Robo-Advisors and the Legal Duties of their Providers

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This article discusses online asset management services that are referred to as "Robo-Advisors" (or "Robo-Advice"). Robo-Advisors offer mechanized services free of human involvement, with even investment decisions being made automatically in non-face-to-face transactions. However, the inherent features of Robo-Advisors pose numerous legal challenges. I would like to discuss how we should apply financial regulations and civil rules to Robo-Advisors, and how we should expand fiduciary duties beyond the premise of their being imposed only on humans so as to include machines as well.

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I will start with an overview of the Robo-Advisor market, followed by my identifying the key regulatory issues consistent with international and comparative research. In the next section, I pose some legal questions based on Japanese law. The paper is rounded off with some concluding remarks.

I. THE ROBO-ADVISOR MARKET

1. The Rapid Growth of a New Market and its Socio-economic Policy Context

According to "Statista.com", assets under management in the Robo-Advisor segment amounted worldwide to USD 980 billion in the year 2019, and this market is expected to show an annual growth rate (CAGR [compound annual growth rate] 2019–2023) of 27.0%.[1] Reports claim the existence of about 200 Robo-Advisors in the US, with a total estimated value of assets managed exceeding USD 400 billion in 2018; this figure is anticipated to grow at an average annual rate of over 30 percent, reaching approximately USD 1.5 trillion by 2023.[2] The use of Robo-Advisors has developed rapidly over the last three years in Europe as well. There are now over 70 Robo-Advisors, with a total of Euro 14 billion of assets under management (AuM) last year and around 900,000 clients.[3]

When looking at Japan, it should be noted that cash and deposits make up over 50% of the financial assets of an average household, namely more than JPY 900 trillion.[4] Although the public has been encouraged to use their assets for investment on previous occasions, the market of Robo-Advisors is still in an early phase of its development, with the first Robo-Advisor being funded in 2015 and launching its services in 2016. However, the market of Robo-Advisors is growing. There are now six companies known as "Robo-

1 *https://www.statista.com/outlook/337/100/robo-advisors/worldwide.* J. E. FISCH/M. LABOURÉ/J. A. TURNER, The Emergence of the Robo-Advisor, in: Agnew/Mitchell (eds.), The Disruptive Impact of FinTech on Retirement Systems [hereinafter "Disruptive Impact"] (Oxford 2019) 13–37.

2 F. ABRAHAM/S. L. SCHMUKLER/J. TESSADA, Robo-Advisors: Investing through Machines, Research & Policy Briefs from the World Bank Chile Center and Malaysia HuB, No. 21.

3 O. KAYA, German robo-advisors: Rapid growth, robust performance, high cost (12 February 2019), DB Research Management. *https://www.dbresearch.com/PROD/RPS_EN-PROD/PROD0000000000487351/German_robo-advisors%3A_Rapid_growth%2C_robust_perform.PDF*.

4 FINANCIAL SERVICES AGENCY, JFSA's Initiatives for User Oriented Financial Services in a New Era, 28 August 2019, 19.

Advisors",[5] and the amount of AuM was approximately JPY 122 billion in the year 2018, which is approximately GBP (British pound sterling) 927 million.[6]

Here, in relation to this point, I touch on a recent episode that triggered controversy. The Financial System Council (one of the councils established under the Financial Services Agency of Japan) released a report titled "Asset Building and Management in an Aging Society" in June 2019.[7] According to the report, given the increase in life expectancy and the decrease in retirement benefits, an elderly couple living on pensions would need "approximately JPY 20 million (approximately GBP 156,000) in savings over and above their public pension benefits to fund a 30-year post-retirement life".[8] The report sparked a public backlash with people focusing exclusively on the figure of JPY 20 million in savings. The government desperately tried to quell the uproar as the summer election day neared, but the controversy has unexpectedly contributed to a rapid rise in public awareness of the need for and the importance of "long-term, installment, and diversified" investments.[9] One of the outcomes of this controversy is that, according to a prognosis of market watchers, the number of accounts managed by Robo-Advisors is expected to grow rapidly, presumably reaching over a million accounts next year and continuing to grow to up to 2.6 million accounts in 2023.[10]

2. Two Types of Robo-Advisors

Although there are various types of Robo-Advisors, at least in Japan they are generally classified as (i) "investment advice type" or (ii) "investment management type". Investment advice type Robo-Advisors propose portfolios or financial products suited to customers based on their answers to a set of simple questions, covering topics such as the customer's age, occupation, investment objectives, investment experience, and risk tolerance. Customers can answer these questions on either their personal computers or smartphones. Invest-

5 If one includes the "Fund Wrap Account" service providers accompanied by automated management, the number becomes 18.

6 Nikkei Shinbun, 24 March 2018.

7 *https://www.fsa.go.jp/singi/singi_kinyu/tosin/20190603/01.pdf.*

8 Report published by the Market Working Group of the Financial System Council, *Kōrei shakai ni okeru shisan keisei/kanri* [Asset Building and Management in an Aging Society] (3 June 2019) 16. The World Economic Forum published a similar report on 13 June 2019.

9 A. YONEZAWA, *Keizai insaido rōgo '2000 man yen' wa kinku no kin'yū gyōkai, yokisenu onkei ni fukuzatsu na hyōjō* [Economy Inside "JPY 20 million" after Retirement is a Taboo Word in the Financial Industry: The Financial Industry is Confused by the Unexpected Benefit], available at *https://www.sankei.com/premium/news/190709/prm1907090001-n1.html.*

10 *http://search01.jmar.co.jp/static/mdbds/user/pdf/release_20190805.pdf.*

ment management type Robo-Advisors even make investment decisions on behalf of customers. These services are termed "robo" because investment advice is provided through automated means with no human interaction, using algorithms to automatically provide modern and portfolio-theory-based "long-term, installment, and diversified" asset management services.[11]

The core features of these innovative services are "automation" and "online" (non-face-to-face) transactions. And thanks to these features, Robo-Advisors have been able to reduce investment costs and pave the way towards overcoming the risks and restrictions associated with human nature, creating new opportunities for people – especially those who previously could not afford investment advice – to access the financial market ("democratization" and "popularization" of asset management services). There is no disputing that the rapid growth of Robo-Advisors was realized against the backdrop of network effects made possible by the proliferation of smartphones and improvements in user interfaces. At the same time, it is pointed out that the "investment advice gap" and "pension crisis" – issues faced by developed countries where services capable of responding to pension issues are not available to the general public – also serve as the backdrop for their recent rapid growth.[12] It is in this context that Robo-Advisors are expected to provide low-cost, high-quality services driven by technological innovations, thereby ultimately contributing to the development of the capital market.[13]

