How should Canada approach open banking?

Building a better working world

Contents

Introduction

Open banking is poised to transform the landscape of the financial services industry. It will change how consumers engage with their banks and financial services providers, introduce new channels, and promote innovation and competition in financial products and services.

Maintaining a trusted open banking ecosystem requires new business and operating models, rapid innovation cycles, flexible technology integration, enhanced security and an updated privacy and liability regime.

We see open banking as a strategic opportunity for both new and established institutions — and a potential source of risk that needs to be carefully managed and mitigated.

As Canada formulates its approach to open banking, we believe the following key principles should guide the development of open banking policy objectives and prescribed industry standards:

1

Enhance consumer choice by promoting competition

2

Foster innovation by establishing a level playing field for established players and new entrants

3

Protect and promote customer data privacy

4

Protect against systemic risks to the Canadian financial system and economy

Canadian industry context

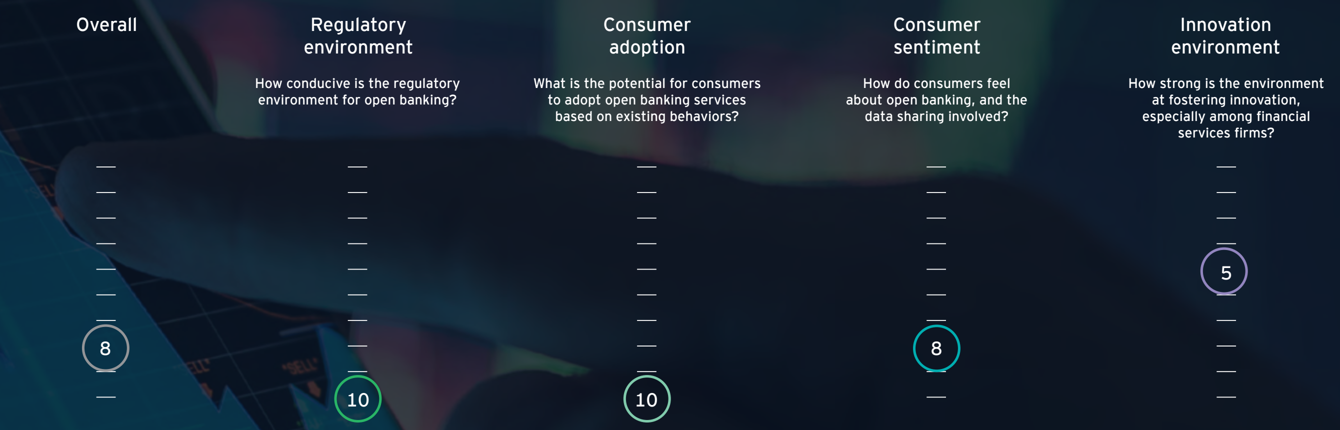
Canada

Canada is well positioned to be a leader in promoting consumer choice, privacy and establishing a competitive marketplace through open banking. We have high consumer digital adoption, a thriving FinTech industry, strong innovation being driven by Canadian entities, great access to private capital, and government-sponsored programs to support startups.

These factors have helped Canada rank as a leading global tech hub according to the EY Open Banking Opportunity Index. However, the industry seems to be taking a "go slow" approach to open banking, leading Canada to place eighth in the index (as shown in the figure below).

EY GLOBAL BANKING

Canada - open banking opportunity index ranking



Ranking Key: 1 = highest; 10 = lowest

Source: EY Open Banking Opportunity Index research.

Regulatory environment and consumer adoption

One of the major hurdles Canada faces in its open banking journey is the regulatory environment, for which key provisions need to be strengthened. This explains why Canada's open banking regulatory environment ranked 10th in the index. An example of a provision which needs to be strengthened is data portability, similar to how it is outlined in the EU's General Data Protection Regulation (GDPR).

