

Director
Financial Institutions Division
Financial Sector Policy Branch
Department of Finance Canada
James Michael Flaherty Building
90 Elgin Street
Ottawa ON K1A 0G5

September 27, 2017

Dear Sirs/Mesdames:

Re: Potential Policy Measures to Support a Strong and Growing Economy: Positioning Canada's Financial Sector for the Future (the "Consultation Paper")

INTRODUCTION

Portag3 Ventures LP ("**Portag3**") is pleased to provide this comment letter on the Consultation Paper.

Portag3 is a Canadian venture capital fund focused on the financial technology ("**fintech**") sector, with a portfolio of investments in Canada and abroad listed in Schedule A, and which include Wealthsimple, Borrowell and Koho. We are an early-stage investor dedicated to backing innovating financial services companies working to benefit all consumers and are one of the most significant investors in early-stage fintech in Canada.

RESPONSE TO QUESTIONS

1. Clarifying the Fintech Business Powers of Financial Institutions

Question: The Department is seeking views on whether to clarify and modernize the type of information and technology activities that federally regulated financial institutions ("**FRFIs**") are permitted to undertake in-house, while maintaining the long-standing prohibition on commercial activities. In this context, the Department is seeking views on appropriate statutory language.

Response: Portag3 supports the Department's initiatives to modernize and clarify the fintech business powers of FRFIs. Banking and other commercial activities, particularly information and technology commercial activities, are increasingly converging, both in Canada and globally. Technology companies, such as Google, Facebook and Amazon, are offering financial services products, such as e-wallets, payment services and financing.¹ Conversely, banking itself is becoming much more technology and data-focused.

¹ World Economic Forum, "Beyond Fintech: A Pragmatic Assessment of Disruptive Potential In Financial Services", August 2017. Available at <<https://www.weforum.org/reports/beyond-fintech-a-pragmatic-assessment-of-disruptive-potential-in-financial-services>>.

The current limitations on the business powers of FRFIs can prevent FRFIs from competing with, cooperating and partnering with, and investing in, fintech. Accordingly, we recommend broadening the types of information and technology-related commercial activities that are currently within the powers of FRFIs to undertake, including to clarify and modernize the type of permitted information and technology activities that include data-related activity. We would suggest in particular adding language that explicitly permits: (a) the use of anonymous and aggregate customer data to generate business insights for use internally; (b) the use of anonymous and aggregate customer data to generate business insights for use/sale externally; and (c) the combination of such customer data with other data sets.

There is often greater value in aggregating data than looking at specific data points. The ability to use aggregate and anonymous data means FRFIs can use Big Data analytics techniques to add value to such data sets by combining them with other data sets to yield correlations not otherwise possible. Such correlations drive consumer engagement, encourage product and service innovation, create new business lines, and allow businesses to improve their in-line operational decisions. Aggregation allows for insights to be drawn that lead to more personalized services being offered or delivered to the consumer. This can lead to higher savings and more appropriate investment or credit decisions; it also allows a consumer to benchmark their holistic financial health against the aggregate “other”, which can promote better financial health, prudent financial decision-making and greater financial literacy.

Since there is a lack of clarity around this type of information, the terms “anonymous” and “aggregate” should be defined. Protection of privacy rights is important to such expanded powers and below we outline how such privacy rights protection should be addressed.

2. Facilitating Fintech Collaboration

Question: The Department is seeking views on whether to provide federally regulated financial institutions with additional flexibility to make non-controlling investments in fintechs and the corresponding authority to make referrals, subject to appropriate consumer protection, prudential, and commercial activities limitations. Views related to the outsourcing framework, which is prudential in nature, should be directed to the Office of the Superintendent of Financial Institutions (“OSFI”) for consideration.

Response: Portag3 supports providing FRFIs with additional flexibility to make non-controlling investments in fintechs. Collaboration between fintech entities and FRFIs is key for both types of entities, and key to the development of innovation in the sector and the creation of broader financial choices for consumers and better outcomes for consumers (including with respect to pricing, financial literacy and budgeting). Such non-controlling investments should be fostered.

While information on non-controlling investments in other jurisdictions is not generally publicly available, a number of foreign banks have started their own fintech investment funds and are very active in making investments into fintech entities (including Citibank², Santander³ and BBVA⁴). CB Insights reported that “[s]ince 2012, the top ten US banks by assets under management have participated in 72 rounds totaling \$3.6B to 56 fintech companies.”⁵ European banks have also been very active, led by Santander which has made 13 investments in fintech entities, of which the

² See <http://www.citi.com/ventures/>.

³ See <http://santanderinnoventures.com/>.

⁴ BBVA, “BBVA increases fintech fund to \$250M”, February 11, 2016. Available at <<https://www.bbva.com/en/bbva-increases-fintech-fund-250m/>>.

⁵ CB Insights, “Visualizing Where Major US Banks Have Invested in Fintech” June 13, 2017. Available at <<https://www.cbinsights.com/research/fintech-investments-top-us-banks/>>.

largest was a \$135M Series E investment to US small business lender Kabbage.⁶ More specifically, Santander and Siam Commercial Bank appear to have made non-controlling investments in Ripple.⁷

We also recommend providing for additional ability for FRFIs and fintech entities to collaborate on smaller scale pilot projects (a “regulatory sandbox” concept applicable to FRFI-fintech collaborations).

In addition, Portag3 recommends expanding current limits on the ability of FRFIs to provide credit facilities to individual fintech entities which are considered “affiliates” beyond the current limit restrictions. Lending to fintech entities is an important way in which FRFIs support the fintech ecosystem and existing lending limits currently restrict the ability of FRFIs to provide vital credit to such entities despite the lack of materiality of the investment to the FRFIs.

While Portag3 agrees that the outsourcing framework is a matter better addressed by OSFI, we note that the nature of many fintech solutions inherently subjects their proposed use by FRFI’s to the OSFI Guideline B-10 *Outsourcing of Business Activities, Functions and Processes* (“**Guideline B-10**”) which governs material outsourcing arrangements. The requirements of Guideline B-10 can pose challenges to the adoption of fintech solutions, some of which include: identifying the physical location from where services will be provided; giving customers the right to monitor and audit services (including a service provider’s internal controls); and the ability to logically isolate the FRFI’s data from that of other vendor’s clients at all times.

3. Improving Regulatory Transparency and Coordination

Portag3 agrees that there is a need to improve regulatory transparency and coordination and supports the efforts of the Department to achieve better harmonization and coordination. There are currently multiple federal regulators with a potential oversight mandate over fintech activities, including OSFI, the Financial Transactions and Reports Analysis Centre of Canada (“**FINTRAC**”), the Financial Consumer Agency of Canada (“**FCAC**”), the Canada Deposit Insurance Corporation (“**CDIC**”), the Competition Bureau and the Office of the Privacy Commissioner of Canada. There are also multiple provincial regulators, including provincial privacy commissioners, the provincial securities and derivatives regulators, the provincial consumer protection regulators, the provincial financial services regulators and the provincial deposit insurers. The differing mandates of these regulators all include jurisdiction over some aspect of fintech activities, but the varying emphasis of each regulatory mandate and the uncoordinated manner in which they apply lead to inconsistent (and in some cases, directly conflicting) regulations which fintechs can find difficult, if not impossible, to navigate.

