ARTIFICIALLY INTELLIGENT INVESTMENT ADVISERS AND THE FIDUCIARY DUTY PROBLEM: RISKS, CHALLENGES, AND REGULATORY SOLUTIONS

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A thesis submitted to the Faculty of Graduate Studies of

The University of Manitoba

in partial fulfilment of the requirements of the degree of

MASTER OF LAWS (LL.M.)

Faculty of Law

University of Manitoba

Winnipeg, Manitoba, Canada

November 2019

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ABSTRACT

Artificially intelligent investment advisers which are commonly called robo-advisers are Artificial Intelligence or Machine Learning-based online platforms that provide investment advisory services to investors. Both in the USA and Canada, robo-advisers are required to adhere to the regulations governing investment advisers. In the USA, the Securities and Exchange Commission has clearly stated that robo-advisers owe a fiduciary duty to their clients. In Canada, while there is no statutory fiduciary duty, according to the jurisprudence, based on the facts and circumstances of an adviser-client relationship, an investment adviser may be required to act as a fiduciary. This Thesis argues that Canadian robo-advisers, too, owe a fiduciary duty to their clients. Given that the securities regulations and the standards of conduct under the investment adviser fiduciary duty have been developed throughout the history with an eye to how humans behave and what kind of motivations they have, the use of algorithmic and AI-based systems as the provider of the investment recommendations raises concerns as to these state-of-the-art financial intermediaries’ capability of complying with the securities regulations and acting as good fiduciaries. This Thesis conducts an analysis of robo-advisers under the US and Canadian securities laws to illustrate why robo-advisers are/should be required to act as fiduciaries in the USA and Canada, identify and analyze the risks and challenges that may negatively affect a robo-adviser’s compliance with laws, and explore implementable regulatory solutions to address these risks and challenges. This Thesis argues that there exists a number of issues that may adversely affect a robo-adviser’s compliance with the regulatory requirements as a good fiduciary, and recommends the intervention of the US and Canadian securities regulations into robo-advisory in a number of ways and methods.
ACKNOWLEDGEMENTS

I would like to express my deep gratitude to Dr. Jonathan L. Black-Branch for his support and guidance during the development of this Thesis. I also would like to thank Dr. Donn Short and the professors who visited the Graduate Legal Research and Theory course for their inspiring lectures on conducting legal research.

I am deeply grateful for the financial support of the Schwartz/Reisman Scholars Program, Adalsteinn (Steini) Fridrikson Kristjansson Graduate Fellowship, Davit T. Sgayias Graduate Fellowship, and International Graduate Student Entrance Scholarship. Without their support, this Thesis would not be possible.

I would like to extend my thanks to my friends whose support and friendship motivated me greatly during my studies.

Lastly, I would like to thank my family and Hyunji, for supporting, motivating, and encouraging me on this path.
DEDICATION

To the machines of the future.
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INTRODUCTION

In recent years, financial services and markets have faced dramatic changes, as the ever-advancing technology has been constantly opening new paths and creating new structures for businesses around the globe.\(^1\) In addition to the advancement of technology, the 2008 financial crisis, too, functioned as a catalyst for these changes.\(^2\) Especially, the fact that lawmakers were inclined to create more strict regulations in the aftermath of the 2008 financial crisis to control systemic risk in the financial markets,\(^3\) and that the image of banks dramatically deteriorated in the public eye after the said financial meltdown facilitated the emanation of innovative enterprises with the purpose of creating alternative financial institutions and services.\(^4\) Consequently, markets have witnessed the burgeoning of numerous companies providing financial services by means of electrified and digitalized platforms in the last 10 years.\(^5\) Today, the term “financial technology” or “FinTech” is used to denote the integration of technology into financial services in order to achieve innovation and create technology-based business models (i.e. start-ups) for providing services and products that have been conventionally provided by traditional financial institutions.\(^6\)

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FinTech companies, since their first appearance in the financial markets, have been bringing new dynamics to the markets disrupting the existing market conditions,\(^7\) causing a “creative destruction”,\(^8\) and forcing traditional financial institutions to take new positions to be able to compete with the state-of-the-art service models.\(^9\) As a result of this disruption, business models that have been prevalent in the markets are challenged with the new models,\(^10\) and the works previously performed by humans are taken over by the automation.\(^11\) It is estimated that 30% of jobs in the banking industry will be lost by 2025 in the US and Europe due to the rise of FinTech and banking automation.\(^12\)

Investment management and financial advisory services, like many other areas of banking and finance, have been subject to the disruption created by FinTech in the last 10 years.\(^13\) Providing advisory services to investors and managing their investments, despite being a profitable

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\(^8\) Economist Joseph Schumpeter argues that the innovation, throughout history, advanced the economic structure and industry always through a creative destruction. See Joseph A Schumpeter, Capitalism, Socialism & Democracy (published online: Routledge, 2003) at 83. FinTech, too, as a financial innovation, is changing market conditions with a creative destruction.


\(^11\) Citi GPS, “Digital Disruption: How FinTech is Forcing Banking to a Tipping Point” Citigroup (March 2016), online: [https://ir.citi.com/D%2F5GCKN6uoSyhbcMvU6S5SySrAdVAYkPjb5ubGr7fJMe8w2oX1bqFm6RdjSRSgZSaXhIY3%3D] [https://perma.cc/NB58-73DU] at 80; See e.g. Lucinda Shen, “Here’s Why Bank of America Is Slashing Up to 8,400 Jobs” Fortune (15 June 2016), online: [http://fortune.com/2016/06/15/bank-of-america-job-cuts/] [https://perma.cc/PH4K-6BUD].

\(^12\) Citi GPS, supra note 11 at 80.


investment strategy created by a robo-adviser is based on the analysis of the market data and the data provided investors. For generating an investment strategy, in the initial phase, robo-advisers generally provide their clients with online questionnaires that ask for information such as the age, savings rate, net income, investment targets, value of the current investments, and the risk appetite of investors. Once the questionnaire is filled and submitted, the robo-adviser generates the investment strategy, constructs the portfolio, and makes the investment on behalf of its client. The service provided by robo-advisers is not restricted to formulating an investment strategy and making the investment. Indeed, robo-advisers offer investment advisory services ranging from asset allocation, to tax loss harvesting, and to rebalancing of investment accounts as well. However, it should be noted that there is no single type of robo-advising model in the markets, and therefore, the scope of the services provided to customers varies from a robo-adviser to another.

26 Eric Jansen, “When a robo-advisor is, or isn’t, the right choice” CNBC (5 June 2018), online: <https://www.cnbc.com/2018/06/04/when-a-robo-advisor-is-or-isnt-the-right-choice.html> [https://perma.cc/9H6N-RP2D].
Robo-advisers are targeting mainly lower-income investors who do not have extensive experience in the financial markets. Especially, by providing financial services with notably lower costs and fees than traditional investment advisers, and by making these services available 24/7 through online platforms, robo-advisers are rendering investment tools easily accessible to the people who were underserved by traditional investment advisers. Despite the fact that robo-advisers were devised to serve simple investment needs; in order to meet the demands of the wealthy clientele and also due to some regulatory constraints, robo-adviser companies have invented a new model called “hybrid robo-adviser” that combines the AI and ML algorithms with the supervision of human investment advisers. In this model, the investment strategy is created by the algorithm, however, before investing the money, the strategy is reviewed by a human investment adviser. As a matter of course, as this model employs humans as overseers of the provision of the investment recommendations, its costs and fees are higher than that of fully-automated robo-advisers.

The market share of FinTech companies operating robo-advisers is growing day by day. It is estimated that by 2025, the value of the assets under the management of robo-advisers will

34 Lightbourne, supra note 25 at 652.
36 Verhage, supra note 32.
37 For example, in Canada, only hybrid robo-advisers are allowed. See CSA Staff Notice 31-342 – Guidance for Portfolio Managers Regarding Online Advice, (2015) 38 OSCB 8197 [CSA Staff Notice 31-342] at 8198.
39 Payette, supra note 35 at 441.
40 Verhage, supra note 32.
reach USD 16 trillion;\textsuperscript{41} and by that time robo-advisory will have become a mainstream investment method among investors.\textsuperscript{42}

Robo-advisers are definitely creating new horizons and promising new opportunities for the investors of today and the future. However, as is the case with many other FinTech innovations, robo-advisers, too, are posing significant threats to both financial markets and investors.\textsuperscript{43} Especially, as robo-advisers are artificially intelligent systems, the legal status and capability of AI to operate in a legally-compliant manner constitutes a major issue that must be approached with utmost care by the securities regulators. Robo-advisers have not yet reached their maximum potential and are still taking baby steps towards a greater intelligence;\textsuperscript{44} therefore, before it evolves into a more complex instrument, it is the perfect time to assess the dynamics of robo-advising and the risks and challenges that may adversely affect a robo-adviser’s compliance with the standards imposed on investment advisers by securities regulations.\textsuperscript{45}

1. Subject and Aim of Thesis

Can AI perform a task as good as humans, or even better than humans can? For a long time, this question has engaged the attention of countless scientists and researchers as well as many fans of sci-fi movies. But today, as AI has become a pervasive element that has significant impacts on our lives, this question has turned into a very crucial social issue that must be tackled


\textsuperscript{44} See Damir Tokic, “BlackRock Robo-Advisor 4.0: When artificial intelligence replaces human discretion” (2018) 27:4 Strategic Change 285 at 290; See also Lightbourne, supra note 25 at 653-654.

\textsuperscript{45} See Ji, supra note 33 at 1579; See also Tom Baker & Benedict Dellaert, “Regulating Robo Advice Across the Financial Services Industry” (2018) 103 Iowa L Rev 713 at 732, 745 [Baker & Dellaert, “Regulating Robo Advice”].
by lawmakers as well in order to maintain order in society and protect rights and liberties of people.

Robo-advisers, the artificially intelligent investment advisers, are subject to the same question. The AI and ML algorithms are now replacing human investment advisers and can formulate investment strategies by analyzing vast amount of data in the blink of an eye.46 It goes without saying that this innovation is facilitating investments, creating new possibilities for financial markets, and most importantly, making investment possible for previously underserved people;47 however, as a matter of fact, robo-advisers may pose unforeseen risks to investors and financial markets as they are still relatively new business models and their capability of meeting certain standards set for human investment advisers is still vague.

Investment advisers are subject to rigid standards that they must observe while providing services to consumers, such as disclosing substantial information, addressing and disclosing conflicts of interest, and providing suitable investment advice, and above all, the fiduciary duty.48 The fiduciary duty is defined as the “the duty of the finest loyalty” and the persons acting under a fiduciary duty, as fiduciaries, are “held to something stricter than the morals of the market place.”49 Under the fiduciary duty, an investment adviser should seek its clients’ best interests and avoid subordinating its clients’ interests to its interests.50 While the fiduciary duty

47 Edwards, “Automated Investment Advice”, supra note 35 at 103; Payette, supra note 35 at 426.
48 See Chapter II, below, for more on this topic.
is imposed on all investment advisers in the USA,\textsuperscript{51} there is no statutory fiduciary duty for investment advisers in Canada, and no consensus as to whether all investment advisers are subject to the fiduciary standards or not.\textsuperscript{52} In Canada, the determination of whether an investment adviser is liable as a fiduciary depends on the nature of the relationship between the investment adviser and the client.\textsuperscript{53} The fiduciary duty and other relevant duties contained therein are stipulated by securities regulators mainly to provide a certain degree of protection to consumers, as consumers may be vulnerable and exploited while dealing with an investment adviser.\textsuperscript{54} Furthermore, the fact that the financial literacy is not widespread among lay people intensifies the significance of consumer protection in the capital markets.\textsuperscript{55} Indeed, research shows that the majority of investors do not understand the differences between the standards of conduct imposed on investment advisers and broker-dealers and the duties these financial intermediaries must adhere to.\textsuperscript{56}

Without the shadow of a doubt, the securities regulations and the standards of conduct, and accordingly the fiduciary duty, were traditionally created to address human investment advisers, considering what humans’ motivations are and how they reach a decision.\textsuperscript{57} Algorithms do not have motivations; further, their decision-making process is different than that of humans.\textsuperscript{58} Of course, as we can already observe in the markets, robo-advisers can provide investment advice,

\textsuperscript{52} CSA Consultation Paper 33-403, supra note 50 at 9563-9564.
\textsuperscript{53} Ibid at 9561.
\textsuperscript{54} See Chapter II, below, for more on this topic.
\textsuperscript{57} Ji, supra note 33 at 1556.
generate investment strategies and conduct the management of the assets of their clients, and investors may be satisfied with the service they get from robo-advisers. However, the fact that an AI-driven algorithm can generate an investment advice does not mean that the said investment advice serves the best interest of the client.\(^{59}\) In order to prove that a robo-adviser can act as a fiduciary and serve the best interests of its clients, we must answer several questions affirmatively, such as: Does the robo-adviser effectively address conflicts of interest, disclose substantial information to its client, obtain sufficient Know-Your-Client information, and run on an algorithm created with an utmost good faith?\(^{60}\) Under these circumstances, it is of great importance to assess how robo-advisers fit in the existing regulatory framework and what mechanisms or factors relevant to the robo-adviser technology may negatively affect a robo-adviser’s adherence to the fiduciary obligations and how these obstacles may be addressed.

This Thesis aims to (i) analyze the legal status of robo-advisers within the existing regulatory framework, (ii) illustrate whether robo-advisers are subject to the fiduciary duty under the securities regulations of the USA and Canada, (iii) identify and analyze the risks and challenges, arising from the use of algorithm-based systems, that may negatively affect a robo-adviser’s compliance with the fiduciary obligations, and (iv) explore implementable solutions that can be adopted by securities regulators to efficiently enhance robo-advisers’ compliance with the fiduciary obligations and ensure that they can act as good fiduciaries. It should be noted that this Thesis, does not aim to discuss whether robo-advisers that are currently active in the US and Canadian markets are complying with the fiduciary obligations; nevertheless, where


\(^{60}\) See SEC, Commission Interpretation Regarding Standard of Conduct for Investment Advisers, Release No IA-5248 (5 June 2019) at 6-11 (indicating the obligations of an investment adviser under the fiduciary duty) [SEC, Standard of Conduct]; CSA Consultation Paper 33-403, supra note 51 at 9560-9561 (indicating the obligations of a fiduciary).
relevant, it will exemplify and analyze the practices of existing robo-advisers to portray the current status of robo-advisers in the light of the fiduciary obligations.

2. Limitation of Subject

This Thesis does not attempt to compare the US and Canadian regulatory approaches to the fiduciary duty of investment advisers and find which approach is the better one. Nevertheless, for the purposes targeted herein, the US and Canadian securities regulators’ policies specifically concerning the duties and legal status of robo-advisers will be assessed with a comparative approach to provide a deeper insight into the subject. Furthermore, as mentioned above, this Thesis does not aim to prove whether currently active robo-advisers are observing the fiduciary obligations. Lastly, this Thesis will not discuss the performance of the stocks and securities preferred by robo-advisers or the amounts of returns obtained by investors through using a robo-adviser. Such an analysis would fall within the area of finance.

3. Methodology

This Thesis adopts both doctrinal and non-doctrinal research methods. Doctrinal research refers to the analysis and exploration of the laws pertaining to a specific subject. Non-doctrinal research, on the other side, can be described as the research method that does not solely investigate what the laws are in a specific area, but instead, analyzes a problem, a policy or recommends policy reforms through a qualitative assessment. This Thesis, firstly, by implementing a doctrinal analysis, lays out the policy justifications of financial services regulations, an overview of the US and Canadian investment adviser regulations, the fiduciary duty in general terms, the US and Canadian approaches to and interpretation of the investment

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62 See ibid 22-23.
adviser fiduciary duty, and finally, the fiduciary standards investment advisers are subject to. Upon the elucidation of the laws underlying the investment adviser fiduciary duty, this Thesis, implements a non-doctrinal and qualitative approach\textsuperscript{63} to continue and finalize its analysis. For the qualitative analysis, the data on the technical and legal aspects of robo-advisers is obtained from (i) securities regulators’ reports and analyses, (ii) secondary sources such as scholarly written articles as well as reports and articles published by industry reporters and analysts, (iii) technical reports published by companies that provide data on the financial markets and service providers, and (iv) directly from robo-advisers’ public disclosures. In conducting the qualitative research on robo-advisers, this Thesis adopts an analytical and exploratory approach. Analytical approach mainly targets to break down a subject into its components and display and scrutinize these components.\textsuperscript{64} Exploratory approach is useful for the subjects for which a limited number of studies have been conducted.\textsuperscript{65} Exploratory research enables the detection and assessments of the dynamics of a subject in a way that the research sheds light on the issues clouded by uncertainty.\textsuperscript{66} Despite that there is a growing literature on robo-advisers; still, many aspects of this new technology require a deeper examination. Accordingly, an exploratory approach that would elucidate the dynamics and legal aspects of robo-advising to a greater extent is an appropriate research method for this Thesis. By applying an analytical and exploratory approach, this Thesis puts the robo-adviser technology to a test under the investment adviser regulations of the USA and Canada and breaks down robo-advisers into their technical components and legal aspects and explores the risks and challenges that may hinder a robo-adviser’s capability to comply with the fiduciary standards. In detecting these risks and

\textsuperscript{63} It should be noted that qualitative research and non-doctrinal research are not interchangeable terms. Arguably, a doctrinal research, too, may be a qualitative research. See \textit{ibid} at 23-25. The qualitative aspect of this Thesis mainly pertains to the non-doctrinal analysis and discussion of the topic.


\textsuperscript{66} See \textit{ibid}.
challenges, both primary and secondary sources are used. Additionally, this Thesis recommends a number of regulatory interventions in varying forms to effectively address the discovered risks and challenges, and accordingly, enhance and ensure robo-advisers’ compliance with the fiduciary obligations. While some of these recommendations are drawn from the policies adopted by different securities regulators and the suggestions made in secondary sources, others originate from the Author’s own assessment and arguments.

This Thesis adopts the functional method of comparative law as a supplementary research method. The functional method, instead of solely focusing on the comparison of the laws and legal systems, compares the effects of the laws of different jurisdictions and doctrinal structures on subjects and events.67 In other words, it targets to analyze the facts under the light of different rules, laws and doctrines.68 By doing so, it provides the researcher with a more holistic view of the functions of the laws in the analyzed subject.69 By applying the functional method as a supplementary method, this Thesis illustrates the functionality and implementation of the current investment adviser regulations of the USA and Canada in the context of robo-advising. The functional method of comparative law also provides the opportunity to compare the functionally equivalent agencies’ policies with regard to certain subjects.70 Using this opportunity, this Thesis also indicates the differences between the US and Canadian securities regulators’ approaches to and interpretation of robo-advisers and these policies’ effects on the implementation of and innovation in the robo-adviser technology. Even though the functional method may also act as an evaluative criterion that helps assess which jurisdiction’s laws more effectively address the issues arising from the analyzed subject,71 the research in this Thesis

68 Ibid.
69 See ibid.
70 Ibid at 348.
71 See ibid.
does not extend to such an analysis, as, it is worth reiterating, it does not aim to compare the US and Canadian investment adviser regulations.

It should also be reiterated that, while this Thesis benefits from using a comparative approach, the functional comparison conducted herein is not the main target of this research; instead, it should be considered as a facilitator (i) to depict a holistic view of robo-advisers and their current legal status in the light of the regulatory requirements of different jurisdictions, (ii) to identify the threats and risks posed by robo-advisers and the current regulations’ effectiveness in this regard, and (iii) to determine what regulatory solutions would effectively address the issues that may arise in connection with both the operation of robo-advisers and the implementation of robo-adviser-specific policies.

4. Thesis Structure

Chapter I provides an overview of investment adviser regulations. Beginning with an explanation of the policy justifications of financial services regulations, the fundamental issues that have been and are necessitating regulatory intervention into the operation of financial intermediaries are illustrated. Afterwards, the US and Canadian regulations on investment advisers, particularly, the legal instruments through which the regulation of investment advisers is implemented and developed as well as the definition and registration requirements of investment advisers are explained.

Chapter II provides an explanation of the investment adviser fiduciary duty. This Chapter, firstly, describes the significant aspects of the common law fiduciary duty with a comparison with other two ancient legal relations, namely the status relation and contract relation. Upon this basis, the investment adviser fiduciary duty is analyzed. In doing so, both the US and
Canadian regulators’ interpretation of and approach to the investment adviser fiduciary duty is explained respectively. The main part of this Chapter depicts the investment advisers’ standards of conduct in the US and Canadian securities regulations.

Chapter III explores the technical and legal aspects of robo-advisers and provides an overview of the US and Canadian securities regulators’ approach to and policy on robo-advisers. In this Chapter, firstly, the technology infrastructure underlying robo-advising, namely algorithms, AI, and ML technology are explained. Afterwards, the technical and legal aspects of robo-advisers are explored and illustrated. Chapter III concludes with an overview of the robo-adviser-specific policies developed by the US and Canadian securities regulators so far.

Chapter IV provides an analysis of the robo-advisers’ legal status under the investment adviser fiduciary duty. It discusses whether robo-advisers are required to act as fiduciaries under the US and Canadian securities regulations.

Chapter V is devoted to the analysis of the risks and challenges that may adversely affect robo-advisers’ compliance with the fiduciary standards and the discussion of necessary regulatory developments. This analysis is divided into five sections each of which focuses on a different fiduciary obligation. In each section, risks and challenges that may hinder a robo-adviser’s compliance with the relevant fiduciary obligation are analyzed. Upon this analysis, possible regulatory interventions or whether a regulatory intervention is needed are discussed.

The final Chapter concludes.
CHAPTER I:
REGULATORY FRAMEWORK

The high level of standard of care and the investment adviser fiduciary duty are a result of securities regulators’ attempt to protect consumers and maintain a safe and secure market.\(^{72}\) In order to understand the fiduciary duty and its importance in investment advisory, and to assess the risks and challenges robo-advisers may face in carrying out the fiduciary obligations, firstly, we must understand the logic behind the regulations and laws governing financial services and intermediaries. This Chapter will firstly illustrate the objectives of financial services regulations, and then lay out the US and Canadian regulatory frameworks that specifically govern investment advisers.

1. Policy Justifications of Financial Services Regulations

Financial institutions not only facilitate the distribution of financial products by reducing transaction costs, making products easily accessible to consumers, and diminishing the information asymmetry in the markets,\(^{73}\) but also greatly contribute to the economic development of nations.\(^{74}\) Despite these benefits, in today’s world, as a result of the globalization and the increasing interconnectedness within the financial realm, the failure of financial institutions, beyond causing a turmoil in the financial markets, can easily lead to a global economic crisis as was witnessed in 2008.\(^{75}\) Therefore, the regulation and government intervention in financial services are of great importance for the protection of consumers and

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\(^{72}\) See Chapter II, below, for more on this topic.


The fundamental policy justifications of financial services regulations can be categorized under three objectives: (i) protecting consumers from being taken advantage of by the providers of the financial products, (ii) supervising risk levels of financial institutions and providing an appropriate degree of protection for consumers with regard to the risks imposed by financial institutions in order to enable consumers to confidently transact in the financial markets, (iii) and controlling the systemic risk, and accordingly, maintaining financial stability and protecting the society from the failures of the market players. Besides, depending on the characteristics of the financial products and the providers thereof, financial services regulations serve some other purposes too, such as mitigating discrimination and inequality in financial services, preventing the occurrence of monopolies, and countering money laundering. In addition to these traditional objectives, as a result of technology’s increasing intervention in the financial markets, new regulatory objectives have risen within the financial realm in recent years. For example, the rising number of online fraud incidents and cyberattacks at financial institutions have recently prompted regulators to take new measures to enhance cybersecurity and protect consumer data.
The structural change the financial services have gone through especially from the beginning of 1990s has obscured the distinction between the financial services to a great extent.\textsuperscript{84} Despite the blurring lines within the industry, the traditional classification of financial services is still valid today. According to this classification, financial services industry is regulated within three different sectors: insurance, securities, and banking.\textsuperscript{85} While policy justifications of regulations in these sectors overlap to a great extent, the focal point and the priority of the objectives of the regulations vary from one sector to another, as each of these sectors has its own unique dynamics, structures and challenges.\textsuperscript{86} For example, insurance regulation aims to ensure that insurance companies have the adequate capital reserves so that the policyholders will be compensated once the covered loss occurs.\textsuperscript{87} Another objective of insurance regulation is to ensure the reasonableness of the price of insurance products and the terms of policy forms used by insurance companies.\textsuperscript{88} In banking regulation, the focus is primarily on preventing systemic failures,\textsuperscript{89} as banks can grow to such an extent that their failure may trigger the collapse of other financial institutions, and eventually, this can lead to a crash in other sectors of the economy.\textsuperscript{90} Additionally, banking authorities also aim to provide a certain degree of protection for consumers’ deposits in bank accounts by establishing deposit insurance\textsuperscript{91} and imposing minimum capital requirements on banks.\textsuperscript{92} Securities regulations, on the contrary, do not


\textsuperscript{86} See Baker & Dellaert, “Regulating Robo Advice”, supra note 45 at 722; Jackson, \textit{supra} note 78 at 332.


\textsuperscript{90} Magnuson, \textit{supra} note 7 at 1194.

\textsuperscript{91} See \textit{Federal Deposit Insurance Act}, 12 USC § 1815 (1950); \textit{Canada Deposit Insurance Corporation Act}, RSC 1985, c C-3 s 12.

\textsuperscript{92} Roland I Robinson, “The Capital-Deposit Ratio in Banking Supervision” (1941) 419:1 Journal of Political Economy 41 at 41.
attempt to ensure that investors will get back all money they invested in the capital markets. Investors are free to take higher risks with the expectation of getting higher returns, but as a matter of course, they may suffer tragic losses too. At this point, securities regulators do not attempt to eliminate the risk in the capital markets, instead, they focus on protecting investors from being manipulated, defrauded, or exploited, enhancing transparency, and promoting fair and efficient markets that facilitate consumers’ access to investment products and price information. In order to achieve these goals, securities regulations implement four essential mechanisms: (i) imposing licensing and registration requirements on financial intermediaries in order to maintain certain standards for the service provided to consumers, (ii) setting certain standards of conduct and establishing a high level of liability for financial intermediaries to ensure that consumers are provided with appropriate financial service, (iii) prohibiting the practice of fraudulent activities, (iv) and requiring financial intermediaries to disclose substantial information to their clients, such as the financial intermediary’s market experience, fee structure, and potential conflicts of interest.

Beyond these objectives, since the 2008 financial crisis, there has been a ceaseless debate as to whether securities regulations should encompass the supervision of systemic risk as well. Systemic risk does not have a globally accepted definition, however, for present purposes, it

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93 Baker & Dellaert, “Regulating Robo Advice”, supra note 45 at 722.
96 IOSCO, supra note 95 at 6.
98 IOSCO, supra note 95 at 33.
99 Baker & Dellaert, “Regulating Robo Advice”, supra note 45 at 724.
100 IOSCO, supra note 95 at 5.
101 Ibid at 38-39.
can be defined as the likelihood that the failure of a financial institution will cause a chain reaction that will lead to other financial institutions’ failure too, and eventually, cause a financial turmoil in the entire system. The possible severity of the havoc that systemic risk can wreak on the financial markets and the national economies was witnessed during the 2008 financial crisis and in the aftermath thereof. Traditionally, systemic risk has been regulated under prudential regulation (i.e. financial institution regulations), and on the other hand, securities regulations have been focusing on the issues regarding the day-to-day conduct in the capital markets rather than controlling the systemic risk posed by investment companies. However, as the 2008 financial crisis arose from the capital markets through the failure of mortgage-backed securities, the regulatory focus has moved on to the expansion of the objectives of securities regulations to incorporate the supervision of systemic risk into securities laws. For example, in the USA, the Financial Stability Oversight Council (“FSOC”) established under the Dodd-Frank Wall Street Reform and Consumer Protection Act (“Dodd-Frank Act”) and authorized to identify risks that may threaten the financial stability has prompted the Securities and Exchange Commission (“SEC”) several times to adopt policies to oversee the systemic risk to a greater extent as a financial stability regulator; nevertheless, while adopting some of the recommendations of the FSOC, the SEC has generally opposed to


act as a prudential regulator so far. The increasing focus on overseeing systemic risk in the capital markets has been observed in Canada too. In 2015, the Department of Finance released a draft of the Capital Markets Stability Act (“CMSA”) that aims “to promote and protect the stability of Canada’s financial system through the management of systemic risk related to capital markets; and to protect capital markets, investors and others from financial crimes.” However, the CMSA still remains as a draft today.

As can be seen from the recent developments, overseeing systemic risk has not yet been adopted as a primary objective by securities regulators. Of course, this situation may change in the future depending on the market conditions and the changing regulatory approaches to the prudential regulation of capital markets. Robo-advisers, as financial intermediaries, may indeed contribute to the systemic risk in the markets; however, as of today, in view of the small market share of robo-advisers, this contribution would be minimal. After all, as systemic risk is a subject of prudential regulation and it does not directly concern robo-advisers’ capability of acting as fiduciaries, robo-advisers’ possible contribution to systemic risk will not be discussed herein.


113 See Baker & Dellaert, “Regulating Robo Advice”, supra note 45 at 717.
2. Regulation of Investment Advisers

2.1. USA

2.1.1. Overview

In the USA, investment advisers are regulated under both federal and states regulations. On the federal level, the primary investment adviser regulation is the *Investment Advisers Act of 1940* (“IAA”). The oversight of investment advisers under the IAA is conducted by the SEC. Since its establishment under the *Securities Exchange Act of 1934* (“SEA”), the SEC has been acting as the primary securities regulator and overseeing the securities exchanges and mutual funds as well as the activities of investment advisers and broker-dealers. The mission of the SEC encompasses maintaining fair and efficient markets, protecting investors from unfair practices and fraudulent activities, and facilitating capital formation. In order to achieve these missions, the SEC is authorized to use different tools such as conducting inspections of investment advisers, broker-dealers, investment companies and rating agencies, bringing enforcement actions against these market players for the violation of securities regulations, and adopting rules to govern the securities markets.

While the SEC is the primary securities regulator, there are also other agencies that hold regulatory powers in the capital markets, such as the Commodity Futures Trading Commission.

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118 See generally SEC, *Examinations by the Securities and Exchange Commission’s Office of Compliance Inspections and Examinations* (February 2012), online: <https://www.sec.gov/about/offices/ocie/ocieoverview.pdf> [https://perma.cc/EG2J-C5HC].


(“CTFC”) that regulates futures, swaps and derivatives,\textsuperscript{121} and the Financial Industry Regulatory Authority (“FINRA”) that mainly regulates broker-dealers in the markets.\textsuperscript{122} FINRA, despite having no regulatory authority over investment advisers, operates the electronic filing system which is used for the registration of investment advisers.\textsuperscript{123}

2.1.2. Definition

Section 202(a) of the IAA defines investment adviser as “any person who, for compensation, engages in the business of advising others, either directly or through publications or writings, as to the value of securities or as to the advisability of investing in, purchasing, or selling securities, or who, for compensation and as part of a regular business, issues or promulgates analyses or reports concerning securities.”\textsuperscript{124} Under this definition, the SEC highlights three main elements that identify a person as an investment adviser: receiving compensation for the service provided, being engaged in the business of advising, and providing advice about securities.\textsuperscript{125} Firstly, compensation does not have to be in a certain form; the SEC construes the compensation as “the receipt of any economic benefit.”\textsuperscript{126} Therefore, any money received by the adviser in exchange for the investment advisory service it provided satisfies the compensation element.\textsuperscript{127} The second element, being engaged in the business, does not mean that the investment advisory should be the main activity of the person.\textsuperscript{128} The SEC identifies three factors that determine whether a person is engaged in the business of investment advisory:

\begin{itemize}
  \item Compensation does not have to be in a certain form; the SEC construes the compensation as “the receipt of any economic benefit.”
  \item Firstly, compensation does not have to be in a certain form; the SEC construes the compensation as “the receipt of any economic benefit.”
  \item Therefore, any money received by the adviser in exchange for the investment advisory service it provided satisfies the compensation element.
  \item The second element, being engaged in the business, does not mean that the investment advisory should be the main activity of the person.
\end{itemize}

\begin{flushleft}
\textsuperscript{121} Commodity Exchange Act, 7 USC § 2(a)(1)(A) (1936).
\textsuperscript{122} 15 USC § 78o-3(a), (b).
\textsuperscript{123} SEC, Investment Advisers, supra note 114 at 21.
\textsuperscript{124} Investment Advisers Act of 1940, 15 USC § 80b-2(11) (1940).
\textsuperscript{125} SEC, Investment Advisers, supra note 114 at 2.
\textsuperscript{126} SEC, Application of the Investment Advisers Act to Financial Planners, Pension Consultants, and Other Persons Who Provide Investment Advisory Services as a Component of Other Financial Service, Release No IA-1092 at 9-10 (SEC, Release No IA-1092); See also In the matter of Alexander V. Stein, Investment Advisers Act Release No IA 1497, (the funds obtained from clients through fraudulent activities are deemed to be a compensation, and the person having diverted these funds for his own use is treated as an investment adviser).
\textsuperscript{127} SEC, Release No IA-1092, supra note 126 at 10; SEC, Investment Advisers, supra note 114 at 2.
\textsuperscript{128} SEC, Investment Advisers, supra note 114 at 2.
\end{flushleft}
whether the person is known by the public as an investment adviser, whether the person earns money which can be directly correlated with the investment advice it provided, and whether the person provides investment advice on a frequent basis and for specific types of securities.\textsuperscript{129} In most cases, the provision of investment advice about certain types of securities suffices for being deemed to be engaged in the business;\textsuperscript{130} however, if the investment advice is provided on a limited basis or for isolated transactions, the provider of the advice is not deemed to be an investment adviser.\textsuperscript{131} Finally, the third element, providing advice about securities, is satisfied only if the advice is provided about certain securities such as bonds, mutual funds, limited partnerships, and stocks; accordingly, a person advising people about commodities, real estate, and precious metals is not an investment adviser.\textsuperscript{132} Within this scope, a person providing advice about market trends, assisting people in choosing other advisers, informing people about the upsides of investing in securities, or sharing a list of securities with people even without giving an advice is deemed to be an investment adviser by the SEC under the IAA.\textsuperscript{133}

2.1.3. Registration

As per the IAA, investment advisers are required to register either with the SEC or the state securities regulators where they have their principal office and place of business.\textsuperscript{134} Whether an investment adviser must register with a state securities regulator or the SEC depends on the amount of assets it manages.\textsuperscript{135} Investment advisers that have less than USD 25 million of assets under management cannot register with the SEC, accordingly, they must be registered with one

\textsuperscript{129} Ibid.
\textsuperscript{130} Ibid.
\textsuperscript{132} SEC, Investment Advisers, supra note 114 at 3; See e.g. Melikhov v. Drab, 2017 US Dist LEXIS 119478 at 40 (ND Ill 2017) (advising others about investing in energy projects is not an act of investment advisory under the IAA).
\textsuperscript{133} SEC, Investment Advisers, supra note 114 at 3.
\textsuperscript{134} 15 USC § 80b-3, 80b-3a.
\textsuperscript{135} SEC, Investment Advisers, supra note 114 at 8-9.
or more state securities regulators. Investment advisers managing between USD 25 million and USD 100 million of assets are also prohibited from registering with the SEC provided that these advisers are subject to an examination which is conducted by the state securities regulators they are registered with. Only the State of New York does not conduct examinations for investment advisers, and accordingly, mid-sized investment advisers conducting business in New York must register with the SEC. When a mid-sized investment adviser increases the value of the assets under its management to USD 100 million, it may register with the SEC; however, once this amount reaches USD 110 million, the registration with the SEC becomes obligatory. It should also be noted that, once an investment adviser is registered with the SEC, even if the amount of assets it manages drops below USD 100 million, it does not need to withdraw its registration provided that the said amount stays over USD 90 million.

Despite the abovementioned registration requirements, some investment advisers are exempted from registration under the IAA. For example, investment advisers that provide service exclusively to venture capital funds, or that have less than USD 150 million of assets under management and provide service exclusively to private funds, or that are charitable organizations are exempted from registration.

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136 15 USC § 80b-3a(a).
137 Ibid.
138 SEC, Investment Advisers, supra note 114 at 9.
139 Ibid at 9.
141 15 USC § 80b-3(l).
142 15 USC § 80b-3(m).
143 15 USC § 80b-3(b).
2.2. Canada

2.2.1. Overview

On the contrary to the American regulatory system, in Canada, there is no national securities legislation and no national securities authority that regulates and oversees capital markets on the federal level; accordingly, each province and territory has its own securities regulator, and securities are, therefore, regulated on a provincial and territorial basis under the provincial and territorial Securities Acts. Despite this fragmentation, there is a considerable degree of unification of securities regulation, and accordingly investment adviser regulation as well, provided by the Canadian Securities Administrators ("CSA") which is an unofficial organization comprised of provincial and territorial securities regulators. The CSA aims to harmonize the Canadian securities law through different bodies of rules called “national instruments” and “multilateral instruments.” Nevertheless, these instruments do not automatically become effective upon promulgation thereof until being adopted by provinces in form of a rule or a regulation. Under the current regulatory system, the primary regulations governing investment advisers’ standards of conduct are the provincial and territorial Securities Acts.