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11 IOSCO (Organization of Securities Commissions) Research Report on Financial Technologies (Fintech), February 2017, 7, 25–26. There is no common global definition of a Robo-Advisor. It seems that in some cases the term is limited to automated investment advice services, but in other cases it includes automated investment management services and even brokers. For example, in the United States (investment advice under the Investment Advisor Act, discussed below) and Europe (under MiFiD-II [Directive 2014/65/EU of the European Parliament and of the Council of 15 May 2014 on markets in financial instruments and amending Directive 2002/92/EC and Directive 2011/61/EU], discussed below), Robo-Advisors include both investment advice and asset management services. In the United States, the term "Robo-Advisor" is also used in cases where the person who responds to the customer uses a Robo-Advisor, but this is not the case in Europe (the topics dealt with in research papers vary according to the definition of a Robo-Advisor). IOSCO (Update to the Report on the IOSCO Automated Advice Tools Survey, FR15/2016, December 2016 IOSCO) defines Robo-Advisors as market intermediaries using automated tools to provide advice, distinguishing between investment advice and asset management. The arguments put forth in this paper are based on the way in which the term Robo-Advisor is used in Japan.

12 B. P. EDWARDS, The Rise of Automated Advice: Can Robo-Advisers Rescue the Retail Market?, Chicago-Kent Law Review 93 (2018) 97, available at *https://scholarship.kentlaw.iit.edu/cgi/viewcontent.cgi?article=4194&context=cklawreview*.

3. The Emergence of New Retail Investors

In Japan, the typical profile of investors entering this new market is low- or middle-income workers in their 20s, 30s, or 40s with a relatively high level of IT literacy. With Japan's aging population and shifting demographic structure, these generations are supporting Japan's pension system, but they are worried about post-retirement life because they often do not understand the details of their pension benefits. It is fair to describe these investors as "consumers" who are forced to make investments and manage their own assets as part of their self-help efforts.[14] In other words, they represent generations of individuals that are now expected to shift their assets from saving to investing as part of the government's policy. These investors who make investments from their household financial assets do not fit the typical profile of an investor who can be expected to critically assess given information, instead, they are constituting a profile that has been accepted since the reform of the legal protection system for retail investors following the financial crisis (here we see the segmentation of retail investor profiles). Hence, these new investors are treated as "financial consumers" who require higher levels of protection,[15] and in this respect, a certain overlap with the thinking behind consumer protection laws is recognized.[16]

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13 OECD, Financial Markets, Insurance and Pensions: Digitalisation and Finance, April 2018; OECD, Robo-Advice for Pensions, December 2017; T. MORISHITA, *Fintekku to nenkin* [Fintech and Pension], Nenkin to Keizai [Pension and the Economy] 36 No. 4 (2018) 16.

14 On the use of the individual-type, defined contribution pension plan (iDeCO), see MORISHITA, *supra* note 13, at 18.

15 One can consider the management type Robo-Advisor used by inexperienced investors as an example. As discussed later in detail, although the users of such services are retail investors, they are significantly different from the traditional investors that the existing legal system is intended to protect – i.e., investors who are expected to have the ability to make critical assessments and independent investment decisions when explanations are given – because they are more dependent on the logical and streamlined investment judgments of an automated machine. Considering that investment management agreements are (quasi) entrustment agreements, it seems appropriate to regard financial firms offering Robo-Advisory services as fiduciaries.

16 For example, the guideline of the Japan Securities Dealers Association (JSDA) requires financial firms offering investment trusts using NISA (Nippon Individual Saving Account, modeled after the ISA system [UK] and launched in January 2014 as Japan's tax exemption program for investments by individual investors) to provide very detailed, in-depth explanations to their clients (*http://www.jsda.or.jp/anshin/oshirase/files/nisaguideline.pdf*). The legal implications of this requirement remain to be clarified. For example, a civil court decision that dealt with the monthly dividend, distribution type investment trust, which is subject to the JSDA guidelines (Tōkyō High Court, 26 January 2015, (Kinhō No. 2015, 109), did not bring clarity (the court ruled

The legal reforms undertaken to protect retail investors following the financial crisis focused on how to regulate investment advice. The aim of legal reform was to induce a shift away from the traditional investor protection system that emphasized processes based on the provision of information (the so-called "Informations-Modell" in Germany). Fundamental reform was implemented after information problems in terms of both quantity *(information overload)* and quality *(conflicts of interest)* became apparent, and a simple and comprehensive format to provide information was presented. In addition, the regulations have been strengthened in order to (i) improve the transparency of information to ensure comparisons between different financial products, (ii) fully enforce the prohibition of conflicts of interest, and (iii) disclose the risk of conflicts of interest. However, critics point out that such reforms will only increase compliance costs for financial firms, thus *raising the threshold for investment advice services offered by human advisors* and giving rise to the problem of "advice refugees". This would mean that there is an increasing number of people who cannot enjoy investment advice from human advisors because they do not have enough assets to invest; nor do they have sufficient savings for their post-retirement lives, leaving them no alternative but to resort to pension benefits after retirement. Robo-Advisors can potentially respond to the social need for low-cost, good-quality investment advice services by cutting compliance costs through the digitization and automation of client management.[17]

II. Regulatory Challenges

It is difficult to say the time is ripe to discuss how Robo-Advisors should be regulated. But there are some discussions and regulatory guidelines. Based on international and comparative research, there seem to be three key issues that should be discussed.

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that the financial firm did not breach its obligation to explain because the client was a retail investor with previous investment experience). Nevertheless, in reviewing the court's decision we see a burgeoning of financial duties, see M. Sumida, *Tōshi shintaku no hanbai/kan'yū ni kansuru shihō-jō no mondai* [Private Law Issues regarding the Sale and Solicitation of Investment Trusts], Kin'yū-hō Kenkyū 32 (2016) 72.

17 M. Ji, Are Robots Good Fiduciaries? – Regulating Robo-Advisors Under the Investment Advisors Act of 1940, Columbia Law Review 117 (2017) 1543, 1561; M. Fein, Robo-Advisors: A Closer Look (30 June 2015), available at SSRN: *https://ssrn.com/abstract=2658701*; Y. Numata, *Torampu seiken-ka no ritēru shōken-gyō to fidyukiarī dyutī* [Retail Securities Business and Fiduciary Duties under the Trump Administration], in: Shōken Kei'ei Kenkyū-kai (ed.), *Henbō suru kin'yū to shōken-gyō* [Financial and Securities Businesses are Changing], (Japan Securities Research Institute, Tōkyō 2018) 304.

