

## CAPITOLO 12

### FINTECH REGULATION IN CANADA

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**SUMMARY:** 1. Fintech Integration in Canada. – 2. Fintech Money. – 2.1. Electronic Money & Virtual Currency. – 2.2. Electronic Payments. – 3. Fintech Financing. – 3.1. Initial Coin Offerings. – 3.2. Peer to Peer Lending and Invoice Trading. – 4. Fintech Financial Services. – 4.1. Smart Contract Investment Vehicles. – 4.2. Robo-advisors and Automated Personal Wealth Management Services. – 4.3. Algorithmic Trading and Market Automation. – 4.4. Artificial Intelligence and Financial Contracts. – 4.5. Decentralized Autonomous Organizations. – 4.6. Crypto Hedge and Investment Funds.

Canada has a very robust financial system, characterized by a relatively small number of large capitalization national banks that integrate fintech internally to improve and expand operations, products and customer service. Despite the size and stability of its major banks, Canada has been criticized as lagging globally in consumer fintech adoption rates and fostering new fintech market entrants. The supervisory frameworks for non-bank fintech firms in Canada has some agency fragmentation costs, which can serve as a barrier to entry for new firms. The following report outlines the law of fintech, as it applies in Canada, including the regulatory frameworks for fintech money (e-money, virtual currency and electronic payments); fintech financings (initial coin offerings, peer to peer lending and invoice trading); and fintech financial services (smart contract investing, robo-advisors, algorithmic trading and market automation, artificial intelligence, decentralized autonomous organizations, and crypto hedge and other investment funds).

#### 1. Fintech Integration in Canada

The major banks in Canada use financial technology (fintech) to enhance and expand customer service, products and operations<sup>1</sup>. Canada's banking system is stable, but consolidated, with strong "customer

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<sup>1</sup> See PriceWaterhouseCoopers (PWC), *Canadian Banks 2016 Embracing the Fintech Movement, Perspectives on the Canadian Banking Industry*, 2016, at pg. 11.

retention” rates and trust.<sup>2</sup> Canadian banks fared well, compared to many international counterparts, during the 2008 global financial crisis<sup>3</sup>. These banks are regulated through an “integrated” supervisory framework, that is both “risk-based” and “principle-based,”<sup>4</sup> under the federal supervision of *The Office of the Superintendent of Financial Institutions* (OSFI)<sup>5</sup>. Since banks are central to fintech integration in Canada, there are a higher proportion of bank-tech “partnerships” than global averages<sup>6</sup>. The market dominance of Canada’s major banks has, however, led to criticism that it “lags” in fintech “consumer adoption rates,” and the establishment of new fintech firms<sup>7</sup>.

Canadian banks may also be creating “entry barriers” for new consumer-facing fintech start-ups.<sup>8</sup> As a result, non-bank fintech firms in Canada represent only a small portion of the total market, and it can be difficult to get customers to “trust” new firms since they are used to only dealing with large banks, which they’ve had relationships with for many years<sup>9</sup>. In addition, unlike other international jurisdictions, such as the European Union, Canada does not currently have an “open banking” framework where consumers can easily share and port their financial data with

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<sup>2</sup> C. WATSON – A. LAPLANTE, *An Overview of Fintech in Canada*, Global Risk Institute, *Financial Innovation Series*, March 2018, at pg. 3.

<sup>3</sup> See L. SAVAGE, *From Trial to Triumph: How Canada’s Past Financial Crisis Helped Shape A Superior Regulatory System*, 7(15) *SPP Research Papers*, University of Calgary, School of Public Policy, May 2014.

<sup>4</sup> See SAVAGE, *supra* note 3; see also C. FORD, *Principles-Based Securities Regulation in the Wake of the Global Financial Crisis*, 55(2) *McGill Law Journal* 257, 2010.

<sup>5</sup> See R. CLEMENTS, *Regulating Fintech in Canada and the United States: Comparison, Challenges and Opportunities*, 12(23) *SPP Research Paper*, University of Calgary School of Public Policy, August 2019, at pg. 5, <https://www.policyschool.ca/wp-content/uploads/2019/08/Fintech-Clements-final.pdf>.

<sup>6</sup> See WATSON - LAPLANTE, *An Overview of Fintech in Canada*, *supra* note 2, at pg. 4.

<sup>7</sup> See R. CLEMENTS, *Stability’s Important, but Canada needs to take more chances with fintech*, *Financial Post*, October 2, 2019, <https://business.financialpost.com/opinion/stabilitys-important-but-canada-needs-to-take-more-chances-with-fintech>; see also EY, *Global FinTech Adoption Index*, 2019, [https://assets.ey.com/content/dam/ey-sites/ey-com/en\\_gl/topics/banking-and-capital-markets/ey-global-fintech-adoption-index.pdf](https://assets.ey.com/content/dam/ey-sites/ey-com/en_gl/topics/banking-and-capital-markets/ey-global-fintech-adoption-index.pdf).

<sup>8</sup> PRICEWATERHOUSECOOPERS, *Canadian Banks 2016*, *supra* note 1, at pg. 11.

<sup>9</sup> See J. W. HINTON - D. LOMBARDI - J. WAJDA, *Issues in Bringing Canadian Fintech to the International Stage*, Centre For International Governance Innovation Policy Brief No. 111, June 2017, at pgs. 2-3.

non-bank fintech firms; although in early 2019 the federal Department of Finance undertook public consultations into the merits of open banking.<sup>10</sup>

No single regulatory agency oversees all non-bank, consumer facing, fintech firms in Canada, and the extent of provincial and federal regulation depends on the financial product or service a fintech firm provides<sup>11</sup>. When a bank adopts fintech internally, regulatory fragmentation is not a problem since OSFI is the country's primary bank regulator, and a large proportion of financial transactions occur through a federally regulated bank<sup>12</sup>. Consumer protection in Canadian financial services is, however, "an area of shared jurisdiction" and as a result it can be a costly and challenging proposition for new fintech firms to navigate the multiple federal and provincial regulatory frameworks that may apply to them<sup>13</sup>.

To encourage fintech innovation the *Canadian Securities Administrators* (CSA) – an "umbrella" organization comprised of Canada's provincial securities regulators – created a fintech "regulatory sandbox" in 2017 so firms could "test" their financial products and services with a defined customer base, under bespoke regulatory parameters, and receive potential "exemptive relief" from the securities laws that would otherwise apply<sup>14</sup>. A variety of fintech firms have access to the sandbox provided their activities come within the ambit of securities jurisdiction<sup>15</sup>. To date, the CSA regulatory sandbox has provided exemptive relief to several firms and helped launch a variety of fintech ventures including crypto investment funds, international money remittance mechanisms using blockchain

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<sup>10</sup> See GOVERNMENT OF CANADA, DEPARTMENT OF FINANCE, *A Review into the Merits of Open Banking, Consultation Document*, January 2019, <https://www.fin.gc.ca/activty/consult/2019/ob-bo/obbo-report-rapport-eng.asp>.

<sup>11</sup> See CLEMENTS, *Regulating Fintech in Canada and the United States: Comparison, Challenges and Opportunities*, *supra* note 5.

<sup>12</sup> See E. SALE, *Regulatory and Supervisory Rules for Banks – Office of Superintendent of Financial Institutions*, 8:20 *International Banking Law and Regulation*, 2018; see also Clements, *Regulating Fintech in Canada and the United States: Comparison, Challenges and Opportunities*, *supra* note 5.

<sup>13</sup> See BORDEN LADNER GERVAIS, *Regulating Fintech in Canada*, *Financial Services Regulatory Bulletin*, October 2016, at pg. 4.

<sup>14</sup> See CANADIAN SECURITIES ADMINISTRATORS, *CSA Regulatory Sandbox*, [https://www.securities-administrators.ca/industry\\_resources.aspx?id=1588](https://www.securities-administrators.ca/industry_resources.aspx?id=1588).

<sup>15</sup> STIKEMAN ELLIOT LLP, *Fintech In Canada*, *Lexology*, October 28, 2018, <https://www.stikeman.com/en-ca/kh/guides/Fintech-in-Canada>.

technology, initial coin offerings, utility tokens, and mechanisms for the issuance of tokenized securities.<sup>16</sup>

In addition to the CSA sandbox, there are several provincial regulatory, and private market initiatives that also support the fintech market in Canada including a provincial regulatory “super sandbox,” and a *Fintech Accelerator Office*, in the country’s largest province Ontario<sup>17</sup>. Also, the provincial securities commissions of Ontario, Quebec, British Columbia and Alberta have created either working groups, *new economy* divisions, or advisory offices to encourage and support fintech growth<sup>18</sup>. Further, a variety of private innovation “accelerators”, innovation labs or “hubs” and other university-supported innovation centres have been launched throughout the country to support fintech development<sup>19</sup>.

