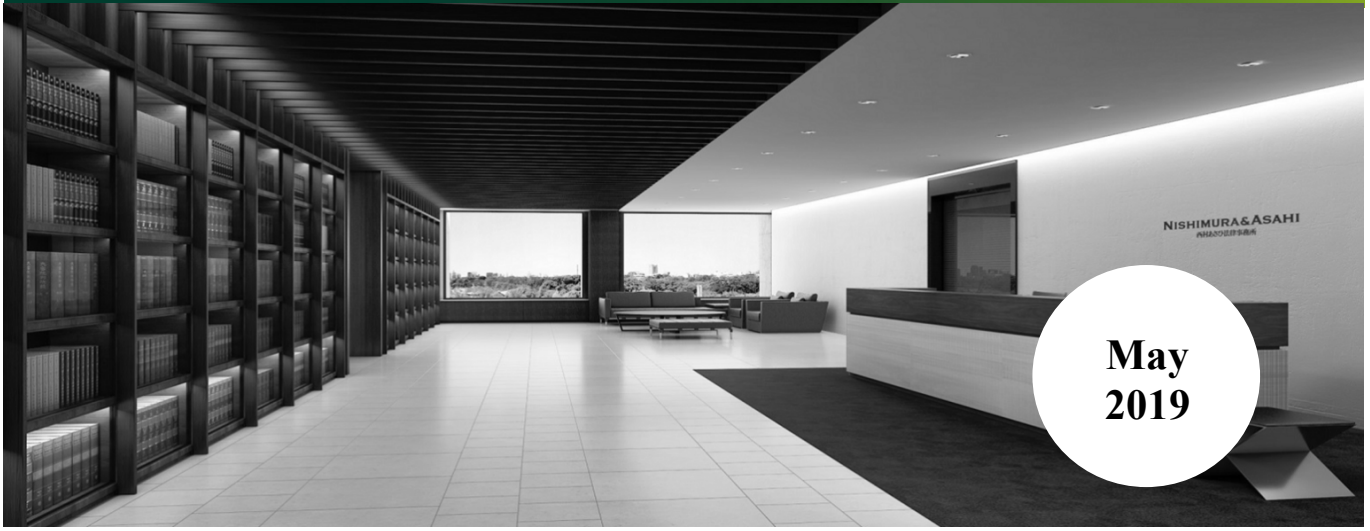


Finance Law Newsletter



AI as fuel for advanced RegTech: Will (and should) RegTech and artificial intelligence be utilized as screening tools for “real” intelligence?

Toshiyuki Yamamoto

1. RegTech is coming – Next buzzword?

Following the emergence of FinTech in Japan around 2015, “RegTech” has recently attracted the attention of the Japanese financial industry; indeed, RegTech is quickly becoming the next buzzword. In addition to the private sector, such as financial institutions and startups, the public sector, including the Financial Services Agency of Japan (the “JFSA”), is promoting RegTech. For instance, a recent JFSA report encourages readers to “consider the future establishment of a RegTech ecosystem that enables: a) financial institutions to decrease system expenditures and b) the authority to grasp the actual state of financial institutions in a timely manner.”¹ All of this begs the question: “What is RegTech?”.

2. What is RegTech?

The Financial Stability Board defines RegTech (and SupTech) as follows.²

RegTech: any range of applications of FinTech for regulatory and compliance requirements and reporting by regulated financial institutions. This can also refer to firms that offer such applications, and in some cases can encompass SupTech (see below).

SupTech: applications of FinTech by supervisory authorities.

In a nutshell, RegTech is one of the applied FinTech methods focusing on financial regulations and compliance matters.

¹ See page 5 of [Summary Points from For Providing Better Financial Services in the Era of Transition](#) dated November 20, 2018.

² See [Artificial intelligence and machine learning in financial services](#) dated November 1, 2017.

After the 2008 global financial crisis, tremendous financial regulations were implemented globally. To handle the increased regulations efficiently and become more cost effective, financial institutions attempt to implement assistive technologies. To this end, RegTech is applied in a variety of areas, including AML/CFT (Anti-Money Laundering/Countering the Financing of Terrorism), KYC (Know Your Customer), reporting to authorities, monitoring of trades, and compliance of financial market transactions.

A recent trend in RegTech is the incorporation of artificial intelligence (AI). Through such incorporation, RegTech intends to run predictive analytics beyond workflow automation and continuous-monitoring, and AI and machine learning are proactively identifying and predicting risks.³ In other words, AI is fuel for advanced RegTech, as per other financial areas such as credit scoring for lending, chatbots for client marketing, and analyzing alternative data for asset management. Actually, in an April workshop held by the Bank of Japan, advanced AI applications in AML and other compliance matters were discussed.⁴

3. Screening tool? “Real” intelligence? – A case study from JFSA’s FinTech PoC Hub

On September 21, 2017, the JFSA launched an innovation hub known as “FinTech PoC Hub” (FinTech *jissho jikken habu*; the “**Hub**”). The Hub aims to support projects in the proof-of-concept (PoC) stage that have been put forth by innovative financial institutions and innovators and which lead to further user convenience and company productivity. There have been several cases where such PoC results have been worthy of publication.

A prime example of Hub backed project results was revealed on August 1, 2018.⁵ Several Japanese banks joined in a PoC project which aimed to assess whether or not banks can improve their day-to-day operations through such means as reviewing records of client communications attempting to sell financial instruments. In the past, these reviews were conducted manually by personnel for compliance purposes. In the project, AI was applied for scoring and prioritizing each record which contained natural language; this means AI functioned as a first-level screening tool. In the second-level screening phase, reviewers prioritized record review based on the scores assigned to each file by the AI. As such, AI, as a first-level “reviewer”, firstly prioritizes which documents should be reviewed by humans who will work as second-level reviewers after such AI screening. The project compared the results of such processes run with the AI prioritization and without the AI prioritization.