For instance, while the federal Office of the Privacy Commissioner of Canada recognizes in its guidance materials⁸ that some organizations are required to collect information about clients and report it to FINTRAC, the Office of the Privacy Commissioner of Canada is of the view that “these reporting requirements must always be balanced with customers’ privacy rights”. Generally, privacy laws require that organizations collect, use or disclose personal information for appropriate or reasonable purposes and that collection is limited to what is necessary or reasonable to meet those purposes. Under this analysis, what is reasonable in the circumstances should be the least invasive

⁶ CB Insights, “Where Top European Banks Are Investing In Fintech In One Graphic”, June 14, 2017. Available at <<https://www.cbinsights.com/research/europe-bank-fintech-startup-investments/>>.

⁷ John L. Douglas and Reuben Grinberg, “Old Wine in New Bottles: Bank Investments in Fintech Companies”. Available at <<https://www.bu.edu/rbfl/files/2017/02/Old-Wine-in-New-Bottles.pdf>>

⁸ Office of the Privacy Commissioner of Canada, “Privacy and the Proceeds of Crime (Money Laundering) and Terrorist Financing Act for customer-facing employees”, March 2012. Available at <https://www.priv.gc.ca/en/privacy-topics/public-safety-and-law-enforcement/financial-transaction-reporting/faqs_pcm1tfa_02/>.

of: (a) examining the driver's licence; (b) recording information from the licence, such as the driver's licence number or (c) photocopying or "swiping" the licence.⁹

However, FINTRAC's guidance¹⁰ removes the aforementioned flexibility and states that an entity relying on valid, current and original photo identification issued by a federal, provincial or territorial government to identify an individual must record the individual's name, the type of card or document used (for example, driver's license, B.C. Services Card), the unique identifier number of the document or card; the issuing jurisdiction and country of the document; the expiry date of the document or card, if available (if the information appears on the document or card, the organization must record it); and the date on which the organization verified the information. FINTRAC's requirements are in some respects inconsistent with privacy guidance, which creates ambiguity for organizations. Harmonization of the two regimes is essential.

Similarly, many fintechs (and increasingly, FRFIs) rely on data as they are embracing data-driven technologies. Much of the power of these technologies is derived from the ability to use large, aggregate and anonymized personal information. However, Canadian privacy law is unclear on what constitutes "anonymized" information and whether consent is required to anonymize personal information. While it is clear in certain jurisdictions that anonymous information is not personal information (and can therefore be used by companies without privacy restrictions), in Canada it is not.

The federal privacy legislation's provisions apply to personal information, defined as information about an "identifiable" individual. The Office of the Privacy Commissioner of Canada's interpretation of personal information has also been very broad. In Canada, the Courts have ruled that "information will be about an identifiable individual where there is a serious possibility that an individual could be identified through the use of that information, alone or in combination with other information." This suggests that pseudonymized data (data in which an association with a data subject has been removed) could be personal information under the *Personal Information Protection and Electronic Documents Act* ("PIPEDA") and subject to all provisions of that legislation. This will particularly be a risk across large data sets and data sets consisting of multiple inputs from third parties, where there is the possibility (however remote) that such a combination may lead to data being re-identified.

To address the complex web of regulation across various entities (such as example above), Portag3 recommends that the Department provide for the creation of an "office for fintech", which would be responsible for coordinating policy between the various federal institutions, including OSFI, FINTRAC, the FCAC, CDIC, the Competition Bureau and the Office of the Privacy Commissioner of Canada. This office would act as the federal point of contact for fintech entities, coordinate the sharing of information, foster the harmonization of regulation and help resolve inconsistencies or conflicts between the various regulators as to fintech matters. In addition, this office could liaise with provincial regulators that have oversight over fintech activities, such as the provincial securities and derivatives regulators, the provincial consumer protection regulators, the provincial financial services regulators and the provincial deposit insurers to promote consistency and direction for the Fintech community.

4. Streamlining the Bank Entry and Exit Framework

⁹ Office of the Privacy Commissioner of Canada, Office of the Information and Privacy Commissioner of Alberta, and the Office of the Information and Privacy Commissioner of British Columbia, "Collection of Driver's Licence Numbers Under Private Sector Privacy Legislation: A Guide for Retailers", December 2008.

¹⁰ Financial Transactions and Reports Analysis Centre of Canada, Methods to identify individuals and confirm the existence of entities, June 2017. Available at <<http://www.fintrac-canafe.gc.ca/guidance-directives/client-clientele/Guide11/11-eng.asp>>.

Question: The Department is seeking views on whether to undertake a series of targeted refinements to streamline and promote a smooth entry and exit process. For example:

- The number of officers a newly incorporated federally regulated financial institution may remunerate could be increased to better meet OSFI's prudential expectations around designated officers; and
- The Superintendent could be provided with the authority to extend the period to issue an Order to Commence and Carry on Business in exceptional circumstances.

Response: Portag3 supports streamlining the bank entry and exit process, particularly for fintechs that seek to become banks. In this respect, we recommend that the Department consider the possibility of offering a more streamlined limited purpose federal banking licence to fintech entities, which would permit licensed entities to receive and hold customer deposits (which would be subject to CDIC coverage) but would not be permitted to lend those funds for their benefit. This type of entity presents a lower risk from a prudential perspective than a traditional bank, since customer funds would be invested in lower risk assets than loans such as overnight deposit at the Bank of Canada, and should therefore be subject to more limited requirements than a traditional bank and, importantly, obtaining such licence should be a much more rapid process. The current timeline to obtain a bank licence is lengthy (the associated costs can be significant) and may be prohibitively long for fintech entities, given the rapid pace of change in the industry. An option of a more limited type of banking licence with a faster entry process would be helpful in fostering innovation, particularly in the case of fintech entities whose business model is that of "neo banks"/ challenger banks/ application programming interface ("APIs") banks/ online banks.

In the US, a similar concept exists. The Office of the Comptroller of the Currency ("OCC") has the authority to charter "special purpose national banks" and announced in 2006 that it would make that option available to fintech entities.¹¹ These "special purpose national banks" are national banks whose activities are limited to a special purpose (for example, credit card banks) and a number of these are currently in existence in the US. These "special purpose national banks" are generally subject to the same requirements as full-fledged national banks, although some requirements may be tailored based on the particular business model of the "special purpose national banks" in question. Supervisory expectations are tailored to the bank's size, complexity, and risks.

5. Positioning a Competitive and Innovative Sector to Support Long-Term Economic Growth

Question: Competition in the financial sector can be a tool to deliver economic growth. In this context, the Department is seeking views on how best to ensure that the financial sector supports long-term economic growth, while balancing the need for a well-functioning and stable sector and, in particular, the role that small and mid-sized banks can play in enhancing the innovative and competitive potential of the Canadian economy.

Response: An important way that the government can foster a competitive and innovative financial services sector is by providing certain key services, including in particular access to data (discussed in further depth under Section 6 below) and access to authentication services for both individual and corporate identity. The current system of authentication and identity verification in the financial services sector is highly inefficient and susceptible to human error and fraud, with each additional financial service provider repeating the process of confirming identity without sharing information. An increased role of government in this process would be welcome. As stated by the World

¹¹ Office of the Comptroller of the Currency, "Exploring Special Purpose National Bank Charters for Fintech Companies", December 2016. Available at <<https://www.occ.treas.gov/topics/responsible-innovation/comments/special-purpose-national-bank-charters-for-fintech.pdf>>.