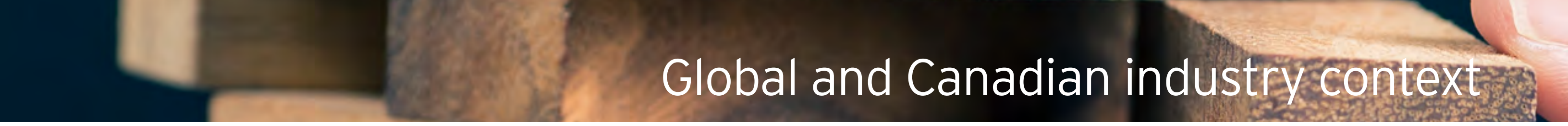
Consequently consumer adoption of open banking is just as low. Consumers are far less likely to consent to open banking given the lack of measures to protect their privacy and manage consent.

Innovation environment and consumer sentiment

The Canadian innovation environment was ranked fifth among its global peers. Canada ranked third after China and the US for the number of patents filed by its main banks and FinTechs in 2017. It also ranked first for its broader research and development environment.

In other geographies, we've observed the innovation environment as a driver for strong consumer sentiment. However, in Canada, consumer sentiment remains a hurdle. Canada is placed eighth among its global peers. Consumers' major concerns revolved around cybersecurity, fear of change, and data protection, which accounted for 41%, 19% and 15% of negative comments, respectively. However, discussions about innovation were by far the top driver for positive sentiment (38%).

Nonetheless, the regulatory environment must be able to provide the right means to foster innovation as it relates to open banking. We believe Canada has a tremendous opportunity to draw on lessons from other governments that were more successful in each category.



Global and Canadian industry context

50%
2017

18%
2015

Adoption of Fintech products continues to rise.[1]

40% - 60%

of banks are investing in API architectures or open platforms and will increase investments over the next three years.[2]

Outside of Canada

The global sentiment towards open banking has been growing over the past few years, with customers becoming less brand loyal and more willing to switch if offered a better digital offer or experience. Consumer adoption of FinTechs has been growing as well, from 18% in 2015 to 50% in 2017[1], with 40%-60% of banks worldwide investing in open platforms and supporting API architectures[2]. Other jurisdictions have surpassed Canada in various EY Open Banking Opportunity Index categories.

Regulatory environment and consumer adoption

The UK ranked top overall in the index, with first in its regulatory environment and consumer adoption. This can be attributed to the prescriptive regulation approach the UK has taken. In addition to the GDPR and the revised Payment Service Directive (PSD2) already prescribed by the EU, the UK Competition and Markets Authority (CMA) mandated its own open banking reforms, publishing mandatory specifications, formats and deadlines applicable to the nine largest banks operating in the UK. This mandates data portability, data ownership and technology standards, thereby enhancing confidence and driving adoption.

Innovation environment and consumer sentiment

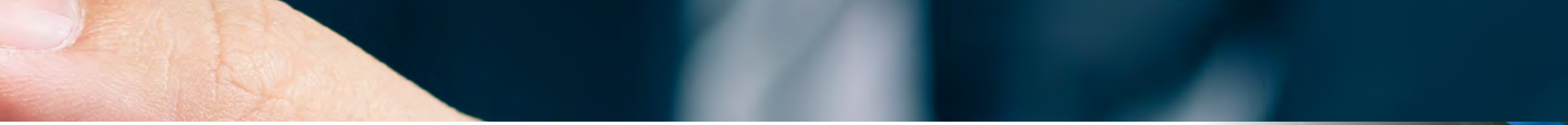
Open banking can be promoted through a strong innovation environment. According to the EY index, innovation was the highest for both the US and China, which ranked first and second, respectively.

The highly innovative environment in the US is evident through its FinTech industry, with 128 patents filed in 2017, and large investments in innovation by financial institutions. Additionally, the intense competition in the industry is prompting regional banks to collaborate with FinTechs. This is contributing to better services and increased consumer convenience. The US EY Open Banking Opportunity Index found that 34% of digitally active customers in the US were comfortable sharing transaction data with FinTechs for better services, even as questions about data privacy and cybersecurity persist.

We believe a strong regulatory environment is an enabler for consumer adoption, and a strong innovative environment is an enabler for consumer sentiment. Canada should draw on lessons on strengthening the regulatory environment through policies and standards to drive adoption while protecting the customer and avoid systemic risks to the economy. Further, Canada should continue to foster innovation and promote competition to enhance consumer choice and drive consumer sentiment.

[1] "EY FinTech Adoption Index 2017", EY, https://www.ey.com/Publication/vwLUAssets/ey-fintech-adoption-index-2017/$FILE/ey-fintech-adoption-index-2017.pdf, accessed 11 February 2019.

