21 The Bureau does not currently have evidence that financial institutions have been engaged in this type of behaviour.

22 *Option consommateurs*, for example, has expressed concerns about the privacy policies of many mobile payment services including a lack of clarity and uniformity.

23 During these consultations, Canadians demanded better: timing and availability of funds, provision of payment data and visibility into payment status and improved privacy and ability to receive payments. Similar frustrations were expressed with international payments.

24 *Canadian Payments Act* (R.S.C., 1985, c. C-21).

25 *Exchange* means the delivery and receipt of payment items; *clearing* means the reconciliation of payment items that were exchanged and the calculation of the clearing balances; *settlement* means the payment of the clearing balance.

26 Payment systems can be exposed to various forms of risk including credit, liquidity, systemic and operational risk.

[27] The volume requirement is maintained at 0.5% as set out in Canada Payments Association Rule D1–Direct Clearer/Group Clearer Requirements. The ACSS processed 7.4 billion payments in 2016, meaning the threshold for direct participation is approximately 37 million payment items. Though not directly comparable, the estimated threshold to benefit from direct participation in the UK's Faster Payments Service (FPS) is as low as 1.4 million transactions annually.

[28] Canadian Payments Association Rule D3 - Indirect Clearer Requirements.

[29] Submission to the Bureau from Payments Canada.

[30] The Tripartite Study Group, *Conditions for Direct Participation in the ACSS*, Canadian Payments Association Discussion Paper (2006).

[31] Information gathered from interviews with PSPs.

[32] Submission to the Bureau from Payments Canada.

[33] Submission to the Bureau from Payments Canada.

[34] Consultations by Payments Canada also found that new entrants expressed a desire for greater competition and choice in exchange and clearing services.

[35] Life insurance companies and money market mutual funds were eligible only as indirect clearers.

[36] For example, in 2011, the Directorate General for Competition in the European Union launched an investigation into standards for e-payments that were in development by the European Payments Council (EPC). The concerns related to standards that excluded from the market new entrants not linked to a bank. Because of the investigation, the EPC ceased work on developing e-payments standards.

[37] In 2014, 13.8% of SMEs used a line of credit as a means of financing.

[38] Business term loans provide medium- to long-term financing to cover some or all of the cost of capital equipment, expansion or renovation of buildings. Term loans are usually secured by the asset being financed and come with different repayment schedules, interest rates and periods, depending on the purposes of the loan.

[39] Equity financing is accumulated from savings and investors. Outside investors typically receive a portion of a company's equity in return for their investments.

[40] Information gathered from interviews with P2P lenders.

[41] Information gathered from interviews with P2P lenders; also Ivey Business School, *Lending Loop: FinTech Disruption in Canadian Banking*, Ivey Publishing (2016).

[42] Information gathered from interviews with P2P lenders.

[43] Information gathered from submissions by alternative lenders.

[44] Information gathered from interviews with academics.

[45] Information gathered from submissions from consumer groups.

[46] Information gathered from submissions from consumer groups.

[47] FINTRAC provides guidance on the definition of money services business in its policy interpretations including as it relates to crowdfunding. See its 2015 policy interpretation PI-6338 for an example of a P2P business model that is likely not an MSB.

[48] A prospectus is a comprehensive disclosure document that sets out detailed information about an issuer and describes the securities being issued and the risks associated with purchasing those securities. Securities may not be distributed by an issuer unless it first files a prospectus with a Canadian securities regulator. Prospectuses usually require a substantial degree of input and time from the management of an SME for a period that can last up to several months.

[49] Investment fund securities include mutual funds, exchange-traded funds, pooled funds, closed-end funds and alternatives. Given the wide variety of investment products and securities available on markets today, the Bureau decided to focus our analysis on the sector supplying these types of funds. Although these funds often trade securities on different exchanges, this study does not look at the competitive dynamics in the exchange industry.

[50] The terms "robo-advice" and "robo-advisor" may imply that advice is given by a robot. This is not the meaning the Bureau intends through our usage. Rather, the Bureau are using these terms to distinguish between those who provide advice through a bricks-and-mortar retail channel with periodic direct, in-person interaction with a client and those who provide advice solely online via their website or software application with limited direct interaction.

[51] These are funds that are managed by the deposit-taking institution or insurer. Some examples include RBC Global Asset Management Inc. mutual funds, BMO Asset Management Inc. ETFs and Manulife Investments mutual funds.

[52] The exchange matches buyers and sellers, executing a trade when the bid price from a buyer matches the asking price of a seller.

[53] Typically, a bank, trust company or credit union.

[54] Following the implementation of CRM2, the embedded commission is now disclosed in the "Fund Facts" material made available to investors. However, the information is often not clearly identified and is rarely provided in a format that lends itself to easy comparison with other investment products.

[55] It is important to note that a robo-advisor could use higher-fee mutual funds to build portfolios or charge a higher advice fee, causing the gap between a robo-advisors costs and those of a commission-compensated mutual fund advisor could narrow; however, this has so far not been the case.

[56] In their report on automation in financial advice, three European authorities noted that "in relation to reduced costs, several respondents were of the view that a high initial investment is required from financial institutions, but that, once the cost of system development has been met, the marginal cost of each new transaction may be relatively low, enabling financial institutions to benefit from economies of scale. However, several respondents also introduced a significant caveat, in that the client base would have to be sufficiently large for such economies of scale to materialise."

[57] According to a 2010 report by the Brondesbury Group prepared for the CSA (2010), only half of responding investors said they discussed costs with their advisor. A Pollara opinion survey found that 56% of investors recalled that their advisor discussed compensation when the investor purchased a mutual fund.

[58] Submission to the Bureau by a consumer advocacy group.

[59] ATON is operated by the Canadian Depository for Securities Limited. It automates the exchange and confirmation of requests for transfer and asset list details between the deliverer and receiver of account transfers. ATON users include broker-dealers and other regulated financial firms such as banks, trust companies, intermediaries, investment fund dealers, insurance companies and credit unions.

[60] Information gathered from interviews with robo-advisors.

[61] Information gathered from interviews with robo-advisors.

[62] From BMO Smartfolio's frequently asked questions: "Why am I being asked to mail in my beneficiary designation form? Can't I just eSign? In the event a client dies and their designation is contested in court, we want to make absolutely sure a client's designation is honoured. We know sending in a paper copy is not as convenient, but we are looking out for your best interests! If you don't send in a paper form while your beneficiary designation is still captured with eSignature, if the courts do not honour your electronic instructions, no one can get a new ink signature to replace it."

[63] Online advisers are portfolio managers that offer managed accounts composed of portfolios of simple ETFs or investment funds to retail clients at a low cost primarily through an interactive website, but with the active involvement of an AR in the KYC and suitability process.

[64] Information gathered from interviews with self-regulatory organizations and robo-advisors.

[65] Information gathered from interviews with investment advisory firms.

[66] Information gathered from interviews with investment advisory firms and robo-advisors.

[67] Information gathered from interviews with investment advisory firms.

[68] Information gathered from interviews with robo-advisors.

[69] This objective operates as a "self-standing" objective and is applicable only when advancing a primary objective.

[70] In contrast to the national innovation hubs cited in the report, the Single Supervisory Mechanism's Fintech Hub interfaces with the 19 euro zone national hubs to promote information exchange and best practices among supervisory authorities.

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