1. Sufficient Provision of Information?

The feature that makes Robo-Advisors unique is the *automation* and *online* delivery of algorithm-based financial services, done with the aim of resolving the risks associated with human involvement.

For example, in the case of investment management type Robo-Advisors, machines make investment decisions on the clients' behalf; thus, clients with little investment experience can avoid the risk of making emotional and irrational decisions. Similarly, this advantage presumably applies to the risk of conflicts of interest, which was one area of particular focus in recent legal reforms (as mentioned in I.3.). Human advisors who provide investment recommendations might be motivated by sales commissions or rebates, such that transactions involving human advice entail the risk of conflicting interests (the risk of conflict between human advisors and their clients). It is generally considered that the risk of conflict can be resolved by digitization. However, the risk of conflicts of interest between financial services firms and their clients cannot be resolved by automation; it is even suggested that if financial services firms intentionally develop algorithms that maximize their profits, the risk of conflicts of interest will be cemented, mass-produced, and eventually broadly spread. It is also pointed out that traditional securities companies providing Robo-Advisory services, which are not independent financial services firms, charge management fees in unclear ways.[18]

There is another problem. Since the automation of investment processes is carried out by machines, Robo-Advisory services are not free from what is called the "frame problem".[19] No matter how advanced the algorithm is, various assumptions are embedded in the automated Robo-Advisor, while some elements of reality are excluded in the process of developing a program. Therefore, Robo-Advisors have certain limitations. It is pointed out that financial services firms offering Robo-Advisory services need to explain these limitations to their clients in advance[20] as well as monitor the behavior of the machines.[21]

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18 JI, *supra* note 17, at 1580–1581; M. FEIN, Are Robo-Advisors Fiduciaries? (12 September 2017), available at SSRN: *https://ssrn.com/abstract=3028268,* at 14. Class Action Complaint Green v. Morningstar, Inc., No. 1:17 –cv-05652, N. D.III. (3 August 2017).

19 N. ARAI, *AI gijutsu no ima – Nani ga mondai ka?* [The Current AI Technology – What are the Challenges?], in: Sumida/Kudō (eds.), *Robotto to ikiru shakai* [Living with Robots in Society] (Tōkyō 2018) 5.

20 The scope of advice should be clarified so that clients do not misunderstand that Robo-Advisors offer comprehensive asset management and tax advice. US Securities and Exchange Commission, IM Guidance Update, Robo-Advisors, No. 2017-02, February 2017 (hereinafter SEC) at 5; T. KATŌ, *Robo-adobaizā to 1940nen*

It is presumed that financial services firms are required to provide users of their automated services with information about the automation of these services, the features of the machines, the above-mentioned limitations, the risks involved in the transactions,[22] and other necessary information. Specifically, the following examples are generally cited as information that requires explanation: (i) the fact that algorithms are used to manage client accounts and the risks this involves; (ii) the functions of the algorithms; (iii) the assumptions and limitations of the algorithms; (iv) whether or not a third party is involved in developing and managing the algorithms (and the risk of conflicts of interest); (v) the degree of human involvement in managing and monitoring client accounts; (vi) the use of information collected from client profiles, and (vii) the restrictions on the use of client information.[23] It could be said that the provision of this information by financial services firms and their obligation to explain potential investment risks are different in nature,[24] meaning that the information listed above should be provided to service users as the specifications of the automated services.

2. Do You Know Your Clients?

The Robo-Advisor uses algorithms to automatically process the data entered by the investor, and it then delivers an appropriate portfolio for that

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tōshi komon-hō [Robo-Advisor and Investment Advises Act of 1940], Kin'yū-hō Kenkyū 33 (2017) 119.

21 ESMA (The European Securities and Markets Authority), Suitability Guidelines, p. 82, General Guideline 12 (Section 101); FINRA The Financial Industry Regulatory Authority), Report on Digital Investment Advice, March 2016, at 3–7; T. BAKER/B. DALLAERT, Regulating Robo Advice Across the Financial Services Industry, Iowa Law Review 103 (2018) 713, 742 (proposing drastic methods to develop regulations given the difficulty in verifying algorithms).

22 In this context, rather than systemic risks like a "flash crash", the "herding risk" might be relevant because of a huge amount of automated and similar/parallel passive investments. See M. SUMIDA, Proceeding of the Banking and Financial Law Annual Conference 2018, Kin'yū-hō Kenkyū 35 (2019) 116; O. KAYA, Robo-advice – a true innovation in asset management, Deutsche Bank Research (10 August 2017) 6, *https://www.dbresearch.com/PROD/RPS_EN-PROD/PROD000000000449125/Robo-advice_%E2%80%93_a_true_innovation_in_asset_managemen.PDF*); W.-G. RINGE/C. RUOF, A Regulatory Sandbox for Robo Advice, EBI Working Paper Series 2018, No. 26, 17.

23 SEC, *supra* note 20, at 3–4; KAT…Ō, *supra* note 20, at 118; NUMATA, *supra* note 17, at 309; K. SATŌ, *Robo-adobaizā to shijō kyūhen o meguru giron*, [The discussion about Robo-Advisors and sudden market change], Nomura Shihon Shijō Quarterly (Summer 2017) 20, 31.