Economic Forum, “lack of digital identity limits the development and delivery of efficient, secure, digital-based Fintech offerings”¹² and “[d]igital identity is a critical enabler of activity inside Financial Services broadly.”¹³

The national KYC utility in Singapore¹⁴ is a useful model for consideration. The Monetary Authority of Singapore (“MAS”) is piloting a national KYC utility for financial services, based on the MyInfo digital identity service, jointly developed by the Ministry of Finance and GovTech, the lead agency for digital strategy in Singapore.¹⁵ This initiative was announced in 2016. The pilot aims “to expand the MyInfo service to the financial industry for more efficient KYC using trusted, government-collected personal data.”¹⁶ Singapore’s GovTech announced in May 2017 that MyInfo, the government’s “digital vault containing citizens’ personal data,”¹⁷ would be extended to the banking sector, starting with the following four banks: United Overseas Bank, Development Bank of Singapore, Oversea-Chinese Banking Corporation and Standard Chartered Bank.¹⁸ MyInfo, developed by the Ministry of Finance and GovTech, “is a personal data platform, containing government-verified personal details, e.g. the national ID number, residential address, and so on”¹⁹ and it “enables residents to provide their personal data just once to the government, and retrieve their personal details for all subsequent online transactions with the government.”²⁰ The use of MyInfo has been extended to banks, for the pilot program, with a goal of extending its use to a broader range of financial services.²¹ MyInfo was piloted in May 2016 for popular government digital services, such as balloting of the Housing Development Board’s Build-To-Order flats.²² MyInfo “is currently available on 19 Government digital services at present and will be extended to more than 150 by 2018.”²³ The national KYC pilot initiative aims to eliminate “tedious form-filling and providing hardcopy documents for manual verification by the financial institution,”²⁴ reducing data entry errors,

¹² World Economic Forum, “A Blueprint for Digital Identity: The Role of Financial Institutions in Building Identity”, August 2016. Available at <http://www3.weforum.org/docs/WEF_A_Blueprint_for_Digital_Identity.pdf>.

¹³ *Ibid.*

¹⁴ Media Release, “Singapore’s FinTech Journey – Where We Are, What is Next”, Speech by Mr Ravi Menon, Managing Director, Monetary Authority of Singapore, November 16, 2016. Available at <<http://www.mas.gov.sg/News-and-Publications/Speeches-and-Monetary-Policy-Statements/Speeches/2016/Singapore-FinTech-Journey.aspx>>.

¹⁵ Finextra, “MAS to roll out national KYC utility for Singapore”, Finextra, March 24, 2017. Available at <<https://www.finextra.com/newsarticle/30332/mas-to-roll-out-national-kyc-utility-for-singapore>>.

¹⁶ *Ibid.*

¹⁷ CNA, “Data vault MyInfo to speed up bank account applications in Singapore”, Channel NewsAsia, May 3, 2017. Available at <<http://www.channelnewsasia.com/news/singapore/data-vault-myinfo-to-speed-up-bank-account-applications-in-8813584>>.

¹⁸ Media Release, “Opening Bank Accounts Becomes More Seamless and Convenient for MyInfo Users”, GovTech, May 3, 2017. Available at <<https://www.tech.gov.sg/Media-Room/Media-Releases/2017/05/Opening-Bank-Accounts-Becomes-More-Seamless-and-Convenient-for-MyInfo-Users>>.

¹⁹ Media Release, “Singapore’s FinTech Journey – Where We Are, What is Next”, Speech by Mr Ravi Menon, Managing Director, Monetary Authority of Singapore, November 16, 2016. Available at <<http://www.mas.gov.sg/News-and-Publications/Speeches-and-Monetary-Policy-Statements/Speeches/2016/Singapore-FinTech-Journey.aspx>>.

²⁰ *Ibid.*

²¹ Rohaidi, Nurfilzah, “Singapore’s data sharing platform MyInfo being piloted in banks”, GovInsider, March 31, 2017. Available at <<https://govinsider.asia/digital-gov/singapore-myinfo-pilot-banks/>>.

²² Media Release, “Opening Bank Accounts Becomes More Seamless and Convenient for MyInfo Users”, GovTech, May 3, 2017. Available at <<https://www.tech.gov.sg/Media-Room/Media-Releases/2017/05/Opening-Bank-Accounts-Becomes-More-Seamless-and-Convenient-for-MyInfo-Users>>.

²³ CNA, “Data vault MyInfo to speed up bank account applications in Singapore”, Channel NewsAsia, May 3, 2017. Available at <<http://www.channelnewsasia.com/news/singapore/data-vault-myinfo-to-speed-up-bank-account-applications-in-8813584>>.

²⁴ Media Release, “Singapore’s FinTech Journey – Where We Are, What is Next”, Speech by Mr Ravi Menon, Managing Director, Monetary Authority of Singapore, November 16, 2016. Available at <<http://www.mas.gov.sg/News-and-Publications/Speeches-and-Monetary-Policy-Statements/Speeches/2016/Singapore-FinTech-Journey.aspx>>.

and increasing convenience for customers.²⁵ The MyInfo platform is rolled out onto the websites of the banks participating in the pilot program, where customers can retrieve their personal information on the websites of the banks directly. The current initiative only applies to customers applying for a new bank account at one of the four banks participating in the pilot program. The initiative will be extended to more complex transactions and KYC processes, where, through MyInfo, it will involve “several layers of identity verification depending on the purpose of the transaction, the extent of information involved, and the degree of rigor required.”²⁶

We understand that there are in Canada a number of private sector and/or public-private initiatives relating to authentication, in particular through SecureKey. However, identity and authentication are key to financial services and the federal government has a role to play in ensuring all participants in the financial services ecosystem have access to the necessary tools in this area. This function should not be a competitive advantage or barrier to entry in the manner it can be today.

6. Examining the Merits of Open Banking

Question: The Department intends to examine the merits of open banking. This would include consideration of how other jurisdictions are implementing open banking and the potential benefits and risks for Canadians.

The Department is also seeking views on other specific adjustments to the federal financial sector framework that could further support competition and innovation.

Response: Portag3 supports initiatives which create a competitive environment that (i) facilitates innovation, (ii) enhances a consumer’s choice and control of their own data and (iii) provides for better consumer outcomes. Portag3 believes that open banking is one such initiative and that the open banking transformations occurring around the world should be examined, with the serious consideration being given to implementing in Canada a form of open banking appropriate to the Canadian financial ecosystem.

An important driver of competition, and as a consequence, innovation, is ready access to data. Current and nascent technologies are heavily data-reliant (e.g. predictive analytics, artificial intelligence) and both fintechs and FRFIs are embracing such technologies and using them to provide better service, more consumer choice and better consumer outcomes, and to reach a broader segment of consumers. However, there is currently an imbalance in the availability of data to drive such technologies, specifically consumer transaction data. In Canada in particular, this data currently resides almost exclusively with FRFIs.²⁷

This data can be made available through open banking, essentially the introduction of open APIs which enable third party developers to build applications and services around a financial institution. This requires a financial institution to provide access to the customer data (with permission) it holds and allow it to be used by developers and other third party providers. These other parties can then develop apps which allow consumers to compare rates, manage their accounts, obtain credit and make payments without having to directly engage a bank. Consumers should have more control over their own information and be able to allow their information to be made available (or restrict their information from being made available) to these third parties. We believe consumers should be in control of their information, not the institutions which they entrust with such data. Equally

²⁵ *Ibid.*

²⁶ *Ibid.*

²⁷ Note that we are not advocating the release of data not normally available to a consumer, such as internal proprietary company data and value-added data such as financial advice. This type of information would continue to be proprietary to the institution and, ideally, drive a new focus on competitiveness beyond the existing mere hoarding of transactional information.

importantly, we believe that consumers should be the ones to benefit from the use of their information, through lowered rates, increased choice, and greater availability of financial services.