## 2. Fintech Money

### 2.1. Electronic Money & Virtual Currency

The Bank of Canada (BOC) is the nation’s central bank and “fiscal agent,” and is responsible for the country’s monetary policy, currency, payments, settlement and financial system stability<sup>20</sup>. Given its legal jurisdiction over currency in Canada, the BOC has undertaken extensive research on “e-money developments” and adoption, and their impact on payment systems, monetary goals and systemic risk<sup>21</sup>. E-money (the

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<sup>16</sup> See CANADIAN SECURITIES ADMINISTRATORS (CSA) REGULATORY SANDBOX, *Decisions*, [https://www.securities-administrators.ca/industry\\_resources.aspx?id=1626](https://www.securities-administrators.ca/industry_resources.aspx?id=1626).

<sup>17</sup> See J. GIOVANNETTI, *Ontario To Ease Regulations on Financial Startups*, *The Globe and Mail*, November 13, 2017, <https://www.theglobeandmail.com/news/national/ontario-to-ease-regulations-on-financial-startups/article36873205/>.

<sup>18</sup> See STIKEMAN ELLIOT LLP, *Fintech in Canada*, *supra* note 14; see also ALBERTA SECURITIES COMMISSION, Press Release, *Alberta Securities Commission Establishes New Economy Division and Appoints Directors*, June 25, 2018, <http://www.albertasecurities.com/news-and-publications/Pages/customdisp.aspx?pi=1717>.

<sup>19</sup> See for example DMZ-BMO Fintech Accelerator, <https://dmz.ryerson.ca/programs/fintech/>; see also COMPETITION BUREAU OF CANADA, *Canada’s Progress in Fintech*, <https://www.competitionbureau.gc.ca/eic/site/cb-bc.nsf/eng/04392.html>

<sup>20</sup> BANK OF CANADA, *About the Bank*, <https://www.bankofcanada.ca/about/#what-the-bank-does>.

<sup>21</sup> See B. FUNG - M. MOLICO – G. STUBER, *Electronic Money and Payments: Recent* (segue)

ability to “directly store monetary value in an electronic device or communications network”) takes many forms in Canada including prepaid cards using “payment networks such as Visa or Mastercard,” online services like *Paypal*, or decentralized virtual currencies like *Bitcoin*<sup>22</sup>. Virtual currencies, like *Bitcoin*, are not widely used in Canada for transactional purposes, largely due to the stability of Canadian banks, and the ubiquitous usage of “e-payment systems” like “contactless debit cards and credit cards” that are widely issued by Canadian financial institutions and heavily used by bank customers<sup>23</sup>.

It is possible that in the future, the BOC could look to develop a national virtual currency<sup>24</sup>. No such initiative has been announced to date, and researchers from the BOC have noted that such a development would entail “trade-offs” influenced by how the technology is designed (“as a token or an account; centralized or decentralized”), the extent of monetary policy improvements, and potential risk<sup>25</sup>. The BOC has recently developed a “policy framework” to help clarify and distil these trade-offs<sup>26</sup>. Other academic studies suggest that a sovereign virtual currency could present “functionality” and create “security” since it would be controlled by a central bank<sup>27</sup>. The BOC has added that perhaps the most “compelling” argument for a government-controlled e-money system is to

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*Developments and Issues, Bank of Canada Discussion Paper 2014-2, April 2014, <https://www.banqueducanada.ca/wp-content/uploads/2014/04/dp2014-2.pdf>.*

<sup>22</sup> BANK OF CANADA, *E-Money Backgrounder*, 2014, <https://www.bankofcanada.ca/wp-content/uploads/2014/04/E-Money-Backgrounder.pdf>.

<sup>23</sup> BANK OF CANADA, *E-Money Backgrounder*, *supra* note 22; see also C. HENRY – K. HUYNH – G. NICHOLLS, *Bitcoin Awareness and Usage in Canada: An Update*, Bank of Canada Staff Analytical Note, 2018, <https://www.bankofcanada.ca/wp-content/uploads/2018/07/san2018-23.pdf>.

<sup>24</sup> See C. M. KAHN – F. RIVADENEYRA – T.N. WONG, *Should The Central Bank Issue E-Money? Bank of Canada Staff Working Paper 2018-58*, December 2018, <https://www.bankofcanada.ca/wp-content/uploads/2018/12/swp2018-58.pdf>.

<sup>25</sup> KAHN - RIVADENEYRA - WONG, *Should The Central Bank Issue E-Money?* *supra* note 24, at pg. ii.

<sup>26</sup> See M. DAVOODALHOSSEINI – F. RIVADENEYRA, *A Policy Framework For E-Money: A Report on Bank of Canada Research, Bank of Canada Staff Discussion Paper 2018-5* (April 2018), <https://www.bankofcanada.ca/wp-content/uploads/2018/04/SDP-2018-5.pdf>.

<sup>27</sup> J. E. GLASS, *What Is A Digital Currency?* 57 *IDEA: The Journal of the Franklin Pierce Center For Intellectual Property* 455, 2017, at pg. 517.

“increase competition and spur innovation” particularly in the banking sector<sup>28</sup>.

Decentralized virtual currencies, like Bitcoin, are not legal tender in Canada<sup>29</sup>. Given the recent popularity of virtual currency, the federal government has actively adjusted regulatory frameworks to guard against money laundering and other terrorism financing risks<sup>30</sup>. In 2014 Canada amended its *Proceeds of Crime (Money Laundering) and Terrorist Financing Act*<sup>31</sup>, to more closely mirror other international regimes, and also to apply to a wider variety of firms including those “in the business of ‘virtual currencies’”<sup>32</sup>. Revised guidelines were updated in 2019 creating a clear distinction between “fiat” and “virtual” currency and mandating increased standards for entities that deal in the latter<sup>33</sup>. The rules governing virtual currency transactions for financial institutions have also been amended (effective in 2021) for consistency with comparable fiat guidelines<sup>34</sup>.

Effective July 1, 2020, dealers of virtual currency will be required to register with the *Financial Transactions and Reports Analysis Center of Canada* (FINTRAC)<sup>35</sup>, Canada’s money laundering authority, and submit to enhanced reporting for “suspicious transactions” in excess of \$10,000, and also comply with strict record keeping and identify verification requirements<sup>36</sup>. Companies who deal in virtual currency are also subject to

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<sup>28</sup> KAHN - RIVADENEYRA - WONG, *Should The Central Bank Issue E-Money*, *supra* note 24, at pg. 2.

<sup>29</sup> See FINANCIAL CONSUMER AGENCY OF CANADA, *Digital Currency*, <https://www.canada.ca/en/financial-consumer-agency/services/payment/digital-currency.html>.

<sup>30</sup> See GOWLING WLG, *Enhanced Disclosure For Virtual Currency Will Soon Be Mandatory in Canada*, 26 July 2019, [https://gowlingwlg.com/en/insights-resources/articles/2019/enhanced-disclosure-for-virtual-currency-will-soon/?utm\\_source=Mondaq&utm\\_medium=syndication&utm\\_campaign=View-Original](https://gowlingwlg.com/en/insights-resources/articles/2019/enhanced-disclosure-for-virtual-currency-will-soon/?utm_source=Mondaq&utm_medium=syndication&utm_campaign=View-Original).

<sup>31</sup> *Proceeds of Crime (Money Laundering) and Terrorist Financing Act* (S.C. 2000, c. 17), <https://laws-lois.justice.gc.ca/eng/acts/P-24.501/>.

<sup>32</sup> GOWLING WLG, *Enhanced Disclosure for Virtual Currency*, *supra* note 30.

<sup>33</sup> See Regulations Amending Certain Regulations Made Under the *Proceeds of Crime (Money Laundering) and Terrorist Financing Act*, 2019: SOR/2019-240, Canada Gazette, Part II, Volume 153, Number 14, <http://www.gazette.gc.ca/rp-pr/p2/2019/2019-07-10/html/sor-dors240-eng.html>.

<sup>34</sup> See GOWLING WLG,, *Enhanced Disclosure for Virtual Currency*, *supra* note 30.

<sup>35</sup> See FINANCIAL TRANSACTIONS AND REPORTS ANALYSIS CENTER OF CANADA, <http://www.fintrac-canafe.gc.ca/intro-eng.asp>.

<sup>36</sup> See GOWLING WLG, *Enhanced Disclosure for Virtual Currency*, *supra* note 30.

oversight by the *Department of Justice* with respect to fraud, and both provincial and federal consumer protection rules<sup>37</sup>. Canadian companies or exchanges, dealing in virtual currency, may also be subject to securities laws, depending on the nature of their operations and whether they provide virtual currency custody services to platform users<sup>38</sup>.