[2] "EY Global Banking Outlook 2018", EY, https://www.ey.com/Publication/vwLUAssets/ey-global-banking-outlook-2018/$File/ey-global-banking-outlook-2018.pdf, accessed 11 February 2019.



The benefits of open banking

Open banking enables the sharing of data in an ecosystem of consumers, financial institutions (FIs), FinTechs and businesses. The intention is to make it easier for companies to offer a variety of innovative services while giving consumers more choice and control over their money and financial information. As open banking implementations globally are still at an early stage, many benefits are emerging and will likely continue to emerge.

Benefits to Canadian consumers

Fundamentally, open banking enables consumers to take control of their data and share information with third-party providers in return for differentiated value propositions. As a result, greater choice of financial services and products is available to consumers.

The following are some specific areas within which we believe Canadians will benefit most from the adoption of open banking:

Data aggregation: Open banking will enable consumers to have a single, consolidated view of their financial position and activity such as bank accounts, loans, credit cards, investments and insurance. This level of insight will make it easier for consumers to make better financial decisions and facilitate financial reporting (e.g., preparing tax returns). Screen scraping is the traditional mechanism for data aggregation however most data aggregators are now shifting to leverage APIs.

Personalization: Open banking will give financial institutions insights from consumer data to enable them to proactively provide targeted and relevant offerings that address consumer needs at every life stage (e.g., buying a new home). The customer experience will be significantly improved because of the greater personalization of services and potential horizontal integration of value propositions across traditional industry boundaries, including banks, real estate brokers, lawyers and home inspectors, all integrated into a single seamless service.

Customer empowerment and access to better technology and innovation:
Open banking will provide consumers with greater options in financial products and services, and drive greater competition among financial institutions. Additionally, consumers should be allowed to choose how they wish to engage with open banking, including consent on what data to share and with whom it should be shared. This in turn will fuel innovation in how banks and third parties provide products and services to consumers. In geographies where the innovation environment is high, such as the US, there is a correlation of a high consumer sentiment, as consumers are already exposed to high-value services delivered through innovative technology.

Better pricing for products and services through enhanced competition:
Open banking will enable third-party providers and challenger banks to offer more competitive products and services, using data that was previously stowed by incumbent financial institutions.

Benefits to financial institutions serving Canadians

Better understanding of the customer's risk profile: Open banking will enable financial institutions to generate a more comprehensive risk profile as a direct result of data sharing among financial institutions in an open banking environment. This may allow financial institutions to make better-informed decisions when it comes to lending underwriting, investment risk, cyber security risk and more.

More accurate pricing that promotes competitiveness: Open banking will allow for the promotion of more suitable financial products and services and can also contribute to more accurate pricing that promotes competitiveness, since financial institutions will have a better understanding of the customer's risk profile.

Holistic view of the customer: Open banking will give financial institutions a holistic view of the customer to deliver the right products. This can be achieved through the financial institutions' own products or through new partner relationships.

Enable new business models and expand market share: Open banking will further enable new business models to expand market share through non-traditional product offerings, data sharing and data commercialization.

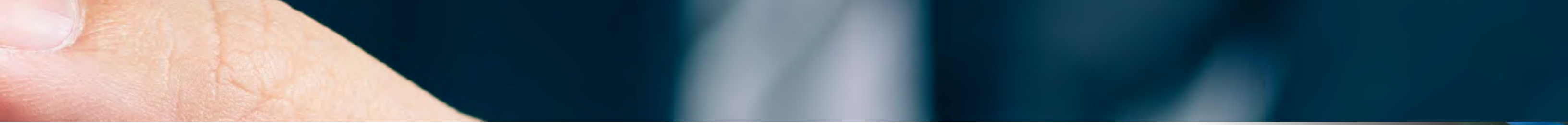
Reduce time to market and push core modernizations: Open banking will as an imperative for banks to undergo digital transformations, which in turn will result in benefits such as reduced time to market.

Enhanced fraud prevention and more efficient consumer identity management: Open banking will enable enhanced fraud prevention (e.g., anti-money laundering and counter-terrorist financing) and more efficient consumer identity management (e.g., KYC/KYB). Credit adjudication for loan requirement verification can be performed more easily by application programming interfaces (APIs) exposing bank transactions than existing paper-based practices (e.g., pay slips), which can be more easily forged.