Europe

In Europe, open banking will come into effect in 2018 as a result of the revised Payment Services Directive (“**PSD2**”).²⁸ PSD2 is designed to create a more level playing field for third party fintechs by requiring that banks in Europe offer APIs that provide access to account information to third parties. These third parties (e.g. fintechs) will facilitate internet and mobile payments by securely accessing the customer’s payment account (with the customer’s prior consent) and initiating credit transfers in their name to complete an online purchase. These third parties may also provide other services, such as aggregating information from all of the customer’s accounts in one place to help the customer better manage their finances, or to display rate comparisons to allow consumers to easily switch financial services providers.

With the introduction of payment initiation services, online payments are no longer restricted to credit cards. With PSD2, payers simply need to confirm that they instructed a payment initiation service to transfer the money from their account. The benefits of this can be seen throughout the payments ecosystem:

- merchants are guaranteed payment, have reduced transaction costs and have the increased flexibility of multiple payment methods.
- consumers can consolidate different current accounts in order to get a more holistic view of their financial situation and better budget and plan their finances. Consumers will also benefit from increased competition as they will be able to make immediate payments, send higher transaction amounts and pay reduced costs.

PSD2 also now authorizes payment initiators and account information services which were previously unregulated to officially become payment service providers. This recognition brings these initiators and service providers into the fold, and “ensures that more effective and efficient security measures and processes can now be implemented, notably through the mandatory authorization to operate that is provided by the prudential supervisory authority of the country of practice”.²⁹

To ensure the security of confidential financial and personal user data, service providers must respect international security norms (such as PCI-DSS) and implement rigorous authentication measures (such as one-time password and strong customer authentication). This has the added benefit of bringing existing unregulated providers out of the shadows in order to benefit from access while ensuring a minimum security standard.³⁰

EU banks and financial services providers have already begun to open up customer information (with permission) and offer more innovative, flexible services usually at lower cost to consumers. Please refer to Schedule B for examples of the types of innovative services now available in the EU as a result of these types of changes.

United Kingdom

²⁸ EU Commission, “European Parliament adopts European Commission proposal to create safer and more innovative European payments”, 2015. Available at <https://ec.europa.eu/info/law/payment-services-psd-2-directive-eu-2015-2366_en>.

²⁹ Ponsard, Guillaume, “The Impact of PSD2 Explained”, Let’s Talk Payments, May 22, 2016. Available at <<https://letstalkpayments.com/the-impact-of-psd-2-explained/>>.

³⁰ *Ibid.*

In the United Kingdom, the Competition and Markets Authority (“**CMA**”) in November of 2014 launched a market investigation in to the supply of retail banking services to personal banking customers and small and medium sized enterprises.³¹ In its final report published last year,³² the CMA announced a package of reforms, including open banking, specifically designed to drive competition, and help consumers take control of their banking using innovative new services. The report was critical of the largest incumbents:³³

Essentially, the older and larger banks, which still account for the large majority of the retail banking market, do not have to work hard enough to win and retain customers and it is difficult for new and smaller providers to attract customers.

These failings are having a pronounced effect on certain groups of customers, particularly overdraft users and smaller businesses. They also mean that the sector is still not as innovative or competitive as it needs to be. Banks will only invest in new products or services or reduce their prices and improve service quality, if they expect to win business as a result, or fear losing business if they do not.

The package of remedies recommended included the development and implementation of an open API standard for banking to permit authorised intermediaries to access information about bank services, prices and service quality and customer usage. Privacy and security concerns were recognized as issues, and as a result, it was recommended that requirements to release of information should take place in stages.³⁴

In summer of 2015, Treasury requested the establishment of the Open Banking Working Group (“**OBWG**”) to produce a detailed framework for how an Open Banking Standard could be designed and delivered, with a timetable for achieving this. The OBWG comprised industry experts from banking, open data, and consumer and business communities to ensure a diverse range of expert views are represented. This OBWG report was delivered in early 2016 and the bulk of the report addresses critical issues around governance, security, liability, standards, communications, regulation and legal.

Around the same time, highlighting the coordination among departments, the Financial Conduct Authority announced it was creating a regulatory sandbox for fintechs,³⁵ and the Payment Systems Regulator noted it had appointed a “Special Envoy for Fintech” to represent UK interests in Fintech and lead the Treasury’s engagement with industry.

³¹ Competition and Markets Authority, “Retail Banking Market Investigation”, June 19, 2013. Available at <<https://www.gov.uk/cma-cases/review-of-banking-for-small-and-medium-sized-businesses-smes-in-the-uk#terms-of-reference>>.

³² Competition and Markets Authority, “Retail Banking Market Investigation: Final Report”, August 9, 2016. Available at <<https://assets.publishing.service.gov.uk/media/57ac9667e5274a0f6c00007a/retail-banking-market-investigation-full-final-report.pdf>>.

³³ Competition and Markets Authority, “Making Banks Work Harder for You. Overview of the Retail Banking Market Investigation Final Report”, August 9, 2016. Available at <https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/544942/overview-of-the-banking-retail-market.pdf>.

³⁴ The least sensitive information – about banks’ prices, terms and conditions and branch location – was made available at the end of March 2017. It is expected that all aspects of an open banking standard will be up and running in early 2018.

³⁵ Media Release, “UK FinTech: Regulating for innovation”, Speech by Christopher Woolard, Financial Conduct Authority Director of Strategy and Competition, February 22, 2016. Available at <<https://www.fca.org.uk/news/speeches/uk-fintech-regulating-innovation>>.

As a consequence of these changes (and pending changes) the UK has become a leading hub of fintech investment and innovation.³⁶ Please refer to Schedule B for examples of such investment and innovation.

Australia

Australia moved shortly after the UK, with the Australian government announcing in its 2017/2018 Budget that it would be introducing open banking:³⁷

The Government is opening the door to new banking entrants and new financial products and services.

This will mean more choice and cheaper and better options for consumers.

The Government will introduce an open banking regime that will increase access to banking product and consumer data by consumers and third parties, if the consumer consents. This will empower consumers to seek out banking products better suited to their needs and create further opportunities for innovative business models in banking that enhance competition.

In July 2017, the Australian government announced that was seeking “advice on implementing an open banking system regime in Australia, and examine how such a framework can help boost competition and innovation in financial services for the benefit of Australian customers and businesses”³⁸ and commissioned an independent review by a law firm to recommend the best approach to implement an open banking regime in Australia, with the report due by the end of 2017.

The slower pace of regulatory change in Australia has caused David Coleman, the chair of the Australian House Economics Committee, to lament the lack of startup competition.³⁹ Nonetheless, there are a number of Australian fintechs, primarily in the loan and payments space. See Schedule B for additional details.

United States

In the United States, there is no top-down regulatory framework driving the adoption of open banking as of yet (the federal fintech charter discussed above under Section 4 does not address this issue). American fintechs drove the first wave of digital innovation, resorting to screen scraping⁴⁰ to permit the aggregation of customer transaction data in a unified fintech-provided

³⁶ Barber, Lindsey, “London keeps hold of global fintech lead - but these are the global cities hot on its heels”. Available at <<http://www.cityam.com/262644/london-keeps-hold-global-fintech-lead-but-these-global>>.