24 E. KURONUMA, *Kin'yū shōhin torihiki-hō* [The Financial Instruments and Exchange Act] (Tōkyō 2016) 541.

investor. To my knowledge, there have so far been no arguments to indicate that the services provided by Robo-Advisors are merely a reaction of the machine, and hence cannot be recognized as acts. Furthermore, although Robo-Advisors have reduced the cost of services due to online transactions, a decline in the level of protection afforded to customers (a limitation of the obligations of financial services firms), which is often the case with discount online brokers, is generally found to be inappropriate.[25] Rather, the concern is "how can client-specific suitability assessments conducted in face-to-face transactions be appropriately implemented in non-face-to-face, online transactions?"[26] In other words, although Robo-Advisory services are provided mechanically in non-face-to-face transactions, they are expected to comply with the same rules as face-to-face transactions, meaning that Robo-Advice are subject to the principle of suitability (here we can see the principle of "Same Business, Same Risk, Same Rule", which I would like to term "the Same Rule Principle"[27]). Presumably, this is because an accurate understanding of the attributes and needs of Robo-Advisory ser-

25 "Streamlined advice" (including Robo-Advisors) as introduced in the UK Financial Advice Market Review is also subject to the legal requirements for investment advice. T. KAMIYAMA, *Eikoku no tōshi adobaisu ni kakawaru kisei kai'aku* [Regulatory Deterioration on Investment Advice in the UK], Nomura Shihon Shijō Quarterly (Spring 2018) 105–112. Since discount broker services are limited to the execution of orders on behalf of clients (execution-only), the limitation of obligations is justified, and discount brokers are only required to clearly indicate to customers that they should not have any expectations. However, the disclaimer language used by financial firms attempting to restrict the content and nature of the services is regarded as problematic. (See Section III.4. of this paper) For limited obligations imposed on discount brokers in Germany, see M. SUMIDA, *Tekigō-sei gensoku to shihō riron no kōsaku* [The Suitability Principle and its Implications for Civil Law Theory] (Tōkyō 2014) 190.

26 In the United States, investment advisors are obligated to provide investment advice that is relevant to individual clients, and it is understood that this obligation constitutes a duty of care. It is unclear whether it is understood that this obligation cannot be waived under federal law, but Fein affirms the view that as a fiduciary obligation, this obligation has the nature of a mandatory provision, FEIN, *supra* note 18, at 6. KATŌ, *supra* note 20, at 128, note 33. In Europe (under MiFID-II), the principle of suitability is specified as the obligation of investment advisors and the persons managing clients' portfolios, though the matters considered in the suitability assessment regarding the former and the latter are different.

27 The Same Rule Principle refers to the idea that if the service provider changes from a "human advisor" to a "machine" or to a "human advisor plus machine," the applicable laws and regulations should, in principle, be the same as long as the "services" provided are the same, see European Commission, Summary of contributions to the "Public consultation on FinTech: a more competitive and innovative European financial sector," 2017, 4; IOSCO (2016) at 13; SEC, *supra* note 20, at 2.

vice users is directly linked to the quality of Robo-Advisory services,[28] and it should therefore be secured by regulations.

The biggest challenge is how to respond to the problem of limited client information available to Robo-Advisors as a result of non-face-to-face transactions. It cannot be overlooked that when the form of transaction changes from face-to-face to non-face-to-face, the primary party entering client information into the system also changes from the salesperson to the client.[29] If a client enters false information and then seeks protection for losses incurred using the Robo-Advisory service, such protection would be rejected through estoppel and be a violation of the principle of good faith. One way of looking at this is to say that Robo-Advisor providers have an obligation to ensure the reliability and consistency of client information by taking reasonable and appropriate measures, such as notifying users in advance of any possible direct impact on their portfolios (i.e., before they answer the questions asked by Robo-Advisors), while investors are expected to provide all of the necessary and correct information that reflects their current situation.[30] In addition, Robo-Advice providers need to be sufficiently creative in how they ask questions (e.g., by providing supplementary explanations using pop-up boxes or tool-tips) so that service users can answer appropriately and Robo-Advisor providers can obtain enough information to conclude that the services they provide best meet the users' needs.[31]

Furthermore, it is being discussed that in cases where support is given to clients when their answers are contradictory, or where clients are given an

28 S. ŌSAKI, *Kin'yū no IT-ka ga ikitsuku saki* [What Could Information Technology Bring About to Financial Services?], in: Sumida/Kudoh, *supra* note 19, 338. As empirical research, M. TERTILT/P. SCHOLZ, To Advise or Not to Advise – How Robo-Advisors Evaluate the Risk Preferences of Private Investors, forthcoming in the Journal of Wealth Management, available at SSRN: *https://ssrn.com/abstract=2913178.*

29 Former § 34 (2a) of Germany's Securities Trading Act required a "salesperson" of a financial firm to prepare a written record of the communication between the "salesperson" and the client at the solicitation stage and to sign that written record. Although this rule is transformed to "written basic agreement" (§ 64 (4) since 2018), Maume points out it is unclear how this rule is extended to Robo-Advisors, see P. MAUME, Regulating Robo-Advisory, Texas International Law Journal 55-1 (2019) 49, at 82; for the Amendment to the Act, see SUMIDA, *supra* note 25, at 230.

30 ESMA Suitability Guidelines, General Guideline 4 "Reliability of Information Collected about Clients" (Section 44), Sections 45 and 49. The Guidelines also point out the need to design a system taking into account clients' biases, such as over-reliance on automated advice (Section 51).

31 SEC, *supra* note 20, at 5–6. KATŌ, *supra* note 20, at 120; ESMA Suitability Guidelines, General Guideline 2 (Section 22), Section 32 (Clients' self-assessment must be objectified).

opportunity to change their answers after the outcomes are delivered by Robo-Advisors, accountability for the outcomes should be imposed on the automated service provider in order to prevent unreasonable judgments being made based on the clients' decisions.[32]

3. Establishment of a Structure to Satisfy System Functions

As the provider of a system that mechanically processes the data entered by clients into investment advice, Robo-Advice providers are considered to owe a duty of care with respect to the entire establishment and management of the system, with the obligation to build a human and physical capital structure that is sufficient to secure the proper functioning of the system.[33]

But various details need to be put in place. As mentioned, since the financial crisis, there has been a tendency among various countries to strengthen their laws and regulations governing investment advisors. As far as the "machine" is concerned, the list includes developing, testing, and verifying (using past data) the algorithms; monitoring the algorithms after their introduction into the system (when incorrect advice is being caused by bugs or when the market is permeated with similar advice); supervising a third party subcontracted to develop the algorithm software; and maintaining information security.[34] Moreover, one can add to the list: the management of clients' portfolios at the "current stage"; the management of client attributes that might affect suitability assessments; and assuring transparen-

32 SEC, *supra* note 20, at 7. KATŌ, *supra* note 21, at 120; NUMATA, *supra* note 17, at 309. See also ESMA Suitability Guidelines, General Guideline 3 (Section 33 onwards), which recommends that financial firms consider whether it is necessary to conduct an in-depth assessment of clients in light of the nature of the investment products and the services they want, and General Guideline 6 (Section 58 onwards) setting out situations where clients are legal entities or groups of persons.