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144 Christopher C Nicholls, Securities Law, 2nd ed (Toronto: Irwin Law, 2018) at 77-78.
145 Whether provincial securities laws and regulations, under this fragmented system, can respond to the complexity of the modern Canadian capital markets has ignited a growing debate in recent years. See Ibid at 78. In this regard, in 2013, as an attempt to unify the regulation of capital markets, the government of Canada and governments of British Columbia and Ontario proposed a new structure which is called the Cooperative Capital Markets Regulatory System (“CCMR”), and later in 2014, said governments signed a Memorandum of Agreement together with two additional provinces, Saskatchewan and New Brunswick, and agreed on working towards the establishment of the CCMR. However, at the time of writing, the CCMR still remains as a project. See Agreement in Principle to Move Towards a Cooperative Capital Markets Regulatory System, CCMR (19 September 2013), online: [https://perma.cc/7KPS-Z2G3]; Memorandum of Agreement Regarding the Cooperative Capital Markets Regulatory System, CCMR (8 September 2014), online: [https://perma.cc/4ELR-AMZ8]. At the time of writing, the governments participating in the CCMR are: Canada, British Columbia, New Brunswick, Nova Scotia, Ontario, Prince Edward Island, Saskatchewan, and Yukon.
146 Nicholls, supra note 144 at 101.
147 While national instruments are in effect in every province and territory, multilateral instruments refer to those that are adopted by some provinces and territories. Ibid at 100-101.
148 Ibid.
Acts and the *National Instrument 31-103 Registration Requirements, Exemptions and Ongoing Registrant Obligations* ("National Instrument 31-103").\textsuperscript{149}

In addition to the provincial legislations and national instruments, Canadian securities regulations are supplemented by two self-regulatory organizations’ ("SRO") oversight in the capital markets. These are the Investment Industry Regulatory Organization of Canada ("IIROC") that regulates investment dealers in the Canadian securities markets,\textsuperscript{150} and the Mutual Fund Dealers Association of Canada ("MFDA") that regulates dealers engaging in the distribution of mutual funds.\textsuperscript{151} Dealers, depending on the subject of their businesses, must be a member of either the IIROC or the MFDA ("Dealer Member").\textsuperscript{152} Furthermore, investment advisers working for or on behalf of an IIROC/MFDA-registered Dealer Member must be approved by the relevant SRO to carry out their activities in the securities markets.\textsuperscript{153}

2.2.2. Definition

The Securities Acts in Canada, despite some minor differences in wording of the definition of investment advisers, share a common indicator to identify a person as an investment adviser: being engaged in or holding oneself out as being engaged in the business of advising.\textsuperscript{154} In parallel with the provincial and territorial regulations, the CSA, too, considers being engaged in the business of advising to be an essential element that determines whether a person’s

\textsuperscript{149} It should be noted that the National Instrument 31-103 is not the only instrument developed by the CSA for regulating investment advisers. The CSA, through staff notices and consultation papers as well as other national instruments, such as the National Instrument 23-101 Trading Rules, sheds light on and regulates varying issues relating to investment advisory.

\textsuperscript{150} Nicholls, *supra* note 144 at 114-115, 123-124.

\textsuperscript{151} *Ibid* at 115.

\textsuperscript{152} *National Instrument 31-103 Registration Requirements, Exemptions and Ongoing Registrant Obligations* (12 June 2018) ss 9.1, 9.2 [National Instrument 31-103].


\textsuperscript{154} See e.g. *OSA, supra* note 95 s 1; *Securities Act*, RSA 2000, c S-4, s 1.
activities fall within the scope of investment advisory. In this regard, the CSA highlights a number of elements that identify a person’s activities as the business of advising in securities. These elements, while not exhaustive, are: carrying out activities similar to that of an investment adviser, receiving compensation for the service provided, and contacting people to promote securities transactions. Firstly, a person performing activities that would normally be carried out by an investment adviser, such as promoting or advising in securities, may be deemed to be an investment adviser even if these activities do not constitute the primary business of the said person. Especially, where a person carries out such activities on a regular basis, it is likely that the said person is engaged in the business of advising in securities. Nevertheless, advising activities occurring as a one-time event or as an incidental transaction while carrying out another business do not satisfy this element. The second element, receiving compensation, is satisfied where a person is remunerated for the investment advice it provided. The CSA, in a similar vein to the SEC, construes this element very broadly; accordingly, any money paid to the provider of the investment advice in any form in exchange of the investment advice suffices to be regarded as a compensation. The last element, contacting people to promote securities transactions, may indicate that a person is in the business of advising in securities even if the contact with people is not in a direct form. For example, soliciting people or advertising the services through a web site, or advertising one’s

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155 Companion Policy 31-103CP, supra note 153 s 1.3.
156 The CSA states that the existence of one of these elements does not automatically mean that the relevant person is an investment adviser. Ibid.
157 Ibid.
158 Ibid.
159 Ibid.
160 Ibid.
162 Companion Policy 31-103CP, supra note 153 s 1.3.
163 See Ibid.
164 Etherington (Re), 2002 LNONOSC 472 at paras 17-21; MP Global Financial Ltd. (Re), 2011 LNONOSC 628 at para 107.
skills in wealth management through brochures are strong indicators of being engaged in the business of advising in securities.\textsuperscript{165}

\subsection*{2.2.3. Registration}

In Canada, as in the USA, investment advisers are subject to registration requirements. All Securities Acts stipulate that investment advisers must register with the securities regulator.\textsuperscript{166} While the Securities Acts provide the framework for a basic registration requirement, the \textit{National Instrument 31-103} and the \textit{Companion Policy 31-103CP Registration Requirements and Exemptions} ("Companion Policy 31-103CP") provide a more detailed structure for the registration of investment advisers. Under the \textit{National Instrument 31-103}, the registration categories for investment advisers are determined as "portfolio manager" and "restricted portfolio manager."\textsuperscript{167} While a portfolio manager can provide advice regarding any securities,\textsuperscript{168} a restricted portfolio manager is subject to the restrictions imposed by the securities regulator, and accordingly, it can only provide advice regarding specific securities permitted by the securities regulator it is registered with.\textsuperscript{169} The \textit{National Instrument 31-103}, in addition to imposing registration requirements on investment advisers, also provide the circumstances where a person or a company is exempted from registration. For example, a

\textsuperscript{165} \textit{Re David Michael Michaels}, 2014 BCSECCOM 327 at paras 68, 69, 73, 78.
\textsuperscript{166} See e.g. \textit{OSA, supra} note 95 s 25(3) ("[u]nless a person or company is exempt under Ontario securities law from the requirement to comply with this subsection, the person or company shall not engage in the business of, or hold himself, herself or itself out as engaging in the business of, advising anyone with respect to investing in, buying or selling securities unless the person or company, (a) is registered in accordance with Ontario securities law as an adviser; (b) is a representative registered in accordance with Ontario securities law as an advising representative of a registered adviser and is acting on behalf of the registered adviser; or (c) is a representative registered in accordance with Ontario securities law as an associate advising representative of a registered adviser and is acting on behalf of the registered adviser under the supervision of a registered advising representative of the registered adviser."); \textit{The Securities Act}, CCSM c S50, s 6(1) ("[a] person must not (a) trade in a security or derivative; (b) act as an adviser; (c) act as an investment fund manager; or (d) act as an underwriter; unless the person is registered, in accordance with the regulations, in the category that the regulations prescribe for the activity.").
\textsuperscript{167} \textit{National Instrument 31-103, supra} note 152 s 7.2(1). It should also be noted that individuals employed by or are acting on behalf of an investment adviser must be registered as advising representatives, or associate advising representatives or chief compliance officers. \textit{Ibid} ss 3.11, 3.12, 3.13.
\textsuperscript{168} \textit{Ibid} s 7.2(2)(a).
\textsuperscript{169} \textit{Companion Policy 31-103CP, supra} note 153 s 7.2.
registered dealer that performs advising activities regarding its clients’ managed accounts is not required to register as an investment adviser provided that the said dealer is a member of the IIROC and provides investment advice in compliance with the IIROC Dealer Member Rules.\textsuperscript{170}

Where an investment adviser registered with a securities regulator wishes to extend its services to other jurisdictions, the Passport System provides a great convenience for the registration with multiple securities regulators. The Passport System is a mechanism which is used by all Canadian provinces and territories, except Ontario, to facilitate market participants’ access to the capital markets in multiple jurisdictions in Canada.\textsuperscript{171} Under the Passport System, once a person’s or a company’s application for registration or exemption under a designated category (e.g. investment adviser or dealer) or a prospectus filed by an issuer is approved by a securities regulator, the said person, company or the issuer can have this approval applied in other jurisdictions as well.\textsuperscript{172} Although Ontario has not adopted the Passport System, the Ontario Securities Commission (“OSC”), while examining an application for registration or exemption, takes the principal securities regulator’s decision into account as well through a system called “interface system.”\textsuperscript{173} On the other hand, securities regulators in other provinces and territories accept the decisions of the OSC to maximize the effectiveness of the Passport System in the capital markets.\textsuperscript{174}

\textsuperscript{170} National Instrument 31-103, supra note 152 s 8.24.
\textsuperscript{171} Provincial-Territorial Securities Initiative, “Improving Securities Regulation in Canada” Securities Canada, online: \url{https://securitiescanada.org/} [https://perma.cc/6JWV-KRG4].
\textsuperscript{173} CSA, “Pan-Canadian” CSA, online: \url{https://www.securities-administrators.ca/aboutcsa.aspx?id=96} [https://perma.cc/Q7U3-HQ48].
\textsuperscript{174} Ibid.
CHAPTER II:

FIDUCIARY DUTY OF INVESTMENT ADVISERS

The fiduciary duty is a crucial element of investment advisory services and it includes a number of obligations that apply to investment advisers. Before analyzing the risks and challenges that may adversely affect robo-advisers’ compliance with the fiduciary standards while providing service to their clients, we must understand the components and the applicability of the fiduciary duty under securities regulations. This Chapter, firstly, will give a background of the fiduciary duty, and then lay out its components and applicability to investment advisers under the US and Canadian regulations.

1. Definition

Fiduciary law scholar Tamar Frankel argues that the fiduciary relation is one of the primary social relations and that the fiduciary duty and its underlying principles can be understood well when they are analyzed with a comparative approach to two other primary social relations: status and contract.\textsuperscript{175} Firstly, status relation refers to a social relation where a person is heavily dependent on another person.\textsuperscript{176} In this kind of relation, the dependent person obeys the will of the other person who wields power to ensure his own well-being, and on the other hand, the one wielding power refrains from using excessive power over the dependent one and takes care of him so that the person wielding power can keep benefiting from this relation.\textsuperscript{177} In a contract relation, on the contrary to the status relation, neither party can exercise power to dominate the other party, instead, parties determine the obligations to be carried out by themselves with equal legal freedom.\textsuperscript{178} The contract relation is formed with the parties’ mutual understanding on the

\textsuperscript{175} Tamar Frankel, “Fiduciary Law” (1983) 71:3 Cal L Rev 795 at 798.
\textsuperscript{176} Ibid.
\textsuperscript{177} Ibid.
\textsuperscript{178} Ibid at 799.
terms of the agreement they entered into,\textsuperscript{179} and beyond these terms, the parties are not obliged to take care of each other.\textsuperscript{180}

The fiduciary relation has similar aspects with both the status and contract relations, though it has its own unique features. In a fiduciary relation, a person (“beneficiary”) is dependent on another person (“fiduciary”); however, unlike the status relation, in this case, the beneficiary’s dependence on the fiduciary emerges from the expectation of receiving a specific service and does not extend to the level in a status relation.\textsuperscript{181} As a party has the freedom to choose a person to enter into an agreement with in the contract relation, the beneficiary, too, is free to select a fiduciary among many other fiduciaries to receive the service he wants.\textsuperscript{182} However, the fiduciary relation does not have to be established with a contract; indeed, it may occur as a result of a statutory requirement as well as a unilateral undertaking of the fiduciary.\textsuperscript{183}

On the contrary to the status and contract relation, the fiduciary relation is not based on the satisfaction of both parties’ needs,\textsuperscript{184} instead, the fiduciary is required to act selflessly to satisfy the beneficiary’s needs.\textsuperscript{185} The fiduciary duty requires the beneficiary to be protected, because he is vulnerable against the fiduciary and depends on the fiduciary’s expertise to satisfy his own needs.\textsuperscript{186} Furthermore, the beneficiary is not required to compensate the fiduciary for his services, however, parties may agree on that the fiduciary will be remunerated.\textsuperscript{187} Above all, in

\textsuperscript{180} Frankel, \textit{supra} note 175 at 800.
\textsuperscript{181} \textit{Ibid}.
\textsuperscript{182} \textit{Ibid} at 801.
\textsuperscript{184} Frankel, \textit{supra} note 175 at 801.
\textsuperscript{185} Miller, \textit{supra} note 183 at 259.
\textsuperscript{186} See \textit{Ibid} at 253.
\textsuperscript{187} See Frankel, \textit{supra} note 175 at 801.
a fiduciary relation, regardless of whether the fiduciary is remunerated or not, he is obliged to seek the beneficiary’s best interests\textsuperscript{188} with utmost good faith.\textsuperscript{189}

The fiduciary relation exists in a variety of areas in business.\textsuperscript{190} Although fiduciaries from different sectors of business share some fundamental obligations, they may also be subject to varying sector-specific requirements under the fiduciary duty.\textsuperscript{191} Due to these possible differences within the fiduciary duty, an overarching analysis that will elucidate all forms of the fiduciary duty in different sectors will not be conducted herein; instead, as the subject of this thesis requires, the investment adviser fiduciary duty will be analyzed below.

2. Investment Adviser Fiduciary Duty

Every day, millions of transactions are taking place in the securities markets and billions of dollars are traded between investors,\textsuperscript{192} and a myriad of these trades are executed based on the guidance of investment advisers.\textsuperscript{193} As a requisite of the consumer protection policies of the securities regulations, investors’ reliance on investment advisers must be counterbalanced with certain standards of conduct to be imposed on investment advisers; otherwise, investors would be exposed to unreasonable risks while making decisions with the help of investment advisers.\textsuperscript{194} Common law provides a solution to this problem by having created heightened standards of care and the fiduciary obligations for investment advisers. Nevertheless, as in Canada, investment advisers may not always be subject to the fiduciary standards. Furthermore, the fiduciary duty and the specific extent of the obligations contained therein for investment

\textsuperscript{189} Ibid at 986.
\textsuperscript{190} Frankel, supra note 175 at 795.
\textsuperscript{191} Ibid at 797.
\textsuperscript{193} See Laby, supra note 15 at 701.
\textsuperscript{194} See Chapter I, above, for more on this topic.
advisers in the USA have not been established in regulations based on specific rules; instead, they have been interpreted and developed through jurisprudence and the interpretation and guidance provided by the SEC. In Canada, too, the investment adviser fiduciary duty and its exact content is not thoroughly explained in securities regulations; instead, it has developed through the interpretation of courts and securities regulators, specifically the CSA. And today, despite there is a general agreement on the essential principles of the fiduciary duty to some extent, the fiduciary duty itself and the obligations thereunder are not perfectly clear.

Below, the investment adviser fiduciary duty, its components, and its applicability to investment advisers under the jurisprudence and the securities regulations of the USA and Canada will be illustrated and analyzed.

2.1. USA

Despite the IAA stipulates several responsibilities and requirements for investment advisers as to how they should provide services to their clients, it does not explicitly impose a fiduciary duty on investment advisers. Nevertheless, 23 years after the enactment of the IAA, the Supreme Court, in SEC v. Capital Gains Research Bureau, Inc., stated that the Congress, by enacting the IAA, intended to create fiduciary obligations for investment advisers and aimed to prevent conflicts of interest, between investors and investment advisers, that may impede the

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195 See SEC, Investment Advisers, supra note 114 at 23 (“[t]he duty is not specifically set forth in the Act, established by SEC rules, or a result of a contract between the adviser and the client (and thus it cannot be negotiated away). Rather, fiduciary duties are imposed on an adviser by operation of law because of the nature of the relationship between the two parties.”).
196 See e.g. SEC v. Capital Gains Research Bureau, Inc., 375 US 180 at 191-192 (US 1963) [Capital Gains].
197 See e.g. SEC, Standard of Conduct, supra note 60.
199 For an interpretation of the application of the fiduciary duty to dealers and investment advisers See CSA Consultation Paper 33-403, supra note 50 at 9560-9562.
200 Miller, supra note 183 at 237.
provision of unbiased investment advices. Following this decision, at later dates, the Supreme Court, in two other decisions too, emphasized that investment advisers are subject to the fiduciary duty under Section 206 of the IAA.

Today, there is no discussion as to whether investment advisers are subject to the fiduciary standards under the IAA; in addition to numerous court decisions following the abovementioned approach of the Supreme Court, the SEC has established a well-grounded framework for the investment adviser fiduciary duty. Nevertheless, the boundaries of the obligations and responsibilities constituting the investment adviser fiduciary duty are not perfectly clear, and the SEC is constantly trying to improve and clarify the fiduciary obligations to ensure better investment advisory services in the capital markets.

The Supreme Court of the United States, in SEC v. Capital Gains Research Bureau, Inc., defines the duty of a fiduciary as “an affirmative duty of ‘utmost good faith, and full and fair disclosure of all material facts’ as well as an affirmative obligation ‘to employ reasonable care to avoid misleading’ his clients.” In parallel with this definition, the SEC sets forth that an investment adviser, under the fiduciary duty, is obliged to act in its clients’ best interests while

201 Capital Gains, supra note 196 at 191-192.
203 See e.g. Laird v. Integrated Res., 897 F (2d) 826 at 832-833 (5th Cir Tex 1990); Goldstein v. SEC, 451 F (3d) 873 at 881 (DC Cir 2006); SEC v. Slocum, Gordon, & Co., 334 F Supp (2d) 144 at 182 (DRI 2004).
204 See SEC, Standard of Conduct, supra note 60; SEC, Investment Advisers, supra note 114 at 22-28.
205 See e.g. SEC, Proposed Commission Interpretation Regarding Standard of Conduct for Investment Advisers; Request for Comment on Enhancing Investment Adviser Regulation, Release No IA-48891 (18 April 2018). This proposal was adopted as the “Commission Interpretation Regarding Standard of Conduct for Investment Advisers” on 5 June 2019, and for now, this release represents the SEC’s current interpretation of the investment adviser fiduciary duty. See SEC, Standard of Conduct, supra note 60. Nevertheless, this interpretation has been criticized for being vague in some aspects of the investment adviser fiduciary duty. See e.g. Rick Fleming, “Statement Regarding the SEC’s Rulemaking Package for Investment Advisers and Broker-Dealers” SEC (5 June 2019), online: <https://www.sec.gov/news/public-statement/statement-regarding-sec-rulemaking-package-investment-advisers-broker-dealers> [https://perma.cc/RTA9-SF55].
206 Capital Gains, supra note 196 at 194 (citations omitted).
providing advices.\textsuperscript{207} In order to satisfy this obligation, an adviser must always avoid conflicts of interest with its clients, and under any circumstances, cannot use its clients’ trust for its own benefits.\textsuperscript{208} Further, the fiduciary duty requires an investment adviser to employ a high level of care which goes beyond a simple honesty and good faith, and accordingly, an investment adviser must avoid even the possibility of unintentional harms it may cause to its clients through the advices it provides.\textsuperscript{209} In order to ensure the satisfaction of these duties, investments advisers must comply with five fundamental requirements under the fiduciary duty: (i) disclosing all material facts to clients,\textsuperscript{210} (ii) collecting sufficient information from clients regarding their financial status and investment targets,\textsuperscript{211} (iii) providing a suitable advice\textsuperscript{212} through meticulously investigating the basis and background of the recommendations,\textsuperscript{213} and monitoring the client’s investments to ensure the investment advice is suitable and in the best interest of the client,\textsuperscript{214} (iv) disclosing, eliminating, and avoiding conflicts of interest,\textsuperscript{215} (v) ensuring the best execution of clients’ transactions.\textsuperscript{216} These obligations, as will be shown below, overlap with the Canadian regulatory approach to the fiduciary duty and obligations of investment advisers to a great extent, therefore, a detailed analysis thereof will be provided below in the light of both the US and Canadian approaches.

\textsuperscript{207} SEC, Investment Advisers, supra note 114 at 22.
\textsuperscript{208} Ibid.
\textsuperscript{209} Ibid; See Capital Gains, supra note 196 at 191-192.
\textsuperscript{210} In the Matter of Arleen W. Hughes doing business as E. W. Hughes & Company, Release No 4048 (18 February 1948) [Arleen W. Hughes].
\textsuperscript{211} SEC, Standard of Conduct, supra note 60 at 13.
\textsuperscript{212} Ibid at 12-13; See also SEC, Suitability of Investment Advice Provided by Investment Advisers; Custodial Account Statements for Certain Advisory Clients, Release No IA-1406 (proposed: 22 March 1994). Despite this rule was not adopted and did not gain effect, it is frequently referred to in order to interpret the investment adviser fiduciary duty, as the SEC, by proposing this rule, did not intend to impose new obligations on investment advisers; instead, it aimed to elucidate the investment adviser fiduciary duty. See Ji, supra note 33 at 1552.
\textsuperscript{214} SEC, Standard of Conduct, supra note 60 at 20-21.
\textsuperscript{215} Capital Gains, supra note 196 at 191-192.
2.2. Canada

In Canada, unlike the USA, there is no regulatory or jurisprudential consensus as to whether investment advisers are required to act as fiduciaries while providing service to their clients. Under the securities laws of Canada, investment advisers and dealers must “deal fairly, honestly, and in good faith with their clients.”\(^\text{217}\) Accordingly, the minimum level of standard of care that investment advisers must adopt in dealing with their clients is not the fiduciary duty, but having good faith, being honest and fair. Nonetheless, four provinces stipulate a best interest standard depending on the type of account used in an adviser-client relationship. Only in Alberta, Manitoba, Newfoundland and Labrador, and New Brunswick, the Securities Acts require investment advisers to act in their clients’ best interests if the investment advisers are granted the discretion over their clients’ assets.\(^\text{218}\) Here, a brief explanation of discretionary accounts is needed. In Canada, portfolio managers (i.e. investment advisers) may manage their clients’ assets either through discretionary or non-discretionary accounts. When a non-discretionary account is used, the investment adviser must obtain the consent of its client for every transaction it makes with its client’s assets.\(^\text{219}\) On the contrary, in a discretionary account, the client’s consent for every transaction is not required, and accordingly, the investment adviser can transact in securities without having to ask its client’s permission.\(^\text{220}\) In the four provinces mentioned above, when investment advisers are using discretionary accounts, they must serve their clients’ best interests, and accordingly, they may become subject to the fiduciary duty.\(^\text{221}\) In addition to these provinces, in Quebec, investment advisers are required to

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\item CSA Consultation Paper 33-403, supra note 50 at 9564.
\item Ibid at 9564; See Securities Act, RSA 2000, c S-4, s 75.2(2); The Securities Act, CCSM, c S50, s 154.2(2); Securities Act, RS NL 1990, c S-13, s 26.2(2); Securities Act, SNB 2004, c S-5.5, s 54(2).
\item CSA Consultation Paper 33-403, supra note 50 at 9565.
\item Ibid.
\item Both the Supreme Court and the CSA defines the fiduciary duty as the duty to act in one’s client’s best interest. See Galambos v. Perez, 2009 3 SCR 247 at para 66 (“… it is fundamental to ad hoc fiduciary duties that there be an undertaking by the fiduciary, which may be either express or implied, that the fiduciary will act in the best interests of the other party.”); CSA Consultation Paper 33-403, supra note 50 at 9560 (“[a] fiduciary duty is a duty of a person to act in another person’s best interests.”) (emphasis omitted). Nevertheless, the CSA, in 2016, in a discussion as to whether a regulatory best interest standard should be imposed on registrants, stated that despite
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comply with standards of conduct that are similar to the fiduciary duty under common law.\textsuperscript{222} The \textit{Securities Act} (Quebec) sets forth, “[a]ll persons registered as dealers, advisers or representatives are required to deal fairly, honestly, loyally and in good faith with their clients.”\textsuperscript{223} Additionally, under the \textit{Securities Act} of Quebec, investment advisers are “required to act with all the care that may be expected of a knowledgeable professional acting in the same circumstances.”\textsuperscript{224} According to the jurisprudence and the relevant doctrine in Quebec, investment advisers are also subject to the regulations governing property administrators and the general contractual relationships.\textsuperscript{225} In this regard, the \textit{Civil Code of Quebec} (“CCQ”) requires property administrators to “act honestly and faithfully in the best interest of the beneficiary”\textsuperscript{226} and contractors to “act in the best interests of their clients.”\textsuperscript{227} According to some scholars, these standards stipulated by the CCQ are similar to the duties of a fiduciary under common law.\textsuperscript{228}

Despite there is no federal statutory fiduciary duty imposed on investment advisers, the Canadian jurisprudence shows that investment advisers may be fiduciaries depending on the facts and circumstances of the relationship between the adviser and its client.\textsuperscript{229} In this regard,

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\textsuperscript{222} CSA Consultation Paper 33-403, \textit{supra} note 50 at 9564.  \\
\textsuperscript{223} \textit{Securities Act}, CQLR c V-1.1 s 160 [QSA].  \\
\textsuperscript{224} \textit{Ibid} s 160.1.  \\
\textsuperscript{225} CSA Consultation Paper 33-403, \textit{supra} note 50 at 9564.  \\
\textsuperscript{226} \textit{Civil Code of Quebec}, CCQ-1991, s 1309.  \\
\textsuperscript{227} \textit{Ibid} s 2100.  \\
\textsuperscript{228} CSA Consultation Paper 33-403, \textit{supra} note 50 at 9564.  \\
\textsuperscript{229} \textit{Ibid} at 9561.
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courts have developed an approach based on five different factors in order to determine whether an investment adviser is subject to the fiduciary duty or not.\textsuperscript{230} These factors are: (i) vulnerability, (ii) trust, (iii) reliance, (iv) discretion, and (v) professional rules or codes of conduct.\textsuperscript{231}

The first factor, vulnerability, means that if the client does not have an extensive knowledge of securities and capital markets, or if his age, language, or level of education makes him vulnerable against the investment adviser, then the adviser may be required to act as a fiduciary.\textsuperscript{232} Nevertheless, the existence of one of these signs of vulnerability does not automatically satisfy this factor. For example, a businessman who does not have experience in futures trading but previously made considerable number of transactions in commodities may not be deemed vulnerable against his investment adviser just because of his lack of experience in futures trading.\textsuperscript{233}

According to the second factor, the client’s high level of trust in his adviser may be a sign of a fiduciary relation.\textsuperscript{234} In this regard, the degree of trust can be measured taking into consideration what type of account is used by the investment adviser (i.e. discretionary or non-discretionary)\textsuperscript{235} and for how long the investment adviser has been providing service to its client.\textsuperscript{236} Accordingly, the management of assets through discretionary accounts,\textsuperscript{237} or the

\textsuperscript{230} See \textit{Hunt v. TD Securities Inc.} (c.o.b. \textit{TD Evergreen}), 2003 OJ No 3245 at para 40 [\textit{Hunt}].
\textsuperscript{231} Ibid.
\textsuperscript{232} Ibid. See also \textit{Laflamme v. Prudential-Bache Commodities Canada Ltd.}, 2000 SCJ No 25 at para 28; \textit{Frame v. Smith}, 1987 2 SCR 99 at para 63 (discussing the importance of vulnerability in determining the existence of the fiduciary duty under common law).
\textsuperscript{233} \textit{Zraik v. Levesque Securities Inc.}, 2001 OJ No 5083 at paras 10, 24-26.
\textsuperscript{234} \textit{Hunt}, supra note 230 at para 40.
\textsuperscript{235} \textit{Ibid} at paras 49-56.
\textsuperscript{237} \textit{Hunt}, supra note 230 at paras 49-56.
provision of service for a considerably long time are signs of the existence of a high level of trust.\textsuperscript{238}

The third factor, reliance, means that if the client has been relying on the investment adviser’s competence and skills for a long time or if the investment adviser publicly promotes his competence and skills the client can depend on for making investments, such reliance may require the investment adviser to act as a fiduciary.\textsuperscript{239} Where the second factor, trust, is satisfied and it is found that the client has a high level of trust in his investment adviser, it is likely that the reliance is established too.\textsuperscript{240}

The fourth factor, discretion, is particularly important in determining whether an investment adviser is subject to the fiduciary duty. As explained above, when a discretionary account is used by an adviser to manage the client’s assets, the consent of the client is not required for every securities transaction made by the adviser.\textsuperscript{241} According to the Canadian common law, where the management of the client’s assets is executed by the investment adviser through a discretionary account, the investment adviser is always required to comply with the fiduciary standards.\textsuperscript{242} Nevertheless, the use of a non-discretionary account does not automatically mean that the investment adviser is not a fiduciary.\textsuperscript{243} Indeed, where other factors illustrated herein are satisfied in a client-investment adviser relation, the investment adviser may be subject to the fiduciary duty despite a non-discretionary account is used.\textsuperscript{244}

\textsuperscript{238} Zivadinovich v. Mehta, supra note 236 at para 4.
\textsuperscript{239} Hunt, supra note 230 at para 40.
\textsuperscript{240} Ibid at para 57.
\textsuperscript{241} CSA Consultation Paper 33-403, supra note 50 at 9565.
\textsuperscript{242} Ibid at 9564.
\textsuperscript{243} Ibid at 9565.
\textsuperscript{244} Ibid.
Finally, the last factor, professional rules or codes of conduct, is a complementary factor rather than a determinative one. Professional rules created by a professional body or a self-regulating body do not directly lead to the determination that an investment adviser is a fiduciary; instead, they provide guidance to the courts in determining the duties and responsibilities that an investment adviser may be subject to.\textsuperscript{245} Accordingly, courts take these rules into consideration while assessing whether an investment adviser is a fiduciary or not.\textsuperscript{246}

Despite these factors form the basis of the examination of whether an investment adviser is subject to the fiduciary duty, they are not exhaustive, and courts may consider more factors depending on the specific facts of a particular case.\textsuperscript{247}

The above part of this section has illustrated where and how the investment adviser fiduciary duty arises under Canadian regulations and jurisprudence. Now, we should identify the responsibilities and obligations falling under the investment adviser fiduciary duty. The Supreme Court, in \textit{Galambos v. Perez}, stated: “it is fundamental to \textit{ad hoc} fiduciary duties that there be an undertaking by the fiduciary, which may be either express or implied, that the fiduciary act in the best interests of the other party.”\textsuperscript{248} The Supreme Court, in another oft-cited decision, found: “[…] while a fiduciary obligation carries with it a duty of skill and competence, the special elements of trust, loyalty, and confidentiality that obtain in a fiduciary relationship give rise to a corresponding duty of loyalty.”\textsuperscript{249} In parallel with the US interpretation of the fiduciary duty, under the Canadian law, fiduciaries must act with utmost good faith while

\textsuperscript{245} \textit{Hodgkinson v. Simms}, [1994] 3 SCR 377 at para 52 (“[i]n sum, the rules set by the relevant professional body are of guiding importance in determining the nature of the duties flowing from a particular professional relationship.”).
\textsuperscript{246} \textit{Hunt, supra note 230 at paras 62-63.}
\textsuperscript{247} \textit{Ibid} at para 41.
\textsuperscript{248} \textit{Galambos v. Perez, supra note 221 at para 66.}
\textsuperscript{249} \textit{Hodgkinson v. Simms, supra note 245 at para 26.}
providing service to their clients and cannot give priority to their own interests instead of their clients’ interests. Furthermore, an investment adviser, under the fiduciary duty, must always avoid conflicts of interest with its clients and where it is impossible to avoid conflicts of interest, the fiduciary duty requires the investment adviser to obtain its client’s explicit consent in order to keep providing service to its client. Additionally, an investment adviser, when it is subject to the fiduciary duty, under any circumstances, cannot exploit its client’s conditions to obtain a profit for itself and must always keep its clients fully informed as to the particulars of its service. Despite the fundamental principles of the fiduciary duty are well-established, as the investment adviser fiduciary duty is not regulated and imposed in securities regulations in Canada, regulations do not provide a detailed description of the exact obligations under the fiduciary duty. As mentioned above, the current securities regulations in Canada require investment advisers to “deal fairly, honestly, and in good faith with their clients.” Within this framework, the standard of conduct for investment advisers include five fundamental obligations for investment advisers: (i) disclosing all material facts to clients, (ii) collecting sufficient information from clients regarding their financial status and investment targets, (iii) providing a suitable advice based on an extensive knowledge about the particulars of the investment instruments recommended to clients, (iv) disclosing, controlling, and avoiding conflicts of interest, and (v) ensuring the best execution of clients’ transactions.

252 Ellis, *supra* note 250 at Chapter 1, 4(2)(a).
253 *CSA Consultation Paper 33-403*, *supra* note 50 at 9560.
255 Ellis, *supra* note 250 at Chapter 1, 4(2)(d)(i).
256 *CSA Consultation Paper 33-403*, *supra* note 51 at 9563.
257 *National Instrument 31-103*, *supra* note 152 s 14.2.
258 *Ibid* s 13.2.
259 *Ibid* s 13.3.
260 *Companion Policy 31-103CP*, *supra* note 153 s 13.3.
261 *National Instrument 31-103*, *supra* note 152 ss 13.4, 13.5.
All investment advisers in Canada, regardless of being subject to the fiduciary duty, are required to observe these obligations illustrated as five different items above. Nevertheless, the existence of the fiduciary duty in a particular case will certainly alter the level of prudence and care required from an investment adviser.\textsuperscript{263} It is worth reiterating that the current securities regulations in Canada require investment advisers to “deal fairly, honestly, and in good faith with their clients”\textsuperscript{264} and observe the abovementioned five obligations while providing services. However, where an investment adviser is acting as a fiduciary, and accordingly, is required to act with utmost good faith\textsuperscript{265} and in the best interest of its client\textsuperscript{266}, as a matter of course, the investment adviser will be expected to perform these obligations by applying an excessively high level of care and prudence which cannot be expected from an investment adviser which is not a fiduciary. In this case, the investment adviser will be required to observe something much more greater than the obligation to “deal fairly, honestly, and in good faith with their clients.”\textsuperscript{267} Accordingly, in case of a breach of these obligations, the sanctions to be faced by an investment adviser acting as a fiduciary will be much more severe than those faced where the fiduciary duty is non-existent.\textsuperscript{268}

As will be discussed in Chapter IV, below, the dynamics of the relationship between robo-advisers and their clients in Canada indicate the existence of a fiduciary relation between each other. Accordingly, a clear description of the investment adviser fiduciary duty is of great importance for the analysis herein. Nonetheless, aforementioned in this section, the obligations

\textsuperscript{263} See generally CSA Consultation Paper 33-403, supra note 50 at 9560.
\textsuperscript{264} Ibid at 9563.
\textsuperscript{265} Rotman, supra note 188 at 986.
\textsuperscript{266} Ibid at 984.
\textsuperscript{267} See CSA Consultation Paper 33-403, supra note 50 at 9563 (“[a] threshold question is whether the obligation to act fairly, honestly and in good faith creates, or is equivalent to, a best interest standard. Many commentators believe that it is not (by itself) equivalent to, and falls short of, a best interest standard. Others disagree. We are not aware of any court or regulatory decision that has concluded that this duty creates, or is equivalent to, a fiduciary duty.”).
\textsuperscript{268} See CSA Consultation Paper 33-404, supra note 198 at 3965.
under the fiduciary duty are not clear in the Canadian securities law. In order to interpret the extent of the fiduciary duty and its effect on the abovementioned obligations of investment advisers, the CSA’s initiative for a regulatory best interest standard and the recently adopted amendments to the National Instrument 31-103 and the Companion Policy 31-103CP will be used as a reference in this Thesis. In order to provide a precise description of what investment adviser fiduciary duty would be in the light of these recent changes and overall the Canadian securities laws, a review of the developments of the initiative for a regulatory best interest standard and the recently adopted client-focused reforms should be provided herein.