³⁷ Media Release, “Building an accountable and competitive banking system”, Treasury, Australian Government, May 9, 2017. Available at <<http://sjm.ministers.treasury.gov.au/media-release/044-2017/>>.

³⁸ Media Release, “Empowering consumers through open banking”, Treasury, Australian Government, July 20, 2017. Available at <<http://sjm.ministers.treasury.gov.au/media-release/065-2017/>>.

³⁹ Coleman, David, “How to Boost Bank Competition and Make Executives Genuinely Accountable”, Australian Financial Review, April 2, 2017. Available at <<http://www.afr.com/opinion/columnists/how-to-boost-bank-competition-and-make-executives-genuinely-accountable-20170402-qvbq6d>>.

⁴⁰ Screen scraping is the process of collecting screen display data from one application and translating it so that another application can display it. This is normally done to capture data from a legacy application in order to display it using a more modern user interface. In this case, customers provide their username and password credentials to a third party data aggregator and the aggregator logs in to obtain customer data by literally copying and pasting the bank account information into their own or partners' apps, usually tools for helping consumers manage their money.

dashboard. However, many banks alleged this was a violation of their terms of use and caused technical and security issues, suspended access and threatened legal proceedings.⁴¹

Screen scraping is not a secure mechanism for obtaining such information and introduces risk into the financial ecosystem and is to be banned in the EU under PSD2, although this move has been contentious. Many European fintechs protested the banning of screen scraping as an alternative to APIs, fearing that without it, banks would be positioned as gatekeepers and grant selective access via API.⁴²

In the US, in response to consumer pressure and demand (and other factors), some American banks (such as JPMorgan Chase and Capital One) have moved to API technology, but on a proprietary basis (instead of a truly open basis), which limits innovative potential.^{43,44}

All this has not been lost on American regulators. In October 2016, Richard Cordray, the Director of the United States of Consumer Financial Protection Bureau (“**CFPB**”) gave a talk at the massive Money 20/20 conference in which he stated clearly that open banking was on the regulator’s agenda.⁴⁵

⁴¹ Crosman, Penny, “The Truth Behind the Hubbub Over Screen Scraping”, American Banker, November 12, 2015. Available at <<https://www.americanbanker.com/news/the-truth-behind-the-hubbub-over-screen-scraping>>.

⁴² Leading EU fintech companies argue that without the use of screen scraping, critical elements of the payment initiation business model will be negatively impacted, notably the guarantee that payments will be executed in real time. Some companies also point to Article 66 of PSD2 as support for screen scraping, as it states that banks must be in a position to “provide or make available...all information accessible to the bank regarding the execution of the payment transaction” and that the provision of this service cannot be “dependent on the existence of a contractual relationship.” In May 2017, a coalition of 60 payment industry stakeholders published a manifesto (available at <<https://www.futureofeuropeanfintech.com/assets/Manifesto-for-the-impact-of-PSD2-on-the-future-of-European-Fintech.pdf>>) urging authorities to abandon the proposed ban on screen scraping, arguing that it would give banks a competitive advantage “will make fintechs technologically dependent on banks and therefore grant incumbents a gatekeeper role on the fintech sector,” thereby allowing the banks to dictate which companies will progress and to hamper new entrants in the market place and innovation generally. However, the European Banking Federation, a banking lobbying organization, issued a statement (available at <<https://www.ebf.eu/ebf-statement-on-eu-commission-position-on-eba-rti-for-psd2/>>) arguing that APIs provide greater protection for consumers and that permitting screen scraping may have a negative impact on innovation with the payments industry.

⁴³ See, for instance, CapitalOne’s hackathon API (<http://api.reimaginebanking.com/>), JPMorgan Chase and Intuit’s partnership (<http://www.businessinsider.com/jpmorgan-gives-intuit-access-to-customer-data-2017-1>).

⁴⁴ In Canada, there is legal precedent that screen scraping is violation of a website’s terms of use and that courts will enforce such agreements (see, for instance, *Century 21 Canada Limited Partnership v. Rogers Communications Inc.*, 2011 BCSC 1196 (CanLII), <http://canlii.ca/t/fn00h>).

Furthermore, in March of 2011, the Financial Consumer Agency of Canada (FCAC) issued a statement, warning Canadians to be aware of the possible risks of disclosing their online banking and credit card information to financial aggregation services. Aside from the obvious data security and privacy risks, the FCAC cautioned that using such a service could also violate the terms and conditions of the account:

Consumers should be aware that if they disclose their online banking information to any other party, including financial aggregators, they may risk losing their protection against unauthorized transactions. Some financial institutions’ user agreements clearly state that users will be responsible for unauthorized transactions if they provide other parties, including financial aggregators, with their passwords and account information.

The FCAC reminded consumers it was their responsibility to manage their online banking and credit card credentials in accordance with the terms of their user agreements, as well as to review their user agreements and to understand their responsibilities thereunder. Available at <<https://www.canada.ca/en/news/archive/2011/03/financial-aggregation-services-risk-disclosing-online-banking-information.html>>.

⁴⁵ Consumer Financial Protection Bureau, “Prepared Remarks of CFPB Director Richard Cordray at Money 20/20, Las Vegas, Nevada”, October 23, 2016. Available at <<https://www.consumerfinance.gov/about-us/newsroom/prepared-remarks-cfpb-director-richard-cordray-money-2020/>>.

Many exciting products we see through the lens of Project Catalyst depend on consumers permitting companies to access their financial data from financial providers with whom the consumer does business. We recognize that such access can raise various issues, but we are gravely concerned by reports that some financial institutions are looking for ways to limit, or even shut off, access to financial data rather than exploring ways to make sure that such access, once granted, is safe and secure.

Let me state the matter as clearly as I can here: We believe consumers should be able to access this information and give their permission for third-party companies to access this information as well.

The following month, the CFPB released a Request for Information Regarding Consumer Access to Financial Records.⁴⁶ Over seventy responses were received.⁴⁷ Financial institutions and organizations representing financial institutions were lukewarm to open banking, raising security and liability issues. Most preferred a proprietary API model.

Limited forms of open banking are being adopted nonetheless (albeit slowly). Major American banks assessed this new business model that was evolving in other jurisdictions and determined that open banking (at least in some form) created a competitive advantage. They also realized that a failure to incorporate some aspect of open banking into their business model put them at significant risk of being disintermediated, particularly in the payments ecosystem. As a result, the adoption of open banking variants in the United States has begun – however, in the absence of regulatory drivers, it has been criticized for developing too slowly, with the result that the United States is “falling behind other countries when it comes to consumer finance”.⁴⁸ Furthermore, “American banks’ slow adoption of application programming interfaces is one reason the world’s largest economy has stumbled in advancing digital banking”.^{49, 50}

The situation in the United States stands in contrast to that in the United Kingdom and the European Union, where a statutory regime was implemented to level the playing field, enhance consumer choice and drive innovation. The landscape in the United States is driven by proprietary mechanisms, and is developing unevenly. Please refer to Schedule B for further detail.

These jurisdictions (and others) have recognized explicitly that open banking supports competition and innovation, and the changes necessary to realise open banking have been achieved by the coordination of competition, financial, and data protection/privacy authorities. Portag3 recommends that the Department coordinate a collaborative approach amongst regulatory stakeholders to examine the merits of open banking, and that such an exploration be initiated as soon as possible.