33 ESMA Suitability Guidelines, General Guideline 11 (Section 96); BAKER/DALLAERT, *supra* note 21, at 741; N. G. IANNARONE, Computer as Confidant: Digital Investment Advice and the Fiduciary Standard, Chicago-Kent Law Review 93 (2018) 141, 152–153. Similar legal theory can be recognized in Japanese civil law (Supreme Court, April 8, 2003, Minshū 57, 337); T. MORISHITA, *FinTech jidai no kin'yū-hō no arikata ni kansuru joron-teki kōsatsu* [Introductory Study on how Financial Regulation in the FinTech Era should be], in: Kuronuma/Fujita (eds.), *Kigyō-hō no shinro: Egashira Kenjirō sensei koki joronteki kinen* [The Future Course of Enterprise Law: In Celebration of the 70th Birthday of Professor Kenjirō Egashira] (Tōkyō 2017), at 818. In the area where there is a collaborative relationship between civil rules and financial regulations, the Same Rule Principle should, in principle, be adopted for civil law rules, see SUMIDA/KUDŌ, *supra* note 19, at 496 ("Epilogue").

34 OECD (2018), *supra* note 13, at 91–92; MORISHITA, *supra* note 13, at 18; SEC, *supra* note 20, at 7–8; KATŌ, *supra* note 20, at 121; ESMA Suitability Guidelines (Section 100).

cy in relation to the direct and indirect costs of the transactions. It is pointed out that the automation and digitization of these compliance tasks have contributed to the growing popularity of Robo-Advisors.[35]

III. Questions from a Legal Perspective

In this section, based on Japanese Law, I would like to raise some questions in regard to the interpretation of regulatory rules and their implications in the context of private law. Before starting the discussion, let me briefly address several issues of concern. It is well known that most discussions and debates on the legal duties of financial firms serving retail investors have so far focused on the duty to provide explanations and the principle of suitability at the solicitation and sale stages of face-to-face transactions. On the other hand, in transactions in which services are offered without human intervention, i.e., transactions where humans are replaced by machines, how do these legal doctrines need to be further expanded and developed?

In general, financial regulations in this area in Japan are established by focusing on the "business" carried out by financial firms, and I think it is worth pointing out that general provisions of private law are inevitably affected by the financial regulations in this field. Japanese private law belongs to the civil law family (influenced by the German BGB and the French Code Civil), and is not of common law heritage, and we share the dualistic concept of public law and private law in principle. But there has been a very interesting development in investor protection law and a certain "inter-relationship" that has resulted in a number of bridges being built between regulation (public law) and civil rules (private law). For example, in the judgment of the Supreme Court of Japan, it is said that an extreme violation of the suitability principle could establish the "illegality" of the conduct of an employee of a financial services firm, which is one of the prerequisites of business tort liability.[36]

This issue cannot, however, be considered separately without a good grasp of the automated, machine-delivered "business" and the regulatory stance on Robo-Advice "services".

1. Is the Principle of Suitability Not Applicable at All?

Looking at regulatory framework, we have to consider that the suitability principle is stipulated as applying to "solicitation". The Financial Instru-

35 Fein, *supra* note 18, at 1; Ji, *supra* note 17, at 1561.

36 Supreme Court, 14 July 2005, Minshū 59, 1323.

ments and Exchange Act (FIEA)[37] of Japan stipulates that the principle of suitability is a rule regarding "solicitation" (Article 40(1) of the FIEA), so the question arises whether the use of Robo-Advisors constitutes "solicitation".

In general, "solicitation" means an invitation or inducement to enter into an agreement regarding financial products or services ("sale") after a client has initiated communication with a financial services firm. In other words, "solicitation" is conducted on a one-to-one basis in relation to a particular product and affects the formation of decision-making. "Solicitation" is distinguished from "advertising" in that the latter targets many unspecified persons and provides them with general information. Items displayed on the internet target many unspecified persons, so unless an investor takes action (i.e., the act of visiting the website of a financial services firm), communication does not start between the investor and the financial service provider (clients take the initiative in communication).[38] Based on these points, some argue that "solicitation" is not generally recognized in internet transactions, but I disagree with this view.[39]

First, whether or not "solicitation" is conducted should be determined substantively in each case on the basis of the actual circumstances,[40] and, needless to say, we should observe the actual use of Robo-Advisors carefully. In doing so, as discussed above, we need to recognize that Robo-Advisors are creating a new market and are different from existing non-

37 *Kin'yū shōhin torihiki-hō*, Act No. 25 of 13 April 1948, as amended by Act No. 71 of 11 December 2019.

38 To determine whether an act constitutes an unjust solicitation or not, the courts have primarily focused on which party takes the initiative in the communication leading up to the execution of the agreement (assuming mostly face-to-face transactions); T. MIYAWAKI/Y. SHIBATA, *'Kōrei kokyaku e no kan'yū ni yoru hanbai ni kakawaru gaidorain' no ichibu kaisei no gaiyō* [Summary of Partial Amendment to Guidelines on Selling to Elderly Customers by Solicitation], Kin'yū Zaisei Jijō, 9 January 2017, 41. See also the arguments on the possible application of the notion to internet transactions.

39 M. TAZAWA, *Hanhi (Ōsaka kōhan hei 23・9・8)* [Case Note (Ōsaka High Court Decision of 8 September 2011)], Jurisuto 1454 (2013) 95, 96; KURONUMA, *supra* note 24, at 528. This understanding is consistent with the Financial Services Agency's Guidelines (III-2-3-1), which, with regard to internet transactions, require financial firms to take the utmost care to ensure their solicitation and explanation policy adheres to the principle of suitability. See also Supreme Court, 24 January 2017, Minshū 71, 1. Although this is a case concerning consumer contract law, the court held that just because the firm targets many unspecified persons, one cannot say immediately that the conduct does not constitute a "solicitation" (distribution of leaflets in newspapers).

40 N. MATSUO, *Kin'yū shōhin torihiki-hō* [The Financial Instruments and Exchange Act] (Tōkyō 2018) 441.

face-to-face transactions, i.e., internet-exclusive companies engaged in speculative transactions that offer simple services at cheap prices. Given the typical profile of an investor participating in this market, the details of the services Robo-Advisors provide, and the roles and functions that Robo-Advisors are expected to play socio-economically, I think this view should be affirmed.