In conjunction with the publication, the JFSA revealed its thoughts regarding the above PoC project. The JFSA appears to believe that, under its current guidelines, as well as the applicable laws and regulations, utilizing AI as a first-level screening tool would not cause any specific day-to-day review operation issues to arise. This endorsement is somewhat tempered by the caveat that such circumstances be accompanied by proper management, such as validation of the AI judgement threshold and reliability testing of the trained models using reasonable methods at reasonable intervals.

Interestingly, it is apparent that the JFSA admits the utility of AI in the context of RegTech. On the other hand, JFSA’s judgement is limited to the use of RegTech as a first-level “screening tool”. This appears to be reasonable in consideration of the current ability of AI, which is not “real” intelligence. Artificial general intelligence/strong AI has not yet been practically implemented.

4. RegTech legal and regulatory issues – What should we expect?

Despite the current phase of RegTech being somewhat introductory (i.e., a screening tool rather than real intelligence), applications of RegTech expect to increase on an industry-wide basis going forward. This movement will bring many

³ See [The State of Regtech](#) dated September 20, 2017 available at CB Insights’ website.

⁴ See Bank of Japan’s website at https://www.boj.or.jp/announcements/release_2019/re1190422a.htm/ (Japanese only).

⁵ See JFSA’s website at <https://www.fsa.go.jp/news/30/20180801.html> (Japanese only).

legal and regulatory issues to the attention of financial industry participants, some of which are discussed below.

■ **Regulatory risks and how to explain to regulators**

- Model risk
 - ✓ The current AI is not “real intelligence” and is merely a model; as a matter of the nature of models, it is statistically possible for incorrect results (i.e., “outliers”) occasionally to be produced.
 - ✓ How should financial institutions explain results of compliance checks relying on potential outliers? As per the case study described in 3 above, would it be considered reasonable to limit the usage of RegTech to a first-level screening tool (at least until the models have evolved past a certain level of reliability)?
 - ✓ Continuous monitoring of a model may be a key for dialogues with regulators, particularly in the case of failure, since it is possible to explain which portion of the model has a problem and how to improve it.
- Explainability
 - ✓ Explainability of AI, particularly, machine learning (i.e., black-box issues), is one of the hot topics across industries.
 - ✓ As financial institutions are supervised by regulators and highly regulated (compared to other industries), enhancing AI explainability will be a top priority for both financial institutions and regulators.⁶
 - ✓ Should we simply expect that technology enhancements, such as “explainable AI,” will solve this issue? Otherwise, as an industry-wide effort, should financial institutions and regulators continue to have dialogues seeking to craft specific (supervisory) guidance that addresses RegTech and AI?

■ **Management perspectives**

- Under Japanese law, directors of stock companies have obligations to perform their duties with the due care of a prudent manager (*zenryo na kanrisha no chui gimu*). If directors breach such obligation, they may be liable for the damages incurred by their companies.
- Directors should be more careful when they implement RegTech within financial institutions, since RegTech and AI are comprised of brand new technologies, which may bring risks that are currently unknown or unrecognized. Reasonable consideration when implementing RegTech is necessary for not only the subject of determination but also the determination process.
- Due to enhancement of technology, there may be cases where “hidden” matters (which could not have been detected by humans) are revealed. Depending on the scale and other factors of such hidden matters, management may be forced to take immediate action involving regulators and the public.

In addition to the above, ethics issues for utilizing AI may be necessary to consider depending on the applicable fields of RegTech.

⁶ For instance, see [Machine learning hits explainability barrier](#) on pages 22–26 in *Asia Risk* (November 2018). This article refers to the [SR 11-7: Guidance on Model Risk Management](#) issued by the Federal Reserve and Office of the Comptroller of the Currency in the U.S., which does not specifically discuss AI. However, this article argues that the SR11-7 “should serve as a guiding framework” for AI applications.

In any event, due to the new technological nature of RegTech and AI, no specific “hard law” (e.g., statutory law) exists in Japan at this moment. Thus, it is highly desirable to prudently consider all relevant issues, in a step-by-step fashion, when implementing and utilizing RegTech, and, of course, take into account all “soft law” (e.g., guidance by regulators) and your company’s reputation.

Japan’s Financial Scene: The view from Tokyo

The “Japan’s Financial Scene: The View From Tokyo” series is a sub-series of the Nishimura & Asahi Finance Law Newsletter. This sub-series provides a broad overview of Japanese financial regulation, as well as relevant tips and pointers. We hope that global financial professionals will find it useful for understanding some of the general, and even some of the complex, concepts of Japanese finance.



Toshiyuki Yamamoto Attorney-at-Law

E-mail: to_yamamoto@jurists.co.jp

Toshiyuki Yamamoto's main practice areas are asset management and derivatives. He is also involved in finance transactions and regulatory matters, as well as foreign regulatory defense and litigation. Prior to joining N&A in 2009, he worked in the field of securitization at a domestic credit rating agency and at the Tokyo office of a global investment bank as an analyst. He is a Certified Member Analyst of the Securities Analysts Association of Japan and a Certified International Investment Analyst.

He regularly publishes articles and made a presentation in the workshop at the “FIN/SUM 2018×REG/SUM” conference regarding artificial intelligence in finance industries. This newsletter also constitutes a series of his AI-related finance publications.