## 2.2. Electronic Payments

Canada's payment system is overseen by the federal *Minister of Finance*, and the provision of "payments infrastructure" is delegated to *Payments Canada* – a "public purpose, non-profit organization" funded by financial institutions that use this infrastructure<sup>39</sup>. The BOC has overlapping regulatory jurisdiction for payments given their authority over "clearing and settlement systems" and "payments systemic risk"<sup>40</sup>. Fintech payments companies in Canada may also be required to register with FINTRAC as a "money services business"<sup>41</sup>, adhere to anti-money laundering (AML) rules<sup>42</sup>, and comply with criminal code, privacy standards, and consumer protection legislation<sup>43</sup>.

<sup>37</sup> See CLEMENTS, *Regulating Fintech in Canada and the United States*, supra note 5, at pg. 14.

<sup>38</sup> See JOINT CANADIAN SECURITIES ADMINISTRATORS (CSA) / INVESTMENT INDUSTRY REGULATORY ORGANIZATION OF CANADA (IIROC), Consultation Paper 21-402, *Proposed Framework For Crypto-Asset Trading Platforms*, March 14, 2019, [https://www.osc.gov.on.ca/en/SecuritiesLaw\\_csa\\_20190314\\_21-402\\_crypto-asset-trading-platforms.htm](https://www.osc.gov.on.ca/en/SecuritiesLaw_csa_20190314_21-402_crypto-asset-trading-platforms.htm).

<sup>39</sup> See PAYMENTS CANADA, *About Us*, <https://www.payments.ca/about-us/what-we-do>.

<sup>40</sup> See A. GOODMAN - M. PARTRIDGE, *Cryptocurrency in Canada*, *Practical Law Canada Practice Note* w-013-8891, 2018. <http://www.goodmans.ca/files/file/docs/Cryptocurrency%20in%20Canada%20published%2005%2022%2018.pdf>, at pg. 13.

<sup>41</sup> See COMPETITION BUREAU OF CANADA *Technology-Led Innovation In The Canadian Financial Services Sector – A Market Study*, December 2017 (Ottawa, 2017), [https://www.competitionbureau.gc.ca/eic/site/cb-bc.nsf/ovwapj/FinTech-MarketStudy-December2017-Eng.pdf/\\$FILE/FinTech-MarketStudy-December2017-Eng.pdf](https://www.competitionbureau.gc.ca/eic/site/cb-bc.nsf/ovwapj/FinTech-MarketStudy-December2017-Eng.pdf/$FILE/FinTech-MarketStudy-December2017-Eng.pdf), at pg. 48.

<sup>42</sup> See CLEMENTS, *Regulating Fintech in Canada and the United States*, supra note 5, at pg. 19-20.

<sup>43</sup> See CLEMENTS, *Regulating Fintech in Canada and the United States*, supra note 5, at pg. 19-20; see also Financial Consumer Agency of Canada, <https://www.canada.ca/en/financial-consumer-agency.html>.

In 2017 the federal *Department of Finance* sought public consultation for a “new retail payments oversight framework”<sup>44</sup>, and introduced the concept of a “payment service provider” (PSP) for virtual currency businesses with disclosure obligations, privacy and “operational standards”, requirements to “safeguard” funds, and liability for violations and unauthorized transactions<sup>45</sup>. The federal government’s new payments framework will depart from “entity” based regulation and instead regulate “functions” or “activities”<sup>46</sup>.

In fintech payments, a potential barrier to entry for new consumer-facing firms in Canada is the inability to obtain consumer data to “test technology”, and new firms must generally partner with existing banks to access “core payments infrastructure” like the *Automated Clearing Settlement System*<sup>47</sup>. Incumbent banks compete with new firms for financial customers, so they also have an incentive to strategically deny partnerships under the justification of “de-risking”<sup>48</sup>.

In December 2018, the Government of Canada, through *Payments Canada*, issued a “delivery roadmap” for the completion of the payments modernization project, highlighting three new payments infrastructure elements including a “high-value payments system” called *Lynx*; a “real time rail” for smaller value transfers (which would be available to a wider variety of participants beyond banks); and a new “retail batch payments” mechanism<sup>49</sup>. The finalization of all three projects will take place in stages, with ultimate completion estimated in late 2021, and it will help to foster

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<sup>44</sup> See GOVERNMENT OF CANADA, DEPARTMENT OF FINANCE, *A New Retail Payments Oversight Framework*, <https://www.fin.gc.ca/activity/consult/rpof-cspd-eng.asp>.

<sup>45</sup> See MCCARTHY TETRAULT, *Department of Finance Releases Consultation Paper on New Retail Payments Oversight Framework Providing For Functional Regulation of Payment Service Providers*, July 11, 2017, <https://www.mccarthy.ca/en/insights/blogs/cyberlex/department-finance-releases-consultation-paper-new-retail-payments-oversight-framework-providing-functional-regulation-payment-service-providers>.

<sup>46</sup> See J. ROODE, *New Regulatory Framework For Canadian Retail Payments Coming in 2019*, *National Crowdfunding & Fintech Association*, August 12, 2019, <https://ncfacanada.org/new-regulatory-framework-for-canadian-retail-payments-coming-in-2019/>.

<sup>47</sup> See COMPETITION BUREAU OF CANADA, *Technology-Led Innovation In The Canadian Financial Services Sector*, *supra* note 41 at pg. 5.

<sup>48</sup> COMPETITION BUREAU OF CANADA, *Technology-Led Innovation In The Canadian Financial Services Sector*, *supra* note 41, at pg. 31.

<sup>49</sup> PAYMENTS CANADA, *Payments Canada Publishes Modernization Delivery Roadmap 2018 Update*, December 19, 2018, <https://www.payments.ca/about-us/news/payments-canada-publishes-modernization-delivery-roadmap-2018-update>.



competition in the payments space including new fintech market entrants<sup>50</sup>.

*Project Jasper*, a research initiative jointly sponsored by the Department of Finance, the BOC, and several private stakeholders is currently investigating how blockchain technology can improve wholesale payments<sup>51</sup>. Also in 2018, a proof of concept was announced for a blockchain-based “instantaneous clearing and settlement of securities” framework<sup>52</sup>. Further, recent consultations by the Department of Finance on “open banking” (which gives bank customers have more control and portability over their personal financial data) could accelerate the development of new consumer-facing fintech payment companies in Canada<sup>53</sup>.

### 3. Fintech Financing

#### 3.1. Initial Coin Offerings

Canadian securities regulators (like those in the U.S.)<sup>54</sup> have applied securities jurisprudence to initial coin offerings (ICOs)<sup>55</sup>. In 2017, Canadian securities authorities advised that pre-established legal rules, including tests distilled from *Pacific Coast Coin Exchange*<sup>56</sup> (one of the leading Supreme Court of Canada cases on the definition of an “investment

<sup>50</sup> PAYMENTS CANADA, *Modernization Target State*, December 2017, [https://www.payments.ca/sites/default/files/21-Dec-17/modernization\\_target\\_state\\_companion\\_reader\\_en\\_final.pdf](https://www.payments.ca/sites/default/files/21-Dec-17/modernization_target_state_companion_reader_en_final.pdf).

<sup>51</sup> See BANK OF CANADA, *Fintech Experiments and Projects*, <https://www.bankofcanada.ca/research/digital-currencies-and-fintech/fintech-experiments-and-projects/>.

<sup>52</sup> See PAYMENTS CANADA, *Payments Canada, The Bank of Canada, TMX Group, Accenture and R3 Demonstrate Feasibility of Instantaneous Equity Settlement Through Distributed Ledger Technology*, May 11, 2018, <https://www.payments.ca/about-us/news/payments-canada-bank-canada-tmx-group-accenture-and-r3-demonstrate-feasibility>.

<sup>53</sup> See GOVERNMENT OF CANADA, DEPARTMENT OF FINANCE, *Department of Finance Canada Launches Consultations on Open Banking*, *supra* note 10.

<sup>54</sup> See CLEMENTS, *Regulating Fintech in Canada and the United States*, *supra* note 5, at pg. 15-17.

<sup>55</sup> See CANADIAN SECURITIES ADMINISTRATORS, *Cryptocurrency Offerings*, CSA Staff Notice 46-307, August 24, 2017, [http://www.osc.gov.on.ca/documents/en/Securities-Category4/csa\\_20170824\\_cryptocurrency-offerings.pdf](http://www.osc.gov.on.ca/documents/en/Securities-Category4/csa_20170824_cryptocurrency-offerings.pdf).