As discussed below, I believe the principle of suitability detailed here should be understood as a fiduciary duty, on whose basis we should determine whether Robo-Advisors are "performing their services in the best interests of clients."[41]

2. Advice Type: Are 'Free' Services Incidental to 'Brokerage Business'?

For this question, I would like to raise a question with reference to a model scenario for an advice-type Robo-Advisor.[42]

Model Scenario for Advice-Type Robo-Advisor

(1) After an investor answers some questions on the internet, the Robo-Advisor proposes the portfolio best suited to the investor;
(2) The investor purchases shares in an index funds according to the proposed portfolio; and
(3) Subsequently, the Robo-Advisor periodically reports to the investor on the status of asset management, and when the investor becomes aware that the portfolio has drifted away from its intended target consistent with the investor's long-term, diversified investment plan (glide path), the investor terminates the contract with one click and purchases shares of a new fund according to the proposed review plan.[43]

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41 In light of the trends in the United States, it is highly likely that questions will be raised about a Robo-Advisor's nondisclosure of information regarding the risk of conflicts of interest. See S. ŌSAKI, *Beikoku ni okeru roboadobaizā ni yoru hōrei ihan no tekihatsu* [Exposing (Legal) Contraventions Through Robo-Advisors in the United States], available at *https://www.nri.com/jp/knowledge/blog/lst/2019/fis/osaki/0115*; SEC, Investment Advisers Act of 1940, Release No. 5086 21 December 2018, Administrative Proceeding File No. 3-18949, In the Matter of Wealthfront Advisers LLC, f/k/a Wealthfront, Inc.; SEC, Release No. 508, 21 December 2018, Administrative Proceeding File No. 3-18950, In the Matter of Hedgeable, Inc.

42 Many Robo-Advice services providing these kinds of advice-type services are either "financial instruments business operators engaged in Type I financial instruments business" (as defined in the FIEA) or registered financial institutions.

43 The University of Tōkyō, Graduate School of Public Policy, 1st Industry-Government-Academia Forum on Financial Capital Markets, "Asset Management-type FinTech Services Including Robo-Advisors and Fiduciary Duties", Minutes (*http://*

Before I go into greater detail, let me state my conclusion first: It is highly unlikely that FIEA's provisions regarding "investment advisory business" (including Articles 41 and 41-2 of the FIEA) apply to the advice in the model scenario set out above.[44]

My interpretation of the regulatory rules is as follows: Since the delivered portfolio itself does not contain any description of the value of the specific stocks and is offered as a free-of-charge assessment tool, the activity described by (1) in the model scenario does not constitute "investment advisory business", and it is merely "incidental to" brokerage services as described by (2) (see Articles 35 (1) (viii) of the FIEA).

If the above interpretations are correct, most of the activities in (1) and (3) of the model scenario – the activities that investors consider to be the essential part of Robo-Advisory services – can be regarded under the law as free-of-charge services incidental to the transaction described in (2). It is here, in my view, that a "discrepancy between the law and reality (customers' reliance)"[45] can be found, and I wonder if I am the only one who sees that discrepancy. In Europe, following regulatory reform (MiFID-II), financial services firms are required to unbundle fees for execution of client orders from fees for investment advices in order to ensure transparency, and incidental services without charge are not permitted.[46] I believe this is worth referring to when considering regulations on Robo-Advisors in Japan.

Moreover, in the latter part of (3) in the model scenario, the termination of the fund contract and the purchase of new fund shares are carried out by the investor. But if the investor finds these procedures cumbersome and makes arrangements for the transactions to be conducted automatically,

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www.pp.u-tokyo.ac.jp/CMPP/forum/2017-06-01/documents/forum01_report.pdf) 3–6; see also S. KATŌ, *Ginkō demo shisan keisei-sō e no apurōchi toshite jiwari shintō* [Gradual Diffusion as an Approach Towards Banking-Related Asset Layer Formation], Kin'yū Zaisei Jijō, 26 March 2018, 20, 21.

44 "Investment advisory business" means the advice about investment decisions based on an analysis of the value of securities and financial products under the investment advisory contract, including the agreement to pay remuneration thereof (Article 2(8) (xi) of the FIEA). The following analysis is largely based on M. SUZUKI, *FinTech ni yoru jidō-ka torihiki sābisu no kinshō-hō-jō no ichizuke* [The Position of Automated FinTech Services in the FIEA], Kin'yū Zaisei Jijō, 4 January 2016, 83.

45 M. TSUKAHARA/K. HASEGAWA, *Kin'yū kikan no jogen gimu ni tsuite no hōteki ichi-kōsatsu: jogen no hōteki ichizuke o meguru eikoku, doitsu no seido o tegakari toshite* [A Legal Insight into Financial Firms' Obligations to Provide Advice: The UK and German Systems Relating to Legal Position of Advice for Guidance], Kin'yū Kenkyū, Vol. 36 No. 2 (2017) 75, 90.

46 Directive (2014/65/EU) Articles 24(9) and 24(11); Commission Delegated Directive (2017/593) Article 11.

those transactions would constitute "investment management business."[47] In addition, financial firms offering advice-type services also provide services that are close to investment management-type services in light of their user-centered design. Given this reality, the role played by "fiduciary duties"[48] can be viewed as very significant in Japan.[49]

3. Management Type: Wrong AI Decisions as a Breach of the Duty of Care?

Next let me discuss how to establish the breach of the legal duty of care owed by a prudent manager when a customer incurs a loss due to a materially irrational decision by AI:

It could be said that the issue here concerns a breach of the duty of care owed by a prudent manager at an investment management firm. In Japan, two court decisions should be referred to as precedents, and in these cases the two courts took different approaches in determining whether or not there was a breach of the prudent manager duty of care. In one case the court focused on the investment decisions relative to the entire investment strategy but in the other on the individual investment decisions.

In regard to Robo-Advisors, the Institute for Monetary and Economic Studies (IMES), which is a part of the Bank of Japan, recommends the

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47 This is because investment decisions and the authority to make investments are delegated to the program offered by a financial firm (Article 2(8)(xii)(b) of the FIEA); SUZUKI, *supra* note 44, at 86. Under the FIEA, investment management firms owe to right holders a duty of loyalty and a duty of care of prudent managers. The FIEA also contains the provisions that prohibit conflicts of interest and other matters with respect to investment management firms (Articles 42 and 42-2 of the FIEA).