While recognizing that any move toward open banking requires the coordination of multiple stakeholders and complex regulatory considerations, the failure to move quickly in this area will

⁴⁶ Consumer Financial Protection Bureau, “Request for Information Regarding Consumer Access to Financial Records”, November 16, 2016. Available at http://files.consumerfinance.gov/f/documents/112016_cfpb_Request_for_Information_Regarding_Consumer_Access_to_Financial_Records.pdf.

⁴⁷ Available at <https://www.regulations.gov/docketBrowser?rpp=50&so=DESC&sb=commentDueDate&po=0&dct=PS&D=CFPB-2016-0048>.

⁴⁸ Siddiqui, Nabeel, “Slow API adoption is dragging U.S. banking down”, American Banker, May 10, 2107. Available at <https://www.americanbanker.com/opinion/slow-api-adoption-is-dragging-us-banking-down>.

⁴⁹ *Ibid.*

⁵⁰ Macheel, Tanya, “Why ‘challenger banks’ haven’t taken off in the US”, Tearsheet, March 10, 2017. Available at <http://www.tearsheet.co/modern-banking-experience/why-challenger-banks-havent-taken-off-in-the-us>.

mean Canada will trail other markets in this regard and the ancillary innovation opportunities and financial offshoots will be taken by companies in first mover jurisdictions. In addition, Canada will have a diminished opportunity to craft its own solution for open banking, one tailored for the unique Canadian market, as solutions which dominate other jurisdictions will spill over into Canada.

Finally, in the absence of a coordinated regulatory effort, Canadian FRFIs will likely sidestep true open banking (which embraces concepts of publically available, non-proprietary APIs and data made freely available with consent) to develop a proprietary form of “semi-open banking” in which the FRFIs lock down specific fintech companies to provide a solution for only that FRFI. Rather than promoting innovation, this leads to technological stagnation and forces fintechs that want a broader market to go to other, more open, jurisdictions to escape FRFI contractual restrictions. In this semi-open model, consumer choice is significantly reduced since all new “innovation” is tied to a particular FRFI and the power of aggregate data sets across multiple institutions is lost.

7. Modernizing the Framework

FRFIs typically have very large legacy technology systems that are in some cases outdated and in need of modernization. Legacy infrastructure is a current impediment to innovation in financial services in Canada even in the case of two willing parties. Portag3 supports any incentives that would assist FRFIs with the modernization of their technology platforms, for example, providing for accelerated depreciation for technology purchases.

8. Limitations on Using the Terms "Bank," "Banker" and "Banking"

Question: The Department is seeking views on whether prudentially regulated non-bank deposit-taking institutions should be given flexibility to use the terms "bank" or "banking" to describe their activities and services in appropriate circumstances. Feedback is welcomed on how to refine the limitations on the use of these terms and on how to avoid marketplace confusion and ensure appropriate protection of consumers.

Response: The term “banking” has evolved over time to extend beyond the reference to a specific type of entity (i.e. a regulated bank) to a more general type of business (loans, savings, and other financial services). This term is routinely used in such manner in media and other popular information sources. We would suggest that, instead of strictly limiting the uses of the term “banking”, the focus should instead be on ensuring clear disclosure on whether funds are CDIC ensured and whether an entity is subject to oversight by OSFI or any other regulator. The descriptive use of the word “banking” (in particular as a verb) should be permitted for non-bank entities, given that this term is generally understood to describe business activity and not entity type.

CONCLUSION

As noted above, we support initiatives to modernize our world leading banking industry and promote greater innovation, which in turn will spur greater consumer access, choice and outcomes and overall competition in financial services.

Fintech innovation is already providing Canadians access to services that enable greater financial literacy (see for example, the “know your credit score” service offered by Borrowell and the financial education blog maintained by Wealthsimple) and improved budgeting (through personal financial management software such as that offered by Moven). Fintechs are also providing credit to underserved segments of the market or population (including small and medium sized businesses) and providing Canadians with access to better ways to save for retirement (for example the wealth management services offered by Wealthsimple to consumers with smaller value portfolios). We are

only at the start of the fintech journey. Portag3 is at the forefront of the fintech industry in Canada and makes investments globally. As such, we have broad exposure to emerging global trends in the area of fintech and would welcome the opportunity to provide ongoing observations.

We further support the approach of the Canadian government to fintech and its initiatives to provide for greater innovation. In particular, we applaud the efforts of the Canadian government to date and encourage the Department to focus on establishing a mechanism to better harmonize requirements across the various relevant regulatory bodies. Fostering innovation can assist our financial services industry transform and remain competitive and relevant in the future.

We welcome the opportunity to discuss this response with you and thank you for the opportunity to provide comments. We would be pleased to work with the Department as we recognize the need to lay the important groundwork for the future of the financial services industry in Canada.

Sincerely,

A handwritten signature in blue ink, appearing to read 'A. Felesky', with a stylized, cursive flourish extending to the right.

Adam Felesky
President
Portag3 Ventures LP

Schedule A

Portag3 Ventures LP Investments as at September 13, 2017

Investment in Companies	Domicile
Alan S.A.	France
Albert Corporation	United States of America
Borrowell Inc.	Canada
Clear Financial Technology Inc. / Clearbanc	Canada
Collage Inc.	Canada
D1g1t Inc.	Canada
Dialogue Technologies Inc.	Canada
Drop Loyalty Inc.	Canada
FL Fintech E GmbH	Germany
Flybits Inc.	Canada
Kin Insurance Inc.	United States of America
Koho Financial Inc.	Canada
League, Inc.	Canada
Limelight Health Inc.	United States of America
Loot Financial Services Limited	United Kingdom
Quantify Labs Inc.	Canada
Seed Platform Inc.	United States of America
Stride Health Inc.	United States of America
Wave Financial Inc.	Canada
Wealthsimple Financial Corp.	Canada
Zensurance Inc.	Canada

Investment in Funds	Domicile
Diagram Ventures, LP	Canada
Information Venture Partners II, LP	Canada
La Famiglia Fund I, LP	Germany
Nyca Investment Fund, LP	United States of America
Real Investment Fund 17 LP	Canada
White Star Capital II, LP	Guernsey

Schedule B

Certain Examples of Open Banking Innovation in Other Jurisdictions

Table I: Examples of Fintech Innovation in the European Union

Company	Location	Description and Services
Fidor Bank	Germany, UK	<p>Fidor Bank is a German online bank, founded in 2009. In 2015, it entered the UK where it currently offers two personal banking products, a current account and savings bonds with terms between 3-36 months.</p> <p>In July 2016, it was announced that Fidor Bank was being acquired by France's Groupe BPCE for an undisclosed amount. As of September 2016, Fidor Bank continued to operate under its own branding.</p>
N26	Germany, with services throughout the Eurozone, with the exception of Cyprus and Malta	<p>N26 (known as Number 26 until July 2016) started operations without holding a banking license; instead it was merely an interface while the back end was provided by Wirecard. In July 2016 it rebranded as N26 Bank, having received its own banking license from BaFin.⁵¹</p>
BBVA (Banco Bilbao Vizcaya Argentaria)	Spain	<p>On May 24, 2017 (ahead of the PSD2 requirement), BBVA launched an open banking platform by making its APIs publicly available.⁵²</p> <p>The BBVA API Market released eight of the bank's APIs to companies, startups, and developers to access and integrate customer data into their services, such as customer acquisition and loan origination.⁵³ BBVA has said that the open banking platform will comply with the EU's PSD2 regulation.</p> <p>The platform launched in Spain first, meaning developers globally can access data on Spanish customers. It will roll out to US customers later this year with Turkey, Mexico, and Latin America to follow.</p>

⁵¹ Dillet, Roman, "Number 26 is now a true bank as it now has a full banking license", TechCrunch, July 21, 2017. Available at <<https://techcrunch.com/2016/07/21/number26-is-now-a-true-bank-as-it-now-has-a-full-banking-license/>>.