<sup>56</sup> See *Pacific Coast Coin Exchange of Canada v. Ontario (Securities Commission)*, 1977 CarswellOnt 50 (S.C.C.).

contract”) and similar cases, would be applied to determine whether an ICO is an “investment contract” and thus falling within the ambit of securities law<sup>57</sup>. In 2018, securities regulators also opined on the status of “utility tokens,” and stated that when considering the “totality” of the offering circumstances many tokens that purport to serve as a “utility” (like as a payment mechanism on a network for the purchase of goods or services) are actually a “security” and subject to securities laws<sup>58</sup>.

Provincial securities regulators in both Ontario and British Columbia have published various advisory notes, and comment requests, seeking input on the securities ramifications of companies using blockchain technology in capital raising contexts<sup>59</sup>. The Canadian ICO market has fallen from its peak in 2017, yet it could serve as a valuable capital raising mechanism in the future<sup>60</sup>. In 2017, the Ontario Securities Commission approved the ICO of *TokenFunder Inc*<sup>61</sup>. – a “smart token asset management platform” for companies wanting to raise money using virtual tokens<sup>62</sup>.

Also, in 2017, Ontario-based *Kik Interactive*<sup>63</sup> launched an ICO in the U.S.; however, the offering precluded Canadian investors from participating because Canadian securities regulators interpreted it as an “offering of securities”<sup>64</sup>. This determination was contested by Kik, who has insisted

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<sup>57</sup> See CANADIAN SECURITIES ADMINISTRATORS, *CSA Staff Notice 46-307, Cryptocurrency Offerings*, *supra* note 56, at pg. 3.

<sup>58</sup> See CANADIAN SECURITIES ADMINISTRATORS, *CSA Staff Notice 46-308 Securities Law Implications For Offerings of Tokens*, June 11, 2018, [https://www.osc.gov.on.ca/en/SecuritiesLaw\\_csa\\_20180611\\_46-308\\_securities-law-implications-for-offerings-of-tokens.htm](https://www.osc.gov.on.ca/en/SecuritiesLaw_csa_20180611_46-308_securities-law-implications-for-offerings-of-tokens.htm).

<sup>59</sup> See ONTARIO SECURITIES COMMISSION, *OSC Highlights Potential Securities Law Requirements For Businesses Using Distributed Ledger Technologies*, March 8, 2017, [http://www.osc.gov.on.ca/en/NewsEvents\\_nr\\_20170308\\_osc-highlights-potential-securities-law-requirements.htm](http://www.osc.gov.on.ca/en/NewsEvents_nr_20170308_osc-highlights-potential-securities-law-requirements.htm); see also BRITISH COLUMBIA SECURITIES COMMISSION, *BCSC Consults With Stakeholders in Financial Technology Sector*, February 14, 2018, [https://www.bccsc.bc.ca/News/News\\_Releases/2018/11\\_BCSC\\_consults\\_with\\_stakeholders\\_in\\_financial\\_technology\\_sector/](https://www.bccsc.bc.ca/News/News_Releases/2018/11_BCSC_consults_with_stakeholders_in_financial_technology_sector/).

<sup>60</sup> See T. KOEPL – J. KRONICK, *Initial Coin Offerings Could Provide Badly Needed Financing For Canadian Startups*, *The Globe and Mail*, December 10, 2018, <https://www.theglobeandmail.com/business/commentary/article-initial-coin-offerings-could-provide-badly-needed-financing-for/>.

<sup>61</sup> See TOKENFUNDER, <https://tokenfunder.com>.

<sup>62</sup> ONTARIO SECURITIES COMMISSION, *Decision, In the Matter of Token Funder Inc*, October 17, 2017, [https://www.osc.gov.on.ca/en/SecuritiesLaw\\_ord\\_20171023\\_token.htm](https://www.osc.gov.on.ca/en/SecuritiesLaw_ord_20171023_token.htm).

<sup>63</sup> See KIK INTERACTIVE, <https://www.kik.com>.

<sup>64</sup> See GOODMAN - PARTRIDGE, *Cryptocurrency in Canada*, *supra* note 40, at pg. 5.

that its “Kin” token is a pure utility token<sup>65</sup>. Ultimately the U.S. took the same position as Canadian securities regulators when, in June 2019, the *Securities and Exchange Commission* (SEC) sued Kik for an illegal distribution of securities to U.S. investors<sup>66</sup>. Kik has vehemently denied, and is actively fighting, the SEC’s allegations<sup>67</sup>.

The CSA, jointly with the *Investment Industry Regulatory Organization of Canada* (IIROC) (the self-regulatory organization for Canadian investment dealers and advisers) jointly issued, in March 2019, a consultation paper for a proposed crypto-asset trading platform regulatory framework, which would take jurisdiction over the trading of tokenized securities, and other commodity-type crypto-assets, like Bitcoin, that aren’t securities on their own but may create a security or a derivative based on how they are traded on a platform<sup>68</sup>. This proposal was welcomed by some industry participants<sup>69</sup>; yet it also attracted criticism by others as an overreach of legal jurisdiction on the part of the regulators<sup>70</sup>. Also, some commenters believe the framework’s steep requirements and costs will hurt businesses

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<sup>65</sup> See KIK INTERACTIVE, *Kin: A Decentralized Ecosystem of Digital Services for Daily Life White Paper*, May 2017, [https://kinecosystem.org/static/files/Kin\\_Whitepaper\\_V1\\_English.pdf](https://kinecosystem.org/static/files/Kin_Whitepaper_V1_English.pdf), at pg. 8

<sup>66</sup> See M. ROBINSON – O. KHARIF, *SEC Sues Kik over \$100 Million ICO, Sees Kin as Security*, Bloomberg (June 4, 2019), <https://www.bloomberg.com/news/articles/2019-06-04/sec-sues-crypto-firm-that-s-raising-money-to-fight-regulator>.

<sup>67</sup> See J. MCLEOD, *Waterloo’s Kik Interactive File Blistering Response To SEC Lawsuit Over Crypto Offering*, Financial Post, August 7, 2019, <https://business.financialpost.com/technology/waterloos-kik-interactive-files-blistering-response-to-sec-lawsuit-over-crypto-offering>.

<sup>68</sup> See JOINT CANADIAN SECURITIES ADMINISTRATORS / INVESTMENT INDUSTRY REGULATORY ORGANIZATION OF CANADA, *Consultation Paper 21-402 Proposed Framework For Crypto-Asset Trading Platforms*, supra note 38.

<sup>69</sup> See COINSQUARE, *Comment Letter Re: Consultation Paper 21-402*, May 15, 2019, [https://www.osc.gov.on.ca/documents/en/Securities-Category2-Comments/com\\_20190515\\_21-402\\_coinsquare-capital-markets.pdf](https://www.osc.gov.on.ca/documents/en/Securities-Category2-Comments/com_20190515_21-402_coinsquare-capital-markets.pdf).

<sup>70</sup> See KRAKEN, *Comment Letter Re: Consultation Paper 21-402*, May 15, 2019, [https://www.osc.gov.on.ca/documents/en/Securities-Category2-Comments/com\\_20190515\\_21-402\\_payward-canada.pdf](https://www.osc.gov.on.ca/documents/en/Securities-Category2-Comments/com_20190515_21-402_payward-canada.pdf); see also A.D.H. CHISHOLM – M. BURNS, *Cryptocurrency Securities Law Update – Platform Framework and Service Providers*, *McMillan Securities and Capital Market Bulletin*, August 2019, [https://www.mcmillan.ca/Cryptocurrency-Securities-Law-Update-Platform-Framework-Service-Providers?utm\\_source=Monday&utm\\_medium=syndication&utm\\_campaign=View-Original](https://www.mcmillan.ca/Cryptocurrency-Securities-Law-Update-Platform-Framework-Service-Providers?utm_source=Monday&utm_medium=syndication&utm_campaign=View-Original).

in the crypto-ecosystem and cause them to leave Canada for more favourable international regulatory jurisdictions<sup>71</sup>.

### 3.2. Peer to Peer Lending and Invoice Trading

There is strong demand in Canada for fintech credit and marketplace lending products, particularly from small businesses, and start-ups, who often have difficulty procuring credit from traditional banks<sup>72</sup>. There is slow take-up, however, of fintech invoice trading or factoring<sup>73</sup>. Nevertheless, there are firms in Canada that provide fintech factoring services thereby creating the ability for companies to transform receivables into “working capital” loans through a fintech platform.<sup>74</sup>

In terms of conventional fintech credit demand in the country, *Lending Loop* (launched in 2015)<sup>75</sup> has funded loans in excess of \$20 million, from more than 20,000 accredited investors throughout Canada, and the government of Ontario recently committed \$3 million to further support loans sourced through Lending Loop<sup>76</sup>. Researchers from the *Centre For International Governance Innovation* recently noted, with respect to funding needs for “small and medium enterprises” (SMEs) in Canada that the country’s large national banks often won’t service this market because the costs associated with underwriting SME loans “is seen as unprofitable”<sup>77</sup>.