48 The term "fiduciary duty" as used here is something to be discussed carefully in Japan. The Japanese Financial Services Agency introduced this concept in 2017, and it has recently been articulated more frequently in another way in terms of "Customer-Oriented Business Principles", referring to a broader and not necessarily legally sanctioned principle-based "soft law" concerning every party involved in the investment product chain. Roughly speaking, it might be aligned with (or inspired by) the Kay Review in the UK (The Law Commission, Fiduciary Duties of Investment Intermediaries, 2014). For more information, see A. KOIDE, *Beikoku ni okeru tōshi shōhin no hanbai to fidyūsharī dyūtī* [Sales of Financial Products in the US and Fiduciary Duties], in: Kansaku (ed.), *Fidyūsharī dyūtī to reiki sōhan* [Fiduciary Duties and Conflicts of Interest] (Tōkyō 2019) 229, 231.

49 An example which could be significant in relation to the Financial Service Agency's concern might be the 2019 mis-selling scandal involving the Japan Post Insurance and Japan Post Bank. According to a newspaper account, only 40 percent of the total products sold were suitable for the purchasers of customers aged 70 or more = ca. 183,000 insurance policies. *https://mainichi.jp/english/articles/20190624/p2g/00m/0na/096000c.*

former interpretation in its September 2018 report.[50] Particularly worthy of note here are the legal grounds, which sit well not only with the interpretation under American law (the "mother law"), but also with the nature of algorithms and AI. The report took into account the fact that "algorithms or AI use the probability theory-based method to make investment decisions on the ground of correlations between two or more facts that cannot be recognized by humans, and that have the potential to generate more profits than humans in terms of the entire portfolio."

This is related to the phenomenon known as the "black-box problem" inherent in machine-made decisions in which one option is recommended over other options. If in theory artificial intelligence has evolved from the "black-box" to the "white-box" – which according to one artificial intelligence researcher is the direction in which artificial intelligence is heading – the possibility of choosing the other options cannot be eliminated.

And according to the 2018 report, the answer to this question relates to the appropriateness of standards in investment decision-making.

But the mere fact that machine-made decisions can be beyond human comprehension should not suffice to establish a breach of the duty of care. We rather have to examine if it was reasonable to use algorithms or AI for the investment decisions, and it is here that we can make a reference to the duty to ensure the functioning of the system.

But this raises another point to consider: There might be other reasons for irrational investment decisions. If the suitability check focuses on very limited information about the profile of the customer, the Robo-Advisor could recommend a portfolio which is not suitable for him or her. And there is a possibility of the system's vendor being liable where the AI was not functioning properly. But for a customer it is extremely difficult to know the reason.

4. Could Disclaimer/Safe Harbor Clauses Preserve Validity?: The Platform Liability Discussion

There is a tendency among Robo-Advisors to use disclaimers that state the advice they provide is a general investment recommendation – and not personalized advice tailored to the clients' individual needs – so as to prevent the advice they provide from being viewed as subject to regulations.[51] I see

50 Institute for Monetary and Economic Studies, Bank of Japan, *Tōshi handan ni okeru arugorizumu/AI no riyō to hōteki sekinin* [The Use of Algorithms and AI in Investment Decision-Making and Legal Liability regarding their Use] (September 2018) 17.

51 OECD (2018), *supra* note 13, at 90; OECD (2017), *supra* note 13, at 13; MORISHITA, *supra* note 13, at 18; ID., *supra* note 33, at 817. Also see MATSUO, *supra* note 40, at 441 (arguing that "in managing customer assets, it is inappropriate for a financial firm to enter into a transaction after obtaining confirmation in writ-

this as an issue of the Same Rule Principle. Specifically, I suggest that the following questions be asked first: "Are a financial firm's services being offered as part of its 'business?'" and "Are the legal norms governing that business mandatory provisions of the law?"

Yet, as is often the case with FinTech services, the details of Robo-Advisory services are unclear, and it is difficult to indicate which service applies to which "business". Furthermore, as mentioned before, "solicitation" requires substantive interpretation on a case-by-case basis in light of the individual circumstances. If so, a disclaimer could be seen as a one-sided provision detrimental to clients, allowing financial services firms to pass on to clients the adverse effects caused by a lack of transparency regarding the laws and regulations their services must comply with.[52] In other countries, instances are seen where the effect of such a disclaimer is rejected in financial regulation guidelines.[53] Such an approach can be understood in this context. It seems to me that it is time for Japan to address this issue as a regulatory civil law matter and develop a theory on the proper interpretation of contractual clauses, even if establishing financial regulations remains out of reach.

IV. Conclusion

1. The Meaning of Same Rule Principle

At least at the current stage, the international trend in financial regulatory approaches to Robo-Advisors, where the services provided by Robo-Advisors are the same as those provided by human advisors, seems to be that Robo-Advisors must, in principle, be subject to the same rules as human advisors (the Same Rule Principle).[54] This is probably because, unlike

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ing from the customer that solicitation is unnecessary"); R. Oppenheim/C. Lange-Hausstein, Robo Advisor – Anforderungen an die digitale Kapitalanlage und Vermögensverwaltung, WM 2016, 1966, 1969.

52 This argument is also made by Morishita, *supra* note 33, at 818. On judicial rulings in the US, M. Tamaruya, *Beikoku kin'yū kikan ni taisuru shihō handan no jōkyō* [Judicial Ruling on financial institutions in the US], in: Kansaku, *supra* note 48, at 111, 135–140.

53 FINRA Rule 2111 Supplementary Material (May 2011) 02; ESMA Suitability Guidelines, Section 19 (prohibition of disclaimers), Section 45 (any signature of the client or disclosure made by the firm is ineffectual in relation to the relevant regulations), and other relevant sections.

54 What makes this rule interesting is that it is supposedly applicable not only in the realm of financial regulation but in private law in general. I believe the leading case in this topic is the judgment of the Supreme Court of 8 April 2003 (Minshū 57, 337), which applied the Civil Code article concerning an incorrect payment at the

areas where the competitive advantage of machines over humans is clear, such as high-frequency trading (HFT), when we look at the services that Robo-Advisors provide, we see that humans and machines use their respective qualities to compete against each other.[55] In other words, the Same Rule Principle means the promotion of quality/price competition in respect of customer-oriented services.

2. The Challenge of Establishing Fiduciary Duties in the Era of Automated Technology

I will conclude with a few comments on the theme of "Asset Building and Management in an Aging Society".

As Japan's population decreases and life expectancy continues to rise, we are now living in an aging society where people often live to 100. Against this backdrop, financial services firms urgently need to adopt social science perspectives that incorporate financial gerontology in order to improve their capabilities to respond to today's ever-changing society and to create a new business environment.[56] It is expected that people's needs for

bank by a human employee (Art. 478) to a malpractice payment of deposits at an ATM (Automatic telling machine).