Benefits to the Canadian economy

At a macro-economic level, due to the increase in commercial and consumer activities, open banking is likely to have a positive impact on the financial services industry and overall GDP. For example, according to a study by the Centre of Economics and Business Research in the UK, open banking can contribute more than £1b annually to the UK economy and support the creation of 17,000 jobs[3].

[3] "CITY A.M. – OPEN BANKING COULD PROVIDE A £1BN BOOST TO THE UK ECONOMY AS BANKS ARE FORCED TO COMPETE, SAYS A NEW STUDY", Cebr, https://cebr.com/reports/city-a-m-open-banking-could-provide-a-1bn-boost-to-the-uk-economy-as-banks-are-forced-to-compete-says-a-new-study/, accessed 11 February 2019.



Potential risks and mitigation strategies for open banking

Open banking brings many benefits to consumers, financial institutions and the economy. However, there are associated risks that need to be mitigated as the journey towards open banking continues. Below we have set out what we believe to be the most significant areas of risk from both the Canadian consumers' (individuals and small businesses) and financial institutions' perspectives.

Consumer risks

Security

In today's environment, banks generally store data within their own environments, whereas with open banking there's an ecosystem where data is shared through new mechanisms among banks and third parties. If traffic were to be intercepted through a cyberattack, data would be compromised. This may cause customers to experience financial loss or identity theft, and could make firms vulnerable to cyberbullying and ransomware.

While these risks are not new and are not specifically introduced by open banking, they could increase as more data is shared within a larger ecosystem.

To mitigate these risks, controls and protocols need to be established. These may include authentication and verification protocols. In addition, educating and training employees and customers on leading practices to follow, as well as how to respond to cyberattacks, is essential in protecting both consumers and financial institutions (including FinTechs).

Fraud

Open banking is expected to increase the number of participants in the financial ecosystem. As a result, the risk of fraudulent vendors with fake product offerings and services may increase. This in turn could increase the risk of financial crimes, including money laundering and terrorism financing.

One way to mitigate this risk is to establish trust within the system. Potential tools that could be implemented could include a verification protocol and authentication mechanisms. In addition, technology enablers such as artificial intelligence and machine learning algorithms could be used to learn vendor and customer patterns and flag any irregularities for further investigation prior to allowing a transaction to go through.

Privacy

Open banking is increasing the amount of consumer data that's shared and the number of parties among whom it's shared. This may pose the risk of a misuse of data in a way that was not authorized by the consumer, and inadvertently exposes consumer personal information.

Ensuring a robust data privacy policy could mitigate this risk. In addition, educating participants to increase awareness on how they can protect their information could further reduce privacy breaches.

Potential risks and mitigation strategies for open banking

Digital and financial exclusion

Open banking drives movement toward data sharing and transparency. Many consumers are likely to be open to data sharing and consumption of digital services, and open banking-enabled opportunities are more likely to benefit those people.

Other consumers who are less digitally inclined, however, may be inadvertently excluded from the benefits. Further, vendors and customers with little to no digital presence could also be excluded from the associated benefits. This presents a unique challenge for regulators and financial institutions to maintain inclusivity as the push to go digital continues.

In aligning with the guiding principle of protecting and promoting consumer data sovereignty and privacy, regulators and financial institutions need to educate consumers around the benefits of open banking and data sharing, while reassuring them that their data is secure.

Banks would need to evolve into being data custodians. That is, they would need to be deliberate about their offering within a process and what data they need for it. However, there would always be consumers who do not consent to data sharing and may therefore be excluded from new offerings. Institutions would need to maintain channels to continue to serve these consumers, while advising of other deals which could be made available to them.