In addition to a lack of credit availability and supply, most Canadian borrowers also trust the large banks, and the Canadian *Competition Bureau*

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<sup>71</sup> See CHAMBER OF DIGITAL COMMERCE CANADA, *Comment Letter Re: Consultation Paper 21-402*, May 15, 2019, [https://www.osc.gov.on.ca/documents/en/Securities-Category2-Comments/com\\_20190515\\_21-402\\_woodst.pdf](https://www.osc.gov.on.ca/documents/en/Securities-Category2-Comments/com_20190515_21-402_woodst.pdf).

<sup>72</sup> E. HEINRICH, *Fintech Options Ease The Pain Points of Financing For Entrepreneurs*, *Financial Post*, October 21, 2017, <https://business.financialpost.com/entrepreneur/money/new-financing-options-cibc>.

<sup>73</sup> See A. BADOUR, -D.J. LYNDE – M. HILLSTROM, *Financial Stability Board Issues Report on Fintech Credit Platforms*, *McCarthy Tetrault*, July 21, 2017, <https://www.mccarthy.ca/fr/node/29041>.

<sup>74</sup> See NEXT DOOR LENDING, <http://www.nextdoorlending.ca/>; see also FUND THROUGH, <https://www.fundthrough.com/>.

<sup>75</sup> See LENDING LOOP, <https://www.lendingloop.ca>.

<sup>76</sup> See C. ASANO - M. KING, *Peer-to-Peer Lending Will Help Small Businesses Stay Afloat*, *The Globe and Mail*, May 30, 2018, <https://www.theglobeandmail.com/business/commentary/article-peer-to-peer-lending-will-help-small-businesses-stay-afloat/>.

<sup>77</sup> See HINTON - LOMBARDI - WAJDA, *Issues in Bringing Canadian Fintech to the International Stage*, *supra* note 9, at pg. 3.

suggests that new fintech credit platforms, and peer to peer lenders must earn customers trust, and that this can be difficult to achieve<sup>78</sup>.

New fintech credit firms in Canada are subject to a costly (and often complex) host of regulations that, when fragmented across supervisory agencies, can serve as a market entry barrier<sup>79</sup>. For example, these companies must adhere to Canadian securities rules (since peer-to-peer loans fall within the definition of a “security”) and firms that facilitate these loans are considered “dealers” that are in the “business of trading” peer to peer loans, attracting registration and disclosure requirements (subject to available securities law exemptions)<sup>80</sup>. These firms must also register as “money services businesses” (MSBs) and comply with FINTRAC obligations regarding AML<sup>81</sup>.

## 4. Fintech Financial Services

### 4.1. Smart Contract Investment Vehicles

Blockchain technology and smart contracts could potentially “transform” investing in Canada by lowering “barriers to entry and fees for investors” and enhancing transparency of records for audit purposes<sup>82</sup>. There are limitations, however, when using smart contracts in commercial contexts, including as investment vehicles, such as “verification” problems and computer coding challenges<sup>83</sup>. While smart contract investment vehicles have not experienced widespread take-up to date in Canada, they do stimulate important, and unsettled, legal questions as identified by the

<sup>78</sup> COMPETITION BUREAU OF CANADA, *Technology-Led Innovation In The Canadian Financial Services Sector*, *supra* note 41, at pg. 47.

<sup>79</sup> See CLEMENTS, *Regulating Fintech in Canada and the United States*, *supra* note 5, at pg. 18.

<sup>80</sup> See R. LALONDE, *P2P Lending and How It’s Regulated*, *EKB Fintech Blog* (November 23, 2017), <http://www.ekb.com/p2p-lending-and-how-its-regulated/>;

<sup>81</sup> STIKEMAN ELLIOT LLP, *Fintech in Canada*, *supra* note 15.

<sup>82</sup> See D. DOWSETT, *How Blockchain is Revolutionizing Investment*, *Investco Canada Blog*, November 15, 2018, <https://blog.invesco.ca/blockchain-revolutionizing-investment/>.

<sup>83</sup> See K. BREITMAN, *3 Things Smart Contracts Need Before They Can Finally Take Off*, *Coindesk*, January 5, 2017, <https://www.coindesk.com/three-things-smart-contracts-take-off-2017>.

federal Department of Justice such as how (and to whom) do you assign accountability and liability when something goes wrong<sup>84</sup>?

## 4.2. Robo-advisers and Automated Personal Wealth Management Services

The demand for robo-advisers and algorithmic wealth management services in Canada continues to grow, with successful platforms emerging like *Nest Wealth*, *Justwealth*, *Wealthsimple* and *WealthBar*<sup>85</sup>. A robo-advisory platform in Canada is potentially subject to a variety of federal and provincial laws including: anti-money laundering (AML) and terrorism financing rules<sup>86</sup>; securities rules and associated regulations<sup>87</sup>, and additional oversight through IIROC in relation to know your client (KYC) and “suitability” assessments<sup>88</sup>. They also must comply with prohibitions against fraud, federal criminal code provisions<sup>89</sup>; consumer protection rules<sup>90</sup>, prudential banking standards, and OSFI oversight if the robo-advisory platform is accessible through a federal banking institution<sup>91</sup>.

In 2015, the CSA provided guidance on “online advice” and algorithmic portfolio management in CSA Staff Notice 31-342 including client obligations, due diligence and information gathering by firms<sup>92</sup>. The regulatory framework applicable to robo-advisors in Canada requires a “human” engagement, in what’s been described by one major Canadian law

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<sup>84</sup> See D. DRAEGER, *More than Money: Get The Gist on Bitcoin, Blockchains, & Smart Contracts*, Foresight Gist, Research and Statistics Division, Department of Justice (2015), [http://publications.gc.ca/collections/collection\\_2019/jus/J4-91-2019-eng.pdf](http://publications.gc.ca/collections/collection_2019/jus/J4-91-2019-eng.pdf).

<sup>85</sup> See D. ASTON, *An Investor’s Guide To Robo-Advisors 2018*, *Money Sense*, April 29, 2018, <https://www.moneysense.ca/save/investing/an-investors-guide-to-robo-advisors-2018/>.

<sup>86</sup> See CLEMENTS, *supra* note 5, at pg. 21-22.

<sup>87</sup> See CLEMENTS, *supra* note 5, at pg. 22.

<sup>88</sup> See CLEMENTS, *supra* note 5, at pg. 22

<sup>89</sup> See CLEMENTS, *supra* note 5, at pg. 22.

<sup>90</sup> See COMPETITION BUREAU OF CANADA, *Technology-Led Innovation in The Canadian Financial Services Sector*, *supra* note 41, at pg. 19.

<sup>91</sup> See OFFICE OF THE SUPERINTENDENT OF FINANCIAL INSTITUTION, *Our Role*, <http://www.osfi-bsif.gc.ca/Eng/osfi-bsif/Pages/default.aspx>.

<sup>92</sup> See ONTARIO SECURITIES COMMISSION, *CSA Staff Notice 31-342, Guidance for Portfolio Managers Regarding Online Advice*, [http://www.osc.gov.on.ca/en/SecuritiesLaw\\_csa\\_20150924\\_31-342\\_portfolio-managers-online-advice.htm](http://www.osc.gov.on.ca/en/SecuritiesLaw_csa_20150924_31-342_portfolio-managers-online-advice.htm).

firm as a “hybrid model” of human advice coupled with technology<sup>93</sup>. Platforms that provide “order execution only” (OEO) services (such as a discount brokerage) are also prohibited by IIROC (pursuant to *Notice 18-0076*) from providing investment advice<sup>94</sup>. In addition, pursuant to additional CSA guidelines, robo-advisors in Canada are subject to restrictions on conventional trading mechanisms such as margin, leverage or short selling<sup>95</sup>.

### 4.3. Algorithmic Trading and Market Automation

Trading in Canada, like many other global markets, has been dramatically altered with the increasingly dominant onset of algorithmic and high-frequency trading (HFT) and market automation<sup>96</sup>. While these innovations have many benefits, including enhanced liquidity, lowered costs of trading and improved “price discovery”, they are also controversial in Canada – particularly HFT – for its impact on market stability, efficiency and the creation of potentially “illusory liquidity”<sup>97</sup>. This development has also attracted criticism in Canada by traditional traders<sup>98</sup>. Recent research data from the U.S. suggests that algorithmic and automated trading strategies can have a “procyclical” impact and “exacerbate” price swings<sup>99</sup>. Other criticisms of algorithmic trading, and machine learning in financial markets include their influence on irrational catastrophic events like

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<sup>93</sup> STIKEMAN ELLIOT LLP, *Fintech in Canada*, *supra* note 15.