The CSA, on 25 October 2012, published a consultation paper titled CSA Consultation Paper 33-403: The Standard of Conduct for Advisers and Dealers: Exploring the Appropriateness of Introducing a Statutory Best Interest Duty When Advice is Provided to Retail Clients (“CSA Consultation Paper 33-403”), and therein, it has targeted to provide a forum for the discussion as to the applicability and feasibility of imposing a best interest duty on investment advisers and dealers to address the then-existing concerns related to investor protection. In the said consultation paper, the CSA defined the fiduciary duty as “a duty of a person to act in another person’s best interests.” Further, it has indicated five principles of the fiduciary duty that must be adhered to by a fiduciary. According to the first principle, a fiduciary must not subordinate clients’ interests to its interests. The CSA states: “[f]iduciaries must ignore all considerations other than single-mindedly serving the interests of their clients in all matters related to the service provided – they must place their clients’ interests ahead of their own.” Under the second principle, a fiduciary must avoid having conflicts of interest with their clients and where a conflict of interest is unavoidable, it must be fully and frankly disclosed and the

269 CSA Consultation Paper 33-403, supra note 50 at 9558.
270 Ibid at 9560 (emphasis omitted).
271 Ibid.
272 Ibid.
client’s explicit consent regarding the existence of the conflict must be obtained.\textsuperscript{273} The third principle indicates that a fiduciary must not exploit his clients.\textsuperscript{274} The CSA states: “[i]f fiduciaries learn of an opportunity as a result of acting as a fiduciary for a client, the fiduciary must not take advantage of the opportunity even if the client cannot take advantage of it themselves.”\textsuperscript{275} According to the fourth principle, a fiduciary must disclose all material facts pertaining to his service to his clients.\textsuperscript{276} Finally, under the fifth principle, a fiduciary must perform his duty reasonably prudently and act “with the degree of care, diligence and skill that a reasonably prudent person would exercise in the circumstances.”\textsuperscript{277}

Following the \textit{CSA Consultation Paper 33-403}, the CSA, on 17 December 2013, published CSA \textit{Staff Notice 33-316 Status Report on Consultation under CSA Consultation Paper 33-403: The Standard of Conduct for Advisers and Dealers: Exploring the Appropriateness of Introducing a Statutory Best Interest Duty When Advice is Provided to Retail Clients}, and therein, it stated that, based on the comment letters it received pertaining to its proposal for a best interest standard, it has found a disagreement among the stakeholders as to whether then-existing regulations provide a sufficient protection for investors and what kind of regulatory steps would address the issues in question.\textsuperscript{278} Additionally, based on the said comment letters, the CSA has determined that the proposed best interest duty must not be ambiguous, that potential negative effects of a best interest duty on the markets and investors must be scrupulously analyzed, and that there is a need to conduct further work on the said proposal.\textsuperscript{279}

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\item \textsuperscript{273} \textit{Ibid.}
\item \textsuperscript{274} \textit{Ibid.}
\item \textsuperscript{275} \textit{Ibid.}
\item \textsuperscript{276} \textit{Ibid} at 9561.
\item \textsuperscript{277} \textit{Ibid.}
\item \textsuperscript{278} \textit{CSA Staff Notice 33-316 Status Report on Consultation under CSA Consultation Paper 33-403: The Standard of Conduct for Advisers and Dealers: Exploring the Appropriateness of Introducing a Statutory Best Interest Duty When Advice is Provided to Retail Clients}, (2013) 26 OSCB 11998 at 11998 [CSA Staff Notice 33-316].
\item \textsuperscript{279} \textit{Ibid.}
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The CSA, on 28 April 2016, published CSA Consultation Paper 33-404 Proposals to Enhance the Obligations of Advisers, Dealers, and Representatives toward Their Clients [“CSA Consultation Paper 33-404”]. In the said consultation paper, the CSA extended her initial proposal for a regulatory best interest standard, and in addition to the best interest standard which are considered by the provincial and territorial securities regulators, except for the British Columbia Securities Commission (“BCSC”), the CSA proposed a number of amendments to the National Instrument 31-103 targeting a variety of obligations imposed on advisers and dealers,\textsuperscript{280} such as conflicts of interest, Know-Your-Client, Know-Your-Product, suitability, and designation requirements.\textsuperscript{281} These amendments mainly aimed to enhance the obligations of advisers and dealers to address the concerns regarding the protection of investors.\textsuperscript{282} Additionally, in the said consultation paper, the CSA has laid out the principles of the proposed regulatory best interest standard.\textsuperscript{283} The first principle required registrants to act in the best interests of their clients.\textsuperscript{284} According to this principle, registrants are prohibited from subordinating their clients’ interests to their interests.\textsuperscript{285} The second principle indicated that registrants must “avoid or control conflicts of interest in a manner that prioritizes the client’s best interests.”\textsuperscript{286} This principle explicitly pointed that solely a disclosure, without any other measures, is not sufficient for a good conflicts of interest policy.\textsuperscript{287} The third principle required that all material facts be disclosed fully and timely in a manner that they can be clearly understood by clients.\textsuperscript{288} According to the fourth principle, registrants are required to ensure that the best interests of their clients are secured while interpreting the law and agreements
which may entail conflicting interpretations. The last principle set forth that “[t]irms and representatives should exercise the degree of care, diligence and skill that a reasonable prudent and unbiased firm or representative (as applicable) would exercise in the circumstances.” It can be clearly seen that the principles laid out in the CSA Consultation Paper 33-404 align with those laid out in the CSA Consultation Paper 33-403 to a great extent. It should also be noted that the CSA has explicitly noted that the proposed regulatory best interest standard is not a fiduciary duty. It has stated: “[a]ny best interest standard in the context of Canadian securities legislation would be formulated as a regulatory conduct standard and not as a restatement or formulation of a fiduciary duty” and “[t]he BIS Consulting Jurisdictions have also considered whether the use of the phrase ‘best interest’ in the formulation automatically established a fiduciary duty. Our view is that it does not, since our express intention is not to establish a statutory fiduciary duty for registrants, and although the phrase ‘best interest’ has been interpreted in some contexts as a fiduciary duty, in others it has not.” Despite that the CSA has clearly stated that the best interest standard should not be construed as a fiduciary duty, the abovementioned principles of the best interest standard, such as acting in the best interests of the client and acting with diligence, in fact, fall within the scope of the fiduciary duty. Furthermore, it is worth reiterating that the CSA itself, in the CSA Consultation Paper 33-403 defined the fiduciary duty as “a duty of a person to act in another person’s best interests.” Accordingly, a best interest duty may indeed entail the emergence of a fiduciary duty especially given that, in the light of the jurisprudence developed on this matter, one of the strongest indicators of the fiduciary duty is the requirement to act in a person’s best interest. The CSA

289 Ibid.
290 Ibid.
291 Ibid at 3965.
292 Ibid.
293 Ibid.
294 CSA Consultation Paper 33-403, supra note 50 at 9560.
295 See e.g. Galambos v. Perez, supra note 221 at para 66.
indicated that the precise content of the fiduciary duty is not clear, therefore, it may not be feasible to impose unclear standards on registrants.\textsuperscript{296} The CSA supported its position with other arguments too such as: “fiduciary duty remedies are potentially too harsh for all instances of registrant misconduct”\textsuperscript{297} and “the content of the regulatory best interest standard is more comprehensive and tailored to the client-registrant relationship than a statutory fiduciary duty.”\textsuperscript{298} In short, it can be seen that the CSA aimed to avoid imposing unsuitable or unclear rules on registrants but wanted to establish a framework where investors’ best interests are secured by registrants; accordingly, it tried to explicitly distinguish the best interest standard from the fiduciary duty. However, as mentioned above, imposing a best interest standard on registrants is likely to entail the emergence of the fiduciary duty in a client-registrant relationship. Hence, all in all, the principles of the best interest standard developed by the CSA are strong indicators of what an investment adviser fiduciary duty would be under the Canadian securities regulations.

Following the \textit{CSA Consultation Paper 33-404}, the CSA, on 11 May 2017, published \textit{CSA Staff Notice 33-319 Status Report on CSA Consultation Paper 33-404 Proposals to Enhance the Obligations of Advisers, Dealers, and Representatives toward Their Clients} in which it stated that a number of securities regulators had strong reservations on implementing a regulatory best interest standard\textsuperscript{299} and that it will focus on developing amendments to the \textit{National Instrument 31-103} to enhance the obligations registrants must carry out in dealing with their clients.\textsuperscript{300} On 21 June 2018, the CSA has published the proposed amendments to the \textit{National Instrument 31-103}.

\textsuperscript{296} \textit{CSA Consultation Paper 33-404}, supra note 198 at 3965.  
\textsuperscript{297} Ibid (citation omitted).  
\textsuperscript{298} Ibid.  
\textsuperscript{299} CSA Staff Notice 33-319 Status Report on CSA Consultation Paper 33-404 Proposals to Enhance the Obligations of Advisers, Dealers, and Representatives toward Their Clients (2017) 40 OSCB 4778 at 4781-4782 [CSA Staff Notice 33-319].  
\textsuperscript{300} Ibid at 4782.
and the Companion Policy 31-103CP for a 120-day comment period. Finally, on 3 October 2019, the CSA has adopted amendments (“Client Focused Reforms”) to the National Instrument 31-103 and the Companion Policy 31-103CP with minor changes to the proposed amendments published on 21 June 2018. The amendments mainly targeted disclosure, suitability, Know Your Client, Know Your Product, and conflicts of interest requirements. The CSA has summarized the changes brought with these amendments as follows: “[u]nder the amendments, registrants will be required to address material conflicts of interest in the best interest of the client, put the client’s interest first when making a suitability determination, and do more to clarify for clients what they should expect from their registrants.” These amendments will become effective on 31 December 2019; however, there will be a transition period for the requirements introduced with the said amendments to take effect. The amendments to disclosure and conflicts of interest requirements will be effective on 31 December 2020 and other amendments will be implemented starting from 31 December 2021. These amendments will be explained in the relevant sections devoted to the fiduciary obligations below. The significant aspect of these amendments with regard to this Thesis is that the enhanced standards introduced with these amendments also illustrate what obligations an investment adviser acting as a fiduciary would be required to carry out. Of course, these amendments neither imposes a best interest standard nor a fiduciary duty on investment advisers and dealers. Nonetheless, where all investment advisers and dealers, regardless of whether they

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301 See CSA Notice and Request for Comment: Proposed Amendments to National Instrument 31-103 Registration Requirements, Exemptions and Ongoing Registrant Obligations and to Companion Policy 31-103CP Registration Requirements, Exemptions and Ongoing Registrant Obligations – Reforms to Enhance the Client-Registrant Relationship (Client Focused Reforms) (2018) 41 OSCB (Supp-1) at 1 [Proposed Client Focused Reforms].

302 CSA Notice of Amendments to National Instrument 31-103 Registration Requirements, Exemptions and Ongoing Registrant Obligations and to Companion Policy 31-103CP Registration Requirements, Exemptions and Ongoing Registrant Obligations – Reforms to Enhance the Client-Registrant Relationship (Client Focused Reforms) (2019) 42 OSCB (Supp-1) at 1-2 [Client Focused Reforms].

303 See ibid at 8-12.

304 Ibid at 2.

305 Ibid at 1.

306 Ibid at 5.
act as fiduciaries, will be required to adhere to these enhanced standards, an investment adviser acting as a fiduciary would certainly be expected to show a greater diligence and effort than these standards. Therefore, arguably, the standards introduced with the Client Focused Reforms can also be considered to be showing the minimum level of care and diligence a fiduciary must apply in carrying out the obligations set forth in the *National Instrument 31-103* and the *Companion Policy 31-103CP*.

3. **Obligations under the Investment Adviser Fiduciary Duty**

In the light of the above explanation of the fiduciary duty, we can see that the obligations of investment advisers under the securities regulations of Canada and the USA overlap to a great extent; nevertheless, they also have some distinct discrepancies between each other. These obligations and the discrepancies between the standard of conduct developed under the US and Canadian securities regulations will be explained in this section.

The obligations under the fiduciary duty can be categorized under five titles: (i) Disclosure Obligations, (ii) KYC Obligations, (iii) Suitability Obligations, (iv) Conflicts of Interest Obligations, and (v) Best Execution Obligations. The following part of this Chapter is structured based on this categorization.
3.1. Disclosure Obligations

3.1.1. USA

In the USA, all investment advisers, in order to register with either the SEC or a state securities regulator, are required to fill out a form which is called Form ADV. Form ADV is divided into two parts. In Part 1, investment advisers provide information regarding the structure of their business such as the ownership structure, affiliations, clients and employees of the investment adviser. When the registration application is submitted along with this form, the information provided in Part 1 is reviewed to assess the application made by the investment adviser and conduct the administration of the regulatory procedures.

In Part 2 of Form ADV, investment advisers are required to create a brochure that presents information regarding the details of the service provided by the investment adviser. This brochure is considered to be the essential document that satisfies the disclosure requirements of an investment adviser. SEC Rule 204-3(a) sets forth: “[i]f you are registered under the Act as an investment adviser, you must deliver a brochure and one or more brochure supplements to each client or prospective client that contains all information required by Part 2 of Form ADV.” As per SEC Rule 204-3(b), the said brochure must be delivered to any client before or at the time an agreement for the provision of investment advisory is concluded. Furthermore, within 120 days after the end of every fiscal year, an updated version of the brochure including the material changes that occurred within the relevant fiscal year or a

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308 Ibid.
309 Ibid.
311 Ibid.
312 17 CFR § 275.204-3(a).
313 17 CFR § 275.204-3(b)(1).
summary of the material changes as well as an offer to deliver the current version of the brochure must be delivered to all clients.\textsuperscript{314} Furthermore, investment advisers are required to provide their disclosures in plain language.\textsuperscript{315}

In the brochure, first, an investment adviser must describe itself and provide information regarding the owners of the advisory firm.\textsuperscript{316} In the following sections, it must list the types of services it offers and explain the details of the services it is specialized in\textsuperscript{317} and illustrate the process of generating the investment advices for its clients.\textsuperscript{318} Second, the fee structure must be clarified in detail.\textsuperscript{319} This clarification must include all aspects of the fee schedule and policy; for example, whether the fees are open to modification, and whether clients are billed for the services or the fees are deducted from the assets under management, and whether clients can choose between different fee structures must be disclosed.\textsuperscript{320} Especially, if the fees are paid based on the performance of the securities under management, such facts must be particularly disclosed to clients.\textsuperscript{321} Third, the types of clients to whom the service is provided by the investment adviser must be illustrated.\textsuperscript{322} Fourth, the investment strategies as well as the method of analysis adopted by the investment adviser and the risks involved in the relevant strategies and methods must be explained.\textsuperscript{323} Clients must also be notified of the fact that investing carries certain levels of risk, and accordingly, losses may be incurred.\textsuperscript{324} Fifth, conflicts of interest that

\textsuperscript{314} 17 CFR § 275.204-3(b)(2).
\textsuperscript{315} SEC, Form ADV (Paper Version) Uniform Application for Investment Adviser Registration – Part 2: Uniform Requirements for the Investment Adviser Brochure and Brochure Supplements, online: <https://www.sec.gov/about/forms/formadv-part2.pdf> [https://perma.cc/VQW3-CBFF], at General Instructions for Part 2 of Form ADV [SEC, Form ADV Part 2].
\textsuperscript{316} Ibid, Part 2A Item 4.A.
\textsuperscript{317} Ibid, Part 2A Item 4.B.
\textsuperscript{318} Ibid, Part 2A Item 4.C.
\textsuperscript{319} Ibid, Part 2A Item 5.A.
\textsuperscript{320} Ibid, Part 2A Item 5.A, B.
\textsuperscript{321} Ibid, Part 2A Item 6.
\textsuperscript{322} Ibid, Part 2A Item 7.
\textsuperscript{323} Ibid, Part 2A Item 8.A, B.
\textsuperscript{324} Ibid. If the investment adviser is providing advice in a specific type of securities, the particular risks regarding the relevant securities must be clearly described. See Ibid, Part 2A Item 8.C.
may complicate the investment adviser’s adherence to the duty to provide unbiased advices in its clients’ best interests must be disclosed.\textsuperscript{325} Sixth, if the investment adviser or a person holding administrative powers in the advisory firm has been involved in a disciplinary or a legal event, including criminal and civil actions\textsuperscript{326} and administrative proceedings before a federal or a state regulatory authority, an SRO, the SEC, or a foreign financial authority,\textsuperscript{327} which would be considered a material fact by a client in determining the qualifications of the investment adviser, such disciplinary or legal history, too, must be disclosed.\textsuperscript{328} Seventh, if the investment adviser or a person in the management of the advisory firm has other affiliations or financial industry activities, the relevant information must be disclosed to clients.\textsuperscript{329} While the issues illustrated so far constitute the most essential part of the disclosure requirements, there are still some other aspects of the service that must be disclosed to clients in the said brochure. These aspects are as follows: (viii) if the investment adviser is registered with the SEC, the adviser’s code of ethics which has been created in accordance with the SEC Rules and regulations,\textsuperscript{330} (ix) the policy adopted by the investment adviser for choosing or recommending a broker-dealer to

\textsuperscript{325} Ibid, General Instructions for Part 2 of Form ADV. See section 3.2, below, for more on this topic.
\textsuperscript{326} The disclosure of the information regarding a criminal or civil action is required if the investment adviser or the person holding administrative powers in the advisory firm: (i) was found guilty for a felony, or a misdemeanor regarding investments or other offenses such as bribery, fraud, forgery, and perjury, or a conspiracy to carry out such felonies or misdemeanors, or (ii) breached a statute or a regulation governing the investment industry, or (iii) was temporarily or permanently restrained or restricted from carrying out activities in the investment industry, or (iv) is currently subject of a criminal proceeding relating to a crime that implicates an activity in the investment industry or other offenses such as bribery, fraud, forgery, and perjury. See Ibid Part 2A Item 9.A.
\textsuperscript{327} The disclosure of the information regarding an administrative proceeding before a state or a federal regulatory authority, an SRO, the SEC, or a foreign financial regulatory authority is required if it has been determined that the investment adviser or the person holding administrative powers in the advisory firm: (i) caused the cancellation of a business’ authorization to carry out activities in the investment industry, (ii) breached a statute or a regulation governing the investment industry, or in the case of an administrative proceeding before an SRO, violated the rules of the relevant SRO, and faced with a sanction such as being denied to continue to provide investment services, or incurring limitations regarding the investment services provided to clients, or being suspended from the membership of an SRO. See Ibid, Part 2A Item 9.B, C.
\textsuperscript{328} Ibid, Part 2A Item 9.A, B, C. This is not an exhaustive list; therefore, a disciplinary or legal event other than those mentioned here where the investment adviser or the person holding administrative powers in the advisory firm is involved must also be disclosed provided that the information regarding the relevant disciplinary or legal event would be considered a material event by a client in determining the qualifications of the investment adviser. See Ibid, Part 2A Item 9.
\textsuperscript{329} Ibid, Part 2A Item 10.A, B, C.
\textsuperscript{330} Ibid, Part 2A Item 11.A.
execute the securities trades for the clients’ assets,\(^{331}\) (x) whether the investment adviser reviews the accounts or financial plans of its clients on a regular basis, the frequency of these reviews and the titles of the people performing these reviews,\(^{332}\) (xi) if the investment adviser has an additional compensation which is provided by a person other than the client, this arrangement,\(^{333}\) (xii) if the investment adviser is using custodians for the assets of its clients, the information regarding the use of custodians and the notification alerting clients regarding the necessity of a careful review of the account statements by the clients,\(^{334}\) (xiii) if the investment adviser is offering discretionary accounts, the relevant information in this regard,\(^{335}\) (xiv) if the investment adviser executes the voting rights of its clients, its policy regarding the proxy voting,\(^{336}\) (xv) if a payment of more than USD 1200 is required from clients minimum six months before the provision of the investment advisory services, the balance sheet for the previous fiscal year,\(^{337}\) (xvi) if discretionary accounts or custodians are used by the investment adviser, any financial condition that may hinder the performance of the investment adviser’s obligations within this arrangement,\(^{338}\) and lastly, (xvii) if the investment adviser filed or has become the subject of a bankruptcy petition within the last 10 years, the relevant information regarding such petition must be disclosed to clients.\(^{339}\)

As per SEC Rule 204-3(a), investment advisers, in addition to the main brochure explained above, must deliver a brochure supplement to their clients.\(^{340}\) While the main brochure shows information regarding the details of the investment advisory service, the brochure supplement

\(^{333}\) *Ibid* Part 2A Item 14.
\(^{334}\) *Ibid* Part 2A Item 15.
\(^{335}\) *Ibid* Part 2A Item 16.
\(^{336}\) *Ibid* Part 2A Item 17.
\(^{337}\) *Ibid* Part 2A Item 18.A.
\(^{338}\) *Ibid* Part 2A Item 18.B.
\(^{339}\) *Ibid* Part 2A Item 18.C.
\(^{340}\) 17 CFR § 275.204-3(a).
discloses material information regarding the people working under the supervision of the investment adviser and generating investment advice for clients or having discretion over the assets under management. First, the name, age, education, and the business experience of the supervised people for the last five years must be disclosed in the brochure supplement. Second, if a supervised person was involved in a disciplinary or a legal event, including criminal and civil actions and administrative proceedings before a state or a federal regulatory authority, an SRO, the SEC, or a foreign financial authority, which would be considered a material fact by a client in determining the qualifications of the investment adviser, such disciplinary or legal history, too, must be disclosed. Third, if a supervised person is engaged in another business in the investment industry, the details of such business and the investment adviser’s relation with the said business must be clarified in the brochure supplement. Fourth, if a supervised person has an additional compensation which is provided by a person other than the client, this arrangement, too, must be disclosed. Lastly, the details regarding the oversight of the supervised people’s activities, including what kind of method is adopted by the

342 Ibid.
343 SEC, Form ADV Part 2, supra note 315 Part 2B Item 2.
344 The disclosure of the information regarding a criminal or civil action is required if the supervised person: (i) was found guilty for a felony, or a misdemeanor regarding investments or other offenses such as bribery, fraud, forgery, and perjury, or a conspiracy to carry out such felonies or misdemeanors, or (ii) breached a statute or a regulation governing the investment industry, or (iii) was temporarily or permanently restrained or restricted from carrying out activities in the investment industry, or (iv) is currently subject of a criminal proceeding relating to a crime that implicates an activity in the investment industry or other offenses such as bribery, fraud, forgery, and perjury. See Ibid Part 2B Item 3A.
345 The disclosure of the information regarding an administrative proceeding before a state or a federal regulatory authority, an SRO, the SEC, or a foreign financial regulatory authority is required if it has been determined that the supervised person: (i) caused the cancellation of a business’ authorization to carry out activities in the investment industry, (ii) breached a statute or a regulation governing the investment industry, or in the case of an administrative proceeding before an SRO, violated the rules of the relevant SRO, and faced with a sanction such as being denied to continue to provide investment services, or incurring limitations regarding the investment services provided to clients, or being suspended from the membership of an SRO. See Ibid, Part 2A Item 9.B, 9.C.
346 Ibid, Part 2B Item 3.A, B, C. This is not an exhaustive list; therefore, a disciplinary or legal event other than those mentioned here where the supervised person is involved must also be disclosed provided that the information regarding the relevant disciplinary or legal event would be considered a material event by a client in determining the qualifications of the investment adviser. Furthermore, any other formal ruling or hearing to which the supervised person was subject and faced sanctions such as the cancellation or the suspension of his/her license or authorization due to having breached rules designated for his profession must also be disclosed to clients. See Ibid Part 2B Item 3.D.
investment adviser to oversee the investment advices generated by the supervised people and
the name, title and contact information of the supervisors must be specified.\textsuperscript{349}

On 5 June 2019, the SEC has adopted amendments both to IAA and SEA, and imposed a new
requirement on both investment advisers and broker-dealers to provide their clients with a new
disclosure form named Form CRS which will provide a summary of the relationship between
the adviser or dealer and the client.\textsuperscript{350} The Form CRS will include a number of items such as
conflicts of interest, fees and costs related to the service, standards of conduct of the adviser or
dealer, disciplinary history of the adviser or dealer and the services provided to the clients.\textsuperscript{351}
Advisers and dealers are required to prepare their Form CRS in plain English and ensure that
their Form CRS is concise and direct.\textsuperscript{352} In analogy to the Form ADV Part 2, Form CRS, too,
must be provided to the clients before the service is provided or at the time of the conclusion of
the agreement between the investment adviser and client.\textsuperscript{353} The SEC has explicitly stated that
the disclosures to be made in Form CRS will not replace those made in Form ADV Part 2;
instead, Form CRS will function as an additional disclosure instrument to the Form ADV Part
2.\textsuperscript{354} The investment advisers that are already registered or have applied for registration are
required to file their Form CRS beginning on 1 May 2020 and before 30 June 2020.\textsuperscript{355}
Investment advisers that will apply for registration with the SEC after 30 June 2020 must
include their Form CRS in their application.\textsuperscript{356}

\textsuperscript{349} Ibid, Part 2B Item 6.
\textsuperscript{350} See generally, SEC, \textit{Form CRS Relationship Summary; Amendments to Form ADV (2019) Release No 34-
86032, IA-5247}; See also SEC, “Form CRS Relationship Summary; Amendments to Form ADV” SEC (updated
[https://perma.cc/T5XP-YCT4].
\textsuperscript{351} SEC, “Form CRS Relationship Summary; Amendments to Form ADV”, supra note 350.
\textsuperscript{352} Ibid.
\textsuperscript{353} Ibid.
\textsuperscript{354} Ibid.
\textsuperscript{355} Ibid.
\textsuperscript{356} Ibid.
3.1.2. Canada

In Canada, on the contrary to the regulations in the USA, securities regulations do not impose the use of a certain form for the disclosure of material facts to the clients; accordingly, an investment adviser can satisfy the disclosure requirements by providing the material facts in a single or separate documents in a form he can freely choose.357

The material facts that must be disclosed by investment advisers to their clients are listed in the National Instrument 31-103. First, in parallel with the SEC regulations, Canadian investment advisers, too, must disclose the details of their businesses to their clients.358 This disclosure must include information regarding the types of services offered to clients,359 and an explanation of the particulars of the accounts used by the investment adviser.360 If the assets of the client are managed by the investment adviser or a custodian is used for the same purpose, the details of where and how the client’s account is kept and the risks and benefits emerging from the use of the account must be disclosed.361 Second, the disclosure must contain an explanation of the fee structure used by the investment adviser.362 This explanation must include information regarding the operating charges,363 transaction charges,364 and any compensation

357 Companion Policy 31-103CP, supra note 153 s 14.2. Despite there is no specific form for the disclosure, the items listed under sections 14.2(1) and 14.2(2) of the National Instrument 31-103 must be delivered to clients in writing. As an exception, the item specified under section 14.2(2)(b), which is the information regarding the types of services offered to clients may be disclosed orally as well. See National Instrument 31-103, supra note 152 s 14.3.
358 National Instrument 31-103, supra note 152 ss 14.2(a), (b). If the head office of the investment adviser is located outside the local jurisdiction, clients must be informed in writing as to some additional issues arising from being a non-resident investment adviser such as the assets of the investment adviser located outside the local jurisdiction or the fact that obstacles may be encountered by the client in enforcing legal rights against the investment adviser due to being located in a different jurisdiction. See Ibid s 14.5.
359 Ibid s 14.2(2)(b).
360 Ibid s 14.2(2)(a). If the client’s account is held in a Canadian financial institution or a Schedule III bank, it must be disclosed to clients in writing that the investment adviser is not a part of the relevant financial institution or the bank. See Ibid s 14.4(1).
361 Ibid s 14.2(2)
362 Ibid s 14.2(2)(f), (g), (h).
363 Ibid s 14.2(2)(f).
364 Ibid s 14.2(2)(g). In case a non-discretionary account is used, the investment adviser, before performing the transaction, must disclose the transaction charges to be incurred by the client for the requested purchase or sale. Furthermore, if deferred charges will apply, the information regarding the deferred charges, too, must be disclosed.
provided to the investment adviser by a person other than the client for the provision of certain products to the client. Third, clients must be notified of the risks that must be taken into consideration while making investments with the investment adviser. Fourth, conflicts of interest, as required by the securities legislation, must be disclosed to the client. In addition to these fundamental items, the National Instrument 31-103 lists some other aspects of the service that must be explained to clients within the required disclosure. These are as follows:

(v) the items to be demonstrated in and the frequency of the reports to be delivered to clients for their accounts and portfolios, (vi) the investment adviser’s obligations in case of a dispute between the client and the investment adviser and the method to be followed by the client for the resolution of the dispute, (vii) a declaration that the investment adviser is obliged to provide suitable investment advices for the client, (viii) the information that must be provided by the client to the investment adviser, (ix) a description of how investment performance benchmarks are applied in examining the performance of the investments of the client, (x) if the investment adviser is also registered as a scholarship plan dealer, an explanation of the conditions that, in case of a breach thereof, may deprive the client or the client’s beneficiary of the earnings and contributions in the scholarship plan, (xi) an outline of the compliance system, adopted by the investment adviser, that ensures that the investment adviser allocates investment opportunities fairly between its clients. The disclosure requirements are not limited to the abovementioned items; indeed, an investment adviser must disclose all

Lastly, the investment adviser must inform the client as to whether it will collect trailing commissions for the relevant transaction. See Ibid’s 14.2.1.

Ibid’s 14.2(2)(h).

Ibid’s 14.2(2)(c). If the client is making investments with borrowed money, the investment adviser must explain the particular risks involved in this type of investing to the client. See Ibid’s 14.2(2)(d).

Ibid’s 14.2(2)(e). See section 3.2, below, for more on this topic.


Ibid 14.2(2)(k).

Ibid 14.2(2)(l). See section 3.3, below, for more on this topic.

Ibid 14.2(2)(m).


Ibid 14.3.
information that would be considered material by a reasonable investor.\(^375\) It should also be noted that upon the occurrence of a material change in the information previously disclosed to clients, the investment adviser must notify the client of the relevant change in a timely fashion, and if possible, before the execution of a new transaction or the generation of a new investment advice.\(^376\)

The Client Focused Reforms adopted on 3 October 2019 impose additional disclosure requirements on investment advisers. Starting from 31 December 2020, investment advisers will also be required to disclose constraints affecting a client’s capacity “to liquidate or resell a security”\(^377\) as well as the fees arising from the management of the investment funds or any other fees which may be incurred by a client for his/her securities or the service he/she receives.\(^378\) Additionally, investment advisers will be required to inform their clients as to any limitations affecting the products and services they will receive.\(^379\) The amendments indicate that such a disclosure must include whether the products of a connected or a related issuer are recommended\(^380\) and whether more limitations will be placed on the products and services provided.\(^381\) The Client Focused Reforms also substantially alter some of the disclosure requirements. For example, the requirement to disclose any compensation provided to the investment adviser by a person other than the client for the provision of certain products to the client\(^382\) has been changed to the requirement to disclose “any benefits received, or expected to be received, by the registrant, from a person or company other than the registrant’s client, in connection with the client’s purchase or ownership of a security through the registrant.”\(^383\)

\(^{375}\) *Ibid* 14.2(1).

\(^{376}\) *Ibid* 14.2(4).


\(^{379}\) *Ibid* s 14.2(2)(b.1).

\(^{380}\) *Ibid* s 14.2(2)(b.1)(i).

\(^{381}\) *Ibid* s 14.2(2)(b.1)(ii).


Another provision which requires a declaration that the investment adviser is obliged to provide suitable investment advices for the client has been changed, and the new version thereof requires the declaration that clients’ interests will be the priority of the registered firm and that any action taken by the firm pertaining to the investments of the clients will be suitable for the clients.

3.2. Know-Your-Client Obligations

3.2.1. USA

Under the fiduciary duty, investment advisers are required to recommend investment instruments that are suitable for a client’s investment objectives and in the best interest of the client. In order to provide suitable advices, an investment adviser must firstly collect sufficient information from its clients regarding their financial status and investment targets, as the suitability of an investment decision heavily depends on the nature of the client’s circumstances and its targets. The information to be obtained from an investor must provide the investment adviser with the understanding of, at least: (i) the investor’s financial condition, (ii) investment targets, (iii) previous experience in investing, and (iv) level of knowledge in finance. Nevertheless, obtaining this information only for once may not be sufficient to provide a suitable advice to a client. An investment adviser should make sufficient inquiry into the client’s conditions and events that may affect the suitability of the investment advice, with a frequency that depends on the facts and circumstances of a particular case, in order to update the investment profile of the client and to make changes in the client’s portfolio where

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384 National Instrument 31-103, supra note 152 s 14.2(2)(k).
386 SEC, Standard of Conduct, supra note 60 at 12.
387 Ibid at 13.
388 Ibid.
necessary. However, if the investment advice is provided as a one-time service, updating the client’s investment profile is not required.

3.2.2. Canada

As per section 13.2 of *National Instrument 31-103*, an investment adviser is required to elucidate the identity of its client; and if the information collected regarding the identity of the client is leading to concerns that need to be resolved, the investment adviser must collect sufficient information regarding the reputation of the client in order to resolve such concerns.

Furthermore, investments advisers are required to make sufficient inquiry to find out whether their “client is an insider of a reporting issuer or any other issuer whose securities are publicly traded.” In analogy to the SEC regulations, the *National Instrument 31-103* sets forth that the advice generated by an investment adviser must be suitable for the client; and in order to ensure such suitability, an investment adviser must have a sufficient understanding of its client’s (i) investment targets, (ii) financial status, and (iii) risk tolerance. This information must be collected before concluding an investment advice; and moreover, it must be updated by the investment adviser to maintain the suitability of the investment strategies.

The Client Focused Reforms impose a number of new requirements on investment advisers. Firstly, starting from 31 December 2021, investment advisers will also be required to obtain information as to the clients’ (i) personal circumstances, (ii) investment time horizon, (iii) knowledge about investing, and (iv) risk profile. Additionally, an investment adviser, upon

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390 *Ibid*.
393 *Ibid* s 13.3(1).
395 *Ibid* s 13.3(1).
396 *Companion Policy 31-103CP*, supra note 153 s 13.2.
receiving the KYC information from the client, will be required to obtain the confirmation of the client as to the correctness of the information collected during the KYC process within a reasonable time.398 Furthermore, the recent amendments require investment advisers to examine the KYC information they have about the clients whose assets are held in managed accounts, at minimum, once every 12 months;399 and in other cases, the examination must be done, at minimum, once every 36 months.400

The Client Focused Reforms also provide for a standard of conduct that must be adhered to by investment advisers. The revised Companion Policy 31-103CP sets forth that “the process of collecting and updating a client’s KYC information must amount to a meaningful interaction between the client and the registrant” regardless of what kind of medium is used in the KYC process.401 It is also stipulated that investment advisers help clients understand the questions and provide explanations where deemed necessary402 and resolve the conflicts between a client’s investment expectations and risk tolerance.403 Furthermore, with these amendments, investment advisers will also be prohibited from delegating their KYC obligations404 and required to tailor the method they apply in collecting KYC information based on the extent and type of service they provide.405 For example, while an investment adviser providing fully customized investment recommendations should obtain extensive KYC information, another investment adviser recommending model portfolios that contain investment funds would need to have less extensive KYC information.406 These obligations, at the same time, provide insight into what a fiduciary would be required to do while collecting KYC information. It should be

398 Ibid s 13.2(3.1).
399 Ibid s 13.2(4.1)(a).
400 Ibid s 13.2(4.1)(b).
401 Amended Companion Policy 31-103CP in Client Focused Reforms, supra note 302 s 13.2.
402 Ibid.
403 Ibid.
404 Ibid.
405 Ibid.
406 Ibid.
reiterated that the Client Focused Reforms imposes neither a best interest standard nor a fiduciary duty on investment advisers and dealers. However, as discussed previously, where all investment advisers and dealers, regardless of whether they act as a fiduciary, will be required to adhere to these enhanced standards, an investment adviser acting as a fiduciary would certainly be expected to show a greater diligence and effort than what is required under these standards. Therefore, arguably, the above standards introduced with the Client Focused Reforms can also be considered to be showing the minimum level of care and diligence a fiduciary must apply in gathering KYC information.

3.3. Suitability Obligations

3.3.1 USA

The SEC sets forth that an investment adviser must reach “a reasonable belief” that the best interest of its client is preserved with the investment advices generated for the client. An investment adviser, while assessing whether an investment instrument is suitable for and in the best interest of its client, must conduct its analysis taking into consideration the whole portfolio of the client. Accordingly, simply advising the investment instrument that will create the lowest cost for the client or the lowest profit for the investment adviser without conducting a sufficient analysis of the particulars of the client’s portfolio and investment targets does not mean that choosing the said investment instrument is in the best interest of the client. Furthermore, an investment adviser must ensure that the potential profit that can be achieved by implementing a certain investment strategy justifies the risks posed by the said investment strategy and that the client for whom the said strategy is generated accepts and is capable of tolerating those risks.

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407 SEC, Standard of Conduct, supra note 60 at 15.
408 Ibid.
409 Ibid at 17.
410 Ibid at 15.
In addition to the above requirements, an investment adviser must meticulously investigate the basis and background of its recommendations\(^{411}\) and base its recommendations on accurate information in order to satisfy the suitability requirements.\(^{412}\) Investment advisers failing to sufficiently investigate the investment products before concluding an advice to clients face enforcement actions implemented by the SEC.\(^{413}\)

Lastly, an investment adviser, in order to ensure that the investment advice continues to be in the best interest of and suitable for the client, is required to monitor the investments of its client and all personalized advice provided by the investment adviser at a frequency that will serve the best interest of the client and be determined in the light of the type of the relationship between the investment adviser and the client.\(^{414}\) However, if the advice is provided as a one-time service, the investment adviser does not have a monitoring obligation unless there is an agreement between the investment adviser and client as to the provision of the monitoring services as well.\(^{415}\)

### 3.3.2 Canada

In a similar vein with the US regulations, Canadian securities regulations, too, require investment advisers to provide suitable investment advices to their clients.\(^{416}\) Investment advisers, before recommending an investment product, are required to have extensive knowledge about the particulars of the investment products in order to provide a suitable

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\(^{412}\) SEC, Standard of Conduct, supra note 60 at 16.

\(^{413}\) Ibid.

\(^{414}\) Ibid at 20-21.

\(^{415}\) Ibid.

\(^{416}\) National Instrument 31-103, supra note 152 s 13.3(1).
advice. To this end, new products and existing products that have undergone substantial changes should be subjected to a process of examination and approval by investment advisers before these products are recommended to clients. It should also be noted that, under the suitability obligation, an investment adviser must refrain from executing a transaction requested by a client which, according to the investment adviser, may not be suitable for the client. In such a case, the investment adviser must explain its concerns to the client, and if the client still wants to execute the transaction, then the investment adviser can proceed with the said transaction.

Unlike the SEC regulations, the suitability obligation in Canada does not necessitate that the investment advice must be in the client’s best interest. For example, under the suitability obligation, investment advisers are not explicitly required to analyze the correlation between the costs of the investment instruments and their clients’ investment targets. Furthermore, the suitability obligation is set forth in the National Instrument 31-103 mainly for buying and

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417 Companion Policy 31-103CP, supra note 153 s 13.3. While the current version of the National Instrument 31-103 does not include a provision devoted to the explanation of KYP requirements, the amended version thereof explicitly imposes KYP requirements on registrants. These requirements will take effect on 31 December 2021. See Amended National Instrument 31-103 in Client Focused Reforms, supra note 302 s 13.2.1.


419 National Instrument 31-103, supra note 152 s 13.3(2). This provision has been amended with the Client Focused Reforms. The new provision reads: “[d]espite subsection (1), if a registrant receives an instruction from a client to take an action that, if taken, does not satisfy subsection (1), the registrant may carry out the client’s instruction if the registrant has (a) informed the client of the basis for the determination that the action will not satisfy subsection (1), (b) recommended to the client an alternative action that satisfies subsection (1), and (c) received recorded confirmation of the client’s instruction to proceed with the action despite the determination referred to in paragraph (a).” See Amended National Instrument 31-103 in Client Focused Reforms, supra note 302 s 13.3(2.1). For an explanation of the subsection (1) mentioned in this provision, see below.

420 National Instrument 31-103, supra note 152 s 13.3(2).

421 As mentioned before, in Alberta, Manitoba, Newfoundland and Labrador, and New Brunswick, the Securities Acts require investment advisers to act in their clients’ best interests if they are granted the discretion over their clients’ assets. See CSA Consultation Paper 33-403, supra note 50 at 9564. See Securities Act, RSA 2000, c S-4, s 75.2(2); The Securities Act, CCSM, c S50, s 154.2(2); Securities Act, RSNL 1990, c S-13, s 26.2(2); Securities Act, SNB 2004, c S-5.5, s 54(2). Furthermore, as explained before, in Quebec, the Securities Act and the Civil Code are imposing fiduciary-like duties on investment advisers. See CSA Consultation Paper 33-403, supra note 50 at 9564. Accordingly, in Alberta, Manitoba, Newfoundland and Labrador, and New Brunswick, an investment adviser must generate investment strategies that are in the best interest of its client where it is using discretionary accounts to manage its client’s assets; and in Quebec, investment advisers, as they are required to “act honestly and faithfully in the best interest of the beneficiary” and “act in the best interests of their clients” under their fiduciary-like duties, must observe the best interests of their clients while generating investment strategies.