Financial institution risks

Disintermediation

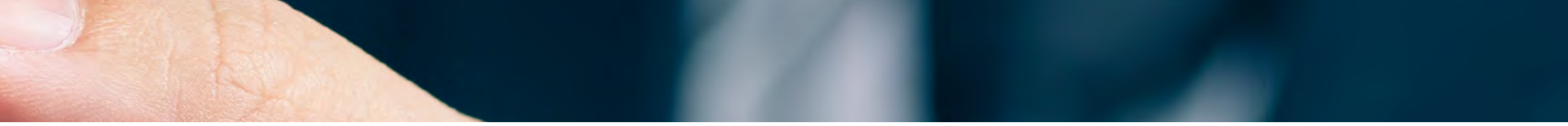
The relationship between the customer and the bank is likely to evolve under the open banking model. Third-party providers will be part of the relationship between the bank and the consumer. This raises the risk of banks being disintermediated, which may affect their revenues. Ultimately, the growing digitization and emergence of new business models demands banks to rethink their operating models and adapt.

Open banking could also lead to changes in liquidity concentration risks for financial institutions. Its possible that while costs associated with enabling infrastructure continue to stay with incumbents, the benefits may move elsewhere in the ecosystem. Based on this, the banks may experience eroded profitability margins.

Additional costs due to regulatory requirements

A regulatory and compliance led approach to open banking could result in significant costs to incumbents. Banks may have to invest to replace legacy systems, establish core banking platforms, digitize offerings, and re-engineer new processes.

It would also increase regulatory oversight across the ecosystem.



The role of the regulator in enabling open banking

A principles-based approach in the Canadian context would likely lead to varying standards and become an obstacle to innovation. Such an approach would invariably result in the pace of open banking adoption in Canada being driven in large part by how willing incumbent banks are in pursuing open banking on their own.

Instead, we believe Canada and Canadians would greatly benefit by following a prescriptive approach that would help promote adoption and more stringent alignment to the key guiding principles we set out on page 1. To that end, we believe Canadian policy makers should consider putting particular focus on the below elements to drive a successful enablement of open banking within Canada.

Clearly define roles in the open banking ecosystem

Due to the potential for more accessible data, a higher number of participants and new risks being introduced, open banking could bring with it new and expanded requirements, such as:

- Maintaining consumer privacy in an open data environment
- Setting and maintaining new technical standards (e.g., communication standards, consent/authorization standards, security standards)
- Creating and managing trust and validating high volumes of digital identities
- Promoting competition and ensuring a level playing field between incumbents and a large number of new entrants such as third-party providers to the market
- Managing consumer disputes regarding unauthorized transactions or data exchange via new mechanisms
- Defining a liability regime between financial institutions and third-party providers (particularly where these operate as a chain of multiple-technology platforms/entities)

To address requirements effectively and efficiently, it would be useful to look at other countries' experiences.

In the UK, the Open Banking Implementation Entity (OBIE) was formed by the Competition & Markets Authority (CMA) specifically to create software standards and industry guidelines that drive competition and innovation in UK retail banking. Other entities' roles were expanded considering new requirements.

In Australia, the Australian Competition and Consumer Commission (ACCC) combines the roles of the OBIE and the CMA. That is, it sets and regulates open banking and administers competition.

Prescribe open access to data

To enable sharing of data while maintaining consumer privacy in an open banking ecosystem, the federal government should consider updating the Personal Information *Protection and Electronic Documents Act* (PIPEDA) to bring it closer to standards such as the EU's General Data Protection Regulation (GDPR).

Some of the key provisions that could be updated to enable open banking:

1

Data portability:

Ability for consumers to securely share their transaction history with third parties of their choosing

2

Right to erasure:

Right for individuals to have personal data erased

3

Default opt-in:

Requirement to provide explicit opt-in consent for use of personal information for secondary purposes

Australia's *Consumer Data Right* legislation and *Privacy Act* are other examples of where new legislation/updates have been made to enable open banking.

Create trust in the ecosystem by authorizing third-party providers

In an open banking ecosystem, sensitive data will extend beyond financial institutions. As a result, there needs to be a mechanism to create trust between participants in the ecosystem.

We've observed two models for validating parties in other jurisdictions:

1

Bank-specific:

Third-party providers must register with each financial institution on an individual basis.

2

Centralized:

Third-party providers can register with the authorities once and gain access to banks' APIs without contractual agreements.