<sup>94</sup> See INVESTMENT INDUSTRY REGULATORY ORGANIZATION OF CANADA, *IIROC Notice 18-0076*, April 9, 2018, [http://www.iiroc.ca/Documents/2018/54DF3AA0-06D8-48FD-8E93-CE469BE1C650\\_en.pdf](http://www.iiroc.ca/Documents/2018/54DF3AA0-06D8-48FD-8E93-CE469BE1C650_en.pdf).

<sup>95</sup> INVESTMENT INDUSTRY REGULATORY ORGANIZATION OF CANADA, *IIROC Notice 18-0076*, *supra* note 95.

<sup>96</sup> See W. BARKER - A. POMERANETS, *The Growth of High-Frequency Trading: Implications For Financial Stability*, *Bank of Canada Financial System Review*, June 2011, at pg. 47, <https://www.bankofcanada.ca/wp-content/uploads/2011/12/fsr-0611-barker.pdf>.

<sup>97</sup> See J. G. MACINTOSH, *High Frequency Traders: Angels or Devils?* C.D. Howe Institute Commentary No. 391 October 2013, [https://www.cdhowe.org/sites/default/files/attachments/research\\_papers/mixed/Commentary\\_391\\_0.pdf](https://www.cdhowe.org/sites/default/files/attachments/research_papers/mixed/Commentary_391_0.pdf).

<sup>98</sup> See M. STOTHARD, *Day Traders Expose Algorithm's Flaws*, *The Globe and Mail*, May 16, 2012, <https://www.theglobeandmail.com/globe-investor/day-traders-expose-algorithms-flaws/article4179395/>.

<sup>99</sup> See R. HENDERSON, *Automated Selling Has Exacerbated U.S. Market Swings*, *Say Analysts*, *Financial Times*, August 8, 2019, <https://www.ft.com/content/d1ed3a28-b957-11e9-96bd-8e884d3ea203>.

“flash crashes,” and the fact that they are often programmed with “typical data” which is not useful (perhaps even harmful) in systemic events or crises<sup>100</sup>.

IIROC is responsible for establishing regulatory policy and “industry standards” for trading and market integrity through rules, compliance reviews and “market surveillance and trading review analysis”<sup>101</sup>. IIROC has created *Universal Market Integrity Rules* (UMIR) and polices to reduce risk and maintain market stability for “automated order systems”<sup>102</sup>, and has proposed amendments in relation to “client identifiers” to enhance transparency around algorithmic trading<sup>103</sup>. IIROC has also been vigilant in pursuing regulatory sanctions against programmatic trading systems and “automated order systems” that use manipulative strategies (in particular “layering, quote stuffing, quote manipulation, spoofing, and abusive liquidity detection”)<sup>104</sup>. Also, in 2015 IIROC completed a comprehensive study on HFT and its effect on equity markets in Canada to ensure that existing regulatory frameworks are adapted to this new technology and any instabilities it may create<sup>105</sup>.

IIROC rules and UMIR are further enhanced in Canada by provincial regulations and harmonized rules developed and issued through the CSA, which is active in adjusting existing regulatory frameworks to automated

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<sup>100</sup> D. PITTIS, *The Challenges of Playing The Market Against Artificial Intelligence*” CBC News (September 25, 2017), <https://www.cbc.ca/news/business/markets-trading-automated-ai-1.4300863>.

<sup>101</sup> INVESTMENT INDUSTRY REGULATORY ORGANIZATION OF CANADA, *About IIROC*, <https://www.iiroc.ca/about/Pages/default.aspx>.

<sup>102</sup> See INVESTMENT INDUSTRY REGULATORY ORGANIZATION OF CANADA, *Universal Market Integrity Rules, Rules and Policies, Part 7 – Trading in a Marketplace*, [https://www.iiroc.ca/industry/rulebook/Documents/UMIRO701\\_en.pdf](https://www.iiroc.ca/industry/rulebook/Documents/UMIRO701_en.pdf).

<sup>103</sup> See INVESTMENT INDUSTRY REGULATORY ORGANIZATION OF CANADA, *Request for Comment, Publication of Proposed Provisions Respecting Client Identifiers*, June 28, 2018, [https://www.osc.gov.on.ca/documents/en/Marketplaces/iiroc\\_20180628\\_notice-proposed-provisions-respecting-client-identifiers.pdf](https://www.osc.gov.on.ca/documents/en/Marketplaces/iiroc_20180628_notice-proposed-provisions-respecting-client-identifiers.pdf).

<sup>104</sup> See J. LANGTON, *IIROC Targets Five Manipulative Trading Strategies*, *Investment Executive* (February 14, 2013), <https://www.investmentexecutive.com/news/from-the-regulators/iiroc-targets-five-manipulative-trading-strategies/>.

<sup>105</sup> See INVESTMENT INDUSTRY REGULATORY ORGANIZATION OF CANADA, *News Release, IIROC Completes Comprehensive Study of High Frequency Trading* (December 9, 2015), [https://www.iiroc.ca/Documents/2015/555b7856-7b49-44ee-81de-bdb7c2c0c9ce\\_en.pdf](https://www.iiroc.ca/Documents/2015/555b7856-7b49-44ee-81de-bdb7c2c0c9ce_en.pdf).



and algorithmic trading<sup>106</sup>. In particular, the establishment in 2012 of *National Instrument 23-103, Electronic Trading and Direct Electronic Access to Marketplaces* (NI 23-103)<sup>107</sup>, and its associated companion policy<sup>108</sup>, instituted a variety of “policies, procedures and controls to manage the risks” inherent in using algorithmic and automated trading platforms and programs<sup>109</sup>. Further, in 2013, NI 23-103 was amended to manage risks associated with “direct electronic access.”<sup>110</sup> IIROC and CSA also recently issued joint guidance relating to automated trading on marketplaces and alternative trading systems have also been issued for crypto-asset trading platforms in Canada<sup>111</sup>.

#### 4.4. Artificial Intelligence and Financial Contracts

Canada has a strong reputation for artificial intelligence (AI) development and deployment in financial services<sup>112</sup>. The country ranks third in the number of AI experts in the world (based on a 2018 *Canadian AI*

<sup>106</sup> See ALBERTA SECURITIES COMMISSION, *Canadian Securities Regulators Take Steps To Reduce Risks Associated With Electronic Trading*, April 8, 2011, <https://www.albertasecurities.com/news-and-publications/news-releases/2018/10/canadian-securities-regulators-take-steps-to-reduce-risks-associated-with-electronic-trading>.

<sup>107</sup> See ALBERTA SECURITIES COMMISSION, *National Instrument 23-103, Electronic Trading and Direct Access to Marketplaces*, <https://www.albertasecurities.com/-/media/ASC-Documents-part-1/Regulatory-Instruments/2018/10/4735177-NI-23-103-CONSOLIDATED-AS-OF-MARCH-1-2014.ashx>.

<sup>108</sup> See ALBERTA SECURITIES COMMISSION, *Companion Policy 23-103, Electronic Trading and Direct Electronic Access to Marketplaces*, <https://www.albertasecurities.com/-/media/ASC-Documents-part-1/Regulatory-Instruments/2018/10/5118716-v1-23-103-CP-Consolidation-Eff-May-5-2015.ashx>.

<sup>109</sup> ALBERTA SECURITIES COMMISSION, *Canadian Securities Regulators Establish Regulatory Framework To Manage Electronic Trading Risks* (June 28, 2012), <https://www.albertasecurities.com/news-and-publications/news-releases/2018/10/canadian-securities-regulators-establish-regulatory-framework-to-manage-electronic-trading-risks>.

<sup>110</sup> See ALBERTA SECURITIES COMMISSION, *Canadian Securities Regulators Establish Regulatory Framework to Manage Risks Associated With Direct Electronic Access* (July 4, 2013), <https://www.albertasecurities.com/news-and-publications/news-releases/2018/10/canadian-securities-regulators-establish-regulatory-framework-to-manage-risks-associated-with-direct>.

<sup>111</sup> See *Joint Canadian Securities Administrators / Investment Regulatory Organization of Canada, Consultation Paper 21-402, Proposed Framework For Crypto-Asset Trading Platforms*, *supra* note 38.

<sup>112</sup> See GOVERNMENT OF CANADA, DEPARTMENT OF FINANCE, *Growing Canada’s Advantage in Artificial Intelligence*, March 30, 2017, <https://www.fin.gc.ca/n17/17-026-eng.asp>.