422 CSA Consultation Paper 33-404, supra note 198 at 3955.
selling investment products; accordingly, investment advisers are not required to ensure the suitability of exchanging or holding investment products.\textsuperscript{423} Nevertheless, where an investment adviser is acting as a fiduciary, it will be required to advice investment instruments that are in the best interests of its clients, as it will be subject to the duty to act in its clients’ best interests. In this regard, the Client Focused Reforms provide insight into what the particulars of a fiduciary investment adviser’s duty pertaining to the suitability requirement would be. The amended section 13.3 of the \textit{National Instrument 31-103} requires investment advisers to ensure that the actions they take, such as opening an account for a client, providing an investment advice to the client, or using their discretionary authority over the investments of a client, are suitable for the client in the light of (i) the relevant KYC information, (ii) the KYP assessment, (iii) the said actions’ effects on the client’s account, (iv) the present and potential costs arising from the implementation of the said actions on the returns of the client, and (v) the alternative actions that can be taken instead of the said actions.\textsuperscript{424} Furthermore, as per these amendments, investment advisers will also be required to “put the client’s interests first” while taking actions.\textsuperscript{425} It should be noted that putting the client’s interests first does not require investment advisers to act in the best interests of the client. This provision, as explained in the amended \textit{Companion Policy 31-103CP}, requires investment advisers to (i) review the alternative actions and, where the interests of the client necessitate, implement those actions, regardless of how those actions would affect the advisers’ interests, (ii) ensure that the account type selected for the client is suitable for the client, (iii) review the clients’ accounts periodically and take actions where the circumstances, such as the occurrence of a change in the security or client information that would negatively affect the suitability of the investments for the client, necessitate,\textsuperscript{426} (iv) take into consideration the factors that may be affected by the liquidation of the securities, and

\textsuperscript{423} Ibid.
\textsuperscript{424} Amended \textit{National Instrument 31-103} in \textit{Client Focused Reforms}, supra note 302 s 13.3(1)(a).
\textsuperscript{425} Ibid s 13.3(1)(b).
\textsuperscript{426} See Amended \textit{National Instrument 31-103} in \textit{Client Focused Reforms}, supra note 302 s 13.3(2).
(v) decline to provide service or open an account for a client where the adviser cannot satisfy
the suitability requirements provided for in abovementioned section 13.3 of the National
Instrument 31-103.427 Arguably, where the obligation to put client’s interests first imposes such
enhanced requirements on investment advisers, an investment adviser acting as a fiduciary (that
must act in the best interests of the client) would certainly be required to show a greater
diligence and care than what is required from investment advisers and dealers under the said
enhanced requirements of the Client Focused Reforms.

3.4. Conflicts of Interest Obligations

3.4.1. USA

In the USA, according to the Supreme Court’s findings in SEC v. Capital Gains Research
Bureau, Inc. and the SEC’s interpretation of the fiduciary duty, investment advisers are required
to disclose, eliminate and avoid conflicts of interest that may impede the provision of unbiased
investment advices to clients.428 Under this obligation, an investment adviser, before starting to
provide service to a client, must detect and disclose all conflicts of interest in the brochure it is
required to deliver to its client.429 The SEC, in a recent release titled Commission Interpretation
Regarding Standard of Conduct for Investment Advisers, lays emphasis on the importance of
the language and details used in the disclosure of the conflicts of interest and states therein that
the disclosure thereof should be “sufficiently specific”430 and using vague statements regarding
already-existing and possible conflicts of interest should be avoided.431 Furthermore, as

427 Amended Companion Policy 31-103CP in Client Focused Reforms, supra note 302 s 13.3.
428 See Capital Gains, supra note 196 at 191-192; See also SEC, Standard of Conduct, supra note 60 at 23.
430 SEC, Standard of Conduct, supra note 60 at 24. In addition to the disclosure of general conflicts of interest, there are specific situations where a particular disclosure must be made to clients. For example, if the investment adviser has an additional compensation which is provided by a person other than the client, conflicts of interest within this arrangement must be disclosed specifically. See SEC, Form ADV Part 2, supra note 315 Item 14.
431 For example, stating that there may be a conflict of interest, where the conflict actually exists, without specific reference to the types of clients, transactions etc. in relation to which the said conflict has arisen, does not satisfy the investment adviser’s duty to disclose conflicts of interest. See SEC, Standard of Conduct, supra note 60 at 25.
different types of clients (i.e. retail and institutional clients) may have different capacities to understand and interpret the intricacies of the service they get from investment advisers, the disclosure of conflicts should be made in an appropriate way based on the type of the client.\textsuperscript{432} In any event, be it a retail or an institutional investor, for a client to effectively understand the conflicts and make a decision as to rejecting or giving a consent to them, the disclosure of conflicts must be unambiguous and expose all important details.\textsuperscript{433} Nevertheless, making a full and fair disclosure of conflicts of interest and obtaining the express consent of the client regarding the disclosed conflicts does not suffice for an investment adviser to observe its obligations under the fiduciary duty, and in particular, its duty to act in its client’s best interest.\textsuperscript{434} Beyond making the disclosure, investment advisers, during the course of their service to their clients, are required to constantly eliminate and avoid conflicts of interest.\textsuperscript{435} Especially, in the process of choosing investment instruments and dividing them among clients, conflicts of interest may occur between the investment adviser and clients or between different clients.\textsuperscript{436} An investment adviser, while forming portfolios for its clients, must constantly seek to avoid conflicts of interest; and at minimum, it must disclose the conflict to the clients.\textsuperscript{437} In this regard, investment advisers must also disclose the way they follow in dealing with conflicts of interest having arisen in relation to the allocation of the investment instruments among clients.\textsuperscript{438} Nonetheless, an investment adviser is not required to develop a specific system or a scheme for dividing the investment instruments among its clients; yet, as the fiduciary duty

\textsuperscript{432} Ibid at 25-26. See Arleen W. Hughes, supra note 210 (“[t]he method and extent of disclosure depends upon the particular client involved. The investor who is not familiar with the practices of the securities business requires a more extensive explanation than the informed investor.”)

\textsuperscript{433} Ibid at 24-26.

\textsuperscript{434} Ibid at 23.

\textsuperscript{435} Ibid at 23, 26.

\textsuperscript{436} Ibid at 26.

\textsuperscript{437} There are several cases where the SEC initiated enforcement proceedings against investment advisers for favoring some clients over others while choosing investment instruments to form portfolios without exposing relevant conflicts of interest to their clients, and for using less profitable investment instruments for their clients than those they use for their own accounts. See e.g. In the Matter of Account Management Corporation, Peter de Poeth and Richard C. Albright, Investment Advisers Act of 1940 Release No 1529 (19 September 1995); In the Matter of Timothy J. Lyons, Release No 1882 (20 June 2000).

\textsuperscript{438} SEC, Standard of Conduct, supra note 60 at 26.
requires the adviser to protect the clients’ best interests in all aspects of the service it provides, the method implemented for the allocation of the investment instruments must not hinder the investment adviser’s capacity of acting in the clients’ best interests.439

3.4.2. Canada

As per section 13.4 of the National Instrument 31-103, investment advisers are required to detect material conflicts of interest that may exist between the investment adviser, adviser’s representatives and their clients.440 This requirement relates to both existing and possible material conflicts of interest that may arise in the future.441 Furthermore, investment advisers are required to devise certain policies to deal with the potential conflicts of interest; and these policies should facilitate the detection of the conflicts and the risks these conflicts cause to arise as well as the response procedure in dealing with these conflicts.442 Where a conflict of interest would be expected to be known by a reasonable investor, the investment adviser must disclose the details of the relevant conflict of interest to the relevant client in a timely fashion.443 Especially, if the adviser is recommending the products of a connected or a related issuer, as per section 13.6 of the National Instrument 31-103, the relation or the connection between the adviser and the relevant issuer must be disclosed to clients in the same medium which is used for recommending the said products.444 The disclosure of conflicts must be made at the time or before the adviser takes the action (i.e. recommending a product or providing a service) that engenders the conflict.445 Nevertheless, a disclosure solely does not suffice for a good conflicts of interest policy; the Companion Policy 31-103CP sets forth that investment advisers are

439 Ibid at 26-27.
440 National Instrument 31-103, supra note 152 s 13.4(1).
441 Ibid.
442 Companion Policy 31-103CP, supra note 153 s 13.4.
443 National Instrument 31-103, supra note 152 s 13.4(3).
444 Ibid s 13.6(a).
445 Companion Policy 31-103CP, supra note 153 s 13.4.
required to avoid conflicts of interest and structure their method of providing services to their clients to control conflicts of interest.\textsuperscript{446} The Companion Policy 31-103CP lays a special emphasis on controlling conflicts of interest and require investment advisers to review and arrange physical locations of their representatives and staff, lines of reporting within the firm, and their organizational settings in order to have a sufficient control over conflicts of interest.\textsuperscript{447} These obligations regarding the disclosure, control and avoidance of conflicts of interest do not specifically require investment advisers to ensure that their clients fully comprehend the details of the disclosed conflicts and to give priority to the interests of their clients in dealing with the conflicts.\textsuperscript{448} Accordingly, under normal circumstances, a reasonable diligence in dealing with conflicts of interest satisfies an investment adviser’s duty to disclose, control and avoid conflicts of interest.

The Client Focused Reforms introduce substantial changes to the current framework described above. First of all, the amended provisions require both registered firms and registered individuals to address all material conflicts of interest “in the best interest of the client.”\textsuperscript{449} Within this framework, investment advisers must “put the interests of their clients first, ahead of their own interests and any other competing considerations.”\textsuperscript{450} Furthermore, investment advisers, under the new provisions, will be required to avoid any material conflict of interest if the conflict cannot be dealt with in another way in the best interest of the client.\textsuperscript{451} The Client Focused Reforms also stipulate the use of plain language in disclosing the material conflicts of interest to the clients.\textsuperscript{452} Additionally, as per section 13.4(5) of the amended National

\textsuperscript{446} Ibid s 13.4.
\textsuperscript{447} Ibid.
\textsuperscript{448} CSA Consultation Paper 33-404, supra note 198 at 3954.
\textsuperscript{449} Amended National Instrument 31-103 in Client Focused Reforms, supra note 302 ss 13.4(2), 13.4.1(3).
\textsuperscript{450} Amended Companion Policy 31-103CP in Client Focused Reforms, supra note 302 s 13.4 at 215.
\textsuperscript{451} Amended National Instrument 31-103 in Client Focused Reforms, supra note 302 ss 13.4(3), 13.4.1(4).
\textsuperscript{452} Ibid s 13.4(6).
Instrument 31-103, registered firms, in their disclosures of conflicts, are required to explain “(a) the nature and extent of the conflict of interest; (b) the potential impact on and risk that the conflict of interest could pose to the client;” and “(c) how the conflict of interest has been, or will be, addressed.”\textsuperscript{453} It should be noted that, starting from 31 December 2020, all investment advisers, regardless of whether they act as a fiduciary or not, must adhere to these standards and act in the best interest of their clients while addressing conflicts of interests. In this framework where even non-fiduciary advisers are subject to a best interest standard, an adviser acting as a fiduciary would certainly be expected to apply a supreme diligence and care in disclosing, controlling, and avoiding conflicts of interests.\textsuperscript{454} Within this scope, at minimum, a fiduciary investment adviser must always ensure that its clients’ best interests are secured and that the risks arising from and the negative impacts of conflicts on clients are addressed without jeopardizing the best interests of the clients.\textsuperscript{455}

3.5. Best Execution Obligations

3.5.1. USA

In an investment adviser-client relationship where the investment adviser is granted the authority to choose the broker-dealer for executing the securities transactions, the investment adviser must ensure that the selected method is the best possible option for executing the client’s

\textsuperscript{453} Ibid s 13.4(5).

\textsuperscript{454} The CSA outlines a fiduciary’s duties pertaining to conflicts of interests. See CSA Consultation Paper 33-403, supra note 50 at 9560 (“[F]iduciaries must scrupulously avoid placing themselves in a possible or potential conflict of interest with their beneficiaries. This is sometimes referred to as the “no conflict” rule. If an actual or potential conflict of interest is unavoidable, it cannot be cured by disclosure alone. Rather, the client must explicitly consent to allow a fiduciary to place herself in an actual or potential conflict of interest. This requires that the fiduciary provide full and frank disclosure of the nature of the conflict to the client and may require that she advise the client to seek independent advice before the client decides whether to give their consent. Regardless of disclosure to a client of an actual or potential conflict, the fiduciary must always ensure that the client’s interests remain paramount.”) (footnote omitted).

\textsuperscript{455} See ibid.
transactions. Accordingly, an investment adviser must target to maximize the value for its client while minimizing the costs of the relevant securities transactions. Nevertheless, choosing the broker that offers the lowest costs is not sufficient for the fulfilment of this obligation. According to the SEC, an investment adviser, before choosing a broker-dealer, must assess the overall service quality of the broker-dealer as well as the broker-dealer’s financial responsibility and competence in executing the securities transactions and doing research. Additionally, the securities transactions carried out by the selected broker must be examined and assessed by the investment adviser on a periodic and systematic basis in order to ensure the provision of the best execution to clients.

3.5.2. Canada

Section 4.2 of the National Instrument 23-101 Trading Rules (“National Instrument 23-101”) requires both dealers and investment advisers to “make reasonable efforts to achieve best execution when acting for a client.” Ensuring the best execution, in this regard, should not be construed as just choosing the option that engenders the lowest costs; instead, an investment adviser, while selecting a broker-dealer for executing a client’s securities transactions must assess a number of factors. These include the execution speed, certainty of execution of the transaction as well as the client’s investment objectives. The Companion Policy 23-101 Trading Rules (“Companion Policy 23-101 CP”) indicates that advisers should adopt

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457 SEC, Standard of Conduct, supra note 60 at 19.
458 Ibid.
460 Ibid.
463 Ibid.
464 Ibid s 4.1(3).
procedures and policies necessitating the observation of the targets and instructions of the client and depicting the steps that must be taken for ensuring the best execution of the client’s securities transactions.\textsuperscript{465} Furthermore, investment advisers are required to periodically and scrupulously review these policies and procedures.\textsuperscript{466}

As is the case in the USA, in Canada too, many investment advisers are engaging in service arrangements with broker-dealers for executing the securities transactions of their clients.\textsuperscript{467} In such arrangements, an investment adviser is required to keep its own records regarding the management of the client’s portfolio and the execution of the securities transactions, and cannot depend solely on the records kept by the broker-dealer instead of its own records.\textsuperscript{468} Furthermore, an investment adviser must ensure that the important details of the service arrangement entered into with a broker-dealer are indicated in a written agreement concluded between the investment adviser and the broker-dealer,\textsuperscript{469} and it must disclose in writing the details of the said arrangement to its clients before starting to provide services.\textsuperscript{470} Additionally, where an investment adviser does not issue its own statement of the client’s portfolio and securities transactions and relies on the statements issued by the broker-dealer, the investment adviser must ensure that the broker-dealer’s statement shows complete and accurate information and is provided to the client in a timely fashion.\textsuperscript{471}

\textsuperscript{465} Ibid.
\textsuperscript{466} Ibid.
\textsuperscript{467} See CSA Staff Notice 31-347 Guidance for Portfolio Managers for Service Arrangements with IIROC Dealer Members (2016) 39 OSCB 9365 at 9365.
\textsuperscript{468} Ibid at 9368.
\textsuperscript{469} Ibid.
\textsuperscript{470} Ibid at 9369.
\textsuperscript{471} Ibid at 9365.
CHAPTER III: 
TECHNICAL, FINANCIAL AND LEGAL ASPECTS OF ROBO-ADVISERS

Robo-advisers are online platforms that employ AI and ML algorithms to provide wealth management services to their customers.\(^{472}\) In order to have a more holistic understanding of this state-of-the-art business model, firstly, the basics of AI and ML technology should be reviewed. This Chapter, firstly, will provide an explanation of algorithms, AI, and ML. Afterwards, it will illustrate the technical and financial aspects of robo-advisory services such as investment instruments, account types, and fee structures used by robo-advisers. This Chapter will conclude with an explanation of the current regulatory approach to robo-advisers, and accordingly, the legal status thereof.

1. The Technology Underlying Robo-Advisers

1.1. Algorithms

Algorithm, as a term in computer technology, refers to “a finite, deterministic, and effective problem-solving method suitable for implementation as a computer program.”\(^{473}\) Algorithms contain specific computational instructions targeting to solve a problem\(^{474}\) and are implemented as a procedure by computer programs that may be created using different programming languages.\(^{475}\) An algorithm, in order to solve a problem, must be fed inputs, and as a result of processing the data contained in the inputs through the computational instructions encoded into the algorithm, it produces outputs.\(^{476}\) For example, an algorithm that has been created for the purpose of sorting a set of numbers can be fed inputs such as \(a_5, a_2, a_4, a_1, a_6, a_9, a_8, a_3, a_7\) (\(a_i\)

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\(^{472}\) Ivanov, Snihovyi & Kobets, supra note 21 at 197; Park, Ryu & Shin, supra note 21 at 105; Sabharwal, supra note 21 at 33.


\(^{475}\) See Sedgewick & Wayne, supra note 473 at 4.

\(^{476}\) See Cormen et al, supra note 474 at 5.
being the smallest number and \( a_9 \) being the biggest number in the given sequence); and the algorithm, after processing these numbers would produce the following output based on an ascending sort: \( a_1, a_2, a_3, a_4, a_5, a_6, a_7, a_8, a_9 \).\(^{477}\) In order to gain a deeper understanding of how algorithms can be used to solve problems, we can review a helpful example provided by Steven S. Skiena. The algorithmic problem exemplified by Skiena is as follows: (i) an actor is offered to star in several movies; (ii) the start date and end date of the filming of each movies is provided to the actor; (iii) the actor cannot work in two different projects at the same time, as he is required to be available until the end of a project; (iv) each project will provide him with the same amount money; (v) the actor wants to earn as much money as he can from the offered projects; and accordingly, (vi) he should star in as many movies as possible.\(^{478}\) The problem in this example is that the actor wants to maximize his profit by starring in as many movies as he can; however, he cannot work in more than one project at a time.\(^{479}\) Accordingly, he has to find an optimal schedule that includes the highest number of movies of which filming periods do not overlap with each other.\(^{480}\) In order to solve this problem, an algorithm can be created and fed the data regarding the start date and end date of each projects as inputs and it can generate the optimal schedule as an output for the actor.\(^{481}\) While algorithms can be useful for solving such problems; in the cases where the instructions are indefinite or impracticable, algorithms may not be able to provide meaningful outputs.\(^{482}\) Accordingly, an instruction in an algorithm “must be sufficiently basic that it can in principle be carried out by a person using only pencil and paper.”\(^{483}\)


\(^{478}\) Skiena, *supra* note 477 at 9.

\(^{479}\) Ibid.

\(^{480}\) Ibid.

\(^{481}\) For the discussion of which algorithmic approach would be the best in this scenario See *ibid* at 9-11.


Algorithms have a long history; the term “algorithm” dates back to the 9th century and was coined after the Latinized name of a famous mathematician, al Khwarizmi, whose is considered to be one of the founders of algebra.\textsuperscript{484} After al Khwarizmi, Fibonacci, also known as Leonardo the Traveller from Pisa, greatly contributed to the development and adoption of numeric systems and algorithms in Europe with his book titled “Liber Abaci” in the 13th century.\textsuperscript{485} Despite that the systematic development of algorithms and numeric systems have been observed in Khwarizmi’s and Fibonacci’s works, the use of algorithms can be traced back to thousands of years ago.\textsuperscript{486} The Sumerian tablets found at Shuruppak in 1937 show that very basic versions of algorithms were utilized in the Sumerian Empire around 2500 BC for sharing grain between people.\textsuperscript{487} Additionally, the Babylonian tablets found in the beginning of 1900s prove that Babylonians were using a positional sexagesimal number system and algorithms around 2000-1600 BC.\textsuperscript{488} Furthermore, there is a number of evidence that other ancient civilizations such as Greeks,\textsuperscript{489} Chinese,\textsuperscript{490} and Egyptians,\textsuperscript{491} too, were using algorithms for different purposes.

\textsuperscript{484} Bahman Mehri, “From Al-Khwarizmi to Algorithm” (2017) 11 Olympiads in Informatics 71 at 71-72; See also Jean-Luc Chabert et al, \textit{A History of Algorithms: From the Pebble to the Microchip} (Berlin: Springer, 1999) at 2.
\textsuperscript{486} See Chabert et al, \textit{supra} note 484 at 1.
\textsuperscript{487} \textit{Ibid} at 8-9.
\textsuperscript{488} \textit{Ibid} at 11-12; See also Donald E Knuth, “Ancient Babylonian Algorithms” (1972) 15:7 Communications of the ACM 671.
\textsuperscript{491} See Chabert et al, \textit{supra} note 484 at 15-20.
1.2. Artificial Intelligence, Machine Learning and Deep Learning

Alan Turing started his famous article published in 1950 in which he discussed the possibility of devising intelligent machines with this question: “Can machines think?”494 Six years later, several scientists convened at the Dartmouth Summer Research Project on Artificial Intelligence to conduct a study for analyzing “the conjecture that every aspect of learning or any other feature of intelligence can in principle be so precisely described that a machine can be made to simulate it.”495 The term “Artificial Intelligence” was for the first time adopted at this conference to name the concept of intelligent machines.496 Today, AI does not have a single, globally accepted definition; nevertheless, for present purposes, we can define it as the endeavor that targets to create machines that can think and act humanly and rationally.497 Machine Learning occurred as a subset of AI in 1959498 and has developed as the practice of using algorithms to analyze data and examples to enable computers to learn from such analysis.499

492 See Stuart Russell & Peter Norvig, Artificial Intelligence: A Modern Approach, 3rd ed (Upper Saddle River: Prentice Hall, 2010) at 27 (“[t]hroughout the 60-year history of computer science, the emphasis has been on the algorithm as the main subject of study. But some recent work in AI suggests that for many problems, it makes more sense to worry about the data and be less picky about what algorithms to apply.”) (emphasis omitted).
493 See Mowei Wang et al, “Machine Learning for Networking: Workflow, Advances and Opportunities” (2018) 32:2 IEEE Network 92 at 92 (“[m]achine learning tries to construct algorithms and models that can learn to make decisions directly from data without following pre-defined rules.”).
497 See Russel & Norvig, supra note 492 at 1-5.
While AI represents the general field of research focusing on the development of machine intelligence,\textsuperscript{500} ML refers to the concept of machines that can program themselves based on the data they process.\textsuperscript{501} Tom M. Mitchell, a computer scientist focusing on ML research, draws the framework of how we can determine that a machine can actually learn as follows: “[a] computer program is said to learn from experience $E$ with respect to some class of tasks $T$ and performance measure $P$, if its performance at tasks in $T$, as measured by $P$, improves with experience $E$.\textsuperscript{502}” Based on this framework, we can think about a machine that is programmed to recognize handwriting and improves its ability without needing the intervention of its programmer.\textsuperscript{503} In this example, the machine’s main task, represented with $T$, is to recognize the handwriting; the machine’s experience, represented with $E$, is the data of the visuals of handwritten texts which is made available to the algorithm of the machine; and lastly, the machine’s performance, represented with $P$, is the machine’s level of success in recognizing the handwritten words.\textsuperscript{504} If the number of the words that are correctly recognized by the machine increases over time, we can conclude that the said machine has been successfully learning recognizing the handwriting.\textsuperscript{505} Accordingly, unlike the basic algorithms which run on specific instructions of their programmers and follow such instructions to perform a task within pre-set borders, ML algorithms may change and improve their method of performing tasks\textsuperscript{506} based on the experience they obtain as they process more and more data.\textsuperscript{507}

\textsuperscript{500} Lee Bell, “Machine Learning versus AI: What’s the difference?” Wired (1 December 2016), online: <https://www.wired.co.uk/article/machine-learning-ai-explained> [https://perma.cc/9RWJ-BZDN].
\textsuperscript{502} Mitchell, supra note 499 at 2.
\textsuperscript{503} See ibid at 3-4.
\textsuperscript{504} Ibid.
\textsuperscript{505} See Ibid at 2-5.
\textsuperscript{507} See Mitchell, supra note 499 at 2-5 (exemplifying the learning process of ML algorithms).
So far, we have not yet been able to create a human-like AI (i.e. machines that have consciousness like humans or can simulate human intelligence perfectly) which can also be called “strong AI.”\(^{508}\) The AI, as of today, has certain limitations and it cannot perfectly simulate a human’s intelligence yet.\(^{509}\) The AI which is currently used in different areas of our lives can be referred to as “weak AI.”\(^{510}\) Weak AI is generally capable of carrying out specifically described tasks that require intelligence;\(^{511}\) nevertheless, it cannot act or think like a human and it does not have any self-awareness.\(^{512}\) We may argue that one day we will be able to create intelligent machines that we can call strong AI which may perfectly simulate the mental activities of humans and is conscious about its own existence,\(^{513}\) or at minimum, show behaviours that are generally attributed to the existence of consciousness.\(^{514}\) On the path leading to the creation of strong AI, ML plays a fundamental role.\(^{515}\) For creating human-like machine intelligence, we must ensure that machines can learn from the data they analyze and improve their internal structures accordingly.\(^{516}\) An AI system that cannot learn from the data it processes cannot be strong AI, or in other terms, an Artificial General Intelligence.\(^{517}\)


\(^{511}\) See Illing, supra note 509.


\(^{513}\) Whether strong AI will indeed have consciousness like humans is open to discussion. See Illing, supra note 509.

\(^{514}\) Ibid.

\(^{515}\) Bell, supra note 500.


\(^{517}\) See Russel & Norvig, supra note 492 at 27 (“AGI looks for a universal algorithm for learning and acting in any environment […]”).
In AI and ML research, one of the most important advancements that occurred recently and have been attracting a great deal of attention is DL. DL can be defined as “a class of machine learning techniques that exploit many layers of non-linear information processing for supervised or unsupervised feature extraction and transformation, and for pattern analysis and classification.”\(^{518}\) While the traditional ML methods may be limited in analyzing raw data, DL systems which are generally built with artificial neural networks can find representations in raw data for classification or detection purposes.\(^ {519}\) DL enables virtual systems to simulate the works of human brain.\(^ {520}\) A DL system is generally composed of several layers of artificial neurons, where first layer recognizes very basic features of the data and transmits its output to the second layer which can recognize more detailed features; and once the second layer generates an output, it transmits it to the next layer; and this process continues until the DL system accurately recognizes the representation and generates a final output.\(^ {521}\) Today, DL technology is helping scientists take further steps in various areas such as speech recognition,\(^ {522}\) self-driving cars,\(^ {523}\) and image recognition,\(^ {524}\) just to name a few.

While ML and DL are tremendously important advancements in AI research, they raise serious concerns regarding the decision-making process of the algorithms.\(^ {525}\) ML and DL algorithms are generally inscrutable, in other words, as they contain highly complicated systems, the


\(^{521}\) See ibid; Knight, supra note 501.


\(^{525}\) See generally Knight, supra note 501.
process these algorithms follow to reach a decision and generate and output cannot be understood or viewed from outside.\footnote{Ibid; See Andrew D Selbst & Solon Barocas, “The Intuitive Appeal of Explainable Machines” (2018) 87:3 Fordham L Rev 1085 at 1094-1096; Aaron M Bornstein, “Is Artificial Intelligence Permanently Inscrutable?” Nautilus (1 September 2016), online: <http://nautil.us/issue/40/learning/is-artificial-intelligence-permanently-inscrutable> [https://perma.cc/8BZV-9BDX].} This inscrutableness is also relevant for the programmer or the designer of the algorithm; accordingly, the programmer or the designer of an ML or DL system, too, may not be able to understand why the system reached a certain result.\footnote{See Knight, supra note 501.} As the decision-making process of these algorithms cannot be understood, it is almost impossible to predict when these systems may fail\footnote{Bornstein, supra note 526.} or understand why they behave unexpectedly.\footnote{Knight, supra note 501.} In addition to the inscrutableness issue, the opacity of ML algorithms is raising further concerns regarding their compliance with ethical and legal standards.\footnote{See Paul B de Laat, “Algorithmic Decision-Making Based on Machine Learning from Big Data: Can Transparency Restore Accountability?” (2018) 31:4 Philos Technol 525 at 526 (“[o]utcomes for the individual may be unjust or differ arbitrarily from one algorithm to the next. On the collective level, outcomes may be biased against specific groups (on the basis of gender, race, and the like); current discriminatory practices may persist in the models used. Most vexing of all, however, is the circumstance that almost all aspects of this algorithmic decision-making remain opaque.”).} It is within the bounds of possibility that the programmer of an algorithm may incorporate societal biases into the algorithm\footnote{See Deven R Desai & Joshua A Kroll, “Trust but Verify: A Guide to Algorithms and the Law” (2017) 31:1 Harv JL & Tech 1 at 8; James Guszcza, “Why We Need to Audit Algorithms” Harvard Business Review (28 November 2018), online: <https://hbr.org/2018/11/why-we-need-to-audit-algorithms> [https://perma.cc/4DFL-A7PA].} or that the algorithm may develop a reasoning, as a result of its learning, which runs contrary to the laws and ethical rules.\footnote{See Yavar Bathaee, “The Artificial Intelligence Black Box and the Failure of Intent and Causation” (2018) 31:2 Harv JL & Tech 889 at 907.} The opacity issue may be overcome with the disclosure of the processes algorithms implement; however, even if the source code of an algorithmic system is completely disclosed, due to the inscrutable nature of the system, such disclosure may not provide any useful information.\footnote{See Desai & Kroll, supra note 531 at 5.}
Before concluding this Section, the historical development of AI and ML should be briefly reviewed in order to gain a better insight into the current status of this technology. AI enjoyed its golden age from 1957 until 1974, as the researchers were heavily funded by governmental authorities and the computing power and machine learning algorithms kept developing in this period. However, from 1974 until 1980 and from 1988 until 1995, the development of AI followed a rough path as the researchers faced many discouraging critiques as well as financial difficulties. Despite the fact that ML constituted an important aspect of AI research since its birth, limitations in the neural network technology impeded the development of ML to a greater extent in its early stages. With the advancement of support vector networks, recurrent neural networks, and IBM’s Deep Blue, significant steps have been taken in ML at the end of 20th century. The most spectacular developments in AI and ML, such as Deep Blue, ASIMO, DeepFace, Google Brain, and AlphaGO have emerged in the last 25 years and in today’s world, especially with the massive pervasiveness of the Internet, AI

534 Rockwell Anyoha, “The History of Artificial Intelligence” Harvard University the Graduate School of Arts and Sciences (28 August 2017), online: <http://sitn.hms.harvard.edu/flash/2017/history-artificial-intelligence/> [https://perma.cc/X34Q-3QZ2].


541 Ibid.


544 Liat Clark, “Google’s Artificial Brain Learns to Find Cat Videos” Wired (26 June 2012), online: <https://www.wired.com/2012/06/google-x-neural-network/> [https://perma.cc/G3YB-CEQB].


546 Anyoha, supra note 534.
and ML are playing an immensely active role in human life and facilitating human activities in a variety of sectors and reaching new heights everyday with the help of exponentially increasing investments and interest in AI research and AI-driven business models. It is estimated that the amount of money invested in AI research will reach globally USD 79.2 billions in 2022 and that the business value to be obtained from the use of AI will be USD 3.9 trillions in the same year.\footnote{Gil Press, “7 Indicators of the State-of-Artificial Intelligence (AI), March 2019” Forbes (3 April 2019), online: <https://www.forbes.com/sites/gilpress/2019/04/03/7-indicators-of-the-state-of-artificial-intelligence-ai-march-2019/#766215b6435a> [https://perma.cc/9FF3-5MXE].} It goes without saying that, by virtue of such an immense interest in developing and using intelligent machines, implementations of AI will be permeating our daily lives to a much greater extent in the near future.\footnote{For an assessment of the AI’s future applications, See generally Stanford University, Artificial Intelligence and Life in 2030, One Hundred Year Study on Artificial Intelligence, Report of the 2015 Study Panel (September 2016), online: <https://ai100.stanford.edu/sites/g/files/shiybj9861/f/ai100report10032016fnl_singles.pdf> [https://perma.cc/BP24-LUDN].} 

As mentioned in the beginning of this Section, Alan Turing, in 1958, asked his famous question: “Can machines think?”\footnote{Turing, supra note 494 at 495.} and today we can ask, “Can machines give investment advices and make investment on behalf of humans?”. Robo-advisors proved that the answer to this question is positive, and in the following Sections, the legal, financial, and technical aspects thereof will be analyzed.
2. Robo-Advisers

2.1. General

Robo-advisers are online platforms that run on AI and ML algorithms to provide wealth management services to investors.550 The early versions of robo-advisers emerged in 2008.551 These early versions responded to investors’ tendency in investing low-risk portfolios in the aftermath of the 2008 financial crisis;552 and later, the increasing demand for low-cost and computerized investment advisory services led to the establishment of modern robo-advisers.553 The first modern robo-adviser, Betterment, came to existence in 2010;554 and with the launch of Betterment, the rise of robo-advisers began.555 As of 2019, robo-advisers operating in Canada manage approximately USD 5.5 billion;556 and in the USA, this amount reaches USD 749.7 billion.557 Robo-advisers’ assets under management (“AUM”) have seen an immense growth since their introduction to the markets; for example, Betterment’s AUM reported at the end of 2014 was USD 1.1 billion,558 and in 2019, this amount has increased to USD 16.5 billion.559 Wealthsimple, a Canadian robo-adviser, which burst onto the scene in 2014, had CAD 400

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550 Ivanov, Snihovyi & Kobets, supra note 21 at 197; Park, Ryu & Shin, supra note 21 at 105; Sabharwal, supra note 21 at 33.
552 Phoon & Koh, supra note 551 at 80.
553 Ibid.
555 Alexander Eule, “Robo Advisors Take On Wall Street” Barron’s (23 May 2015), online: <https://www.barrons.com/articles/robo-advisors-take-on-wall-street-1432349473> [https://perma.cc/6Y8R-X57Q].
557 Statista, “United States” Statista, online: <https://www.statista.com/outlook/337/109/robo-advisors/united-states> [https://perma.cc/3PMC-7GW7].
million of AUM at the end of 2015, and its AUM as of the end of March 2019 has been reported as CAD 4.3 billion. It is estimated that the global AUM of robo-advisers will reach USD 16 trillion in 2025. First robo-advisers were generally established as start-up firms; but today, traditional financial firms, too, such as Schwab, Vanguard, and Blackrock, provide robo-advising services to their clients.

Today, we can divide robo-advisers into two categories based on the type of companies providing robo-advising services; (i) start-up firms, and (ii) traditional financial firms. First robo-advisers were generally established as start-up firms; but today, traditional financial firms, too, such as Schwab, Vanguard, and Blackrock, provide robo-advising services to their clients.

2.2. Services and Method

Robo-advisers, before generating an investment advice, collect information from their clients mostly through online questionnaires which are provided on their websites. The method and the range of questions change from a robo-adviser to another; however, the common feature of these questionnaires is that they aim to construct the investor profile by asking several questions regarding investors’ financial backgrounds and investment needs. When an investor completes the questionnaire on a robo-adviser website and submits it, the algorithm

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563 Phoon & Koh, supra note 551 at 80.
564 See ibid at 80-81.
567 See FINRA, Digital Investment Advice, supra note 30 at 9.
employed by the robo-adviser provides the investor with investment recommendations,\textsuperscript{568} and then makes the investment on behalf of the investor.\textsuperscript{569}

The services provided by robo-advisers extend beyond merely generating an investment advice; indeed, as of today, many robo-advisers are providing tax loss harvesting services as well as portfolio rebalancing,\textsuperscript{570} and portfolio monitoring.\textsuperscript{571} Nevertheless, depending on the business preferences of the robo-adviser companies, the extent of the services as well as the underlying technology infrastructure vary among robo-advisers.\textsuperscript{572} The possible differences between robo-adviser algorithms are indicated by Blackrock, in a white paper published in 2015, as follows: “[a]lgorithms can range from a simple or pre-packaged algorithm that builds a single portfolio to a complex multi-strategy algorithm that reviews thousands of instruments and scenarios in order to construct an aggregate portfolio based on an individual’s current holdings, investment horizon, and risk tolerance.”\textsuperscript{573} Beyond these differences, the level of sophistication of AI technology in these algorithms also changes from a robo-advisor to another; put differently, some robo-advisers may be using simple implementations of AI, and some others may be utilizing the most recent ML\textsuperscript{574} and DL technology.\textsuperscript{575} As the source code of these systems are trade secrets of robo-adviser companies, we, unfortunately, cannot review how exactly these


\textsuperscript{569} Jansen, supra note 26.


\textsuperscript{571} Phoon & Koh, supra note 551 at 80.

\textsuperscript{572} See Blackrock, supra note 27 at 3; Lightbourne, supra note 25 at 663-664.

\textsuperscript{573} Blackrock, supra note 27 at 3.

\textsuperscript{574} See Lightbourne, supra note 25 at 663.

\textsuperscript{575} For example, Qplum, an American robo-adviser which does not provide investment advisory services anymore claimed to be using Deep Learning technology for its robo-advising services. See PR Newswire, “Qplum Expands Product Suite to Derivatives for Institutional Clients” \textit{Markets Insider} (6 August 2018), online: <https://markets.businessinsider.com/news/stocks/qplum-expands-product-suite-to-derivatives-for-institutional-clients-1027433912> [https://perma.cc/HK58-DMM4]; See e.g. QARA, online: <https://www.qara.ai/QARA> [https://perma.cc/D756-QB2J] (QARA is a Seoul-based FinTech company that develops Deep Learning-driven robo-advisers).
algorithms are utilizing AI, ML, or DL technology, processing investor and investment product data and matching products with investors. Yet, regardless of whether basic AI models or the state-of-the-art DL models are used by robo-advisers, the significant point in these systems is that they automate the steps in the process of providing investment advisory services such as collecting investor data, generating investment recommendations and monitoring and rebalancing portfolios.\footnote{See Abraham, Schmukler & Tessada, supra note 568 (describing the role of algorithms in robo-advising).}

2.3. Types of Robo-Advisers

Based on the level of human interaction, robo-advisers can be divided into two categories: (i) fully-automated robo-advisers (also known as pure robo-advisers), and (ii) hybrid robo-advisers.\footnote{FCNB, “Informed Investor Advisory: Robo-Advisers” FCNB (15 July 2019), online: <http://fcnb.ca/For-What-Its-Worth.html?fb_37818530_anch=38981629> [https://perma.cc/8DAL-AXKZ]; See Dunham, supra note 38.} Fully-automated robo-advisers automate the complete process of investment advice provision without a human intervention.\footnote{FCNB, supra note 577.} In other words, in fully-automated models, the process starting with the gathering of the investor information through online questionnaires, continuing with the provision of investment advice, making the investment on behalf of the investor and the provision of other services such as tax-loss harvesting and portfolio rebalancing is conducted by the robo-adviser algorithms without a human intervention. On the other side, hybrid robo-advisers merge the supervision of a human investment adviser and the automation provided by the algorithms and provide investors with a more personalized service.\footnote{Ibid.} The first robo-advisers, such as Betterment and Wealthfront, were established as fully-automated robo-advisers; however, in the course of time, for the purpose of meeting the demands of wealthy clientele and providing a more customized and personalized investment advisory service,\footnote{Verhage, supra note 32.} and

\footnote{\textcopyright 2023}
in some jurisdictions, for complying with the regulatory requirements, innovators have developed hybrid robo-advisers. In the hybrid model, as is the case with the fully-automated model, the algorithm matches investment products and investors, and generates the investment advice; however, the different mechanism in the hybrid model is that human investment advisers supervise the portfolios and investors can get in contact with these human investment advisers to consult about their investment targets and needs. Depending on the robo-advisers’ preferences and technology infrastructures, the communication with human investment advisers may be provided to investors with telephone, or through online platforms or e-mail. As will be discussed further below, while the US securities regulators allow both fully-automated and hybrid robo-advisers, in Canada, only hybrid models are allowed to provide robo-advising services.