Hong Kong's approach is bank specific, thereby allowing financial institutions to remain as the gatekeepers of the customer relationship and data, and to choose which third parties they wish to collaborate with. This approach requires effort for institutions to make corporate onboarding highly flexible. They will need new processes consisting of generic building blocks that can be deployed depending on a third party's identity, services offered, the type of APIs offered and the risks involved. A constraint to the bank-specific approach is that this could require significant investment from FinTechs, which may be an impediment to their competitiveness.

In the UK, by contrast, validation is managed centrally via the Open Banking Directory. The Directory requires participants to have a digital identity certificate — that is, they must meet the minimal standard of technical security — and to be authorized by the UK Financial Conduct Authority. One challenge of this approach has been that these criteria do not update in real time, and the lag between identifying an entity as fraudulent, failing or otherwise in breach is too long. By the time an entity has been identified as being in breach, investigated and had their authorization removed, they could already have stolen data from accounts. As such, real-time updating is something that needs to be considered following this approach.

Canada may choose to implement a step approach, culminating in a centralized third-party provider validation mechanism, as it would likely improve the speed to market. Ultimately, this is likely to result in a more competitive landscape.

Additionally, capital requirements for third-party providers should be at an appropriate level. If the regulator were to set thresholds too high, it would run counter to the intent of enhancing competition; setting them too low could result in systemic risk.

Manage consent and authorization between consumers, third parties and financial institutions

Aligning to our guiding principles, consumer consent should be transparent, temporal and purpose driven. The model for consent and authorization management is typically bank specific. We have observed this across other jurisdictions.

Like onboarding, the concept of real-time updating needs to apply to consent management. In a scenario where a consumer seeks to withdraw consent before the third party delivers the service, the bank's ability to protect those funds depends on how quickly consent withdrawal reaches the bank.

Authorization renewal should also be considered. While this may disrupt some third-party providers' business models aiming to provide a seamless service (with one time-only authorization), this would mitigate risks such as direct debit fraud. This is prescribed in the UK.

Educate consumers and provide mechanisms for dispute resolution

Coherent simple messaging across the industry is essential to help the consumer understand what open banking means. This in turn should raise adoption potential and the possibilities open banking brings.

In EY's UK Open Banking FinTech Snapshot, consumer education was identified as the top area in which more could be done to help open banking succeed. This was followed by agreeing industry standards outside the top-tier banks and access to industry working groups.

Streamlined procedures should be implemented to resolve potential disputes between all parties, including between financial institutions and third parties when there is a disagreement over responsibility for an unauthorized transaction or data exchange. Specific provisions should also consider the possibility of a player going out of business, and how liabilities would be settled in such a scenario.

Adopt industry standards uniformly

To protect the customer and to protect from systemic risks to the Canadian economy, we believe the federal government should require that participants meet certain standards in the open banking ecosystem. These standards could be developed through industry led initiatives or through legislative action. Broad acceptance of standards will be critical to the success of open banking in Canada.

Such standards might include API standards such as read/write data standards and minimum-security standards; governance, including roles, identity management and decision bodies; systems such as a centralized whitelist directory; processes such as whitelist enrolment, complaints/dispute management; security, including data privacy; and other procedures to support participants.

In the UK, the OBIE provided guidelines for participant capabilities to ensure that security is given sufficient emphasis in their organization. These capabilities included specialist information security, information security controls/assurance, security operations centre, data access and handling rules/controls, penetration testing, credentials management, dedicated cybersecurity, counter-fraud, transaction standards, and IT systems controls around infrastructure and applications.

Regulators must also ensure consumers are protected through new monitoring standards, such as monitoring transactional data by lenders in collections activity to ensure responsible use and ensuring consumers withdrawing access to their data are not penalized.

Conclusion

Canada is well positioned to be a leader in promoting consumer choice, privacy and establishing a competitive marketplace through open banking. Consumer choice, innovation and a level playing field should be promoted, while ensuring consumers are protected and systemic risks to the Canadian economy are managed.

We have a thriving FinTech industry, great access to private capital, and government-sponsored programs to support startups. Thanks to these factors, Canada ranks as a leading global tech hub, according to the EY Open Banking Opportunity Index.

While there are considerable risks with respect to open banking, as discussed above, we believe these risks can be mitigated with thoughtful and considered policy development. Overall, open banking has the potential to create strategic market opportunities for both established and emerging financial institutions while simultaneously enhancing choice, service and value for Canadian banking customers.

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