*Ecosystem Report*<sup>113</sup>) and continues to attract international companies, investment, and the formation of AI research hubs throughout the country<sup>114</sup>. Several of Canada's major banks have integrated AI innovations, or partnered with AI firms to enhance customer products and services (particularly in wealth management, financial budgeting and planning) and increase the efficiency of internal operations<sup>115</sup>. There is also investor interest in start-ups that develop AI for use in financial and business processes<sup>116</sup>.

The Government of Canada recently launched an *Advisory Council on Artificial Intelligence* as part of a "comprehensive" support ecosystem for AI in the country that is "grounded in human rights, transparency and openness."<sup>117</sup> This ecosystem also includes the creation of a new department called "Innovation Canada" providing support to AI companies and a funding commitment for \$125 million in public funds to be directed to research and development for AI (with a subsequent pledge for \$950 million for an "innovation supercluster initiative" with industry)<sup>118</sup>. There are, however, those who feel like the country could do more in AI

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<sup>113</sup> See J.F. GAGNE, *Canadian AI Ecosystem 2018*, <https://jifgagne.ai/canadian-ai-ecosystem-2018-en/>.

<sup>114</sup> MCCARTHY TETRAULT CYBERLEX BLOG, *Artificial Intelligence: Canadian and International Trends*, March 11, 2019, <https://www.mccarthy.ca/en/insights/blogs/cyberlex/artificial-intelligence-canadian-and-international-trends>.

<sup>115</sup> See D. TRAINER, *Royal Bank of Canada Bets Big on Artificial Intelligence*, *Forbes*, May 24, 2018, <https://www.forbes.com/sites/greatspeculations/2018/05/24/royal-bank-of-canada-bets-big-on-artificial-intelligence/#124eadf26a31>; see also D. KIMBERLEY, *HSBC Partners With Canadian Artificial Intelligence Firm*, *Finance Magnates*, June 10, 2019, <https://www.financemagnates.com/institutional-forex/technology/hsbc-partners-with-canadian-artificial-intelligence-firm/>; W. ASHWORTH, *A Canadian Bank Uses AI to Take Market Share*, *Motley Fool*, January 20, 2018, <https://www.fool.ca/2018/01/20/a-canadian-bank-uses-ai-to-take-market-share/>.

<sup>116</sup> See D. GEORGE-COSH, *Element AI Aims for Unicorn Status with Record Canadian Financing: Sources*, *BNN Bloomberg*, July 1, 2018, <https://www.bnnbloomberg.ca/element-ai-aims-for-unicorn-status-with-record-canadian-financing-sources-1.1101206>.

<sup>117</sup> See GOVERNMENT OF CANADA PRESS RELEASE, *Government of Canada Creates Advisory Council on Artificial Intelligence*, May 14, 2019, <https://www.newswire.ca/news-releases/government-of-canada-creates-advisory-council-on-artificial-intelligence-838598005.html>.

<sup>118</sup> See MCCARTHY TETRAULT, *From Chatbots To Self-Driving Cars*, *infra* note 123, at pg. 8.

adoption<sup>119</sup>, and recent data shows the country might be starting to slow in AI deployment (largely driven by employee concerns about its effect on human capital and employment), compared to international counterparts like India and Germany, despite its reputation as an AI “hotbed”<sup>120</sup>.

There are many potential applications of AI in financial services and fintech in Canada including as a cost saving mechanism for “back-office operations,” and enhancing customer service, and process automation<sup>121</sup>. AI can also improve advisory services, provide “inter-application user enhancements” (like search functions or “chat-bots”<sup>122</sup>), enhance portfolio allocation and management, and the generating of client risk profiles, as well as supplement credit assessment and underwriting, research, and valuation<sup>123</sup>. AI is also useful for financial institutions in reducing the cost of regulatory compliance by facilitating “regtech” innovations to aid in automated compliance and reporting, and ensure firms are current on regulatory changes<sup>124</sup>.

AI is also used in Canada by financial institutions and insurance companies to manage their own internal risk – a critical ongoing function given the 2008 global financial crisis<sup>125</sup>. Advances in AI, and “automated

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<sup>119</sup> J. MCLEOD, *Canada Risks Losing Its Artificial Intelligence Edge As Adoption Lags and the Tech Goes Mainstream*, *Financial Post*, November 28, 2018, <https://business.financialpost.com/technology/canada-risks-losing-its-artificial-intelligence-edge-as-adoption-lags-and-the-tech-goes-mainstream>.

<sup>120</sup> See BNN BLOOMBERG, *Canadian Companies Behind In Adopting Artificial Intelligence: Forbes Study*, September 24, 2018, <https://www.bnnbloomberg.ca/canadian-companies-behind-in-adopting-artificial-intelligence-forbes-study-1.1142164>.

<sup>121</sup> DELOITTE, *How Artificial Intelligence is Transforming The Financial Ecosystem*, <https://www2.deloitte.com/global/en/pages/financial-services/articles/artificial-intelligence-transforming-financial-ecosystem-deloitte-fsi.html>.

<sup>122</sup> See MCCARTHY TETRAULT, *From Chatbots To Self-Driving Cars: The Legal Risks of Adopting Artificial Intelligence In Your Business*, White Paper on Transformative Technology, September 2018, at pg. 6, [https://www.mccarthy.ca/sites/default/files/2018-09/McT\\_The%20Art\\_of\\_Artificial\\_Intelligence\\_WHITEPAPER\\_EN\\_SEPT2018.pdf](https://www.mccarthy.ca/sites/default/files/2018-09/McT_The%20Art_of_Artificial_Intelligence_WHITEPAPER_EN_SEPT2018.pdf).

<sup>123</sup> See C. HUDSON, *Ten Applications of AI to Fintech*, *Medium*, November 28, 2018, <https://towardsdatascience.com/ten-applications-of-ai-to-fintech-22d626c2fdac>.

<sup>124</sup> MCCARTHY TETRAULT, *From Chatbots To Self-Driving Cars*, *supra* note 123, at pg. 6.

<sup>125</sup> See E. FAURE, *Concordia Professor Uses Artificial Intelligence To Help Financial Institutions*, *Concordia News*, May 27, 2019, <https://www.concordia.ca/news/stories/2019/05/27/concordia-professor-uses-artificial-intelligence-to-help-financial-institutions-reduce-their-exposure-to-risk.html>.

contract analysis” may also disruptively transform the Canadian legal services landscape, and several Canadian start-up companies are at the forefront of this revolution<sup>126</sup>.

There are many legal risks in deploying AI into financial services and processes in Canada, and some uncertainty on whether existing regulatory structures can sufficiently curtail these risks if widespread adoption takes place<sup>127</sup>. This analysis is made more complex by uncertainty on whether accommodating regulatory structures (to avoid business flight and “regulatory arbitrage” to more favorable international jurisdictions) are preferred over more strict rules-based frameworks that can communicate “certainty” and “predictability” to businesses as an incentive to draw more business to Canada<sup>128</sup>. As such, regulation in this area is one that will continually be adapted, and adjusted, to ensure necessary safeguards and established<sup>129</sup>.

### 4.5. Decentralized Autonomous Organizations

Decentralized autonomous organizations (or “DAOs”) are challenging conventional legal frameworks in many ways. In its most basic definition, a DAO is “a virtual organization” that exists through an expression of “computer code” which is “executed” through blockchain technology.<sup>130</sup> In other words, the “human” component of an organization is eliminated, and management and operations of the entity are automated through “self-executing” computer code<sup>131</sup>. Perhaps the most mature technology “ecosystem” to host DAOs to date – the *Ethereum Network* – has an intimate Canadian connection, as it was co-created by Russian-Canadian

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<sup>126</sup> See S. SHUTT, *Artificial Intelligence*, *Canadian Lawyer*, April 3, 2017, <https://www.canadianlawyermag.com/news/general/artificial-intelligence/270447>.

<sup>127</sup> See MCCARTHY TETRAULT, *From Chatbots To Self-Driving Cars*, *supra* note 123, at pgs. 6-7.

<sup>128</sup> MCCARTHY TETRAULT, *From Chatbots To Self-Driving Cars*, *supra* note 123, at pg. 7.

<sup>129</sup> See C. ALAM, *When It Comes To AI Regulation, Canada Can Do Better*, *Canadian Lawyer*, June 27, 2019, <https://www.canadianlawyermag.com/inhouse/news/opinion/when-it-comes-to-ai-regulation-canada-can-do-better/276197>.

<sup>130</sup> GOODMAN - PARTRIDGE, *Cryptocurrency in Canada*, *supra* note 40, at pg. 13.