2.4. Investment Instruments

Robo-advisers generate portfolios mainly with exchange traded funds (“ETF”). An ETF is a pooled investment fund comprised of securities tailored to provide returns based on the dividend yield and performance of the securities. ETFs were devised to enable investors to

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581 For example, in Canada, only hybrid robo-advisors are allowed. See CSA Staff Notice 31-342, supra note 37 at 8198.
582 See Strzelczyk, supra note 24 at 80.
584 See Lakhan, supra note 583.
586 See CSA Staff Notice 31-342, supra note 37 at 8198.
exchange a whole portfolio or basket of assets with one easy transaction,\(^{589}\) to have positive returns with minimum cost and mostly, often without paying any commission fee.\(^{590}\) Unlike other types of index funds, ETFs do not attempt to perform better than their corresponding index, instead, they aim to perform at the same level with their corresponding index.\(^{591}\)

ETFs are highly liquid.\(^{592}\) Investors, at different points of time in a day, can trade them on the secondary markets.\(^{593}\) Furthermore, ETFs provide a high level of transparency as most of the ETF providers make their portfolios they use for their ETFs publicly available every day.\(^{594}\) Additionally, due to the availability of in-kind redemptions and the provision of lower portfolio turnover, they are tax efficient.\(^{595}\) In short, as ETFs provide high liquidity, versatility, low costs, transparency and tax efficiency, robo-advisers enjoy the benefits of the ETFs and use mainly these investment instruments for their portfolios.\(^{596}\) Yet, some robo-advisers may create portfolios for their clients using emerging market funds,\(^{597}\) cash, cash equivalents and mutual funds as well.\(^{598}\)

\(^{589}\) *Ibid.*


\(^{593}\) *Ibid.*

\(^{594}\) *Ibid.*

\(^{595}\) *Ibid* at 6.


\(^{598}\) CSA Staff Notice 31-342, *supra* note 37 at 8197.
2.5. Account Management

In Canada, robo-advisers manage their clients’ assets mostly through discretionary accounts. Accordingly, robo-advisers do not need the approval or permission of the investors for each transaction and investment decision they perform through these accounts. Hence, they have the discretion to trade stocks based on their assessment of the client’s portfolio. Robo-advisers in Canada generally make arrangements with third party account holders (i.e. dealers) to keep their clients’ assets in these accounts and perform the wealth management activities by using these accounts. Dealers managing investors’ assets must be registered with the IIROC, and all IIROC-registered dealers are also members of the Canadian Investor Protection Fund (“CIPF”). The CIPF provides a certain degree of protection for investors’ assets from the adverse results of the insolvency of the dealer; and in case the dealer becomes insolvent, the CIPF provides coverage up to CAD 1,000,000 of the assets of investors.

In the USA, many investment advisers are providing brokerage services too, and accordingly, are registered with FINRA. Some robo-advisers are keeping clients’ assets in third party custodians, however, many of them are operating as brokers, therefore, they are subject to the registration requirement with FINRA. Accordingly, the FINRA-registered robo-advisers

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599 Payette, supra note 35 at 429.
600 Ibid.
601 Ibid.
602 Ibid.
604 CIPF, “Glossary” CIPF, online: [https://perma.cc/NH8K-64GL]; See Notice of Commission Approval of MOU between the CSA and the CIPF and Notice of Commission Approval of By-law No. 1 of the CIPF, O.S.C. CSA Notice, (2008) 31 OSCB 7556.
605 CIPF, “Coverage Policy” CIPF – Canadian Investor Protection Fund (1 April 2014), online: [https://perma.cc/9D2Y-XQ9T].
606 FINRA, Digital Investment Advice, supra note 30 at 17.
607 Rob Berger, “7 Robo Advisors That Make Investing Effortless” Forbes (5 February 2015), online: [https://perma.cc/EH5F-ZFTA].
have the possession of clients’ assets. In analogy to the CIPF, broker-dealer firms in the USA must be registered with the Securities Investor Protection Corporation ("SIPC"). However, broker-dealer firms that solely handle the distribution of the shares of unit investment trusts and open-end investment companies and broker-dealer firms that only conduct the sale of variable annuities and the business of insurance and those who are engaged in business outside the USA are exempt from this requirement. Robo-advisers providing brokerage services must be registered with the SIPC, and if they are using third-party brokers, then these brokers, too, must be registered with the SIPC. In case the registered broker becomes insolvent, the SIPC provides coverage up to USD 500,000 of the assets of clients.

2.6. Fees and Account Minimums

Both in Canada and the USA, robo-advisers offer services at very low costs. For example, Wealthsimple charges 0.4% management fee for the investments over CAD 100,000 and 0.5% for those under CAD 100,000. Betterment, an American robo-adviser, charges 0.25% annual fee for their digital services, and 0.4% for their premium services that require minimum USD 100,000 account balance. Some robo-advisors, such as SoFi and WiseBanyan, which are American robo-advisers, do not charge any management fees. Many robo-advisers do not charge any fees for the transfers to other financial institutions.


610 15 USC § 78ccc.


612 See Goldman & MacColl, supra note 587.

613 See Backend Benchmarking, supra note 559 at 16-17.


615 Betterment, “Plans For Every Investor” Betterment, online: <https://www.betterment.com/pricing/> [https://perma.cc/NWT6-Y7MH] [Betterment, “Plans”].

616 Backend Benchmarking, supra note 559 at 16-17.

617 For Canada, See Goldman & MacColl, supra note 587; For USA, See e.g. Ibid; Wealthfront, “How much does Wealthfront charge for its service?” Wealthfront, online: <https://support.wealthfront.com/hc/en-
trading may be additionally applied by some robo-advisers, in most cases, robo-advisers do not
charge trading commission fees as additional fees over their advice fees.618

There is no common pattern among different robo-advisers regarding the account minimums.
While some robo-advisers do not require any minimum amount to open an account, some others
require their clients to invest certain minimum amounts.619 Further, especially some of the
American robo-advisers apply different account minimums based on the type of service they
provide.620 For example, Betterment requires USD 100.000 account minimum for its premium
services while it does not have any account minimum requirements for its basic services.621
These premium services generally provide a more sophisticated advisory service over the basic
services, such as, granting clients the access to certified financial planners regarding their
financial concerns about various life events.622

3. Regulatory Approach to Robo-Advisers

Since 2015, both the US and Canadian securities regulators have been expressing their
interpretation of and approach to robo-advisers in different forms of releases. In the USA, the
first release in this regard is an investor alert titled Automated Investment Tools which was
jointly and simultaneously issued by the SEC and FINRA on their own websites on 8 May
2015.623 In the Automated Investment Tools, the SEC and FINRA notified investors of the risks

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618 For Canada, See Payette, supra note 35 at 430; For USA, See e.g. Betterment, “Plans”, supra note 615;
Wealthfront, “Fees”, supra note 617.
619 For Canada, See Goldman & MacColl, supra note 587; For USA, See Backend Benchmarking, supra note 559
at 16-17.
620 Andrea L Seidt, Noula Zaharis & Charles Jarrett, “Paying Attention to That Man Behind the Curtain: State
621 Backend Benchmarking, supra note 559 at 16.
622 See e.g. Betterment, “Plans”, supra note 615.
and limitations of robo-advisers. In the said alert, the SEC and FINRA have particularly advised investors to read and comprehend the terms and conditions of robo-advisers and to protect their personal information while using these online platforms. Furthermore, in the said alert, it has been specifically emphasized that some robo-adviser platforms may not be able to respond to changes in the market conditions, and that the investment advice generated by these advisers are based on the information they collect from investors through online questionnaires – accordingly the scope of the online questionnaires may affect the extent of the information that can be collected and the investment advice to be generated –, and accordingly, that the investment advice provided by robo-advisers may not perfectly match the needs and targets of investors as robo-advisers may not analyze all circumstances pertaining to an investor’s financial conditions, risk tolerance, and investment needs and targets.

The next regulatory release in the USA is FINRA’s Report on the Digital Investment Advice which was issued in March 2016. FINRA, in this report, has shared its observations regarding both legal and technical aspects of robo-adviser platforms. FINRA, in particular, has drawn attention to the different methods and scope of the questionnaires used by different robo-advisers as well as the issues relating to the rebalancing of investment portfolios.


Ibid.
Ibid.
Ibid.
Ibid.

See FINRA, Digital Investment Advice, supra note 30.
See generally ibid.
See ibid at 8-12.
Following FINRA’s report, the SEC, in February 2017, released the *Investor Bulletin: Robo-Advisers*\(^{630}\) and the *IM Guidance Update: Robo-Advisers*.\(^{631}\) While the *Investor Bulletin: Robo-Advisers* was directed at current or prospective users of robo-advisers,\(^{632}\) the *IM Guidance Update: Robo-Advisers* alerted the robo-adviser platforms as to the regulatory standards and requirements they must observe.\(^{633}\) The SEC, in the *Investor Bulletin: Robo-Advisers*, has specifically emphasized that robo-advisers, regardless of the fact that they use automation for the provision of investment advisory, must observe both federal and state securities regulations governing investment advisers and must be registered as investment advisers.\(^{634}\) The *IM Guidance Update: Robo-Advisers* is especially important among other releases, as the SEC, in this update, has expressly stated that robo-advisers are required to comply with the fiduciary standards.\(^{635}\) The SEC’s approach to the robo-advisers’ status under the fiduciary duty will be discussed in the next Chapter.

In Canada, the only federal-level regulatory guidance provided with respect to robo-advisers is the *CSA Staff Notice 31-342: Guidance for Portfolio Managers Regarding Online Advice* (“CSA Staff Notice 31-342” or “Guidance”) issued by the CSA on 24 September 2015.\(^{636}\) In the said Guidance, the CSA stated that the requirements set forth in the *National Instrument 31-103* are “technology neutral”, accordingly, the investment advisers using online automated tools (i.e. robo-advisers), too, must comply with these conduct and registration requirements.\(^{637}\) One of the most significant points in the Guidance is that the CSA has explicitly stated that it does

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\(^{636}\) See CSA Staff Notice 31-342, supra note 37.

\(^{637}\) Ibid at 8197.
not allow fully-automated robo-advisers in Canada.\textsuperscript{638} Robo-advisers that are allowed in Canada, in the words of the CSA, “are hybrid services that utilize an online platform for efficiency, while registered advising representatives (ARs) remain actively involved in decision-making.”\textsuperscript{639} Further, the CSA clearly declared: “[t]he online advisers that have been approved to carry on business in Canada are not “robo-advisers” of the kind that are operating in the United States, which may provide their services to clients with little or no involvement of an AR. By comparison, Canadian online advisers can be seen as providing hybrid services, in that they use an online platform for the efficiencies it offers, while ARs remain actively involved in (and responsible for) decision-making.”\textsuperscript{640} Within this scope, in the Canadian robo-adviser model, while the investment advisory is mainly automated, human investment advisers are responsible for ensuring that sufficient KYC information has been collected from investors and that the investment advice generated by the algorithm is suitable for each investor.\textsuperscript{641} In addition to specifying the allowed robo-advising model, the CSA, in the Guidance, has also mentioned certain standards regarding the KYC and suitability requirements that robo-advisers must comply with.\textsuperscript{642} These standards will be discussed in Chapter V.

\textsuperscript{638} Ibid.
\textsuperscript{639} Ibid.
\textsuperscript{640} Ibid at 8198.
\textsuperscript{641} Ibid at 8197.
\textsuperscript{642} See \textit{ibid} at 8198.
CHAPTER IV: 
ARE ROBO-ADVISERS SUBJECT TO THE FIDUCIARY DUTY?

Thus far, we have focused on the regulations applicable to investment advisers, the obligations under the investment adviser fiduciary duty as well as the technical, financial and legal aspects of robo-advisers. This Chapter will analyze and illustrate the status of robo-advisers under the investment adviser fiduciary duty and whether or to what extent the fiduciary obligations are applicable to robo-advisers. The first Section of this Chapter will discuss FINRA’s observation about the scope of the robo-advising services, and Melanie L. Fein’s interpretation of FINRA’s remarks, and illustrate the SEC’s position about the applicability of the fiduciary duty to robo-advisers. The second Section of this Chapter will discuss why robo-advisers should be subject to the fiduciary duty in Canada based on the factors designated by the Canadian courts.

1. USA

Aforementioned in Chapter III, the SEC, in the *IM Guidance Update: Robo-Advisers* issued in February 2017, expressly stated that robo-advisers are subject to the fiduciary standards imposed on investment advisers in the USA. However, FINRA’s observations and remarks about robo-advisers, particularly regarding the absence of the execution of portfolio analysis in robo-advising services, have raised questions as to whether robo-advisers can or should be subject to the fiduciary duty.


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FINRA has stated that the last function in this chain, portfolio analysis, is used only in financial professional-facing digital investment advice systems. In other words, according to FINRA’s observations, client-facing digital investment advice tools which are the “robo-advisers” of the kind that is analyzed in this Thesis do not conduct portfolio analysis. Based on this observation, Melanie L. Fein, a former Senior Counsel to the Board of Governors of the Federal Reserve System, in a paper published in 2016 analyzing FINRA’s approach to robo-advisers, has argued that robo-advisers cannot be fiduciaries due to the fact that they do not conduct portfolio analysis. Fein bases her arguments on the notion that the fiduciary duty includes the principles of Modern Portfolio Theory (“MPT”) and that portfolio analysis constitutes an essential element of MPT. Fein bases her arguments on the notion that the fiduciary duty includes the principles of Modern Portfolio Theory (“MPT”) and that portfolio analysis constitutes an essential element of MPT.

MPT is a theory developed by Harry Markowitz in 1950s, and it refers to minimizing risks while maximizing returns in investing through the diversification of the investment products included in a portfolio. In this context, diversification refers to the selection of unique investment products and assets (i.e. products and assets that are not highly correlated) in order to limit the volatility and the overall risks of the portfolio. Today, MPT is still a widely applied theory in investment advisory. On the other side, portfolio analysis means “a quantitative method

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646 FINRA divides robo-advisers into two types as: (i) client-facing digital investment advice tools and (ii) financial professional-facing digital investment advice tools. According to FINRA’s report, financial professionals have already been benefiting from digital investment advice tools for various purposes. See *ibid*. The financial professional-facing tools are not the robo-advisers of the kind that is analyzed in this Thesis. Furthermore, the Author is of the opinion that those tools should not be called robo-advisers, as the term “robo-adviser” has emerged with the use of client-facing digital investment tools.


650 See generally Harry Markowitz, “Portfolio Selection” (1952) 7:1 The Journal of Finance 77.


653 See Duggan, *supra* note 651.
for selecting an optimal portfolio that can strike a balance between maximizing the return and minimizing the risk in various uncertain environments,” and Fein argues that an investment adviser, without conducting portfolio analysis, cannot ensure that the investment products recommended to a client is suitable for the relevant client, and that the absence of this essential component of MPT results in the incapability of meeting the fiduciary standards. Hence, she reaches the conclusion that robo-advisers that do not conduct portfolio analysis cannot be fiduciaries. Nevertheless, it should be noted that Fein reaches this conclusion based on the fact that MPT has been taken into consideration by the drafters of the Uniform Prudent Investor Act (“UPIA”), during the drafting process, which is applicable to trustees managing or investing the assets of a trust. The UPIA does not apply to investment advisers, and accordingly, to robo-advisers as well. Therefore, the fact that the UPIA was drafted with an eye to MPT should not have any effects on the analysis of whether robo-advisers can be good fiduciaries even if they do not conduct portfolio analysis. Indeed, Fein does not state that robo-advisers are subject to the UPIA; she uses the UPIA as an exemplary regulation that may shed light on robo-advisers’ capability of observing the fiduciary standards. Yet, she also argues that the SEC should clarify the applicability of the investment adviser fiduciary duty as follows: “[t]he overriding question that needs to be answered is: Does a registered investment adviser, which has the status of a ‘fiduciary’ under the Investment Advisers Act of 1940, comply with its fiduciary obligations if it provides investment advice in all respects except the one key function necessary to provide prudent advice based on modern portfolio theory—i.e., portfolio analysis.”

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656 Ibid at 3.
657 Ibid.
658 Uniform Prudent Investor Act, Prefatory Note (1994) (“[t]he Uniform Prudent Investor Act (UPIA) undertakes to update trust investment law in recognition of the alterations that have occurred in investment practice. The changes have occurred under the influence of a large and broadly accepted body of empirical and theoretical knowledge about the behavior of capital markets, often described as “modern portfolio theory.”)
analysis? In other words, what is the scope of an investment adviser’s fiduciary duty and does it include portfolio analysis?\textsuperscript{660} She further states: “[i]f the duty of an investment adviser does not encompass a duty to provide overall portfolio analysis, the SEC needs to say so.”\textsuperscript{661}

On 5 June 2019, the SEC has published the \textit{Commission Interpretation Regarding Standard of Conduct for Investment Advisers} in order to clarify the duties of investments advisers under the fiduciary duty.\textsuperscript{662} In the said release, the SEC has laid out the details of the investment adviser fiduciary duty, however, it has not discussed the existence or non-existence of what activities determines whether the relevant investment adviser is subject to the fiduciary duty. As discussed in Chapter I, the SEC interprets investment advisory as a wide term and indicates that those engaging in the investment adviser activities as laid out in the IAA are considered to be investment advisers,\textsuperscript{663} and accordingly, are subject to the fiduciary duty.\textsuperscript{664} According to the SEC’s interpretation of the IAA, a person that is receiving compensation for the service it provides, engaged in the business of advising, and providing advice about securities is an investment adviser,\textsuperscript{665} and accordingly, is required to comply with the obligations imposed on investment advisers.\textsuperscript{666} The SEC does not indicate any effect of the provision or non-provision of portfolio analysis on the interpretation of the investment advisory activities or the regulatory requirements investment advisers are subject to. Hence, it can be concluded that a person or an entity that is registered or considered to be an investment adviser according to the SEC’s interpretation must comply with the fiduciary obligations regardless of whether it conducts portfolio analysis or not. Therefore, the fact that FINRA has indicated that robo-advisers are

\textsuperscript{660} \textit{Ibid} at 3.
\textsuperscript{661} \textit{Ibid} at 4.
\textsuperscript{662} See SEC, \textit{Standard of Conduct}, supra note 60.
\textsuperscript{663} SEC, \textit{Investment Advisers}, supra note 114 at 2-4.
\textsuperscript{664} See \textit{ibid} at 22-28.
\textsuperscript{665} \textit{Ibid} at 2.
\textsuperscript{666} See generally \textit{ibid}.
not conducting portfolio analysis should not mean that robo-advisers cannot be fiduciaries or are not subject to the fiduciary duty.

Finally, as the primary securities regulator in the USA, the SEC, has clearly and explicitly declares that robo-advisers are required to observe the fiduciary obligations,\(^{667}\) it is clear and indisputable that robo-advisers are subject to the fiduciary duty in the USA.

2. Canada

As discussed in Chapter II above, there is no statutory fiduciary duty imposed on investment advisers in Canada,\(^{668}\) nevertheless, Canadian courts have indicated that, based on the facts and circumstances of the case, an investment adviser may be required to act as a fiduciary.\(^{669}\) The factors that are taken into consideration in determining whether an investment adviser is a fiduciary have been explained in Chapter II above and listed as follows: (i) the vulnerability of the client, (ii) the client’s trust in the adviser, (iii) the client’s reliance on the adviser, (iv) the degree of discretion granted to the adviser, and (v) the professional rules or codes of conduct.\(^{670}\) It is also worth reiterating that these factors are not exhaustive and courts may consider additional factors where necessary.\(^{671}\) Especially in the case of robo-advisers – the investment advisers that utilize state-of-the-art technology and implement modern business models which are considerably different than that of traditional investment advisers – courts may find specific points, in addition to the abovementioned five factors, that should be analyzed and discussed for assessing the existence of a fiduciary relation. As of now, no data is available regarding


\(^{668}\) The standards for investment advisers in Quebec that are stipulated by the CCQ may be considered to be similar to the duties of a fiduciary under common law. Furthermore, it should be noted that the Securities Acts of Alberta, Manitoba, New Brunswick, and New Foundland and Labrador impose a best interest standard on investment advisers when they manage their clients’ assets in discretionary accounts. See Chapter II, above, for more on this topic.

\(^{669}\) See Chapter II, above, for more on this topic.

\(^{670}\) Hunt, supra note 230 at para 40.

\(^{671}\) Ibid at para 41.
such additional points; accordingly, in this Section, whether robo-advisers are fiduciaries or not will be discussed in the light of the factors mentioned above. This Section will look into the facts and circumstances of the robo-adviser-client relationship and conduct a qualitative analysis thereof to assess whether robo-advisers should be required to act as fiduciaries. Accordingly, the last factor of the list, which is professional rules and codes of conduct, will not be included in this analysis due to the fact that these rules do not have a determinative role in our qualitative analysis of general robo-adviser-client relationship, as they, in essence, indicate the norms and ethics of the profession in the industry. It should be noted that, whether robo-advisers can meet the responsibilities and standards of conduct investment advisers are subject to will be discussed in Chapter V. In short, this Section will focus on the first four factors that could give us an insight into the facts and circumstances of the robo-adviser-client relationship and let us assess whether robo-advisers should act as fiduciaries.

The first factor, vulnerability, means that if the client does not have an extensive knowledge of securities and capital markets, or if his age, language, or level of education makes him vulnerable against the investment adviser, then the adviser may be required to act as a fiduciary.\textsuperscript{672} As these data points change from a client to another, it is not within the bounds of possibility to reach a conclusion that will perfectly reflect the level of vulnerability of the clients of robo-advisers. Nonetheless, while limited, there is some data regarding the customer profile of robo-advisers in Canada that can guide us in this analysis. Firstly, while it is a common belief that robo-advisers are mostly used by millennials, in fact, the average age of the clients of robo-advisers has been reported as 44 in 2017.\textsuperscript{673} Although being very young or very old may indicate

\textsuperscript{672} Ibid.
a high level of vulnerability for an investor, 44 years of age does not necessarily indicate any
level of vulnerability. Another data point that may be considered in this context is the level of
experience in and knowledge of securities and investing. Reports show that both investors who
have extensive previous experience in investing\(^674\) and those who have not had an opportunity
to gain experience in this area show interest in using robo-advisers.\(^675\) Furthermore, while some
robo-advisers do not require any account minimum, and accordingly, investors can start
investing with as lows as CAD 1.\(^676\) other robo-advisers require certain account minimums.\(^677\)
Additionally, some more sophisticated robo-advising services such as Wealthsimple Black may
require significant account minimums as high as CAD 100.000.\(^678\) This data shows that high-
net-worth individuals as well as those who can theoretically start investing with as low as CAD
1 can receive advisory service from robo-advisers. Accordingly, these data points, too, do not
allow us to gauge the level of vulnerability on a general basis, as they do not show a common
pattern among the clients of robo-advisers; and therefore, a clear conclusion regarding the
existence of the fiduciary duty cannot be reached based on this data.

The second factor, trust, indicates that an investor’s high level of trust in its adviser shows that
a fiduciary relation may have been established between each other;\(^679\) and the third factor,
reliance, points out that where an investor has been depending on its adviser’s judgement and
advice for a long period of time and where the investment adviser advertises itself in a way that
shows its qualifications and skills that can form the basis on which the investors can depend on,

\(^674\) Ibid.
\(^675\) See Angus Reid Institute, “Personal Finance: Canadian Millennials show significant interest in using ‘robo-
advisors’ in the future” Angus Reid Institute (1 March 2019), online: <http://angusreid.org/robo-advisors-
investment/> [https://perma.cc/46XD-VX8A].
\(^676\) For example, Wealthsimple and Nest Wealth do not require any account minimum. See Goldman & MacColl,
supra note 587.
\(^677\) For example, Just Wealth requires minimum CAD 5000 for opening an account. See ibid.
\(^678\) See Wealthsimple, “Black” Wealthsimple, online: <https://www.wealthsimple.com/en-ca/pricing/black>
[https://perma.cc/87BB-ZUNP].
\(^679\) See Hunt, supra note 230 at para 40; See also Hodgkinson v. Simms, supra note 245 at para 25.
a fiduciary relation may exist between the client and adviser.\textsuperscript{680} The second factor, trust, and the third factor, reliance, are highly inter-connected elements in this context, as in most cases, where the second factor is satisfied, the third factor can also be deemed to have been satisfied.\textsuperscript{681} Therefore, it would be more appropriate to assess these factors herein together.

In this context, the first aspect of robo-adviser-client relationship that may indicate high level of reliance and trust is the fact that robo-advisers are generally managing their clients' assets in discretionary accounts.\textsuperscript{682} This means that robo-advisers are not required to ask for their clients’ consent for the securities transactions they make.\textsuperscript{683} It can easily be argued that, under normal circumstances, an investor that does not trust and is not willing to rely on its investment adviser would not prefer to have its investments managed under the discretion of the investment adviser. Therefore, granting this discretion to robo-advisers clearly shows that clients trust and rely on robo-advisers’ decision-making and judgement in choosing investment products.

The second aspect that may indicate high level of trust and reliance is the execution of portfolio rebalancing. Robo-advisers rebalance the investments of their clients automatically on a periodic basis and/or when they deem necessary.\textsuperscript{684} For example, Wealthbar rebalances portfolios when an account goes through a distribution or receives a contribution, or when there is 5% or more deviation from the target allocation, or if these situations do not occur,

\textsuperscript{680} Hunt, supra note 230 at para 40; Hodgkinson v. Simms, supra note 245 at para 43.
\textsuperscript{681} See Hunt, supra note 230 at para 57 (“[t]he question of reliance clearly overlaps with the reposing of trust.”) See also ibid at para 41 (“[…] the evidence relevant to one factor may be relevant also to a consideration of one or more of the other factors.”).
\textsuperscript{682} See Payette, supra note 35 at 429.
\textsuperscript{683} Ibid.
rebalancing takes place at a minimum in every quarter. As granting robo-advisers the discretion over the assets indicates high level of trust and reliance, allowing robo-advisers to alter and rebalance the portfolio, too, indicates that clients trust and rely on robo-advisers’ decisions for reallocating the investment products in their portfolios.

Lastly, the third aspect that may indicate high level of reliance and trust is the presentation style of robo-advisers. Robo-advisers generally use very promising statements and mottos on their websites to capture the attention of investors. For example, Nest Wealth, on its home page, states: “Invest and Relax: Leave it to our portfolio managers and smart technology to monitor and rebalance your investments. You can sit back and plan your future.” Another robo-adviser, Wealthbar, on its website, promotes its service as follows: “[o]ur portfolios aren’t as impacted by the ups and downs of the markets. So you can enjoy steady growth and the confidence to focus on achieving your goals – regardless of the weather.” In Hunt v. TD Securities Inc., the court indicates that the fact that “the advisor holds him or herself out as having special skills and knowledge upon which the client can rely” is one of the indicators of the fiduciary relation. From this perspective, the way robo-advisers present themselves to the public – with very promising and reassuring statements –, can be construed to be a catalyst that increases investors’ trust in and reliance on robo-advisers. Of course, the mere fact that robo-advisers are boldly advertising their products does not automatically prove that clients trust and rely on robo-advisers; nonetheless, as suggested in Hunt v. TD Securities Inc., such a presentation may indicate that an investment adviser owes a fiduciary duty to its clients.

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686 Nest Wealth, online: <https://www.nestwealth.com/> [https://perma.cc/75X8-RM2L].
687 Wealthbar, online: <https://www.wealthbar.com/investments> [https://perma.cc/969Q-FJYE].
688 Hunt, supra note 230 at para 40.
The fourth and last factor that will be analyzed in this Section is discretion. According to this factor, an investment adviser that has a significant discretion in managing its clients’ assets is likely to be a fiduciary.\footnote{See ibid; See also Hodgkinson v. Simms, supra note 245 at para 30.} Furthermore, as the CSA points out, in the Canadian common law, a fiduciary relation is always established between the adviser and its client where an investment adviser uses a discretionary account to manage its client’s assets.\footnote{CSA Consultation Paper 33-403, supra note 50 at 9564.} As mentioned before, Canadian robo-advisers mostly use discretionary accounts for managing their clients’ assets,\footnote{See Payette, supra note 35 at 429.} and accordingly, as the use of discretionary accounts is a significant indicator of the existence of a fiduciary duty, it is clear that robo-advisers owe a fiduciary duty to their clients based on this factor as well.

In conclusion, while the existing data regarding the customer profile of robo-advisers does not provide us with sufficient information to discuss the level of vulnerability of the clients, it allows us to sufficiently analyze the level of trust, reliance, and discretion in general robo-adviser-client relationships. As the analysis conducted in this Section proves, Canadian robo-advisers are subject to the fiduciary obligations,\footnote{See Katie Keir, “Are robos regulated like humans?” Advisor (13 October 2017), online: <https://www.advisor.ca/columnists_/katie-keir/are-robos-regulated-like-humans/> [https://perma.cc/FFK9-8FT7] (sharing the statements of Randy Cass, the founder of Nest Wealth, regarding robo-advisers’ status under the fiduciary duty).} and accordingly, they must act in the best interests of their clients while providing advisory services.\footnote{Some Canadian robo-advisers already state that they act as fiduciaries. See e.g. ibid; Andrew Goldman, “Is It Really Wise to Trust a New Company With My Nest Egg?” Wealthsimple (18 October 2016), online: <https://www.wealthsimple.com/en-ca/magazine/ask-wealthsimple-trust> [https://perma.cc/Q98B-8YK5] (sharing Dave Nugent’s statements about different aspects of Wealthsimple).}
CHAPTER V:

ROBO-ADVISERS’ COMPLIANCE WITH THE FIDUCIARY OBLIGATIONS AND RECOMMENDED REGULATORY SOLUTIONS

In 1928 when the Court of Appeals of New York, in Meinhard v. Salmon, defined the fiduciary duty as “the duty of the finest loyalty”, or in 1940 when the United States Congress enacted the IAA; or in 1963 when the Supreme Court of the United States, in SEC v. Capital Gains Research Bureau, Inc., indicated that the enactors of the IAA intended to create fiduciary obligations for investment advisers; or in 1994 when the Supreme Court of Canada, in Hodgkinson v. Simms, laid out the factors that may indicate the existence of a fiduciary relation between an adviser and its client, there were no artificially intelligent investment advisers providing advisory services to investors. These legislators and courts, accordingly, have not considered non-human, algorithm-based, digital investment advisers while developing the investment adviser fiduciary duty. The fiduciary obligations have been developed with an eye to how humans think and behave and what kind of motivations play important roles in investment advisory. It goes without saying that AI, despite that it simulates the functions of a human brain to some extent, does not have the motivations humans have and applies unique computational procedures which are significantly different than the steps human brains implement to reach a decision or a judgement. Therefore, the conditions that may affect a robo-adviser’s service and performance are likely to be considerably different than those that may be relevant to human investment advisers. Nevertheless, as noted by the SEC in the USA

695 Capital Gains, supra note 196 at 191-192.
696 See generally Hodgkinson v. Simms, supra note 245.
697 See Scott MacKillop, “Can a Robot Be a Fiduciary?” ThinkAdvisor (30 January 2017), online: [https://www.thinkadvisor.com/2017/01/30/can-a-robot-be-a-fiduciary/?slreturn=20191011182948] [https://perma.cc/QP9N-EPWC].
698 See Ji, supra note 33 at 1556.
699 Ibid.
700 See Bostrom & Yudkowsky, supra note 58 at 2-5.
and the CSA in Canada, robo-advisers are required to comply with the same regulatory standards and obligations applicable to human investment advisers. Furthermore, as discussed in Chapter IV above, robo-advisers, both in the USA and Canada, are acting as fiduciaries, and therefore, must adhere to the fiduciary standards. Against this backdrop, an analysis of what kind of risks and challenges may adversely affect robo-advisers’ compliance with the regulatory requirements and fiduciary obligations and what kind of solutions would be implemented to address these risks and challenges is of tremendous importance.

So far, securities regulators, both in the USA and Canada, did not attempt to impose detailed obligations on robo-advisers; rather, they have generally adopted a wait-and-see approach and drawn attention to some important points regarding the robo-advisers’ activities in the capital markets and their status under the securities regulations. The first robo-adviser, Betterment, came to existence in 2010 in the USA; and the first Canadian robo-adviser, Wealthsimple, appeared in the markets in 2014. Since the first appearance of these robo-advisers, many others have proliferated not only in the USA and Canada but also in a great number of countries all around the globe. During the rise of robo-advisers in the financial industry, regulators, investors, and markets had the opportunity to observe the risks and promises of these state-of-the-art investment tools. It is likely that robo-adviser technology will develop following the advancements in the AI and ML research; in other words, the robo-advisers of the future may be providing advisory services through more complex tools and algorithms; accordingly, the

702 See Chapter IV, above, for more on this topic.
703 Phoon & Koh, supra note 551 at 81; Otter, supra note 554.
706 See Ji, supra note 33 at 1579 (“[…] as the artificial intelligence continues to develop, automated investment advice will only become more sophisticated.”); Lightbourne, supra note 25 at 671-672 (“[…] it is not unrealistic to expect that in the near future a robo-adviser could be designed to work in tandem with other data collection
challenges and risks arising from the use and operation of robo-advisers may be more complicated and intricate. Therefore, before robo-advisers evolve into a far more complex investment tool, now is the perfect time for regulators to adopt and implement policies to ensure and monitor robo-advisers’ compliance with the fiduciary obligations and to address the challenges and risks that occur at the intervention of the algorithmic systems and AI as investment advisers in the capital markets.

While developing policies, regulators must take into consideration the fact that robo-advising, despite being increasingly provided by traditional investment advisers as well, has appeared as a product of small FinTech start-ups and that further innovations in robo-adviser technology may again be achieved by small start-up enterprises in the future. This being the case, overwhelming administrative and regulatory burdens on start-up firms may hinder these firms’ capability of innovating robo-adviser products and services. Therefore, the first principle that should be adopted by regulators in developing robo-adviser regulations is that the regulations should establish a balance between encouraging robo-adviser innovations and controlling robo-advisers’ compliance with the fiduciary obligations. Against this background, regulators should also refrain from setting higher regulatory standards for robo-advisers than those that are applicable to traditional investment advisers. In this way, services, generating algorithmic complexity and making the robo-adviser’s conduct increasingly difficult to explain.”; See also ibid at 653-654.

707 See Ji, supra note 33 at 1579; Lightbourne, supra note 25 at 672.
708 See Ji, supra note 33 at 1579; See also Baker & Dellaert, “Regulating Robo Advice”, supra note 45 at 732, 745.
709 Phoon & Koh, supra note 551 at 80-81; Blackrock, supra note 27 at 3, 6.
711 See Magnuson, supra note 7 at 1215 (“[a]dmistrative burdens, thus, can be expected to have a disproportionately adverse effect on fintech firms, and regulation must take this effect into account.”).
713 Baker & Dellaert, “Regulating Robo Advice”, supra note 45 at 716.
regulators can maintain an even ground where traditional investment advisers and robo-advisers can fairly compete.

In order to ensure that robo-adviser regulations are feasible and have the efficiency to achieve their targets, regulators should also take into consideration the realities of and limitations in computer science.\textsuperscript{714} For example, as explained in Chapter III, ML and DL algorithms are likely to be inscrutable systems of which decision-making process cannot be monitored or analyzed from outside.\textsuperscript{715} Under these circumstances, even if regulators are provided with the source code of an ML-based system, an effective analysis of the system to see whether it complies with relevant regulatory requirements may be impossible.\textsuperscript{716} Against this backdrop, a regulation that requires the user of an ML algorithm to share the source code thereof with the regulator may not be a feasible policy.\textsuperscript{717} Likewise, requiring a robo-adviser that uses ML algorithms for providing investment advices to share the details and the source code of its software with the regulators would not be an effective policy, as having access to the source code and technical details of the system would not automatically enable the regulators to scrutinize all computational steps incorporated into the algorithms and assess whether the said algorithms perfectly comply with the regulations. Additionally, requiring the user of an ML algorithm to explain to regulators all details, with a great clarity and precision, of why the algorithm made a certain decision may be an impossible task for the user, as, it is worth reiterating, an ML-based system’s reasoning applied in a decision-making process may be highly opaque.\textsuperscript{718} Under these circumstances, the second principle that should be adopted by regulators in developing robo-

\textsuperscript{714} See Desai & Kroll, supra note 531 at 7-11 (arguing that the meaning of political transparency and accountability is different than technical transparency and accountability in computer science and that the regulations should take into consideration these differences and the limitations in computer science).

\textsuperscript{715} See Knight, supra note 501; Selbst & Barocas, supra note 526 at 1094-1096; Bornstein, supra note 526.

\textsuperscript{716} See Bathaeec, supra note 532 at 907 (discussing that the internal process of a black-box AI may be impossible to understand for its programmer as well as the regulators and courts).

\textsuperscript{717} See Desai & Kroll, supra note 531 at 5 (arguing that the exposure of algorithms “may create the illusion of clarity in cases where clarity is not possible”).

\textsuperscript{718} See Knight, supra note 501; Selbst & Barocas, supra note 526 at 1094-1096; Bornstein, supra note 526.
adviser regulations is that the regulations should be feasible in terms of computer science, and the regulatory requirements should not be impossible tasks for robo-advisers and developers of this technology.

In the final Chapter of this Thesis, the risks and challenges that may affect robo-advisers’ compliance with the fiduciary obligations, and feasible regulatory solutions, with an eye to two principles indicated above, that will help ensure that robo-advisers comply with the fiduciary obligations will be analyzed. This analysis will be conducted under five Sections each of which will focus on a fundamental obligation under the investment adviser fiduciary duty.