⁵² Keane, Jonathan, "BBVA launches an open API marketplace for developers and startups", Tech EU, May 24, 2017. Available at <<http://tech.eu/brief/bbva-open-api-marketplace/>>.

⁵³ See: BBVA API Market. Available at <<https://www.bbvaapimarket.com/>>.

Table 2: Examples of Fintech Innovation in the United Kingdom

Company	Location	Description and Services
Monzo	UK	Originally operating through a mobile app and a prepaid debit card, in April 2017 Monzo's UK banking licence restrictions were lifted, enabling them to offer a current account. Monzo was one of the earliest of a number of new app-based challenger banks in the UK. ⁵⁴
Atom Bank	UK	<p>Atom Bank is a digital financial company and challenger bank. It has no branches, tellers, or other physical outposts, or a traditional online banking outlet. Users must utilize the smartphone application to bank.</p> <p>Atom first secured its banking license in June 2015.⁵⁵ The company launched to the public in April 2016.⁵⁶</p> <p>In March 2017 it raised £83M in venture funding, which brought its total funding to over £200M.⁵⁷</p>
Starling Bank	UK	<p>Starling Bank is a licensed mobile-only challenger bank headquartered in London. Since its founding, it has received significant funding, including \$70 million of investment in early 2016.⁵⁸</p> <p>In July 2016, Starling received its banking licence from the Financial Conduct Authority.⁵⁹</p>

⁵⁴ Monzo, "Welcome to Monzo Bank". Available at <<https://monzo.com/blog/2017/04/05/banking-licence/>>.

⁵⁵ Carey, Scott, "The UK's new breed of digital challenger banks: Atom, Monzo, Starling and Tandem – Ranked", TechWorld, March 22, 2017. Available at <<http://www.techworld.com/startups/ranked-uks-new-breed-of-digital-only-challenger-banks-3635411/>>.

⁵⁶ *Ibid.*

⁵⁷ Dorbian, Iris, "Atom Bank will snag 83 mln pounds", PE Hub Network, March 6, 2017. Available at <<https://www.pehub.com/2017/03/atom-bank-will-snap-83-mln-pounds/>>.

⁵⁸ Hugo-Webb, Tristan, "UK Challenger Bank Raises \$70 Million", PaymentsJournal, January 12, 2016. Available at <<http://paymentsjournal.com/uk-challenger-bank-raises-70-million/>>.

⁵⁹ Wallace, Tim, "Mobile-only bank Starling wins its licence", Telegraph, July 14, 2016. Available at <<http://www.telegraph.co.uk/business/2016/07/14/mobile-only-bank-starling-wins-its-licence/>>.

Table 3: Examples of Fintech Innovation in Australia

Company	Location	Description and Services
Banjo	Australia	<p>Founded in 2015 by four National Bank of Australia executives, Banjo is an online lender providing unsecured loans to small business owners who have no lending product other than a credit card. It initially raised \$7.5 million to create the new business.⁶⁰</p> <p>In August 2017, Aura High Yield SME Fund announced a deal with Banjo to build a A\$20m revolving loan facility and expand Banjo’s loan book.⁶¹</p>
Prospa	Australia	<p>Prospa is Australia’s leading online small business lender, which uses a proprietary technology platform and a simple online application process to approve loans and provide funding within 24 hours.</p> <p>In February 2017, it secured \$25M in growth funding led by AirTree Ventures, joined by Entrée Capital and Ironbridge Capital. The deal is the largest fintech venture capital investments in an Australian business.⁶² Prospa also announced it had passed \$250 Million in total loans to small businesses in Australia.</p>
Tyro	Australia	<p>Tyro (originally MoneySwitch Ltd.) was the first new entrant into the Australian EFTPOS (electronic funds transfer at point of sale) business since 1996. In 2015, Tyro was granted a banking license.⁶³ On March 1, 2016, Tyro completed an equity capital raising of \$100m at a price per share of \$1.0361.⁶⁴</p> <p>In the first half of Financial Year 2017, Tyro processed \$5.3b in payments, a growth rate of 23%, and generated revenue of \$59m, a growth of 28%.⁶⁵</p> <p>In February 2017, Tyro announced a partnership with Afterpay.⁶⁶</p>

⁶⁰ Redrup, Yolanda. “Former NAB execs raise millions to take on big four in small business loans with Banjo”, *Financial Review*. September 22, 2015. Available at <<http://www.afr.com/technology/former-nab-execs-raise-millions-to-take-on-big-four-in-small-business-loans-with-banjo-20150916-gjo0bc#ixzz4sraRt14w>>.

⁶¹ Tuckwell, David. “Aura gives Banjo a \$20m facility to expand loan book”, *AltFiNews*, August 16, 2017. Available at <http://www.altfi.com/article/3369_aura_gives_banjo_a_20m_facility_to_expand_loan_book>.

⁶² Media Release, “Prospa secures \$25M in funding led by AirTree Ventures”, February 2017. Available at <<https://www.prospa.com/about-us/in-the-news/prospa-secures-25m-in-funding-led-by-airtree-ventures>>

⁶³ APRA, “List of Authorised Deposit Taking Institutions”. Available at <<http://www.apra.gov.au/adi/pages/adilist.aspx>>.

⁶⁴ Tyro. Available at <<https://tyro.com/corporate/>>.

⁶⁵ Tyro. Available at <<https://www.tyro.com/content/uploads/2017/03/Interim-Financial-Results-2017.pdf>>.

Table 4: Examples of Fintech Innovation in the United States

Company	Location	Description and Services
Moven	US	<p>Moven is a mobile financial service provider operating in the United States. Moven was founded in 2011. Moven's mobile payments system relies on Near Field Communication technology, available via contact stickers placed on users' mobile devices, allowing users to pay for goods and services in the United States where MasterCard is accepted.⁶⁷</p> <p>Moven's current product offerings allow users to track their financial wellness using Moven's proprietary tools: CRED Score, MoneyPulse and MoneyPath, and a financial personality test. Moven launched its mobile banking and mobile payment services in 2013.⁶⁸</p> <p>In January 2016 it formed partnerships with marketplace lender CommonBond and credit card consolidator Payoff, companies which provide financial incentives to customers for using multiple fintech services. Moven users receive \$100 if they consolidate their credit cards with Payoff and \$200 if they consolidate their student loans with CommonBond. CommonBond borrowers will also see their interest rates reduced by 25 basis points when they pay via Moven.⁶⁹</p>
Simple	US	<p>Simple, initially known as BankSimple, was founded in 2009 and launched in the summer of 2012.⁷⁰</p> <p>Simple has no physical branches. Instead, account-holders are issued Visa debit cards and have access to an online banking system accessible by a browser or mobile app. Simple earns revenue by collecting interest on customer deposits and through the collection of interchange fees.⁷¹</p>

⁶⁶ Media Release, "New deal allows consumers to 'buy now, receive now and pay later'." February, 9, 2017. Available at <<https://www.tyro.com/press-releases/new-deal-allows-consumers-buy-now-receive-now-pay-later/>>.

⁶⁷ Moven, "Moven: FAQs", 2017. Available at <<https://moven.com/fag/>>.