<sup>131</sup> See S. D PALLEY, *How To Sue A Decentralized Autonomous Corporation*, *Coindesk*, March 20, 2016, <https://www.coindesk.com/how-to-sue-a-decentralized-autonomous-organization>.

programmer Vitalik Buterin<sup>132</sup>. DAOs work by “bundling” a series of smart contracts (pre-programmed, automated agreements hosted and executed on the underlying blockchain), resulting in a conventional organization, like a corporation or a business, transformed and “distilled to its most basic tasks, and operated by little more than code.”<sup>133</sup> A traditional corporation is effectively a consortium of contracts also (in terms of governing bylaws, corporate constating documents and shareholder agreements); however, a DAO eliminates the need for centralized human management and oversight through contract “automation”<sup>134</sup>.

There are potential legal concerns with DAOs primarily relating to assessing liability and recovering damages<sup>135</sup> (since there is no centralized organization or corporation to sue)<sup>136</sup> and also establishing standing since a DAO doesn’t have a “legal personality” in the way the term is conventionally understood in Canadian law<sup>137</sup>. There are also concerns with DAOs in Canada relating to the application of the rules of evidence<sup>138</sup>; maintaining proper corporate governance standards<sup>139</sup>; enforcing competition rules<sup>140</sup>; guarding against cybersecurity, hacking risks and ensuring

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<sup>132</sup> See DJ PANGBURN, *The Humans Who Dream of Companies That Won't Need Us*, *Fast Company*, June 19, 2015, <https://www.fastcompany.com/3047462/the-humans-who-dream-of-companies-that-wont-need-them>.

<sup>133</sup> DJ PANGBURN, *The Humans Who Dream of Companies That Won't Need Us*, *supra* note 13.

<sup>134</sup> See S. AMUAL – J. N. DEWEY – J. R. SAUL, *The Blockchain: A Guide for Legal & Business Professionals*, s.4:2, October 2016.

<sup>135</sup> See DRAEGER, *More than Money, Get the Gist on Bitcoin, Blockchain & Smart Contracts*, *supra* note 85.

<sup>136</sup> See PALLEY, *How To Sue A Decentralized Autonomous Corporation*, *supra* note 132.

<sup>137</sup> See H. BURSHSTEIN – R. DAVIS – B. HEARN – R. MACDONALD – S. PINK, *Blockchain – The Promise and the Perils*, presentation at *Lexpert's 9<sup>th</sup> Annual Information Privacy and Data Protection Conference*, November 30, 2017, [https://foglars.com/uploads/press/file/515/Blockchain\\_Presentation\\_-\\_Lexpert\\_Conference\\_-\\_Nov\\_30\\_2017\\_-\\_FinalR.pdf](https://foglars.com/uploads/press/file/515/Blockchain_Presentation_-_Lexpert_Conference_-_Nov_30_2017_-_FinalR.pdf).

<sup>138</sup> K. NAYYER, *Blockchain: Lawyers, Take Note*, *The Canadian Bar Association*, May 25, 2017, <https://www.cba.org/Publications-Resources/CBA-Practice-Link/Business-and-Corporate/2017/blockchain>.

<sup>139</sup> See A. DANIELS, *Blockchain & Shareholder Voting: A Hard Fork For 21<sup>st</sup> Century Corporate Governance*, 21 *University of Pennsylvania Journal of Business Law* 405, 2018.

<sup>140</sup> See T. SCHREPEL, *Is Blockchain The Death of Antitrust Law? The Blockchain Antitrust Paradox?* 3 *Georgetown Legal Technology Review* 281, 2019.

consumer financial protection<sup>141</sup>, and enforcing taxation statutes<sup>142</sup>. There are also uncertainties on the validity and enforceability of smart contracts altogether<sup>143</sup>. Another challenge of a DAO is that, since it operates via servers distributed throughout the world, it is arguably “borderless” and difficult, if not impossible, for a domestic regulatory authority to shut down<sup>144</sup>.

### 4.6. Crypto Hedge and Investment Funds

In September 2017, the British Columbia Securities Commission granted First Block Capital registration as an “investment fund manager” and “exempt market dealer” as a hedge fund focused on cryptocurrency investing<sup>145</sup>. First Block Capital also introduced in 2018 a Bitcoin investment fund (the *FBC Bitcoin Trust*) that was restricted only to accredited investors<sup>146</sup>.

Canada also has actively managed mutual funds dedicated to cryptocurrency investments, available to accredited investors, including the *Rivemont Crypto Fund*, which launched in 2017<sup>147</sup> which holds positions in

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<sup>141</sup> See J MAUPIN, *Mapping the Global Legal Landscape of Blockchain and Other Distributed Ledger Technologies*, Centre for International Governance Innovation CIGI Papers No. 149, October 2017, at pgs. 4, 9-10, <https://www.cigionline.org/sites/default/files/documents/Paper%20no.149.pdf>.

<sup>142</sup> See L. GHEORGHIU, *Cryptocurrency Mining as a Service*, 9(1) *Canadian Tax Focus*, February 2019, [https://www.ctf.ca/ctfweb/EN/Newsletters/Canadian\\_Tax\\_Focus/2019/1/190111.aspx](https://www.ctf.ca/ctfweb/EN/Newsletters/Canadian_Tax_Focus/2019/1/190111.aspx).

<sup>143</sup> See K. NAYYER, *Blockchain: Lawyers, Take Note*, *supra* note 139.

<sup>144</sup> MAUPIN, *Mapping the Global Legal Landscape of Blockchain and Other Distributed Ledger Technologies*, *supra* note 142, at pg. 9-10.

<sup>145</sup> See BRITISH COLUMBIA SECURITIES COMMISSION, *B.C. Securities Commission Grants Landmark Bitcoin Investment Fund Manager Registration*, September 6, 2017, [https://www.bsc.bc.ca/News/News\\_Releases/2017/69\\_B\\_C\\_Securities\\_Commission\\_grants\\_landmark\\_bitcoin\\_investment\\_fund\\_manager\\_registration/](https://www.bsc.bc.ca/News/News_Releases/2017/69_B_C_Securities_Commission_grants_landmark_bitcoin_investment_fund_manager_registration/).

<sup>146</sup> See FINANCIAL POST, BUSINESS WIRE, *Canada's First Bitcoin Fund Now Available on NEO Connect*, September 10, 2018), <https://business.financialpost.com/pmn/press-releases-pmn/business-wire-news-releases-pmn/canadas-first-bitcoin-fund-now-available-on-neo-connect>; See also CRYPTOLOBE, *The First Ever Canadian Mutual Fund Based on Bitcoin Has Gone Live* (September 12, 2018), <https://www.cryptoglobe.com/latest/2018/09/the-first-ever-canadian-mutual-fund-based-on-bitcoin-has-gone-live/>.

<sup>147</sup> See RIVEMONT CRYPTO FUND, <https://rivemont.ca/en/rivemont-crypto-fund/>.

Bitcoin, Bitcoin Cash, Ethereum, Ethereum Classic, Ripple and Litecoin.<sup>148</sup> 3iQ also has established the *Global Cryptoasset Fund* and *Bitcoin Trust*, which are both established as “mutual fund trusts.”<sup>149</sup>

Finally, a very interesting development in the burgeoning crypto-investment fund ecosystem is the recent Ontario Securities Commission (OSC) Panel decision overturning a prior OSC staff decision to refuse to issue a receipt for a prospectus for 3iQ Corp.’s closed-end exchange-traded “Bitcoin Fund.”<sup>150</sup> As a result of the OSC panel decision, Canada will shortly have a closed-end bitcoin fund, offered via prospectus, that trades on a major national stock exchange and is accessible to retail investors.<sup>151</sup>

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<sup>148</sup> K. OWRAM, *Canada’s Only Actively Managed Cryptocurrency Fund is 90% In Cash*, *Financial Post* (July 17, 2018), <https://business.financialpost.com/investing/funds/canadas-only-actively-managed-cryptocurrency-fund-is-90-in-cash>.

<sup>149</sup> See 3iQ INVESTMENT OVERVIEW, <https://3iq.ca/3iq-global-cryptoasset-fund/>.

<sup>150</sup> ONTARIO SECURITIES COMMISSION, *Reasons and Decision in the Matter of 3iQ Corp. and the Bitcoin Fund, 3iQ Corp (Re)*, 2019 ONSEC 37, October 29, 2019, [https://osc.gov.on.ca/documents/en/Proceedings-RAD/rad\\_20191029\\_3iq-2.pdf](https://osc.gov.on.ca/documents/en/Proceedings-RAD/rad_20191029_3iq-2.pdf)

<sup>151</sup> See FINANCIAL POST, *3iQs “the Bitcoin Fund” Receives Favorable Ruling From Ontario Securities Commission*, October 30, 2019, <https://business.financialpost.com/pmnp/press-releases-pmn/business-wire-news-releases-pmn/3iqs-the-bitcoin-fund-receives-favourable-ruling-from-ontario-securities-commission-panel>.