1. Disclosure Obligations

As explained in Section 3.1 under Chapter II above, both the US and Canadian securities regulations require investment advisers to disclose material facts regarding their services to their clients. While robo-advisers are required to comply with all disclosure requirements and disclose all items that are stipulated by the securities regulators, one of these requirements requires special attention for robo-adviser disclosures due to the unique features of robo-advisers. This critical requirement is the disclosure of the type of services and products. In the USA, the SEC states that an investment adviser must explain its services as well as whether and how an investment advice is customized in accordance with the needs of a client. Likewise, in Canada, Section 14.2 of the National Instrument 31-103 stipulates that an investment adviser’s disclosure must include “a general description of the products and services the registered firm offers to the client.” Robo-advisers differ from traditional investment advisers in using algorithms to generate investment advices and rebalance investment portfolios of their

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720 SEC, Form ADV Part 2, supra note 315 at Part 2A Item 4.B, 4.C.
clients and providing advisory services through online and digital platforms. As the method applied by robo-advisers in providing advisory services is significantly different than that of traditional investment advisers, one of the most fundamental points that must be clearly disclosed to clients is the extent of the use of technology and the particulars of the generation of investment advice with algorithmic systems. A sufficient and understandable disclosure of the robo-adviser technology and services is of paramount importance mainly because of the fact that humans have not experienced the service of artificially intelligent systems until 2000s, and accordingly, they could not develop a profound understanding of how AI would carry out a task that is previously performed by humans. Humans, as homo sapiens, have been living in societies for thousands of years, and their ancestors, such as Ardepithecus ramidus and Australopithecus africanus had already formed societies 6 million years ago. Throughout this long period, humans have developed certain observations, expectations, and assumptions about how other individuals would behave in a certain situation or perform a task. Based on our previous observations and knowledge, we can predict how a cashier in a supermarket or a flight attendant in an airplane will interact with us. However, as we have not experienced receiving service from a robotic cashier or an artificially intelligent flight attendant, we – except for the creators of these systems and technology – cannot easily and correctly predict how a robot will carry out these tasks. The same issue applies to investment advisers as well, as investment advisory, like many other occupations, has long been performed by humans but now is performed by algorithms too. An individual that has never received any service from an


725 It should be noted that, while robotic cashiers are not common yet, early examples thereof can be observed. See Lisa Wallin, “Will Convenience Stores Cash in on Robot Cashiers?” Tokyo Weekender (19 April 2017), online: <https://www.tokyoweekender.com/2017/04/robot-cashiers/> [https://perma.cc/5WHX-GYEJ].
investment adviser before, can still have certain expectations from the adviser and have an accurate prediction and understanding of the dynamics of the adviser-client relationship based on her observation on others. However, when an individual decides to invest with the help of an artificially intelligent investment adviser, her previous observations may not help her understand the particulars of these state-of-the-art investment advisers. An experienced investor, too, may find it difficult to understand the underpinnings of robo-advisory, as her experience and knowledge at investing may not provide an extensive guidance as to the particulars of the service provided by an algorithmic adviser. More importantly, both experienced and inexperienced investors might assume that a robo-adviser will serve them in the same way a human investment adviser does, as robo-advisers, in the legal and technical context, are investment advisers and same rules and regulations apply to them.\textsuperscript{726} Therefore, in order to avoid any misconceptions and let investors know what they should and should not expect from a robo-adviser, robo-adviser disclosures should be sufficiently elucidative.

It should be noted that the fact that robo-advisers are artificially intelligent investment advisers does not entail a particular constraint in meeting with the disclosure standards as good fiduciaries. Because, these disclosures are not created by the algorithms that generate investment advices; instead, they are written and presented by the people operating robo-advisers. Accordingly, in terms of robo-advisers, there is no specific concern as to an AI-based system’s capability of providing sufficient and legally-compliant disclosures as AI does not play an active role in the development of these disclosures.

\textsuperscript{726} See Jake G Rifkin, “Robo-Advisers Jumping on the Bandwagon: Yet Another Cry for a Uniform Standard” (2019) 97:3 NCL Rev 673 at 705-706 (arguing that the fact that now investment advice is provided by robo-advisers as well adds to the confusion among investors as to the duties of investment advisers and broker-dealers).
In the USA, the SEC, in the *IM Guidance Update: Robo-Advisers* set forth several standards for the disclosures of robo-advisers. As the SEC indicates, the disclosures of robo-advisers should include:

“A statement that an algorithm is used to manage individual client accounts; [a] description of the algorithmic functions used to manage client accounts […]; [a] description of the assumptions and limitations of the algorithm used to manage client accounts […]; [a] description of the particular risks inherent in the use of an algorithm to manage client accounts […]; [a] description of any circumstances that might cause the robo-adviser to override the algorithm used to manage client accounts […]; [a] description of any involvement by a third party in the development, management, or ownership of the algorithm used to manage client accounts, including an explanation of any conflicts of interest such an arrangement may create […]; [a]n explanation of any fees the client will be charged directly by the robo-adviser, and of any other costs that the client may bear either directly or indirectly […]; [a]n explanation of the degree of human involvement in the oversight and management of individual client accounts […]; [a] description of how the robo-adviser uses the information gathered from a client to generate a recommended portfolio and any limitations […]; [a]n explanation of how and when a client should update information he or she has provided to the robo-adviser.”\(^{727}\)

In addition to the above items, the SEC also states that robo-advisers should refrain from misleading their clients regarding the scope of the services they provide.\(^{728}\) Moreover, the SEC

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\(^{728}\) *Ibid* at 5.
emphasizes that the disclosures should be comprehensible; and it suggests that robo-advisers take into consideration whether important points in their disclosures are provided to the clients before the sign-up process; whether these points are specifically emphasized; whether some points in their disclosures are supported with additional explanations especially for the clients who seek more information; and whether the formatting and presentation of disclosures that are provided to clients on mobile platform as well are properly adjusted for the mobile platform. Arguably, these requirements stipulated by the SEC can efficiently allow the clients of robo-advisers to understand, among other things, the scope of the service they can get, the limitations of the algorithms and the risks arising from the use of algorithms; and accordingly, these requirements can enable investors to make more informed decisions about investing through a robo-adviser.

Based on the analysis of the disclosures in Form ADV Part 2 of different robo-advisers, it is observed that robo-advisers disclose the particulars of the service they offer to clients and the use of algorithms for generating investment advices. For example, Betterment, in its Form ADV Part 2, states that it uses algorithms “to advise clients and manage their accounts.” Further, it states: “[t]hese algorithms are developed, overseen, and monitored by Betterment’s investment advisory personnel.” and that the algorithms generate investment advice based on the data inputs provided by the clients and perform additional tasks such as tax loss harvesting, account type selection, and portfolio rebalancing. In addition to these explanations, Betterment also discloses: “[t]hese algorithms may not perform as intended for a variety of reasons, including but not limited to incorrect assumptions, changes in the market, and/or

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729 Ibid at 5-6.
731 Ibid.
changes to data inputs. Betterment may modify periodically these algorithms, or a computer system’s code or underlying assumptions, and these changes may have unintended consequences.\footnote{Ibid.} Additionally, Betterment also provides the details of its hybrid service which is called Betterment Premium, and indicates that Premium plan clients can contact with a financial consultant through telephone and receive “personalized financial planning advice, relating to debt, such as student loans and credit card debt, mortgages, savings, and retirement [...].”\footnote{Ibid at 5.} Another robo-adviser, SigFig, in its Form ADV Part 2, states: “SigFig’s algorithms generate investment recommendations based on such Client’s risk profile, trading patterns and existing individual portfolio investments, if any.”\footnote{SigFig, SEC Form ADV Part 2A: Firm Brochure (28 March 2019), online: <https://d1so5k0levrfcn.cloudfront.net/advisor/adv/ADV_Form.pdf> [https://perma.cc/Y6FV-9YDZ] at 5.} Additionally, SigFig states that its service includes a periodic portfolio rebalancing for all clients\footnote{Ibid at 22.} and tax-loss harvesting for the clients who opted to use this feature.\footnote{Ibid at 6.} SigFig also indicates that the algorithms it uses “are overseen by SigFig’s Investment Committee, which determines SigFig’s investment strategy, reviews the securities used in Client and Digital Advice Investor portfolios, and has the authority to institute necessary measures, such as halting trading, in adverse market conditions.”\footnote{Ibid at 13.} Further, SigFig explains the risks of algorithms as: “[...] the operation of the software might be subject to human errors, processing or communication errors or system failure. The changes made to the algorithms may not always have the desired or intended effect. Further, as market dynamics (for example, due to changed market conditions and participants) shift over time, a previously highly successful model may become outdated or inaccurate, perhaps without the computer software system recognizing the change before further recommendations are made.”\footnote{Ibid at 14.} As a third example, Schwab Intelligent Portfolios (“SIP”), another American robo-adviser, in its
Form ADV Part 2, states that it employs an algorithm “to (1) propose a portfolio based on a client’s answers to the online questionnaire (in the SIP Premium Program, clients may also receive their recommended portfolio from the Planning Consultant); (2) identify portfolio rebalancing opportunities; (3) identify tax-loss harvesting opportunities; and (4) initiate buy/sell orders for the tax-loss harvesting and/or rebalancing opportunities it has identified […]”

In a similar vein to Betterment and SigFig, SIP indicates that “the Algorithm and related software used for strategy selection, tax-loss harvesting and rebalancing, and related functions may not perform within intended parameters, which may result in a recommendation of a portfolio that may be more aggressive or conservative than necessary, and trigger or fail to initiate rebalancing and/or tax-loss harvesting trading.”

SIP offers a hybrid service, too, which is called SIP Premium Program, and states that the clients enrolled has access to a digital planning tool that provides financial planning and can access to a planning consultant for a financial planning consultation regarding different financial needs including ‘retirement planning, savings, educational funding, credit management, charitable giving, and budget management.’

The statements highlighted above constitute just a small part of the disclosures of Betterment, SigFig, and SIP. Due to the constraints on the space, the rest of the disclosures of these robo-advisers as well as the disclosures in Form ADV Part 2 of other robo-advisers cannot be demonstrated here. Nonetheless, even these short parts of disclosures highlighted above indicate that investors, before using a robo-adviser, can indeed understand that the investment

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740 Ibid at 2.

741 Ibid at 1.
advice is generated by algorithms and that there are certain risks arising from the use of algorithms and software for investment advisory.742 Furthermore, investors who choose to use hybrid robo-advisers can see in the disclosures the scope and additional features of the hybrid models. Overall, these disclosures suffice as an explanation of the underlying technology in accordance with the SEC’s IM Guidance Update: Robo-Advisers. It should also be noted that the disclosures mentioned above also contain the general items – such as ownership structure of the advisory firm, management fees and costs, code of ethics, and type of clients – of which disclosures have been stipulated in Form ADV Part 2 requirements.743 The disclosure of these items by robo-advisers do not raise any algorithm-specific or robo-adviser-specific concerns, because, as mentioned before in this Section, these disclosures are not made by AI but humans. Against this backdrop, it is worth reiterating that there is no concern as to an AI-based system’s capability of providing sufficient and legally-compliant disclosures as AI does not play an active role in the development of these disclosures.

In Canada, the CSA, in the CSA Staff Notice 31-342, does not stipulate any additional disclosure requirement for robo-advisers; however, as the CSA indicates that robo-advisers are subject to the same rules and regulations applicable to traditional investment advisers,744 they are required to comply with the disclosure requirements set out in the National Instrument 31-103.

Based on the analysis of the Canadian robo-advisers’ disclosures of the details of their services and products, it is observed that they disclose the core points of their services and products745

742 See also Ji, supra note 33 at 1571 (arguing that clients of robo-advisers understand and know the fact that the investment advice of a robo-adviser will be, in most cases, generated without a human’s judgement).
743 See generally Betterment, Form ADV Part 2A, supra note 730; SigFig, supra note 734; SIP, Disclosure Brochure, supra note 739.
744 See CSA Staff Notice 31-342, supra note 37 at 8197.
and explain numerous points such as the fees,\(^746\) investment risks,\(^747\) type of the clients’ accounts,\(^748\) complaint processes,\(^749\) and the details of the obtainment of the KYC information from clients,\(^750\) just to name a few. These disclosures comply with the disclosure requirements set forth in the *National Instrument 31-103* and are sufficiently explaining the points required therein. Nevertheless, as discussed in the beginning of this Section, since robo-advisers use technology-based tools to provide investment advices, investors may need a more detailed explanation of the features and the risks of this technology. Furthermore, as robo-advisers are acting as fiduciaries, they must act in the best interests of their clients at each stage of their service beginning with the disclosure of material facts. Arguably, being subject to the fiduciary duty should require robo-advisers to clearly explain the limitations and risks of the technology they use so that the clients can assess and sufficiently understand the particulars of the service they will receive. Against this backdrop, in order to enable investors to better comprehend the particulars of robo-advisers, the CSA should consider stipulating additional requirements for 


\(^750\) See e.g. BMO Smartfolio, *Relationship Disclosure, supra* note 745 at 2; Wealthbar, “Client Relationship Disclosure Information”, *supra* note 745.
robo-advisers regarding the disclosure of the details of the technology underlying their services and products.

While developing policies in this regard, the CSA may take the requirements set forth by the SEC in the IM Guidance Update: Robo-Advisers as an example. First of all, the CSA should require robo-advisers to explain the technology they use for providing investment advisory services. In this regard, it should be noted that disclosing merely the fact that investment advices are generated by algorithms and reviewed by advising representatives or that the service offered by the firm is robo-advisory would not suffice to be an elucidative explanation for the clients. Robo-adviser disclosures should include the explanations of the tasks algorithms carry out in addition to generating investment advices, such as periodically rebalancing clients’ portfolios, in proper detail. Furthermore, as only hybrid models are allowed in Canada, the role of advising representatives and the scope of the service they can provide should also be clearly explained. As a result of the disclosure of the roles of the algorithms and advising representatives, investors can more easily understand what part of the service is automated and what part is executed by humans. Furthermore, these disclosures should also indicate the limits of the algorithms. If investors know what algorithms can and cannot do, they can make more accurate decisions as to whether getting service from a robo-adviser or a human investment adviser to meet their investment needs and achieve their investment targets. If you have a complicated tax situation or a high net worth then it might be worth getting a human financial advisor. Despite the higher fees, they will create a full financial plan that may value despite the high fees. For example, if you’re planning your retirement, a divorce, home ownership then a human financial advisor will probably be able to give you the specific guidance on your situation. They may even tell you ‘yes, you should build a deck this spring’ or ‘no, you should not sell your Air Jordan collection!’ If you’re looking to pay lower fees and invest without having to do tons of research and portfolio maintenance, then a robo-advisor might be a good choice. Some robo-advisors offer a hybrid approach giving you access to a financial advisor as well as a personalized investment portfolio. This is a good option if you want to save on fees but still want some support from an advisor.”

751 Goldman & MacColl, in an article published on the website of Wealthsimple, provides an exemplary description of the suitability of human investment advisers and robo-advisers for different investment needs and targets. See Goldman & MacColl, supra note 587 (“[i]f you have a complicated tax situation or a high net worth then it might be worth getting a human financial advisor. Despite the higher fees, they will create you a full financial plan that some may value despite the high fees. For example, if you’re planning your retirement, a divorce, home ownership then a human financial advisor will probably be able to give you the specific guidance on your situation. They may even tell you ‘yes, you should build a deck this spring’ or ‘no, you should not sell your Air Jordan collection!’ If you’re looking to pay lower fees and invest without having to do tons of research and portfolio maintenance, then a robo-advisor might be a good choice. Some robo-advisors offer a hybrid approach giving you access to a financial advisor as well as a personalized investment portfolio. This is a good option if you want to save on fees but still want some support from an advisor.”).
tasks in connection with the provision of the advisory services should be described in the disclosures. It should also be noted that even a disclosure that includes all fundamentals and important details of robo-advisory service and the robo-adviser technology may not suffice to be a good disclosure because such explanations may be too difficult to understand for an average investor. Accordingly, robo-advisers should use a plain language while providing the details of their services and technology in their disclosures. Using plain language in disclosure is already imposed as a requirement on investment advisers by the SEC in the USA. As explained in Chapter II, in Canada, while the disclosures of conflicts of interest are required to be “prominent, specific, clear and meaningful to the client”, the general disclosure requirements under the National Instrument 31-103 do not stipulate the use of a plain language in disclosure; nevertheless, when an investor is acting as a fiduciary, it should ensure that its clients understand the items explained in the disclosure document. The CSA, while developing disclosure requirements for robo-advisers, should also consider imposing the use of a plain language in disclosures as a requirement on robo-advisers.

In conclusion, this Section has demonstrated that both the American and Canadian robo-advisers disclose the items required by the relevant regulations and that there is no insurmountable obstacle, resulting from the use of algorithms and AI-based systems, for robo-advisers that would prevent them from complying with the disclosure requirements as good fiduciaries. Nevertheless, it should also be noted that the arguments laid out in this Section

752 See Iannarone, supra note 722 at 161.
753 SEC, Form ADV Part 2, supra note 315 at General Instructions for Part 2 of Form ADV.
754 Companion Policy 31-103CP, supra note 153 s 13.4.
755 See See CSA Consultation Paper 33-404, supra note 198 at 3955.
756 The use of plain language in disclosure is one of the requirements that are proposed within the Client Focused Reforms. See ibid at 3961. However, the Client Focused Reforms adopted on 3 October 2019, do not stipulate the use of plain language for the disclosure of material facts, except for the disclosure of material conflicts of interest. See Amended National Instrument 31-103 in Client Focused Reforms, supra note 302 s 13.4(6).
757 It is worth reiterating that the disclosures are not developed and presented by algorithms but the people operating the robo-advisers. Accordingly, in terms of robo-advisers, there is no specific concern as to AI’s or algorithms’ capability of disclosing material facts sufficiently and in a legally-compliant manner.
are based on the observations made on the disclosures provided by robo-advisers on their websites and disclosure documents and that it is within the bounds of possibility that some robo-advisers may have non-compliant disclosures. For example, in 2018, the SEC has charged two robo-advisers, Wealthfront and Hedgeable, with providing false information in their disclosures, and both of these robo-advisers, without accepting or denying the findings of the SEC, have agreed to pay a penalty.\(^\text{758}\) This Section has also argued that the disclosure requirements imposed by the SEC on robo-advisers are efficient for enabling investors to understand the particulars of the robo-advisory services. Lastly, this Section has indicated that current regulations in Canada do not require robo-advisers to extensively disclose the details of the technology they use and the risks arising from the use of this technology; and accordingly, it has been suggested that, for ensuring that investors can sufficiently understand the details of the services provided by robo-advisers and make more informed decisions about investing through robo-advisers, the CSA should consider imposing additional disclosure requirements on robo-advisers and take the requirements stipulated by the SEC in the IM Guidance Update: Robo-Advisers as an example while developing policies in this regard.

2. **Know-Your-Client Obligations**

As explained in Section 3.2 under Chapter II above, both the US and Canadian regulations require investment advisers to obtain sufficient information from their clients before providing an investment advice.\(^\text{759}\) The information collected from a client will guide an investment adviser in determining an investment advice that corresponds to the needs and targets of the client;\(^\text{760}\) therefore, an investment adviser must ensure that it has obtained sufficient information regarding certain parameters such as its client’s financial background as well as investment


\(^\text{759}\) See SEC, *Standard of Conduct*, supra note 60 at 12; *National Instrument 31-103*, supra note 152 s 13.2.

\(^\text{760}\) See SEC, *Standard of Conduct*, supra note 60 at 12-13; *Companion Policy 31-103CP*, supra note 153 s 13.2.
targets and needs before it makes an analysis of the suitable investment decisions for its client and concludes the investment advice. Robo-advisers, too, as investment advisers, are required to obtain sufficient KYC information before generating investment advice for their clients. Aforementioned in Chapter III, robo-advisers obtain KYC information mostly through online questionnaires that they make available to their clients on their websites. The fact that human interaction is mostly omitted in robo-adviser questionnaires has raised concerns as to whether these questionnaires have the proper capacity to obtain sufficient and accurate information from clients, and as can be seen in the IM Guidance Update: Robo-Advisers, Report on Digital Investment Advice, and CSA Staff Notice 31-342, securities regulators have attached special importance to this issue.

In the USA, the SEC, in the IM Guidance Update: Robo-Advisers has indicated a number of important points that robo-advisers are advised to consider regarding their online questionnaires. Therein, the SEC, firstly, suggests that robo-advisers consider whether their questionnaires can obtain sufficient information from clients based on which robo-advisers can ensure that their investment advices, both at the beginning and later phases of their services, are suitable for their clients’ investment targets and financial situation. Second, the SEC advises

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761 See SEC, Standard of Conduct, supra note 60 at 13; Companion Policy 31-103CP, supra note 153 ss 13.2, 13.3.
762 See SEC, IM Guidance Update: Robo-Advisers, supra note 631 at 6-7; CSA Staff Notice 31-342, supra note 37 at 8198.
763 See Chapter III, above, for more on this topic.
764 Hybrid robo-advisers may allow clients to contact with an advising representative or a financial consultant during the gathering of KYC information. See CSA Staff Notice 31-342, supra note 37 at 8198 (“[i]n most cases, the firm’s policy is that an AR will always communicate directly with a client or prospective client before its KYC information gathering is completed. Less often, a firm will only require an AR to have direct communications with a client or prospective client if the AR has questions or concerns about the information gathered through the online platform.”).
765 See e.g. Carney, supra note 566 at 602 (arguing that a robo-adviser questionnaire cannot analyze a client’s confidence or indecisiveness).
767 FINRA, Digital Investment Advice, supra note 30 at 9-10.
768 CSA Staff Notice 31-342, supra note 37 at 8198-8199.
robo-advisers to consider whether the questions asked to clients are unambiguous and/or whether the questionnaires have been designed in a way that clients are provided with the opportunity to obtain more information or explanation regarding the questions by using tools incorporated into the questionnaires “such as tool-tips or pop-up boxes.”

Lastly, the SEC suggests that robo-advisers consider whether their questionnaires are equipped with design features that would notify a client when she provides inconsistent answers in the questionnaire and advise her to review those answers and whether these questionnaires are equipped with a feature that alerts the robo-adviser regarding inconsistent answers of a client.

In the USA, in addition to the SEC, FINRA, too, in the *Report on Digital Investment Advice*, has laid out the standards of collecting client information that should be considered by robo-advisers. Therein, FINRA, before pointing out the standards for robo-advisers, indicates that there are a number of principles that should be implemented by the provider of the investment advice, be it an algorithmic adviser or a financial professional, for constructing the profile of an investor efficiently. These principles are: (i) detecting the essential data points that are required for constructing a client’s profile precisely, (ii) evaluating the risk tolerance and risk willingness of a client, (iii) finding solutions in the cases where clients provide inconsistent or contradictory answers in the questionnaire, (iv) examining whether making an investment, instead of implementing another financial solution, suits a client, (v) asking clients on a periodic basis whether there is any change in their financial situation that may affect their profile, and (vi) conducting an efficient monitoring and maintenance of the systems that are used to create

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772 See FINRA, *Digital Investment Advice*, supra note 30 at 8-10.
773 See *ibid* at 8.
the profiles of clients.\textsuperscript{774} In the light of these principles, FINRA draws attention to three important points that robo-advisers should consider with regard to their questionnaires:

“[d]oes the tool seek to obtain all of the required investment profile factors? If not, has the firm established a reasonable basis to believe that the particular factor is not necessary? How does the tool handle conflicting responses to customer profile questions?”\textsuperscript{775}

In Canada, the CSA, in the \textit{CSA Staff Notice 31-342}, has listed a number of requirements that robo-advisers must satisfy in developing their online questionnaires.\textsuperscript{776} As the CSA indicates, an efficient robo-adviser questionnaire should:

“use a series of behavioural questions to establish risk tolerance and elicit other KYC information[;] prevent a client or prospective client from progressing further until all questions have been answered[;] test for inconsistencies in the answers (for example, answers that indicate both low risk tolerance and a maximum growth objective), and will not let the client or prospective client complete the questionnaire until the conflict is resolved[;] flag inconsistencies or conflicts in the client or prospective client’s responses that would trigger a call from the AR to the investor[;] offer investor education about the terms and concepts involved, and remind the investor that an AR is available to help them throughout the process.”\textsuperscript{777}

\textsuperscript{774} \textit{Ibid.}
\textsuperscript{775} \textit{Ibid} at 9.
\textsuperscript{776} \textit{CSA Staff Notice 31-342, supra} note 37 at 8198-8199.
\textsuperscript{777} \textit{Ibid} at 8198.
In addition to these requirements, the CSA also indicates that robo-adviser questionnaires should not be designed merely as “tick the box” tasks.778 Furthermore, in the CSA Staff Notice 31-342, it is also emphasized that clients should be prompted by robo-advisers to update their information in the system when there is a change that may affect their investor profile, or, at least on an annual basis.779 As can be seen from the above requirements, the CSA expressly requires advising representatives to be actively involved in the gathering of KYC information and emphasizes that advising representatives are required to ensure that sufficient client information has been collected prior to the provision of an investment advice.780 Above all, according to the CSA, the gathering of KYC information “must amount to a meaningful discussion with the client or prospective client, even if that discussion is not in the form of a face-to-face conversation.”781

The above requirements and standards discussed by the SEC, FINRA, and the CSA show that the main issue regarding the robo-adviser questionnaires is whether these questionnaires are capable of collecting sufficient and accurate KYC information. Of course, regulators have pointed out different factors as well, such as whether these online questionnaires can successfully respond to an inconsistency in the answers of a client782 or whether they allow clients to obtain more information where necessary.783 Nevertheless, these factors cannot be considered to be independent of the main issue mentioned above; that is, the additional factors indicated by the regulators indeed constitute small components of a fiduciary’s capability of collecting sufficient and accurate KYC information. In other words, a robo-adviser

778 Ibid at 8199.
779 Ibid at 8198.
780 Ibid at 8197.
781 Ibid at 8198.
782 See ibid; See SEC, IM Guidance Update: Robo-Advisers, supra note 631 at 7; FINRA, Digital Investment Advice, supra note 30 at 9.
783 See SEC, IM Guidance Update: Robo-Advisers, supra note 631 at 6; CSA Staff Notice 31-342, supra note 37 at 8198.
questionnaire that can sufficiently and accurately elicit information about clients’ financial situation and investment targets and needs would, as a matter of course, already be able to satisfy these additional requirements as well. Despite that common issues have engaged the attention of the US and Canadian regulators; it should also be noted that there is a significant difference between the approaches adopted by the CSA and the US regulators in this regard. As the CSA allows only hybrid robo-advisers in Canada, it can be seen that the requirements it laid out with regard to robo-adviser questionnaires are directed at the hybrid models and that the CSA expressly requires the active involvement of humans (i.e. advising representatives) in several points during the gathering of KYC information. On the contrary, as there is no restriction to operate fully-automated robo-advisers in the USA, the requirements set forth by the US regulators do not necessitate the involvement of a human in the gathering of KYC information. Accordingly, robo-advisers, in the USA, may totally omit the human intervention in the gathering of KYC information; yet, they may also choose to operate hybrid models depending on their business preferences and enable human intervention in this process.

The most significant factor that may limit a robo-adviser’s capacity to sufficiently and accurately collect KYC information is the absence or limitedness of human interaction in online questionnaires. Since the requirements for robo-adviser questionnaires set forth by the US and Canadian regulators differ from each other regarding the level of human involvement in the gathering of KYC information, the analysis of this issue should be conducted separately for the US and Canadian robo-advisers.

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784 CSA Staff Notice 31-342, supra note 37 at 8198.
785 Ibid.
786 See Carney, supra note 566 at 602, MacKillop, supra note 697; G Rifkin, supra note 726 at 701-702.
In the USA, as mentioned above, robo-advisers are not required to involve human advisers in the gathering of KYC information, accordingly, including or omitting human involvement in their service is up to their business preferences. Firstly, an online questionnaire that does not allow interaction with a human adviser may not be able to provide the same depth of interaction an investor can have when she discusses her investment needs and targets with a human investment adviser, as these questionnaires may not be designed to collect information beyond what is requested through the questions contained therein. Without the shadow of a doubt, an investor, while providing information to a human investment adviser, can explain her financial conditions and investment goals more flexibly. For example, when she is asked to give an estimate of the level of risk she can tolerate, she may reply as “I can risk 20% of my assets. However, I am worried about the debts I may incur in the following months. My son may go abroad for studying, it is not certain yet; but if he goes, I will have to spend at minimum USD 20,000 for him. In that case, I think, I cannot risk 20%.” On the contrary, when an investor gives information about her financial conditions and investment targets in a robo-adviser questionnaire that does not involve the interaction of a human adviser, she will be limited with what the questionnaire asks for and may not be able to provide such details to a single question. For example, according to FINRA’s research, a robo-adviser asks a question as

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787 See Carney, supra note 566 at 602; MacKillop, supra note 697.
788 See SEC, IM Guidance Update: Robo-Advisers, supra note 631 at 6 (“[w]e have also observed that some of these questionnaires are not designed to provide a client with the opportunity to give additional information or context concerning the client’s selected responses.”); See also Avery R Barber, “Redefining Fiduciary in the Robot Age: How the Department of Labor’s New Definition Will Encourage Robo-Investment Platforms and Remove the Human Element from Investment Advising, (2018) 18:2 Wake Forest J Bus & Intell Prop L 316 at 333.
789 See Tara Siegel Bernard, “The Pros and Cons of Using a Robot as an Investment Adviser” The New York Times (29 April 2016), online: <https://www.nytimes.com/2016/04/30/your-money/the-pros-and-cons-of-using-a-robot-as-an-investment-adviser.html> [https://perma.cc/9NAJ-PR7Q] (citing William Galvin’s comments: “I am not sure that many investors, in many cases, can be adequately taken care of by answering questions.”; “You need a human that is responding to them”; and citing Arthur Laby’s comments: “[t]hey are not able to provide the kind of personalized advice that a customer can get from a human on the phone or sitting across the desk, where the customer can say: ‘Oh, I have a new wrinkle. I might be inheriting assets in the next 12 months.’” “Or: ‘I may need to care for a sick parent. How will that impact the cash I need?’”).
follows: “Have you ever lost 20% or more of your investments in one year?”

When it is answered with “yes”, the questionnaire requires the investor to choose an answer in the following statement: “In the year I lost 20% of my investments, I: a) sold everything; b) sold some; c) did nothing; d) reallocated my investments; or e) bought more.” As can be seen from the possible answers, the investor’s choice is narrowed down to five different options. However, when an investor is required to answer to this question while discussing with a human adviser, it goes without saying that there is no limit for what information she can provide. For example, she may reply as “In that year, at first, I decided to do nothing, but I was worried that I may lose more and eventually I sold everything. However, later I realized that if I did nothing, I would not incur any further significant loss. Therefore, if I face a situation like this once again, I would like to act more prudently.” Furthermore, a human adviser, while gathering information from his client can observe whether his client hesitated or has shown any sign of uneasiness while answering to a particular question; and accordingly, a human adviser can try to understand the underlying concerns of his client and elicit more information about her financial circumstances. Nevertheless, an online questionnaire that does not allow clients to contact with human advisers may not provide such an interaction. However, it should also be noted that the absence or limitedness of human interaction in a robo-adviser’s questionnaire does not always automatically mean that the said questionnaire cannot collect client information as good as or better than a human adviser can. Indeed, a well-designed robo-adviser questionnaire

791 FINRA, Digital Investment Advice, supra note 30 at 10. It should also be noted that FINRA has not mentioned whether this question was taken from the questionnaire of a fully-automated robo-adviser or a hybrid robo-adviser.

792 Ibid.

793 Carney, supra note 566 at 602 (“[…] these questionnaires have no way of taking into account a client’s hesitation or confidence in asserting certain risk preferences: with mostly multiple choice questions, the adviser cannot see whether the client really vacillated between two options before selecting one or the other. A human adviser collecting this information from a potential client in person might more readily be able to read hesitation on the potential client’s face and come to a more holistic risk assessment.”).

794 See ibid; Barber, supra note 788 at 330.

795 See Lightbourne, supra note 25 at 667 (arguing that both human investment advisers and robo-advisers are facing challenges regarding the gathering of client information and that provided that they ask all fundamental questions and solve conflicting responses in the questionnaires, they can comply with the fiduciary standards in this regard).
may be able to collect client information and create a client’s investor profile much more accurately and sufficiently than a human investment adviser. However, regardless of this possibility, the absence or limitedness of human interaction in a robo-adviser’s questionnaire is, at least theoretically, posing a risk for the questionnaire’s capability of collecting sufficient KYC information and this situation requires the attention of securities regulators.

On the other side, some robo-advisers in the USA allow their clients to contact with a human adviser during the gathering of KYC information.\textsuperscript{796} Theoretically, it may be argued that the involvement of a human investment adviser in this process, be it to a very limited extent or in an extensive manner, may facilitate the obtainment of KYC information and enhance the accuracy of investor profiles. Nevertheless, this does not mean that a KYC information gathering process that allows interaction with a human adviser will always, by default, be better at collecting client information than a fully-automated robo-adviser questionnaire. Indeed, given that the human interaction in these questionnaires may not be provided always as a face-to-face conversation but through e-mails, phone calls, or online chat as well,\textsuperscript{797} it can be argued that a fully-automated robo-adviser questionnaire that is designed in a way that it collects all fundamental data points, successfully resolves the inconsistencies in the answers, and allows investors to obtain more information when they wish may be far better at collecting sufficient and accurate information than the one that allows human interaction. Whether the former or the latter method is better will not be discussed herein; as it has been indicated, the quality of these methods may change from a robo-adviser to another, and while in some cases fully-automated

\textsuperscript{797} See \textit{ibid} (“[[i]f a robo-adviser does make an investment professional available to you, the format and amount of the interaction may also vary. For example, a person may be available by email but not by phone, or available only for a limited number of in-person meetings.”); See also Ayn de Jesus, “Robo-advisors and Artificial Intelligence – Comparing 5 Current Apps” \textit{Emerj} (13 February 2019), online: <https://emerj.com/ai-application-comparisons/robo-advisors-artificial-intelligence-comparing-5-current-apps/> [https://perma.cc/8K34-7P5A].
questionnaires may collect information more effectively, in other cases, a hybrid method may enable the construction of investor profiles more efficiently.

In Canada, as indicated by the CSA in the CSA Staff Notice 31-342, robo-advisers should develop their KYC information gathering process in a way that an advising representative, (i) either always or (ii) at minimum when there is an issue that engages the attention of the advising representative, contacts with the client. Accordingly, the Canadian robo-advisers are not allowed to totally omit the human element in the gathering of KYC information, and they must ensure that their KYC procedure “amount[s] to a meaningful discussion with the client or the prospective client.” However, the findings of the OSC in its Annual Summary Report for Dealers, Advisers and Investment Fund Managers which was released in 2017, show that some Ontario-based robo-advisers have not complied with these requirements. Therein, the OSC states: “[d]uring the course of our compliance reviews, we noted that some online advisers who did not have a comprehensive KYC questionnaire and/or software mechanisms, as described in CSA Staff Notice 31-342, did not always contact clients or prospective clients to have a meaningful discussion with them. In other cases, we noted that the online adviser did not maintain evidence to support that an AR had, in fact, had this meaningful discussion with clients or prospective clients.” As can be seen from these results, some robo-advisers, despite that the CSA expressly requires the involvement of an advising representative, in fact, may not be using the help of advising representatives to the required extent, and accordingly, are failing to act as good fiduciaries while collecting information from clients.

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798 CSA Staff Notice 31-342, supra note 37 at 8198 (“[i]n most cases, the firm’s policy is that an AR will always communicate directly with a client or prospective client before its KYC information gathering is completed. Less often, a firm will only require an AR to have direct communications with a client or prospective client if the AR has questions or concerns about the information gathered through the online platform.”).
799 Ibid.
800 OSC, Annual Summary Report for Dealers, Advisers and Investment Fund Managers, OSC Staff Notice 33-748 (11 July 2017) at 61.
Another aspect of robo-advisers’ KYC processes that requires special attention in this analysis is the varying extent and methods of the online questionnaires. Firstly, the research shows that the methods used in online questionnaires may significantly differ from one robo-adviser to another.801 For example, according to FINRA’s findings, while some robo-advisers are constructing the investor profiles with an eye to the risk willingness of their clients, other robo-advisers weigh more on the analysis of the risk tolerance of their clients to create investor profiles.802 FINRA also indicates that it has observed different question types in online questionnaires.803 For example, it states that while some approaches include multiple-choice questions that require the clients to choose one answer among given options, others prefer to ask hypothetical questions to elicit information about clients’ risk willingness or risk tolerance.804 Despite that the question types and methods used in online questionnaires are up to the design preferences of robo-advisers, it must be ensured that the questions should be designed and presented in a way that clients will be able to understand them easily and provide sufficient and accurate information about their financial circumstances and investment targets and needs.805 It goes without saying that the questions that are presented in a complicated way or difficult to understand may result in the failure of obtaining accurate information from clients. Another issue that raises concerns about online questionnaires’ capability of eliciting sufficient and accurate client information is that some robo-advisers may be omitting some essential questions that must be asked to a client for understanding her financial circumstances and investment targets and needs. Indeed, the OSC, in the abovementioned Annual Summary Report for Dealers, Advisers and Investment Fund Managers, has indicated that it detected that

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801 See FINRA, Digital Investment Advice, supra note 30 at 9.
802 Ibid.
803 Ibid at 10.
804 Ibid at 10.
805 The SEC requires robo-adviser questionnaires to be sufficiently clear. See SEC, IM Guidance Update: Robo-Advisers, supra note 631 at 6. Similarly, the CSA requires robo-adviser questionnaires to enable “a meaningful conversation” with clients. See CSA Staff Notice 31-342, supra note 37 at 8198.
the questionnaires of some Ontario-based robo-advisers did not have the capability of collecting sufficient information from clients; for example, one questionnaire, while requesting information about the amount of liquid assets of the client, did not ask about the client’s debts.\textsuperscript{806} The OSC stated that the said questionnaire, by omitting such an essential question, failed to elicit information about “the client’s true financial situation and net worth.”\textsuperscript{807} Furthermore, according to the results of the compliance review conducted by the OSC, some other online questionnaires did not ask clients to provide information about their “financial circumstances, investment knowledge or investment restrictions.”\textsuperscript{808} The possible impacts of the limitedness of the robo-adviser questionnaires has also engaged the attention of the Massachusetts Securities Division in the USA. The Division, in a policy statement released in 2016, has drawn attention to this issue and argued that fully-automated robo-advisers use short questionnaires and have limited inquiries into their clients’ circumstances, and such practices would not be able to elicit sufficient client information, and robo-advisers providing investment advices based on such limited information may be failing to act as a fiduciary.\textsuperscript{809} In the said statement, the Division has particularly emphasized that the investment advices provided by fully-automated robo-advisers may not be personalized and appropriate for clients, as they are based on limited client information.\textsuperscript{810} There is no doubt that the lack of fundamental data points about a client’s financial situation may result in the provision of an investment advice which may not suit the client’s needs. Accordingly, robo-advisers, in addition to presenting their questions in an easy-to-understand manner, must also ensure that their online questionnaires

\textsuperscript{806} OSC, Annual Summary Report for Dealers, Advisers and Investment Fund Managers, supra note 800 at 61.
\textsuperscript{807} Ibid.
\textsuperscript{808} Ibid.
\textsuperscript{810} Ibid at 6. It should be noted that the Division has put forward these arguments in a manner that it has addressed all fully-automated robo-advisers on a general basis, not some robo-advisers whose practice have been found to be legally non-compliant in its jurisdiction.
inquire about all important data points about their clients’ financial situations and investment goals that are requisite for providing a suitable investment advice.