⁶⁸ "A Vision for 'Frictionless' Banking", *American Banker* May 1, 2012. Available at <<https://www.americanbanker.com/news/a-vision-for-frictionless-banking>>.

⁶⁹ Wisniewski, Mary. "Fintechs Team Up to Become More Banklike", *American Banker*, January 27, 2016. Available at <<https://www.americanbanker.com/news/fintechs-team-up-to-become-more-banklike>>.

⁷⁰ Simple, "About Simple" and "Simple FAQs". Available at <<https://www.simple.com/about-us>>.

⁷¹ *Ibid.*

		<p>Simple provides FDIC-insured checking accounts to US citizens and is part of the STAR network for surcharge-free access to around 55,000 ATMs.⁷²</p> <p>By January 2013, the company had 20,000 customers and had processed more than \$200 million in transactions. By July 2013, its customers had increased to 40,000 and total transaction values increased to greater than \$1 billion. At year's end in 2013, Simple reported processing on average around 13 debit transactions per minute with an overall customer balance of \$64 million.⁷³</p> <p>On February 20, 2014, Simple announced it had been acquired by Banco Bilbao Vizcaya Argentaria (BBVA) for \$117 million or about \$1200 per customer.⁷⁴</p>
Yodlee/Envestnet	US (India)	<p>Yodlee is a data aggregation and data analytics platform that functions as an account aggregation service, allowing users to see their credit card, bank, investment, email, travel reward accounts, etc. on one screen.⁷⁵ In addition, Envestnet is a provider of integrated portfolio, practice management, and reporting solutions to financial advisors and institutions.⁷⁶ Yodlee uses the "massive scale of financial data within [its] platform"⁷⁷ to fuel Envestnet. Part of Yodlee's business model consists of selling its customer's financial transaction data to investors.⁷⁸</p> <p>Yodlee was started in 1999 and is headquartered in Redwood Shores, California; it merged the following year with its main competitor in the data aggregation space, an Atlanta-based company called VerticalOne, which was owned at the time by an internet banking firm.⁷⁹ By 2013, Yodlee had over 45 million users, and over 150 financial institutions and portals (including 5</p>

⁷² *Ibid.*

⁷³ Reich, Joshua, "One Year with Our Customers", July 15, 2013 and "The Beginning", July 25, 2012, *Simple Blog*. Available at <<https://www.simple.com/blog>>.

⁷⁴ Media release, "BBVA acquires digital banking service pioneer Simple", BBVA Compass, February 20, 2014. Available at <<http://newsroom.bbvacompass.com/BBVA-acquires-digital-banking-service-pioneer-Simple>>

⁷⁵ Yodlee, <<https://www.yodlee.com/company/>>

⁷⁶ Envestnet, <<http://www.envestnet.com/who>>

⁷⁷ Yodlee, <<https://www.yodlee.com/company/>>

⁷⁸ Hope, Bradley. "Provider of Personal Finance Tools Tracks Bank Cards, Sells Data to Investors". *Wall Street Journal*, August 6, 2015. Available at <<https://www.wsj.com/articles/provider-of-personal-finance-tools-tracks-bank-cards-sells-data-to-investors-1438914620>>.

⁷⁹ Adamson, Deborah. "Yodlee to Merge with VerticalOne", *Marketwatch*, December 1, 2000

		<p>of the top 10 U.S. banks) offer services powered by Yodlee.⁸⁰</p> <p>In October 2014, Yodlee went public on NASDAQ, raising \$75 million at \$12/share. In August 2015, Envestnet acquired Yodlee for a reported \$660 Million and the company went private again.⁸¹</p> <p>Initially a screen scraper technology, Yodlee moved to direct API model and in 2017, Envestnet Yodlee worked with 12 of the top 20 U.S. banks and that more than 73% of its data is gathered through direct feeds with financial institutions⁸²</p>
Plaid	US	<p>Plaid, launched in 2012 and based in San Francisco, California, is an API which power developers of financial services applications and helps them connect with user bank accounts. It allows developers to integrate and get transactional and account data from various financial institutions.⁸³ More recently, it has added key insight to the data access it provides with its own suite of analytics products. Plaid provides data such as cleaned merchant name, category, street address, geocode, date, and dollar value.⁸⁴</p> <p>Its products include Auth: a solution that authorizes ACH payments based on the information users know in their heads; and Connect: a solution that offers developers with access to user-permissioned financial data.⁸⁵</p> <p>In January 2017, it settled a patent case brought against it by Envestnet Yodlee. Under the deal, Plaid will license Envestnet Yodlee's worldwide patent portfolio.⁸⁶ In February 2017, Plaid announced that</p>

⁸⁰ Empson, Rip. "With Top Banks In Tow, Financial Service Provider Yodlee Hits 30 Million Users." *TechCrunch*, July 6, 2011. Available at <<https://techcrunch.com/2011/07/06/with-top-banks-in-tow-financial-service-provider-yodlee-hits-30-million-users/>>

⁸¹ De la Merced, Michael. "Yodlee, a Hub for Financial Apps, Sells Itself to Envestnet". *New York Times*. August 10, 2015. Available at <<https://www.nytimes.com/2015/08/11/business/dealbook/yodlee-a-hub-for-financial-apps-sells-itself-to-investnet.html>>

⁸² Crosman, Penny. "Banks Don't want to Give Access to Everything': Ydolee Exec", *American Banker*, June 7, 2016. Available at <<https://www.americanbanker.com/news/banks-dont-want-to-give-access-to-everything-yodlee-exec>>.

⁸³ Plaid, <<https://plaid.com/company/>>

⁸⁴ "Crunchbase company profile: Plaid". Crunchbase, Available at <www.crunchbase.com>

⁸⁵ *Ibid.*

⁸⁶ "Citi and AmEx join Plaid Technologies funding round", *FinExtra*, February 6, 2017. Available at <https://www.finextra.com/newsarticle/30096/citi-and-amex-join-plaid-technologies-funding-round?utm_medium=newsflash&utm_source=2017-2-6>.

		venture arms of Citi and American Express joined its recent \$44 million Series B funding round. ⁸⁷
Quovo	US	<p>Quovo is a provider of data aggregation and analytics platform, with an API management toolkit for individual financial managers and large financial services players.⁸⁸ Companies like Betterment, Wealthfront, and SoFi all use the Quovo's services.⁸⁹ It bills itself as "one of the last independent account aggregators in finance, Quovo continuously evaluates data from thousands of sources in order to produce the highest quality data regardless of account type or asset location".⁹⁰</p> <p>Quovo makes money by charging its clients a fee based on the number of accounts, number of users at the customer's company, and the "scope of services" that Quovo offers. In April 2017 it raised \$10 million in a new round of funding.</p>

⁸⁷ *Ibid.*

⁸⁸ Quovo, <<https://www.quovo.com/about/>>

⁸⁹ Shieber, Jonathan. "Quovo, an API manager for fintech applications, raises \$10 million" TechCrunch, April 26, 2017. Available at <<https://techcrunch.com/2017/04/26/quovo-an-api-manager-for-fintech-applications-raises-10-million/>>

⁹⁰ Media Release, "Quovo Unveils Advisor Dashboard, Arming Financial Advisors With Enriched Client Data Insights in an Intuitive User Interface" September 29, 2016. Available at <<http://www.marketwired.com/press-release/quovo-unveils-advisor-dashboard-arming-financial-advisors-with-enriched-client-data-2162625.htm>>