55 ŌSAKI, *supra* note 28, at 311. In the United States, a leading country as regards Robo-Advisors, hybrid services that utilize robots (online platforms) and human advisors are gaining support; see also T. AOKI, *Ningen to no korabo ga susumu beikoku no robo-ado jijō* [Situation in the US where Collaboration between Human Advisors and Robo-Advisors is Progressing], Kin'yū Zaisei Jijjō, 26 March 2018, 24.

56 In response to the new environment, a number of innovative financial products have been (successfully) introduced in Japan in recent years. In the installment-type Nippon (Japan) Individual Savings Account program, known as *Tsumitate NISA*, NISA savers can contribute up to JPY 400,000 a year to the trust, and the gains from investments made by NISA savers are tax-free each year. NISA products are limited to low fee, publicly sold stock investment trusts. NISA is available to people aged 20 or older who live in Japan. NISA savers can withdraw their assets at any time. *iDeCo* (individual-type defined contribution pension plan): The total amount of contributions savers can put into iDeCo each tax year is capped at between JPY 144,000 and JPY 816,000. The gains from investments are tax-free at the moment (as of September 2019), and the entire amount of contributions is exempt from income tax; a certain tax relief applies when savers receive pension benefits. The broad range of products includes national and foreign stocks, bonds, and investment trusts. This is a pension plan, so savers cannot withdraw money from their iDeCo accounts until they turn 60. The number of *Tsumitate NISA* accounts totals 1.04 million, representing 1.0% of Japan's adult population; with a total balance of JPY92.7 billion and an average per person balance of approximately JPY 90,000/*Ippan* NISA: 11.43 million accounts, 10.9%, JPY 7.7 trillion, approximately JPY700,000/ iDeCo (participants/investment instructors): JPY1.72 million, 1.6%, JPY 1.6 trillion, approximately JPY 1.15 million.

asset management will diversify and that an increasing number of people will be interested not only in building up their assets through "long-term, installment and diversified" investments (accumulation), but also in how to best optimize their assets after retirement (decumulation). Indeed, we are now seeing more diversification in financial products and services in this area consistent with people's changing lifestyles. Furthermore, with our rapidly aging society facing many uncertainties, including the "pension crisis"[57] and health risks associated with aging (as the Financial Services Agency has pointed out), people feel a strong need for "advisors who are able to offer comprehensive advice that is in the best interest of clients according to their life stage, including the formulation of financial plans".[58] However, unlike in the US where independent financial advisors are widely recognized and accepted, most people in Japan do not have access to such advisors – even if they exist.

Taking these factors in account, and even though it will present challenges, I would like to suggest that automated advice services can very much be expected to play an increasing role in this field of decumulation through the utilization of Robo-Advisors that offer low-cost but high-quality asset management services to a wider range of investors, as it is happening in the US.[59] Thus the question we face is: "Who should play a role in providing financial services to support Japan's socio-economic system – humans or machines?"

The number of savers continues to grow, but it is still limited to a small segment of the population. *See* Financial System Council Report*, supra* note 7, at 29–30. In the outline of the tax reform for the second fiscal year of the Reiwa era (2020) which was approved by the Cabinet on 20 December 2019, the extension of the period for NISA and the expansion of iDeCo were approved.

57 The Constitution of Japan guarantees citizens with the right to live a healthy life with a minimum of cultural standards (Article 25(1) of the Constitution of Japan), and low-income and low-pensioners are provided with *"Seikatsu hogo",* Public Assistance (Social Security). The amount varies depending on the age and family structure of the recipients as well as on the local government in which they live but it is JPY 123,000 (≒GP 860) per month for elderly couples in Yokohama City, Kanagawa Prefecture *(https://seikatsuhogo.jp/senior/).* As of September 2019, the majority of households receiving public assistance (896,000 out of 1,635,700) were elderly households, see *https://www.mhlw.go.jp/toukei/saikin/hw/hihogosya/m2019/dl/09-01.pdf.*

58 Financial System Council Report, *supra* note 7, at 33.

59 S. POLANSKY/P. CHANDLER/G. R. MOTTOLA, The Big Spenddown: Digital Investment Advice and Decumulation, in: Agnew/Mitchell (eds.), Disruptive Impact (Oxford 2019) 129–148; T. BAKER/ B. DELLAERT, Behavioral Finance, Decumulation, and the Regulatory Strategy for Robo-Advice, in: Agnew/Mitchell (eds.), Disruptive Impact (Oxford 2019) 149–171.

SUMMARY

In Japan a report of the Financial Service Agency suggesting that the average couple would need a fund of 20 million Yen (about 170.000 Euro) to support their post-retirement income created sensational headlines in June 2019. One of its effects has been renewed interest on the part of the general public in asset management. This reflects a longer term trend 'from savings to investment' in attitudes towards pension provision. Meanwhile, 'Robo-Advice' in Japan has spread rapidly since its first appearance in 2015. This paper will address the following questions: (1) what happens when a human investment advisor is replaced by an automated service ('Robo-Advice'); and (2) how should the legal framework of financial regulation and civil liability be changed to accommodate such a development?

ZUSAMMENFASSUNG

Im Jahr 2019 machte ein Bericht der japanischen Finanzmarktaufsicht Schlagzeilen, der nahelegte, dass ein durchschnittliches Ehepaar in Japan Rücklagen von etwa 20 Millionen Yen (etwa 170.000 Euro) benötige, um sein Einkommen nach Eintritt in das Rentenalter aufzubessern. Dies führte unter anderem zu einer Verstärkung des Interesses an der Verwaltung von Vermögensanlagen in der Bevölkerung und entspricht dem schon länger zu beobachtendem allgemeinem Trend einer Verlagerung vom „Sparen zum Investieren" mit Blick auf die Alterssicherung. Die Beratung und Verwaltung von Vermögensanlagen mithilfe von künstlicher Intelligenz („Robo-Advice") hat sich in Japan seit ihren Anfängen im Jahr 2015 rapide ausgeweitet. Der Beitrag diskutiert die folgenden beiden Fragen: (1) Was geschieht, wenn ein menschlicher Berater durch einen automatisierten Service auf der Grundlage künstlicher Intelligenz ersetzt wird? (2) In welcher Weise sollte der rechtliche Rahmen mit Blick auf die Finanzmarktregulierung und die zivilrechtliche Haftung an diese Entwicklung angepasst werden?

(Die Redaktion)