In the light of the above analysis, it is concluded that, regulators should consider engaging in an extensive analysis of robo-adviser questionnaires and developing policies to address the possible limitations of robo-advisers’ KYC processes in order to ensure and enhance the regulatory compliance of the methods used by robo-advisers for gathering client information. Here, it should be noted that this Thesis does not argue that the KYC processes of all robo-advisers need to be improved or have deficiencies; however, as robo-advisers implement modern and technology-based methods, which may be different than that of traditional investment advisers, for the collection of KYC information, and as they owe a fiduciary duty to their clients, regulators should consider how robo-advisers’ KYC processes can provide the best possible interaction to their clients so that they can optimally elicit client’s financial circumstances and investment targets and needs.

Firstly, regulators may target to eliminate the risks arising from the absence or limitedness of human interaction in robo-advisers’ KYC processes. This can be achieved by initiating a project that involves experts from different disciplines; specifically, behavior scientists, computer scientists, and website designers. The target of this project will be to compensate the absence or limitedness of human interaction in robo-advisers’ KYC processes by enhancing online questionnaires’ capability to observe the behaviors of the users answering the questions. In this project, behavior scientists can detect the elements that may indicate a person’s psychological state while answering questions, and accordingly, a person’s ability to provide accurate

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811 See Baker & Dellaert, “Regulating Robo Advice”, supra note 45 at 716 (arguing that an effective regulatory response to the challenges arising in connection with robo-advisers will require regulators to adopt an interdisciplinary approach that combines different areas such as psychology and computer science).
information about herself. For example, studies show that the lack of interesting options or the lack of sufficient information about the options provided to a person may lead to indecisiveness. Against this background, a client that shows signs of indecisiveness while answering the questions of an investment adviser may be in need of further explanations of the options under the questions provided to her. A human adviser, once she observes hesitation or indecisiveness in her client, may realize that her client needs further explanations regarding the questions asked to her and can provide such explanations to dissipate her client’s indecisiveness and elicit her true financial needs. Behavior scientists, by providing such tips and insights to the designers of the KYC processes of robo-advisers, can help those designers better understand the correlation between someone’s behaviors and unspoken needs or psychological state while making choices. Based on the findings and guidance of the behavior scientists, computer scientists and web designers can develop and design exemplary online questionnaires and KYC processes for robo-advisers. The questionnaires may be designed in a way that users’ reactions to the questionnaire can be monitored and certain conclusions can be drawn from such reactions. For example, a user may change her risk preference several times among the given options in the questionnaire, and this may indicate that the user is not truly sure about the amount of risk she is willing to take. As mentioned above, such behaviors may indicate that the user needs more information about the options provided to her. Accordingly, where such behaviors are detected, the online questionnaire may direct the user to more detailed questions or provide further explanations and examples regarding different risk preferences to elicit the user’s true risk willingness. This project also can look into the optimal practices for hybrid models which enable contact with a human adviser during the KYC process. Based on the guidance of behavior scientists, computers scientists and web designers can develop KYC

processes that utilize the involvement of human advisers to the fullest. For example, a KYC process can be developed in a way that the system alerts a human adviser when it detects a sign of indecisiveness or hesitation in the answers of a client, and the adviser can contact with the client and provide further explanations and guidance.

The exemplary questionnaire and KYC methods developed in the said projects can be provided to robo-advisers so that they can review and implement proposed enhancements by the regulators. Of course, this project may not compensate the absence or limitedness of human interaction perfectly; yet, it can still indicate the optimal practices for gathering KYC information through the use of means of technology which are utilized by robo-advisers.

Another regulatory intervention in this regard may be directed at the extent of the questionnaires. As indicated by FINRA, the data points used and focused on in constructing clients’ investor profiles may differ from a robo-adviser to another, and as indicated by the OSC, some robo-advisers may not be asking some of the essential questions to elicit information about a client’s financial situation and investment targets and needs. As discussed in this Section, both the CSA and the US regulators have already laid out certain standards and recommendations for the extent of online questionnaires. Despite that the said regulatory guidance has undoubtedly standardized these questionnaires to some extent, regulators should consider expressly itemizing all data points that must be collected in an online questionnaire. This does not mean that regulators should impose restrictions or standards on the design of these questionnaires; indeed, such an approach would clearly be an overregulation beyond reasonable limits. Nevertheless, as it can be inferred from the findings of the regulators,

813 See FINRA, Digital Investment Advice, supra note 30 at 9.
814 See OSC, Annual Summary Report for Dealers, Advisers and Investment Fund Managers, supra note 800 at 61.
a certain level of standardization for robo-adviser questionnaires may help ensure that these questionnaires collect client information sufficiently and effectively. Furthermore, by expressly itemizing all data points that must be requested by questionnaires and standardizing the extent thereof, regulators can conduct their compliance reviews and find non-compliant questionnaires more easily, and this would eventually facilitate the regulatory supervision of robo-adviser questionnaires to a great extent.

In conclusion, this Section suggested that the unique aspects of robo-advisers’ KYC processes (i.e. the absence or limitedness of human interaction), while not by default making robo-advisers incapable of meeting the fiduciary standards, raise concerns and require regulatory attention. In this regard, regulators are advised to employ experts from relevant disciplines, such as behavior scientists, computer scientists, and web designers,815 and explore how a well-designed online questionnaire would function and interpret the behaviors of users, and prepare exemplary questionnaires and share them with robo-advisers. Based on these examples, robo-advisers can make necessary adjustments in their questionnaires. In addition to providing guidance in this regard, regulators should also consider itemizing all data points that must be obtained by robo-advisers through online questionnaires. A clear itemization of these data points would lead to the establishment of certain standards for robo-advisers, and this would help regulators detect non-compliant KYC methods and take actions in such situations.

3. Suitability Obligations

As explained in Section 3.3 under Chapter II above, both the US and Canadian securities regulations require investment advisers to provide a suitable advice to their clients.816

815 See Baker & Dellaert, “Regulating Robo Advice”, supra note 45 at 716 (arguing that an effective regulatory response to the challenges arising in connection with robo-advisers will require regulators to adopt an interdisciplinary approach that combines different areas such as psychology and computer science).

816 SEC, Standard of Conduct, supra note 60 at 12; National Instrument 31-103, supra note 152 s 13.3.
Moreover, as investment advisers in the USA are required to act as fiduciaries, they must provide investment advice in the best interests of their clients.\footnote{See SEC, Standard of Conduct, supra note 60 at 12.} While the fiduciary duty is not stipulated under securities regulations in Canada, as discussed in Chapter II, the facts and circumstances of an adviser-client relationship may indicate that a fiduciary relation has been established between each other; and accordingly, in that case, the investment adviser will be required to act in the best interests of his client.\footnote{See Chapter II, above, for more on this topic.} The analysis conducted in Chapter IV indicates that robo-advisers in Canada are acting as fiduciaries, therefore, they should act in their clients’ best interests, and accordingly, the investment advice they provide should also be in their clients’ best interests.\footnote{See Chapter IV, above, for more on this topic.}

As explained in Chapter III above, robo-advisers use algorithms to generate investment advices. The main issue with respect to the provision of suitable investment advice in this regard is whether the algorithms used by robo-advisers are generating investment advices which are indeed in the best interests of clients. These algorithms are robo-adviser firms’ trade secrets, and as a matter of course, the details or the source code of these algorithms are not disclosed to public; therefore, the assessment of the procedures followed by these algorithms to generate investment advices or the analysis of these procedures’ affect on the suitability of the investment recommendations is not possible in the analysis herein.

The primary concern that arises with regard to robo-advisers’ algorithms’ decision-making process is the possibility of algorithmic bias.\footnote{See Packin, supra note 583.} It goes without saying that algorithms are not influenced by psychological and emotional biases as much as human investment advisers are.\footnote{See Ji, supra note 33 at 1563-1564.}
Nevertheless, this does not mean that algorithms are totally free from biases. Algorithms are developed, designed, and coded by humans, and accordingly, based on the values used by humans and inserted into the algorithms, the robo-adviser algorithms, like any other algorithm, may inherent the biases their creators have. This bias may occur due to intentional or unintentional practices; in other words, the creator of the algorithm may or may not be aware of the fact that biased values have been inserted into the algorithm. The challenging aspect of this issue is that when these values are inserted into the algorithm unconsciously, it may be even more difficult to find the biases in the algorithm because even the programmer of the algorithm will be oblivious to the existence of those biases in the algorithm.

Algorithmic bias may occur due to different reasons. Firstly, it may be the result of the pre-existing biases of the programmer as mentioned above, and the values related to such biases may be incorporated into the algorithm implicitly and unconsciously as well as explicitly and consciously. Second, algorithmic bias may be the consequence of technical limitations. Technical bias may stem from the limitations in hardware or software, the misalignment between the context in which the algorithms are used and the procedures applied by the algorithms, and the attempt to turn human-related data into a form of data which can be processed by algorithms, just to name a few. Lastly, algorithmic bias may appear due to the absence of adjustments that should be made in accordance with the changing conditions. Unlike the technical and pre-existing biases which can be detected during the development or

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822 Packin, supra note 583 (“[…] like all algorithms, robo-adviser programs are based on certain implicit values that were inserted into them by the humans who coded, collected, selected, or used data to train the robo-advisers, whether or not the humans were aware of doing so.”). Barber, supra note 788 at 335.
823 Packin, supra note 583.
824 See ibid.
826 Ibid at 334.
827 Ibid at 334-335.
828 Ibid at 334, 336.
implementation of the algorithms, the last type of algorithmic bias, which can also be called emergent bias, can only be detected in the course of time after the algorithms are created and put into operation.\textsuperscript{829} The emergent bias indicates that where the conditions pertaining to the data an algorithm is designed to process change in time or the context in which the algorithm is used undergoes a shift and the algorithm is not updated in the light of such changes, the algorithm may disregard the changes and keep working as if the data and the context is still the same as before.\textsuperscript{830} By doing so, the algorithm’s decisions are likely to be biased in favor of a certain data group.\textsuperscript{831} Robo-adviser algorithms, too, just like any other algorithm may be subject to pre-existing, technical or emergent biases, and the existence of such biases may indeed affect the suitability of the investment advices, as a biased algorithm is likely to favor some data points over others while generating investment recommendations and matching investors with investment products.

Apart from the possibility of algorithmic bias, a robo-adviser’s algorithm may simply be poorly designed and unable to provide suitable investment advices to the users.\textsuperscript{832} There are no clearly specified or listed industry standards for how to develop a well-designed robo-adviser algorithm,\textsuperscript{833} accordingly, designing these algorithms is up to the method and perspective of the programmers and robo-adviser firms. It goes without saying that the application of improper decisions and methods to the development of algorithms may result in the creation of algorithms that may not be able to successfully carry out their tasks.\textsuperscript{834} Indeed, it is within the bounds of possibility that a robo-adviser’s algorithm, when designed poorly, may lack the capacity to

\textsuperscript{829} Ibid at 336.
\textsuperscript{830} Ibid.
\textsuperscript{831} See ibid.
\textsuperscript{832} See generally Baker & Dellaert, “Regulating Robo Advice”, supra note 45 at 731-736.
\textsuperscript{833} See Barber, supra note 788 at 336 (“[…] unlike the regulation in place for human advisers, there is little guidance in place for those in charge of building these digital tools.”).
\textsuperscript{834} See FINRA, Digital Investment Advice, supra note 30 at 3 (“If an algorithm is poorly designed for its task or not correctly coded, it may produce results that deviate systematically from the intended output and that adversely affect many investors.”).
efficiently process the product and customer data and perfectly match them with each other in 
a way that every single match will be in the best interest of the client. A well-designed robo-
adviser should be capable of providing suitable advices for its clients with honesty and 
sufficient competency; and accordingly, it should minimize the algorithmic bias to the 
greatest extent possible, match investment products with investors in accordance with the 
suitability requirements, and ensure that it matches investment products with investors without 
any incentive that may run contrary to the interests of its clients. At this point, it should be 
noted that this Thesis does not argue that robo-advisers are suffering from algorithmic bias or 
their algorithms are not well designed, however, even the mere possibility that these problems 
may occur in robo-advisory requires the attention of regulators.

Hybrid robo-advisers, as explained above, involve human advisers in their services. In Canada, 
as indicated by the CSA in the CSA Staff Notice 31-342, each investment advice generated by 
a robo-adviser algorithm must be reviewed by an advising representative. Theoretically, as 
these hybrid models add an additional layer of control which is conducted by human advisers, 
they may detect an unsuitable investment advice and make the necessary adjustments. 
Nevertheless, we cannot know how closely these decisions are reviewed by human advisers: 
are they scrutinizing each investment advice to the smallest details or generally looking for 
distinct red flags in the advices generated by the algorithms? It is clear that the possibility of 
successfully detecting an unsuitable investment advice is likely to be different depending on

835 See ibid; See Baker & Dellaert, “Regulating Robo Advice”, supra note 45 at 713 (“[a] well-designed robo 
advisor will be honest and competent, and it will recommend only suitable products. Because humans design and 
implement robo advisors, however, honesty, competence, and suitability cannot simply be assumed.”).
836 Baker & Dellaert, “Regulating Robo Advice”, supra note 45 at 731.
837 See Packin, supra note 583 (“[a]lgorithmic bias cannot be fully eliminated. Moreover, technology alone can 
help, but will probably never solve societal injustice or fairness debates. But, the negative impact of algorithmic 
bias can be reduced, by creating and applying industry standards regarding the levels of transparency needed in 
order to better understand what algorithms are based on and what information they use.”).
838 This issue falls within the scope of conflicts of interest problems and will be discussed in Section 4 below. See 
Baker & Dellaert, “Regulating Robo Advice”, supra note 45 at 735.
839 CSA Staff Notice 31-342, supra note 37 at 8198.
which practice is adopted. Arguably, an advising representative who scrutinizes an investment
dvice to the smallest details may have a more holistic view of the possible deficiencies in the
dvice than an advising representative who is only looking for distinct problems in the advices.
Yet, regardless of which practice is adopted, the human control is executed on the advices
generated by algorithms, accordingly, algorithmic decision-making remains as the central part
of the service provided in this concept.\textsuperscript{840} Therefore, the possibility that an algorithm may
contain deficiencies or biases is an issue that requires a special attention regardless of whether
a fully-automated or a hybrid model is used to provide investment advices.

Without the shadow of a doubt, regulators, in order to ensure that the robo-adviser algorithms
are providing investment advice in the best interest of clients, must understand and be able to
analyze the particulars of the technology underlying the robo-advising.\textsuperscript{841} Indeed, where
regulators develop policies regarding the use of robo-adviser algorithms and the provision of
investment advice, without fully comprehending the features of the technology used by robo-
advisers, such policies are likely to be ineffective in addressing the challenges arising from the
implementation of this technology.\textsuperscript{842} In this regard, regulators have a number of options that
they can implement to understand the particulars of the robo-adviser technology and ensure that
robo-advisers are providing suitable investment advice and prioritizing the interests of their
clients. For this purpose, the first regulatory option is the regulatory sandboxes.\textsuperscript{843} A regulatory
sandbox can be defined as a regulatory approach through which a regulator allows companies
to test their innovative products subject to certain terms under the supervision of the

\textsuperscript{840} Philipp Maume, “Regulating Robo-Advisory”, Tex Int LJ (unedited draft), [forthcoming, 2018/2019], online:

\textsuperscript{841} Baker & Dellaert, “Regulating Robo Advice”, supra note 45 at 733; Iannarone, supra note 722 at 159 (arguing
that the SEC should use the available regulatory methods to understand how robo-advisers operate).

\textsuperscript{842} See Baker & Dellaert, “Regulating Robo Advice”, supra note 45 at 733; Iannarone, supra note 722 at 159.

\textsuperscript{843} See Carney, supra note 566 at 609; See generally Wolf-Georg Ringe & Christopher Ruof, “A Regulatory
Sandbox for Robo Advice” (2018) EBI Working Paper Series 2018 No 26, online:
Regulatory sandboxes have emerged as a response to the challenges arising from the increasing use of innovative financial products in recent years. The first regulatory sandbox was established by the Financial Conduct Authority (“FCA”) in the United Kingdom in 2015, and since then many countries all around the world have established their own regulatory sandboxes. In Canada, the CSA has established its regulatory sandbox in 2017, and since then, several companies have been accepted to test their products under this concept. In the USA, there is no regulatory sandbox at the federal level; however, Arizona, Utah and Wyoming have established their regulatory sandboxes and are implementing them at the state level.

The CSA’s regulatory sandbox shares several common features with the regulatory sandboxes established in other countries. Indeed, regulatory sandboxes, despite that there may be procedural differences between each other, are generally implemented based on similar components and are operated for similar purposes. First of all, the CSA, like many other

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849 For a list of the companies authorized in the regulatory sandbox See CSA, “Decisions” CSA, online: <https://www.securities-administrators.ca/industry_resources.aspx?id=1626> [https://perma.cc/UVP7-4W9Y].


851 See Ringe & Ruof, * supra* note 843 at 40-44.
regulators, has its own entry requirements and these requirements must be satisfied by an applicant to be accepted to the regulatory sandbox.\textsuperscript{852} The CSA requires firms to “be ready to provide live environment testing, a business plan and a discussion of potential investors benefits (including how it will minimize investor risks).”\textsuperscript{853} The CSA also states that its regulatory sandbox is available for all firms, including start-up and incumbent companies, provided that the firm has an innovative product for testing in the regulatory sandbox.\textsuperscript{854} Another significant component of the CSA’s regulatory sandbox is that it provides the firms that are authorized to participate in the sandbox with the opportunity to be exempted from some regulatory requirements that may, under normal circumstances, impede the relevant innovative product’s entry into the markets.\textsuperscript{855} The registration requirements, too, may be adjusted for the companies accepted to the regulatory sandbox.\textsuperscript{856} Nevertheless, the relaxation of the regulatory requirements provided to the companies testing their products in the sandbox is limited with a period of time that is determined by the CSA for each company.\textsuperscript{857} The CSA also states that it may place additional restrictions on these firms for protecting investors.\textsuperscript{858} Additionally, the CSA indicates that, for data collection and monitoring purposes, firms accepted to the regulatory sandbox should make the data regarding their operations available to the CSA staff.\textsuperscript{859}

\textsuperscript{852} CSA, “Regulatory Sandbox” CSA, online: <https://www.securities-administrators.ca/industry_resources.aspx?id=1588> [https://perma.cc/V5PM-FM7Q]; See also Ringe & Ruof, supra note 751 at 40-41 (indicating that each regulatory sandbox has its own entry requirements).
\textsuperscript{853} Ibid.
\textsuperscript{854} Ibid.
\textsuperscript{855} Ibid. See also Ringe & Ruof, supra note 843 at 42-43 (indicating that regulators generally provide a relaxation of some regulatory requirements for the firms accepted to regulatory sandboxes).
\textsuperscript{856} CSA, “Regulatory Sandbox”, supra note 852.
\textsuperscript{857} Ibid. See also Ringe & Ruof, supra note 843 at 42 (indicating that firms are given a certain period of time to test their products in regulatory sandboxes).
\textsuperscript{858} CSA, “Regulatory Sandbox”, supra note 852. See also Ringe & Ruof, supra note 843 at 41-42 (indicating that regulators, while operating regulatory sandboxes, take steps to ensure that customers are protected).
\textsuperscript{859} CSA, “Regulatory Sandbox”, supra note 852.
As there is no federal regulatory sandbox in the USA, an explanation thereof is not possible in this analysis. Yet, as mentioned above, Arizona, Utah, and Wyoming are operating their own regulatory sandboxes; and it can be seen that they share similar features with other jurisdictions’ regulatory sandboxes.\footnote{860} For example, they provide a relaxation of some regulatory requirements to the persons that are accepted to their regulatory sandboxes\footnote{861} and determine a period of time for the testing in the sandbox.\footnote{862} Furthermore, they also stipulate certain conditions in order to ensure that consumers receiving service from the persons in the regulatory sandbox are protected.\footnote{863} The regulatory sandbox of Arizona and Utah require the participants to disclose several items to their customers with regard to the particulars of the service they provide and their status in the regulatory sandbox.\footnote{864} As a measure for consumer protection, Wyoming’s regulatory sandbox requires the persons that are accepted to the sandbox to provide a consumer protection bond, of which amount shall not be less than USD 10,000 and will be determined by the state banking commissioner or the secretary of the state, as a security for the losses that may be incurred by the consumers.\footnote{865} Additionally, these sandboxes require the participants to keep records of the data regarding their operations in the regulatory sandbox and make these records available to the overseers of the sandbox for inspection.\footnote{866}

\footnote{860} It should be noted that the conditions and requirements laid out in the CSA’s and these states’ regulatory sandboxes are not limited to those described herein.

\footnote{861} See US, HB 2434, Ari, supra note 850, s 41-5602 (“[t]he Attorney General shall establish a regulatory sandbox program in consultation with applicable agencies of this state to enable a person to obtain limited access to the market in this state to test innovative financial products or services without obtaining a licence or other authorization that otherwise might be required.”); US, HB 378, Uta, supra note 850, s 13.55.103(2)(a), (2)(b) (“[i]n administering the regulatory sandbox, the department: (a) shall consult with each applicable agency; (b) shall establish a program to enable a person to obtain limited access to the market in the state to test an innovative product or service without obtaining a license or other authorization that might otherwise be required […]”); US, HB 0057, Wyo, supra note 850, s 40-28-103(a) (“n[otwithstanding any other provision of law, a person who makes an innovative financial product or service available to consumers in the financial technology sandbox may be granted a waiver of specified requirements imposed by statute or rule, or portions thereof, if these statutes or rules do not currently permit the product or service to be made available to consumers.”).

\footnote{862} See US, HB 2434, Ari, supra note 850, s 41-5605(a)(1); US, HB 378, Uta, supra note 850, s 13-55-104(1); US, HB 0057, Wyo, supra note 850, s 40-28-102(a)(vii).

\footnote{863} See US, HB 2434, Ari, supra note 850, s 41-5606; US, HB 378, Uta, supra note 850, s 13-55-105; US, HB 0057, Wyo, supra note 850, s 40-28-103.

\footnote{864} See US, HB 2434, Ari, supra note 850, s 41-5606; US, HB 378, Uta, supra note 850, s 13-55-105;

\footnote{865} US, HB 0057, Wyo, supra note 850, s 40-28-103.

As an efficient regulatory method for understanding robo-adviser technology and ensuring the suitability of the investment advices generated by the algorithms, regulators may consider encouraging new robo-advisers to apply for the regulatory sandboxes. Indeed, the testing of robo-adviser technology under this concept may provide significant advantages to both regulators and robo-advisers. The core benefit in this regard is that robo-advisers, by participating in the regulatory sandboxes, can test their products in a controlled environment and find out what aspects of their products require improvement. The FCA’s experience with the testing of robo-advisers in its regulatory sandbox indicates that robo-advisers that participated in the sandbox had the opportunity to test the quality of their products and make necessary amendments therein. For example, the FCA, in a report released in 2017 states that a test conducted for a robo-adviser product allowed an experienced adviser to join the testing during the provision of investment advices, and before the clients receive these advices, to review them, and where he/she deems necessary, amend those advices. In accordance with the feedback provided by the adviser, the robo-adviser could make the necessary adjustments in its algorithm.

The FCA also states that the Advice Unit which provides guidance to the businesses that are developing automated advising services and products supported the robo-advisers that have participated in its regulatory sandbox.

The FCA has expressed positive findings not only about robo-advisers but also about other firms testing their products in the regulatory sandbox. The FCA indicated that the firms that

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867 See Carney, supra note 566 at 609; Payette, supra note 35 at 474; Ringe & Ruof, supra note 843 at 72-73 (recommending the use of a guided sandbox for robo-advisers in the EU).
868 See Carney, supra note 566 at 611-613.
870 Ibid.
871 Ibid.
872 Ibid.
873 Ibid at para 4.39.
participated in its regulatory sandbox generally had the opportunity to develop proper consumer protection mechanisms and incorporate those into their products. The FCA states: “[w]orking closely with the FCA has given firms the opportunity to develop their business models with consumers in mind and mitigate risks by implementing appropriate safeguards to prevent harm occurring.” Apart from the positive findings of the FCA, the participants in the FCA’s regulatory sandbox have expressed positive developments that they could make through the testing of their products in the sandbox. A report published by Deloitte in 2018 indicates that several participants of the FCA’s regulatory sandbox had the opportunity to find out the flaws in their products during the testing in sandbox the and made the necessary adjustments. The said report also indicates that the participants in the FCA’s regulatory sandbox have found the opportunity to gain a deeper insight into the regulatory framework applicable to their products and the risks that may arise from the operation of their products.

The success and the potentials of the regulatory sandboxes are clear. The FCA’s regulatory sandbox has already proved that the collaboration of regulators and innovators in this concept has a great potential of enhancing the compliance of robo-adviser algorithms and ensuring the suitability of the investment advices generated by these algorithms. The US and Canadian regulators, too, by conducting tests in the sandbox environment can help robo-advisers detect and improve the points in their products that may affect the suitability of the advice they generate. Furthermore, robo-advisers, apart from having the opportunity to improve their products, can also gain more insight into the expectations and concerns of regulators regarding the suitability issues by exchanging ideas and having extensive communications with the

875 *Ibid*.
877 *Ibid*.
regulators in the regulatory sandboxes and they can gain a more holistic view of the risks and challenges that may arise in connection with algorithmic bias, and overall, with the suitability requirements.\textsuperscript{878}

Another regulatory method that can be implemented with regard to the suitability problem is organizing contests for finding optimal algorithmic mechanisms for robo-advisory. Baker & Dellaert, in their essay titled \textit{Regulating Robo Advice across the Financial Services Industry}, suggests that regulators organize contests of contests that will offer cash prizes to the organizations that organize events providing the robo-advisers with the opportunity to compete against each other on the qualifications and features of their algorithms.\textsuperscript{879} A similar concept has been adopted by the FCA in the United Kingdom in recent years. The FCA, since 2016, has been organizing TechSprint events to discover the possible uses of technology to find solutions to the issues encountered in the financial realm.\textsuperscript{880} In 2018 and 2019, the TechSprint events have focused on the discovery of different implementations of technology as a mechanism that can be used against money laundering and other financial crimes.\textsuperscript{881} A significant number of companies have joined these events, and a number of technology-based methods such as Natural Language Processing, Graph/Network Analytics, and Distributed Ledger Technology have been used by participants to develop products to fight against money laundering and

\textsuperscript{878} See Carney, \textit{supra} note 566 at 609 (arguing that robo-advisers, by participating in regulatory sandboxes, can assess their products in the light of the existing regulatory framework.); Ringe & Ruof, \textit{supra} note 843 at (arguing that regulators, through regulatory sandboxes, can help robo-advisers understand the particulars of the relevant regulations in the EU).

\textsuperscript{879} Baker & Dellaert, “Regulating Robo Advice”, \textit{supra} note 45 at 746.


financial crimes. In 2018, three teams in three different categories have been awarded by the FCA at the end of the event.

The US and Canadian regulators can take the FCA’s TechSprint event as a conceptual example and organize competitions either directly by themselves or through other organizations as suggested by Baker & Dellaert to find optimal algorithms for robo-advisers. These competitions may be available for the robo-adviser firms as well as individuals who are interested in developing robo-adviser algorithms and finding effective mechanisms to ensure the suitability of the investment advices. Indeed, regulators, by offering significantly high cash prizes can engage the attention of talented programmers and developers and establish an environment where these individuals’ varying approaches to the robo-adviser algorithms and suitability problem can be observed, tested and awarded. For assessing the algorithms’ performance, regulators can develop datasets that contain fictitious user and investment product data. These datasets may include thousands of different fictitious user profiles and investment products, as a high variety in the inputs may provide the regulators with the opportunity to observe algorithms’ investor-product matching in a more realistic way. By reviewing a number of different algorithms created by different firms and individuals that may adopt different values during the programming process, regulators may also try to find signs of algorithmic bias and analyze how the said values may affect the creation and performance of the algorithms. At the end of these competitions, regulators can select the algorithms that they deem appropriate and share the source code and all details of the selected algorithms with public. The robo-advisers which are currently active and the firms that are planning or developing robo-adviser technology can study these algorithms and may find some points that need to be improved.

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883 Ibid.
adjusted or modified for the provision of investment advices that are in the best interests of their clients.

Lastly, regulators may also consider establishing a project in which computer scientists and financial professionals are assigned to develop algorithms that can comply with the suitability requirements at the optimal level. In this project, the computer scientists and financial professionals can develop a number of different algorithms and test them by using inputs that are created based on fictitious user and investment product data. Through these tests, regulators can compare the performance of the algorithms, see which components in the algorithms lead to different outputs, and develop a better understanding of the risks and promising aspects of the robo-adviser technology. At the end of the project, selected algorithms may be shared with public so that current and prospective robo-adviser firms can review them and may consider making adjustments in their own systems. In fact, this project may also be organized as a successive step of the competitions explained above. At the end of these competitions, it is likely that regulators will have a number of different robo-adviser algorithms. Regulators may consider hiring computer scientists and financial professionals and assign them to analyze, work on and improve the algorithms created during the competitions. These computer scientists and financial professionals can prepare reports indicating any problems as well as any well-designed features in the algorithms that may affect the provision of a suitable investment advice. With such reports, regulators can gain a deeper insight into the robo-adviser technology and the possible deficiencies and promising features of the robo-adviser algorithms. At the end of the project, if any adjustments and improvements are made on the algorithms, information relating to such changes and the updated versions of the algorithms may be shared with public.

See Baker & Dellaert, “Regulating Robo Advice”, supra note 45 at 716 (arguing that an effective regulatory response to the challenges arising in connection with robo-advisers will require regulators to adopt an interdisciplinary approach that combines different areas such as psychology and computer science).
In conclusion, this section has indicated that there is a possibility that a robo-adviser’s algorithm may be poorly designed\textsuperscript{885} or suffer from biases\textsuperscript{886} and not be able to provide suitable advices to the clients. Regulators, without understanding the particulars of the robo-adviser technology and developing a good communication with robo-advisers, cannot find solutions to these issues effectively.\textsuperscript{887} Therefore, they should consider using alternative regulatory methods discussed in this Section that will allow them to gain a deeper insight into the robo-adviser technology, observe and analyze the operation of robo-adviser algorithms, and help robo-advisers make adjustments in their algorithms where deemed necessary to ensure that the investment advices generated by these algorithms are in the best interest of clients.

4. Conflicts of Interest Obligations

As explained in Section 3.4 under Chapter II above, the US securities laws require investment advisers to disclose, eliminate and avoid conflicts of interest that may negatively affect the provision of unbiased advice to clients.\textsuperscript{888} Similarly, the Canadian securities laws require investment advisers to disclose, avoid and control conflicts of interest that may arise between the investment adviser, adviser’s representatives and their clients.\textsuperscript{889} Robo-advisers, too, as investment advisers, are required to comply with these requirements; and furthermore, as fiduciaries, they must address conflicts of interest in the best interests of their clients.\textsuperscript{890}

As explained in Chapter III above, robo-advisers use algorithms to generate investment advices. Arguably, the use of algorithms, in this regard, may enable the provision of investment advices

\textsuperscript{885} See ibid at 713, 731 (arguing that a robo-adviser may not be well-designed).
\textsuperscript{886} Packin, supra note 583.
\textsuperscript{887} See Baker & Dellaert, “Regulating Robo Advice”, supra note 45 at 733; Carney, supra note 566 at 614; Iannarone, supra note 722 at 159 (arguing that the SEC should use the available regulatory methods to understand how robo-advisers operate).
\textsuperscript{888} See Capital Gains, supra note 196 at 191-192; See also SEC, Standard of Conduct, supra note 60 at 23.
\textsuperscript{889} Companion Policy 31-103CP, supra note 153 s 13.4; National Instrument 31-103, supra note 152 s 13.4(1).
\textsuperscript{890} See Chapter II, above, for more on this topic.
more objectively and may be considered as an advantage for robo-advisers in avoiding conflicts of interest. Indeed, robo-adviser algorithms may be more objective than human advisers as algorithms do not have incentives, emotions, or motivations that would give rise to conflicts of interest between themselves and clients. These algorithms, especially through the fully-automated models used in the USA that do not involve the service of a human adviser, may eliminate the conflicts that may arise from the advising representative-client relationship. In spite of this fact, robo-advisers are not totally free from conflicts of interest. Firstly, hybrid robo-advisers, as they involve human advisers in their services, may still have advising representative-client conflicts “depending on the incentive structure for the financial professional.” Indeed, if a robo-adviser firm is providing incentives to its employees for recommending certain investment products, conflicts of interest are likely to occur. Second, both hybrid robo-advisers and fully-automated robo-advisers, despite the fact that fully-automated models eliminate the biases an advising representative may have, may still have conflicts of interest that may arise from the firm-client relationship. Indeed, robo-adviser firms, like traditional investment advisers, may implement investment policies that may give rise to conflicts of interest due to different practices such as recommending affiliated or proprietary products or revenue sharing. These practices are not prohibited; however, securities regulations require investment advisers to, at minimum, disclose such conflicts to

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891 See Ji, supra note 33 at 1572-1573.
893 Ibid.
894 FINRA, Digital Investment Advice, supra note 30 at 6.
895 See SEC, “SEC Share Class Initiative Returning More Than $125 Million to Investors” SEC (11 March 2019), online: <https://www.sec.gov/news/press-release/2019-28> (stating that where higher-cost mutual fund shares are recommended by advisers instead of lower-cost mutual fund shares, a conflict of interests occurs as the fees are paid by the investors to the advisers, advisers’ broker-dealer affiliates, and advisers’ personnel).
896 See Ji, supra note 33 at 1572-1573; FINRA, Digital Investment Advice, supra note 30 at 6; See also Edwards, “Automated Investment Advice”, supra note 35 at 110.
897 See FINRA, Digital Investment Advice, supra note 30 at 13.
their clients. It is observed that some US robo-advisers have indeed conflicts and disclose them in their brochures to their clients. For example, Morgan Stanley Access Investing (“MSAI”), in its brochure states that fund families may provide reimbursement to Morgan Stanley Wealth Management (“MSWM”) for promotional events and training programs; and additionally, these fund families may buy data analytics pertaining to the fund sales from MSWM. After describing these arrangements, MSWM states: “[…] the above-described fees and payments are specific to Funds and that similar fees and payments are not assessed on other investments that are available in our advisory programs. This fact presents a conflict of interest for MSWM to promote and recommend those Funds that make these payments in advisory program accounts rather than other eligible investments that do not make similar payments. In order to mitigate these conflicts, Financial Advisors and their Branch Office Managers do not receive additional compensation for recommending Funds from sponsors that purchase data analytics.” Another robo-adviser, FutureAdvisor which is owned by BlackRock, in its Form ADV Part 2 states: “[w]hen deemed appropriate, the Adviser in accordance with applicable laws, will purchase on behalf of or recommend to its clients, shares of mutual funds or ETFs for which a BlackRock Investment Adviser serves as investment adviser or sub-adviser, such as the U.S. iShares ETFs advised by BlackRock Fund Advisors (“Affiliated Funds”). As a


899 Morgan Stanley Smith Barney LLC, Morgan Stanley Access Investing Program, Form ADV Wrap Fee Program Brochure (16 September 2019), online: <https://adviserinfo.sec.gov/IAPD/Content/Common/crd_iapd_Brochure.aspx?BRCHR_VRSN_ID=593914> [https://perma.cc/SV5D-VGX2] at 9 (“MSWM provides fund families with opportunities to sponsor meetings and conferences and grants them access to our employees for educational, marketing and other promotional efforts. In this connection, Fund representatives may also work closely with us to develop business strategies and support promotional events for clients, prospective clients and educational activities. Fund families or their affiliates may reimburse MSWM for certain expenses incurred in connection with these promotional efforts as well as training programs.”).

900 Ibid (“MSWM also provides Fund families with the opportunity to purchase data analytics regarding Fund sales. The amount of the fee depends on the level of data. The maximum fee for either a mutual fund or ETF data analytics package is $600,000 per year. ETF sponsors can also purchase transactional data for a separate fee ranging up to $550,000 per year for ETF sponsors with more than one hundred passively-managed ETFs. Additional fees apply to elect to purchase supplemental data analytics regarding financial products sales at MSWM.”).

901 Ibid.
subsidiary of BlackRock, the Adviser may face potential conflicts when recommending to its clients affiliated products with respect to which a BlackRock Affiliate receives fees and/or other compensation.”

Canadian robo-advisers, too, like traditional advisory firms, may have conflicts of interest. For example, BMO, which is operating its own robo-adviser called BMO Smartfolio, in its Conflicts of Interest Statement, indicates that it has connected and related issuers and states: “[w]here we act for you in transactions involving related and/or connected issuers a conflict between our interest and yours may arise.” BMO further states that when there is a potential conflict of interest, it will disclose such conflicts to clients in different forms. For example, it states: “[w]here we advise you with respect to the purchase or sale of securities of a related and/or connected issuer we will notify you of our relationship with the issuer when giving you the advice. Where we exercise discretion, under your authority, in the purchase or sale of securities for your account, we will obtain your prior specific and informed written consent before exercising that discretion for transactions involving related and connected issuers.”

Similarly, another robo-adviser, Wealthsimple, on its website, draws attention to potential conflicts of interest it may have. Wealthsimple states: “[a]s a part of its business activities, Wealthsimple may buy or sell the securities of its “related” or “connected” issuers […] on behalf of its clients, exercise its discretionary power to buy or sell such securities pursuant to discretionary management agreements, or make recommendations in respect of such securities,

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904 Ibid.

905 Ibid.

including funds managed by Purpose Investments Inc. or Mackenzie Financial Corporation. […] Wealthsimple will only buy or sell the securities of Purpose Funds or Mackenzie Funds on behalf of its clients in accordance with applicable securities laws and based on its good faith determination of the best interest of its clients."**907

The fact that robo-advisers may have conflicts of interest does not make them less legally compliant than traditional investment advisers.908 Indeed, conflicts of interest are a reality of investment advisory and may arise due to several reasons and policies as indicated before. Robo-advisers, in the traditional sense of conflicts of interest, do not face an insurmountable obstacle that would prevent them from being good fiduciaries, and there is no need for a regulatory intervention in this regard. Nevertheless, there is a significant concern regarding the occurrence of conflicts through the use of algorithms that should engage the attention of regulators. The research on robo-advisers in the USA has drawn attention to the possibility that conflicts may be embedded into robo-adviser algorithms.909 As mentioned before, the use of algorithms may be increasing the impartiality of the investment advice as algorithms do not have motivations, emotions and incentives like humans; however, the creators of algorithms are humans and their motivations, emotions and incentives may affect the algorithms.910 Indeed, robo-advisers may intentionally or unintentionally embed some instructions into the algorithms that may direct the algorithms to make decisions that would give rise to conflicts of interest between the firm and clients.911 The system used by a robo-adviser may be designed in a way that it gives priority to the robo-adviser’s interests;912 for example, a robo-adviser may guide

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907 Ibid.
908 See Lightbourne, supra note 25 at 668-669 (arguing that the occurrence of conflicts of interest may be encountered in both robo-advisory and the services of human advisers, and both type of advisers can comply with the relevant obligations in this regard by providing sufficient disclosures).
909 See Ji, supra note 33 at 1573-1583.
910 See ibid at 1572-1573.
911 Ibid.
its clients to certain products that are more profitable for the firm. Baker & Dellaert, in their
beforementioned essay, point out this issue as follows: “[w]hile robo advisors have the potential
to outperform humans in matching consumers to mass market financial products, they are not
inherently immune from the misalignment of incentives that has historically affected financial
product intermediaries. A robo advisor can be designed to ignore those incentives, but many
consumer financial product intermediaries that develop or purchase robo advisors are subject
to those incentives. It would be naïve to simply assume that intermediaries will always choose
the algorithms and choice architecture that are best for consumers, rather than those that are
best for the intermediaries.” These possibilities, in fact, are strongly correlated with the
algorithmic bias discussed in the previous section. Just like an intentional or unintentional bias
transferred from the programmer to the algorithm may affect the suitability of an investment
advice, such bias may indeed lead to the emergence of a conflict of interest between the firm
and the client. At this point, it should be noted that the kind of firm-client conflicts discussed
herein is different than that of the conflicts exemplified previously, such as recommending the
products of an affiliated or a connected issuer. Of course, when, for example, an instruction that
makes the algorithm to recommend affiliated products is incorporated in the algorithm, this
conflict must be disclosed properly as required by the regulations; and if robo-advisers take
necessary precautions to mitigate these conflicts and disclose them, the incorporation of such
instructions does not emerge as a problem in this regard. The conflicts that require attention in
this regard are those that may occur as a result of incorporating some parameters in an algorithm
in a way that such parameters will affect the algorithm’s decision-making process. Certain
factors, when taken into account by algorithms, may bias the provision of the advice in a way

<https://repository.upenn.edu/prc_papers/2/> [https://perma.cc/SH4Y-TAB5] [Baker & Dellaert, “Behavioral
Finance”]. See also Barber, supra note 788 at 336.
914 Baker & Dellaert, “Regulating Robo Advice”, supra note 45 at 732 (footnotes omitted).
that it may not be in the best interests of the clients.\footnote{See \textit{ibid} at 735.} For example, if an algorithm is attaching a significant importance to the amount of the commission fee which will be obtained for a transaction, then the said algorithms’ outputs may create conflicts of interest.\footnote{See \textit{ibid}.} Or when an advanced ML algorithm is used for providing investment advices that is programmed to maximize the profit of the firm using it may, in the course of time, learn to implement methods that would run contrary to the best interests of the clients.\footnote{It should be noted that an overly generalized instruction such as “maximizing the profit of the firm” cannot be encoded into the algorithms in a vague manner. However, such a purpose can be encoded into an algorithm by identifying certain steps and factors of which achievement may be considered to be the maximization of the profits of the firm and incorporating necessary instructions relating to such steps and factors into the algorithm. See Chapter III, above, for more on algorithms and computational steps used therein.} Coding an algorithm that is programmed to maximize the benefits of a firm while generating investment advices is certainly not prohibited, but such an algorithm should do so while ensuring that the recommendations it generated are in the best interests of clients; otherwise, conflicts will be inevitable. At this point, it should be noted that this Thesis does not argue that robo-advisers prioritize their own interests over their clients’ interests or implement practices that run contrary to the best interests of their clients; however, even the mere possibility that these practices may be implemented raises concerns and requires the attention of regulators.

So far, both in the USA and Canada, there is no solid evidence that indicates the incorporation of conflicts into robo-adviser algorithms; and therefore, the discussion relating to this matter is based on theoretical assumptions. However, as mentioned above, even the sole fact that such practices are within the bounds of possibility should engage the attention of securities regulators. The need for regulatory attention escalates especially when considered that robo-advisers may use more complex systems in the future as the AI and ML technology develops,\footnote{See Lightbourne, \textit{supra} note 25 at 671-672.} and that without effective policies that would keep the possibility of algorithmic bias and
algorithm-based conflicts low, regulators may not be able to easily analyze and detect such practices in more complex algorithmic systems. Nevertheless, regulators should also refrain from developing overly prohibitive policies such as prohibiting the intentional incorporation of conflicts into algorithms. Such policies would negatively affect the robo-adviser market, as such heightened standards may push robo-advisers outside the competition in the financial services industry.

Ji, in her article titled Are Robots Good Fiduciaries: Regulating Robo-Advisers under the Investment Advisers Act of 1940, argues that regulators should require robo-advisers to disclose whether conflicts are embedded into the algorithms they use. Ji points that such a policy should firstly require robo-advisers to depict both the conflicts that are embedded into the algorithms and those that may influence the creation of the algorithms. While disclosing the conflicts that are intentionally embedded into the algorithms may be an easy task for robo-advisers, identifying and disclosing the conflicts or factors that may affect the creation of the algorithms, and accordingly, may potentially impact the impartiality of the investment advice may be more difficult. Because, such factors may arise from the countless possibilities of life events encountered before, during, and after the programming of the algorithm. For example, where a robo-adviser algorithm is developed by a person who also develops software for some other companies that offer ETFs in the market, a potential conflict of interest may come into question due to the said developer’s connection with several market players. Of course, the fact that a robo-adviser hires a developer that provided programming services to other market players does not automatically mean that the said developer will code the algorithm in a way that the algorithm’s recommendations will be favoring the ETFs offered by the companies he

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919 Ji, supra note 33 at 1582.
920 Ibid at 1582.
921 Ibid at 1580.
922 Ibid.
previously worked with. Nevertheless, given that robo-advisers heavily use ETFs to build portfolios for their clients, the fact that the creator of the algorithm has previously worked or is simultaneously working with other companies that offer ETFs would raise concerns for a reasonable investor regarding the emergence of a potential conflict. Even this basic example shows that some factors, elements, or relations that play important roles in developing robo-adviser algorithms may indeed pose risks regarding potential conflicts of interest; therefore, robo-advisers should identify such phenomena and clearly disclose them to clients. Apart from such life events, the technology used by a robo-adviser may also trigger concerns relating to potential conflicts of interest. For example, the use of an advanced ML algorithm which is programmed to maximize the benefits of a robo-adviser while ensuring that the clients’ best interests are preserved may concern a reasonable investor, as such an ML algorithm contains instructions relating to two competing interests, and the reasoning applied by the said algorithm in recommending an investment product may be inscrutable from outside. This opacity may prevent even the creator of the algorithm from fully comprehending and analyzing why the algorithm reached a certain decision. For a reasonable investor, being unable to understand the reasoning applied by an algorithm that is instructed to achieve a balance between two competing interests in the provision of the investment recommendations may be concerning as to whether the algorithm indeed is striking a perfect balance between the interests of the firm and client and refraining from prioritizing the interests of the firm. Therefore, in this situation, too, the robo-adviser implementing such a system should inform its clients as to the competing interests included in the algorithm and how the potential risks that may arise due to the changes that may occur through the learning process of the algorithm or malfunctions or bugs in the system are mitigated. In short, in addition to the conflicts that are intentionally embedded into the algorithms, robo-advisers should also identify and disclose any other material event that

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923 See Chapter III, above, for more on this topic.
924 See Knight, supra note 501.
may affect an algorithm’s decision-making and the impartiality of the investment advice it generates.925

Ji, secondly, points that when conflicts are intentionally embedded into the algorithms, robo-advisers should disclose a “shadow commission” which depicts the effect of the conflicts of interest on the total amount of commission paid by clients.926 Ji argues that robo-advisers should calculate “the difference between what the client’s expected returns would be if the algorithm worked in the client’s best interest (i.e., if allocation decisions were not affected by conflicts) and what the client’s expected returns are in the actual algorithm (which is affected by conflicts).”927 For example, a client of a robo-adviser may be paying 1.25% of the AUM as the management fee, but due to the conflicts in the recommendations he receives, he may be earning 0.2% less than he can earn through investing in a portfolio which is free of conflicts; accordingly, in total he incurs 1.45% of the AUM as the costs of the service he receives, and 0.2% in this example would be the “shadow commission.” Once the amount of this shadow commission is found by the robo-adviser, it would be disclosed to clients as a percentage; hence, clients would be able to see the exact amount of the costs they will incur and compare the costs of the services of different advisers more accurately.928 Ji suggests that the information pertaining to the shadow commission be provided to the clients at the beginning of the service through the delivery of the brochure and should be updated whenever a brochure is delivered to clients.929 Although Ji’s recommendation would significantly increase the transparency of the robo-advising services and the costs incurred by clients, this approach may also affect the market balance to the detriment of robo-advisers. Because, if securities regulators decide to

925 See Ji, supra note 33 at 1580.
926 Ibid at 1582.
927 Ibid (footnote omitted).
928 Ibid.
929 Ibid.
require robo-advisers to disclose the difference between the costs arising from the advices that include conflicts and those that do not, in order to maintain a fair competition in financial services industry, such a requirement should be imposed on traditional investment advisers as well. Indeed, just like an algorithm’s advice may contain conflicts, a traditional investment adviser’s advice, too, may be affected by a conflict and it would lead to the emergence of a “shadow commission” in the adviser’s service. In other words, the problem of shadow commissions is relevant not only for robo-advisers but also for traditional investment advisers. In short, imposing such a requirement would indeed help investors understand the exact amount of costs they incur and gain a more holistic view of the service they get; however, regulators should refrain from imposing it on only one type of advisers. Instead, if they decide to put such changes on their agenda, they should consider the implementation of this regulation industry-wide.

In conclusion, this section has indicated that robo-advisers, through the use of algorithms, may have the potential of eliminating advising representative-client conflicts in investment advisory; nevertheless, firm-client conflicts may still be existent. In addition to the conflicts incorporated into the algorithms, there may be a variety of factors that may affect the impartiality of the investment advice generated by the algorithms. Regulators, in order to ensure that the current or prospective clients of robo-advisers sufficiently understand the conflicts that may affect the service they receive, should require robo-advisers to disclose both the conflicts that are embedded into the algorithm and the factors that may affect the disinterestedness of the algorithm and the investment advice. However, it is also of great importance that regulators, while addressing these issues, should not push robo-advisers outside

930 See ibid at 1572-1573; FINRA, Digital Investment Advice, supra note 30 at 6. It is worth reiterating that advising representative-client conflicts may occur in hybrid models.
931 See Ji, supra note 33 at 1580.
932 See ibid.
the competition in the financial services industry and aim to find a fair balance between the regulations developed for robo-advisers and traditional investment advisers.\footnote{Ibid at 1582.}

5. Best Execution Obligations

As explained in Section 3.5 under Chapter II above, both the US and Canadian regulations require investment advisers to ensure the best execution of the securities transactions of their clients.\footnote{SEC, Standard of Conduct, supra note 60 at 19; National Instrument 23-101, supra note 262 s 4.2.} As such, robo-advisers while selecting broker-dealers for the execution of the transactions must ensure that the terms provided by the broker-dealer for the execution of transactions must be the most advantageous ones for their clients under the circumstances.\footnote{SEC, Standard of Conduct, supra note 60 at 19 (“[…] an adviser must seek to obtain the execution of transactions for each of its clients such that the client’s total cost or proceeds in each transaction are the most favorable under the circumstances.”); National Instrument 23-101, supra note 262 s 4.2 (“[a] dealer and an adviser must make reasonable efforts to achieve best execution when acting for a client.”); ibid s 1.1 (“best execution means the most advantageous execution terms reasonably available under the circumstances”).}

In investment advisory, one of the main concerns regarding an investment adviser’s capability of satisfying the best execution requirement pertains to the use of an affiliated broker-dealer for the execution of securities transactions. Indeed, the SEC, in the Commission Interpretation Regarding Standard of Conduct for Investment Advisers, states that in spite of the fact that there is no prohibition set forth in the IAA that prohibits the use of an affiliated broker-dealer by an investment adviser for the execution of securities transactions, such an arrangement creates a conflict of interest and advisers must “fully and fairly” disclose these relevant conflicts and obtain their clients’ consent to such conflicts.\footnote{SEC, Standard of Conduct, supra note 60 at 20.} Similarly, in Canada, too, investment advisers are not prohibited from using an affiliated broker-dealer for executing their clients’ transactions, and such arrangements indicate the existence of conflicts of interest for Canadian advisers as well.\footnote{See e.g. OSC, supra note 800 at 63.}

The OSC, in its Annual Summary Report for Dealers, Advisers and Investment Fund...
Managers released in July 2017, has found that some investment advisers have not developed effective policies to mitigate the conflicts of interests arising from their integrated operations and relations with their affiliated dealers. The OSC has explicitly stated that a general disclosure of the use of affiliated dealers would not suffice as an efficient policy in this regard and that investment advisers should develop adequate procedures for alleviating relevant conflicts. One of the recommendations suggested by the OSC is carrying out “an analysis to support that the affiliated dealer is indeed providing services to their clients at prices and on terms that are at least favourable to other unrelated dealers.” Furthermore, the OSC has detected that some investment advisers, for complying with the best execution requirement, entirely depend on their affiliated dealers, and it stated that such practices are not appropriate as the achievement of the best execution in this context should be ensured through the reasonable efforts of investment advisers.

In addition to traditional investment advisers, some robo-advisers, too, use their affiliated broker-dealers for executing trades. For example, in the USA, Morgan Stanley Access Investing (“MSAI”) has the securities transactions of its clients executed by MSWM or an affiliate. Another robo-adviser, Acorns, too, states that it uses its affiliated broker-dealer. Similarly, Betterment uses Betterment Securities, which is an affiliated company of Betterment, for executing the securities transactions. Despite such arrangements (i.e. having transactions executed by affiliated broker-dealers) are allowed by the SEC, as mentioned above, they

938 Ibid at 63-64.
939 Ibid at 64.
940 Ibid.
941 Ibid.
942 See Ji, supra note 33 at 1573.
943 Morgan Stanley Smith Barney LLC, supra note 899 at 6.
945 Betterment, Form ADV Part 2A, supra note 730 at 15.
946 See SEC, Standard of Conduct, supra note 60 at 20.
indicate the existence of a conflict of interest and such a conflict may affect the terms of the
execution of transactions. For example, Betterment, in its Form ADV Part 2, draws attention
to the possible impacts of such arrangements on carrying out the best execution requirement
and states: “Betterment’s procedures are designed to make every attempt to obtain the best
execution possible, although there can be no assurance that it can be obtained. Clients should
understand that the appointment of Betterment Securities as the sole broker for their accounts
under this Wrap Fee Program may result in disadvantages to the client as a possible result of
less favorable executions than may be available through the use of a different broker-dealer.”

In Canada, Wealthimple acquired its broker-dealer, ShareOwner, in 2015, and accordingly,
securities transactions of its clients have been executed through its affiliate since then.
Wealthsimple, draws attention to this arrangement on its website and states: “ShareOwner is
the custodian that Wealthsimple uses to hold assets, executes trades, etc. […] ShareOwner and
Wealthsimple are separate, but affiliated entities. Although they are separate entities,
information about you and your account may be shared between Wealthsimple and ShareOwner
in order to service your account.”

Ensuring that conflicts of interest are effectively mitigated and best execution of transactions is
achieved is a duty of both robo-advisers and traditional investment advisers without an
exception. Therefore, a regulatory attempt that is solely aimed at robo-advisers’ use of affiliated
broker-dealers would be an unfair development. As is the case with developing policies on
conflicts of interest as discussed in the previous Section, regulators, in this regard as well,

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947 See Ji, supra note 33 at 1574.
948 Betterment, Form ADV Part 2A, supra note 730 at 15-16.
949 Clare O’Hara, “Robo-adviser Wealthsimple to acquire ShareOwner Investments” The Globe And Mail (2
December 2015, updated: 22 March 2018), online: <https://www.theglobeandmail.com/globe-investor/robo-
adviser-wealthsimple-to-acquire-shareowner-investments/article27549056/> [https://perma.cc/ZNR6-JN9N].
950 Wealthsimple, “Policy on Conflicts of Interest”, supra note 906.
should not impose new requirements only on robo-advisers for the issues that are relevant for all investment advisers.\textsuperscript{951} Otherwise, robo-advisers will not be able to enjoy a fair competition with traditional investment advisers in the market.

Arguably, there is no need to adopt a regulatory change to be aimed at the conflicts of interest that may arise from the use of affiliated broker-dealers. Robo-advisers, just as other conflicts that may affect the provision of their services, as required by the securities regulations in the USA and Canada,\textsuperscript{952} must take necessary steps\textsuperscript{953} to mitigate the conflicts arising from their relations with their affiliated broker-dealers and disclose these conflicts clearly to their clients. Yet, regulators may consider adjusting the current regulations to enhance the compliance of investment advisers, both traditional investment advisers and robo-advisers, with the best execution requirement. An effective regulatory intervention in this regard would be requiring investment advisers to use unaffiliated broker-dealers as alternatives in the cases where it is determined that the use of an affiliated broker-dealer would not provide the most favourable terms of execution to certain clients. Such an obligation would require investment advisers to analyze the terms and conditions of their affiliated broker-dealer on a continuous basis in the light of the investor profile of each of their clients\textsuperscript{954} and identify the clients for which the use

\textsuperscript{951} See Lightbourne,\textit{ supra} note 25 at 669 ("[…] concerns related to the best execution duty are neither unique to robo-advisers nor insurmountable.").

\textsuperscript{952} See SEC, \textit{Standard of Conduct},\textit{ supra} note 60 at 23 (stating that investment advisers are required to eliminate and at minimum fully disclose the conflicts that may affect the impartiality of the investment advice); See \textit{ibid} at 20 (stating that the use of affiliated broker-dealers gives rise to a conflict of interest, and therefore, such relations must be disclosed to clients and clients’ consent must be obtained); See \textit{National Instrument 31-103}, \textit{supra} note 152 s 13.4 (stipulating that registrants must develop reasonable policies to address material conflicts of interest they have and disclose these conflicts to their clients).

\textsuperscript{953} See Chapter II, above, for more on this topic.

\textsuperscript{954} The SEC already requires investment advisers to “periodically and systematically” to analyze the executions of their clients’ transactions to ensure the best execution thereof. It should be noted that the said requirement is imposed on all investment advisers regardless of whether they use affiliated or unaffiliated broker-dealers. See SEC, \textit{Standard of Conduct},\textit{ supra} note 60 at 19-20; The OSC in Canada, states that investment advisers should periodically assess the quality of the execution of their affiliated broker-dealers. See OSC,\textit{ supra} note 800 at 65; The \textit{Companion Policy 23-101 CP} sets forth that investment advisers are required to “regularly and rigorously” review the procedures and policies they implement in ensuring the best execution of their clients’ transactions. See \textit{Companion Policy 23-101 CP},\textit{ supra} note 462 s 4.1(3).
of an affiliated broker-dealer would potentially lead to the failure of the performance of the best execution requirements. Within this framework, investment advisers would be required to use alternative broker-dealers in such cases. Examples of similar policies can already be found in the industry. For example, MSAI, a robo-adviser which uses MSWM or an affiliate for executing securities transactions, in its Form ADV Part 2, states that it may determine that the best execution of a transaction in an ETF would be ensured if a broker-dealer other than its affiliate or MSWM executes the transaction, even if the use of another broker-dealer for the transaction would require a commission or a commission equivalent to be paid. MSAI further states that when such a broker-dealer is used, its clients will have to pay charges or additional fees for the transactions executed by the said broker-dealer. In MSAI’s policy, it may seem to be concerning that additional costs may be incurred by the client when an unaffiliated broker-dealer is used; nevertheless, the SEC clearly states that the best execution of a transaction does not necessitate the use of a broker-dealer that requires the lowest commission fee among others; instead, this requirement indicates an obligation of ensuring “the best qualitative execution.”

This approach can be found in the Canadian securities regulations as well. It is set forth in the Companion Policy 23-101 CP that, in addition to the costs of the transaction, other factors such as the execution speed, certainty of execution as well as a client’s investment objectives should be taken into consideration in determining the best execution for a transaction. Accordingly, even if the use of an unaffiliated broker-dealer may increase the costs of the execution in some cases, both the US and Canadian regulators, in conformity with their current interpretation of the best execution requirement, may consider stipulating the use of unaffiliated broker-dealers where deemed necessary by the adviser. In order to support the efficiency of

955 Morgan Stanley Smith Barney LLC, supra note 899 at 6.
956 Ibid.
957 SEC, Standard of Conduct, supra note 60 at 19.
958 Companion Policy 23-101 CP, supra note 462 s 1.1.1(1).
959 Ibid s 4.1(3).
such a requirement, regulators may also require investment advisers who mainly use their 
affiliated broker-dealers to explain to each of their clients the reasons of why they have chosen 
an affiliated or an unaffiliated broker-dealer for their transactions and how this choice ensures 
the best execution of their trades. In this way, investors would be sufficiently informed as to 
what aspects of their profiles and portfolios have been considered as the decisive factors in 
choosing the broker-dealer.

It should also be noted that the fact that the use of an affiliated broker-dealer may threaten an 
adviser’s compliance with the best execution requirement does not connote that there is no 
opportunity that an adviser that uses unaffiliated broker-dealers may fail at meeting the best 
execution requirement. Indeed, an investment adviser that is using an unaffiliated broker-dealer 
but failing to make reasonable efforts to investigate the terms offered by other broker-dealers 
would be jeopardizing the best execution of its clients’ transactions. Accordingly, potential 
threats pertaining to the achievement of the best execution may arise not only when an affiliated 
broker-dealer is used but also when an unaffiliated broker-dealer is assigned for executing the 
transactions. Thus, putting the regulatory spotlight only on the advisers that use affiliated 
broker-dealers would not totally eliminate all threats to the achievement of the best execution 
requirement. This issue certainly requires a more holistic approach from regulators.

At this point, it is worth reiterating that this Thesis does not aim to discuss general investment 
adviser regulations. Therefore, as the problems pertaining to the best execution requirement

\footnote{For example, the Office of Compliance Inspections and Examinations under the SEC, in a report released in 2018, states that it has detected that some advisers failed to compare the quality and costs of the broker-dealers they use with the quality and costs of other broker-dealers. See \textit{OSIE, Compliance Issues Related to Best Execution by Investment Advisers}, National Exam Program Risk Alert (11 July 2018), online: <https://www.sec.gov/files/OCIE%20Risk%20Alert%20-%20Best%20Execution.pdf> [https://perma.cc/BN4D-3ACN] at 3.
\footnote{See generally \textit{ibid}.}
concern the investment adviser regulation as a whole instead of possible robo-adviser-specific regulations, a further discussion would extend beyond the scope of this Thesis; accordingly, the discussion as to the possible regulatory developments will not be furthered to a greater extent herein.

In conclusion, this Section has indicated that robo-advisers face the same challenges with traditional investment advisers in ensuring the best execution of their clients’ transactions, and that there is no robo-adviser-specific issue that may hinder a robo-adviser’s capacity to comply with the best execution requirement. Regardless of whether unaffiliated or affiliated broker-dealers are used by robo-advisers, the terms of the execution of transactions must be the most favourable ones for their clients and the details of and conflicts arising from their relations with and use of affiliated broker-dealers must be clearly and properly disclosed to clients. A regulatory intervention that stipulates the use of unaffiliated broker-dealers where the best execution of a transaction cannot be achieved through an affiliated broker-dealer may mitigate the potential threats to the achievement of best execution requirement. Nonetheless, it is worth reiterating that regulators should refrain from overly regulating robo-advisers in this matter and consider imposing the said requirement not only on robo-advisers but also on all investment advisers in the market to maintain a fair competition between traditional and robo-advisers.

962 See Lightbourne, supra note 25 at 669.
963 See ibid.
964 SEC, Standard of Conduct, supra note 60 at 19; National Instrument 23-101, supra note 262 s 4.2.
965 SEC, Standard of Conduct, supra note 60 at 20; See National Instrument 31-103, supra note 152 s 13.4. It should be noted that the National Instrument 31-103 does not clearly require the disclosure of the use of affiliated broker-dealers. Nevertheless, as such an arrangement creates a conflict of interest, it must be disclosed as per section 13.4.
CONCLUSION

Since the 2008 financial crisis, the financial industry has been going through a major transformation and disruption as technology has been increasingly intervening into the financial realm and a myriad of newly emerging technology-based companies and automation have been taking over a number of services which were previously provided by humans and traditional financial institutions.966 Artificially intelligent investment advisers, which are commonly called “robo-advisers”, are one of these new business models that have burst onto the scene during the rise of FinTech. Robo-advisers are AI and ML-based online platforms that provide investment advisory services to investors.967 These platforms use algorithms to analyze investor data which is obtained mostly through online questionnaires provided to clients on their websites968 and the data pertaining to the investment products969 and generate investment recommendations based on this analysis.970 While some robo-advisers totally omit the human element in the provision of investment recommendations,971 other robo-advisers employ human advisers for supervising the portfolios and enable their clients to discuss their investment needs and targets with these representatives.972 Robo-advisers, with their easy accessibility through the Internet973 and significantly lower costs and fees than traditional investment advisers,974 make investment advisory available and easily accessible for the people previously underserved by traditional investment advisers.975 As of 2019, robo-advisers manage USD 749.7 billion in the USA,976 and USD 5.5 billion in Canada.977 This amount reaches to USD 980.5 billion on the global

966 See Magnuson, supra note 7 at 1214; See also Citi GPS, supra note 11 at 80.
967 Ivanov, Snihovyi & Kobets, supra note 21 at 197; Park, Ryu & Shin, supra note 21 at 105; Sabharwal, supra note 21 at 33.
968 Faloon & Scherer, supra note 23 at 31.
969 See Alloca, supra note 25 at 663.
970 Lightbourne, supra note 25 at 663.
971 See FCNB, supra note 577.
972 See Verhage, supra note 32.
973 Lightbourne, supra note 25 at 652.
974 Ji, supra note 33 at 1558.
975 See Edwards, supra note 35 at 103; Payette, supra note 35 at 426.
976 Statista, “United States”, supra note 557.
977 Borzyowski, supra note 556.
While this success is clearly promising, on the other side of the medallion, this technology has been leading to serious concerns as to the robo-advisers’ capability of adhering to the regulatory standards, given that the securities regulations and the standards of conduct of investment advisers, and accordingly the investment adviser fiduciary duty, were traditionally created to address human investment advisers, considering what humans’ motivations are and how they reach a decision and that robo-adviser algorithms, despite being non-human, are required to adhere to these regulatory standards. Indeed, both the US and Canadian securities regulators have explicitly indicated that robo-advisers, despite providing investment advisory services through algorithm-based models, are not exempt from investment adviser regulations and must adhere to the regulatory requirements set forth for investment advisers.

As explained in Chapter II of this Thesis, the US securities regulations require investment advisers to act as a fiduciary while providing services to clients. In Canada, while there is no statutory fiduciary duty applicable to investment advisers, the jurisprudence has shown that based on a number of factors pertaining to the dynamics of an adviser-client relationship, an investment adviser may be in a fiduciary position against the client. The analysis in Chapter IV of this Thesis has put forward that Canadian robo-advisers, based on the said factors, owe a fiduciary duty to their clients. Against this background, it is of great importance for securities regulators to analyze how robo-advisers fit into the current regulatory framework and ensure that these AI-based financial intermediaries can meet the regulatory requirements as good fiduciaries and act in their clients’ best interests.

978 Statista, “Robo-advisers”, supra note 705.
979 Ji, supra note 33 at 1556.
981 SEC, Standard of Conduct, supra note 60 at 6.
982 CSA Consultation Paper 33-403, supra note 50 at 9561.
This thesis sought to clarify whether robo-advisers are subject to the fiduciary duty, identify and analyze the risks and challenges that may affect a robo-adviser’s compliance with the fiduciary obligations, and recommend regulatory measures to efficiently enhance robo-advisers’ compliance with the fiduciary obligations and ensure that they can act as good fiduciaries in Canada and the USA.

Chapter I illustrated the policy justifications of financial services regulations and the US and Canadian regulatory frameworks that govern investment advisers. Chapter II analyzed the fundamental aspects of the fiduciary duty as well as the US and Canadian interpretation of the investment adviser fiduciary duty and laid out the obligations that investment advisers must adhere to under the US and Canadian securities regulations. Chapter III firstly explained the basics of the robo-adviser technology, namely, algorithms, AI, ML, and DL, and shed light on technical, financial, and legal aspects of robo-advisers. This Chapter concluded with an explanation of the US and Canadian regulatory approach to robo-advisers. Chapter IV, as mentioned above, has argued that Canadian robo-advisers owe a fiduciary duty to their clients. This Chapter has also discussed the views that put forward that robo-advisers cannot act as fiduciaries under the US regulations,983 and indicated that US robo-advisers, too, are subject to the fiduciary duty as clearly stated by the SEC.

Chapter V was devoted to the core analysis of this Thesis and divided into five sections each of which analyzes robo-advisers under a fundamental obligation under the investment adviser fiduciary duty. The first Section analyzed the disclosures of robo-advisers and demonstrated that both the US and Canadian robo-advisers disclose the items required by the relevant regulations and that there is no concern, resulting from the use of algorithms and AI-based

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systems, as to the existence of an obstacle for robo-advisers that would prevent them from complying with the disclosure requirements as good fiduciaries. It was argued that the limits, risks, and capabilities of the technology underlying robo-advising should be clearly explained to clients through disclosures so that investors can understand the particulars of this technology and make informed decisions about using a robo-adviser. While the SEC requirements already provide this opportunity to investors, the CSA, in Canada, does not stipulate a clear explanation of the technology used in the provision of the investment recommendations. This section argued that the CSA should consider requiring robo-advisers to explain the risks, limits, and capabilities of the algorithms and technology used by robo-advisers in plain language so that investors, before using a robo-adviser, can sufficiently understand the risks arising from and limits of the service they will receive.

The second Section analyzed the risks pertaining to the KYC processes implemented by robo-advisers. This section indicated that the absence or limitedness of human interaction in the KYC process may adversely affect the gathering of sufficient and accurate KYC information from clients. It was recommended that, in order to address this issue, regulators initiate projects that call for the support of behaviour scientists, computer scientists, and web designers who would work on developing exemplary robo-adviser questionnaires that can compensate the absence or limitedness of human interaction through additional features and collect sufficient and accurate information from clients. Once such questionnaires are developed through these projects, they can be shared with robo-advisers so that robo-advisers can adjust their questionnaires accordingly. This section also indicated that some robo-adviser questionnaires, as detected by the OSC, may be omitting fundamental questions the absence of which may

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984 See Carney, supra note 566 at 602.
985 See Baker & Dellaert, “Regulating Robo Advice”, supra note 45 at 716 (arguing that an effective regulatory response to the challenges arising in connection with robo-advisers will require regulators to adopt an interdisciplinary approach that combines different areas such as psychology and computer science).
result in the provision of unsuitable investment advices.986 Accordingly, it was also recommended that securities regulators clearly itemize all questions that must be asked by robo-advisers in their online questionnaires in order to ensure that their investment recommendations are based on sufficient and accurate client information and to more easily detect non-compliant robo-adviser questionnaires through compliance reviews.

The third Section was devoted to the analysis of robo-adviser’s capability to provide suitable investment advices. This section drew attention to the possibility that a robo-adviser’s algorithm may be poorly designed987 or that biases may be transferred from the programmer, consciously or unconsciously, to the algorithm988 which would result in the emergence of algorithmic bias and jeopardize the provision of a suitable investment advice. As there is no sound evidence pertaining to the existence of such issues both in the USA and Canada, the discussion in this section was based on theoretical assumptions. Regulators, without understanding the particulars of the robo-adviser technology and developing a good communication with robo-advisers, cannot find solutions to these issues effectively.989 Against this backdrop, securities regulators were advised to use regulatory sandboxes to guide robo-advisers within the regulatory framework, exchange ideas with the innovators of this technology, and ensure that robo-adviser algorithms are programmed in a legally compliant manner.990 Furthermore, it was also recommended that the US and Canadian regulators take the TechSprint events that have been organized by the FCA in the United Kingdom as a conceptual example and organize competitions that will call for the participation of robo-advisers and interested individuals for

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986 OSC, supra note 800 at 61.
987 See Baker & Dellaert, “Regulating Robo Advice”, supra note 45 at 713, 731 (arguing that a robo-adviser may not be well-designed).
988 Packin, supra note 583.
989 See Baker & Dellaert, “Regulating Robo Advice”, supra note 45 at 733; Carney, supra note 566 at 614; Iannarone, supra note 722 at 159 (arguing that the SEC should use the available regulatory methods to understand how robo-advisers operate).
990 See Carney, supra note 566 at 609; See generally Ruof & Ringe, supra note 843.
the creation of exemplary robo-adviser algorithms.\footnote{991} It was also suggested that regulators consider hiring computer scientists and web designers for exploring the features of a well-designed robo-adviser algorithm and developing exemplary algorithms and share them with public so that both existing and prospective robo-adviser firms can review and adjust their own algorithms accordingly.

The fourth Section analyzed robo-advisers in the light of the conflicts of interest obligations. This section indicated that robo-advisers, through the use of algorithms, may have the potential of eliminating advising representative-client conflicts in investment advisory; nevertheless, firm-client conflicts may still be existent.\footnote{992} Furthermore, as hybrid robo-advisers include human advisers in the provision of the service, representative-client conflicts may still be encountered in these models.\footnote{993} This section also drew attention to the possibility that the incorporation of biases into the algorithms may lead to the emergence of embedded conflicts that would affect the disinterestedness of the investment advice.\footnote{994} In addition to the embedment of biases, external factors which may occur before, during, or after the development of the algorithms may influence the impartiality of the investment advice generated by the algorithms.\footnote{995} Regulators, in order to ensure that investors are provided with a sufficient explanation pertaining to the conflicts that may arise during the provision of investment advice through algorithms, should require robo-advisers to disclose both the conflicts that are incorporated into the algorithms and the factors that may influence the impartiality of the investment recommendations.\footnote{996}

\footnotetext{991}{See also Baker & Dellaert, “Regulating Robo Advice”, supra note 45 at 746.}
\footnotetext{992}{See Ji, supra note 33 at 1572-1573; FINRA, Digital Investment Advice, supra note 30 at 6.}
\footnotetext{993}{FINRA, Digital Investment Advice, supra note 30 at 6.}
\footnotetext{994}{Ji, supra note 33 at 1573-1583.}
\footnotetext{995}{See ibid at 1580.}
\footnotetext{996}{Ibid.}
The last Section of Chapter V was devoted to the analysis of robo-advisers in the light of the best execution obligations. This section indicated that some robo-advisers are using their affiliated broker-dealers for the execution of the securities transactions and this situation leads to a conflict of interest.\(^{997}\) However, this practice is not relevant for only robo-advisers; indeed, many other traditional investment advisers, too, are using their affiliated broker-dealers for executing transactions. Apart from this issue, there is no significant obstacle that may negatively affect a robo-adviser’s compliance with the best execution requirements. Against this backdrop, regulators may consider stipulating the use of an alternative broker-dealer other than the affiliated one where the circumstances would indicate that the use of an affiliated broker-dealer may not result in the execution of the transactions in the best interest of a client. However, such a requirement should not be imposed only on robo-advisers, as it was mentioned above, this issue relates not only to robo-advisers but also to traditional investment advisers.\(^{998}\)

All in all, this Thesis argued that there are a number of risks and challenges that may negatively affect a robo-adviser’s compliance with the standards of conduct under the fiduciary duty. This Thesis provided a number of recommendations as to the methods and policies that the US and Canadian securities regulators may adopt in order to efficiently address the said risks and challenges and ensure these AI-driven investment advisers’ compliance with the securities regulations. Despite that the analysis in this Thesis is conducted in the light of the US and Canadian regulations, the conclusions drawn and recommendations made herein may shed light on the legal implications and current status of robo-advisers in other jurisdictions as well. Hence, while the regulatory interventions in this Thesis are recommended for the US and

\(^{997}\) It should be noted that the use of affiliated broker-dealers does not automatically mean that the best execution requirement is breached. Both the US and Canadian securities regulations allow investment advisers to use their affiliated broker-dealers. See Chapter V, above, for more on this topic.

\(^{998}\) See Lightbourne, supra note 25 at 669 (arguing that the issues pertaining to the best execution obligations are relevant for both robo-advisers and traditional investment advisers).
Canadian securities regulators, they can also be taken into consideration by the securities
regulators of other jurisdictions in regulating robo-advisers.
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