

Comments, Public

From: Rick Bonhof <Rick.Bonhof@synechron.com>
Sent: Tuesday, February 21, 2023 2:45 PM
To: Comments, Public
Cc: Sandeep Kumar
Subject: Synechron response to FINRA Special Notice 10/21/22
Attachments: Synechron FINRA Special Notice 10-21-22 response - February 2023.pdf

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Dear reader,

We would like to thank FINRA for Special Notice 10/21/22 and inviting the industry to provide comments on FINRA's Machine-Readable Rulebook initiative – FIRST.

We believe that the work by FINRA on this initiative is a very promising step towards further automation and enhancement of the compliance processes within financial institutions.

Synechron is an innovative global consulting firm that is intimately familiar with financial sector regulations and regulatory processes. One of our primary focus areas is supporting leading financial institutions in building new processes to adhere to new and existing financial sector regulations. In doing so we also leverage our ability to deliver industry-leading digital solutions that transform and empower businesses. As such we work and have worked with a wide range of financial institutions and industry partners such as RegTech providers on enhancing compliance process.

In the response to Special Notice 10/21/22 we have pulled together a group of experts representing our various capabilities to review FIRST (including consultants who previously worked as financial sector supervisors). Our response outlines the potential benefits and use cases for application of FINRA's Machine-Readable Rulebook initiative. We also highlight some of the perceived limitations and how these can be addressed.

Finally, we are very proud to provide you with an outline of Synechron's approach to creating an automated and scalable taxonomy.

We hope our contribution is useful to FINRA and are happy to explain in more detail should there be any questions.

Kind regards,

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Synechron response to FINRA Special Notice 10/21/22

21 FEBRUARY 2023

FIRST™, a step towards automation and enhancement of compliance processes

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MEET THE TEAM – A RESPONSE BASED ON THE INSIGHT OF OUR EXPERTS



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GLOBAL HEAD OF
FINLABS



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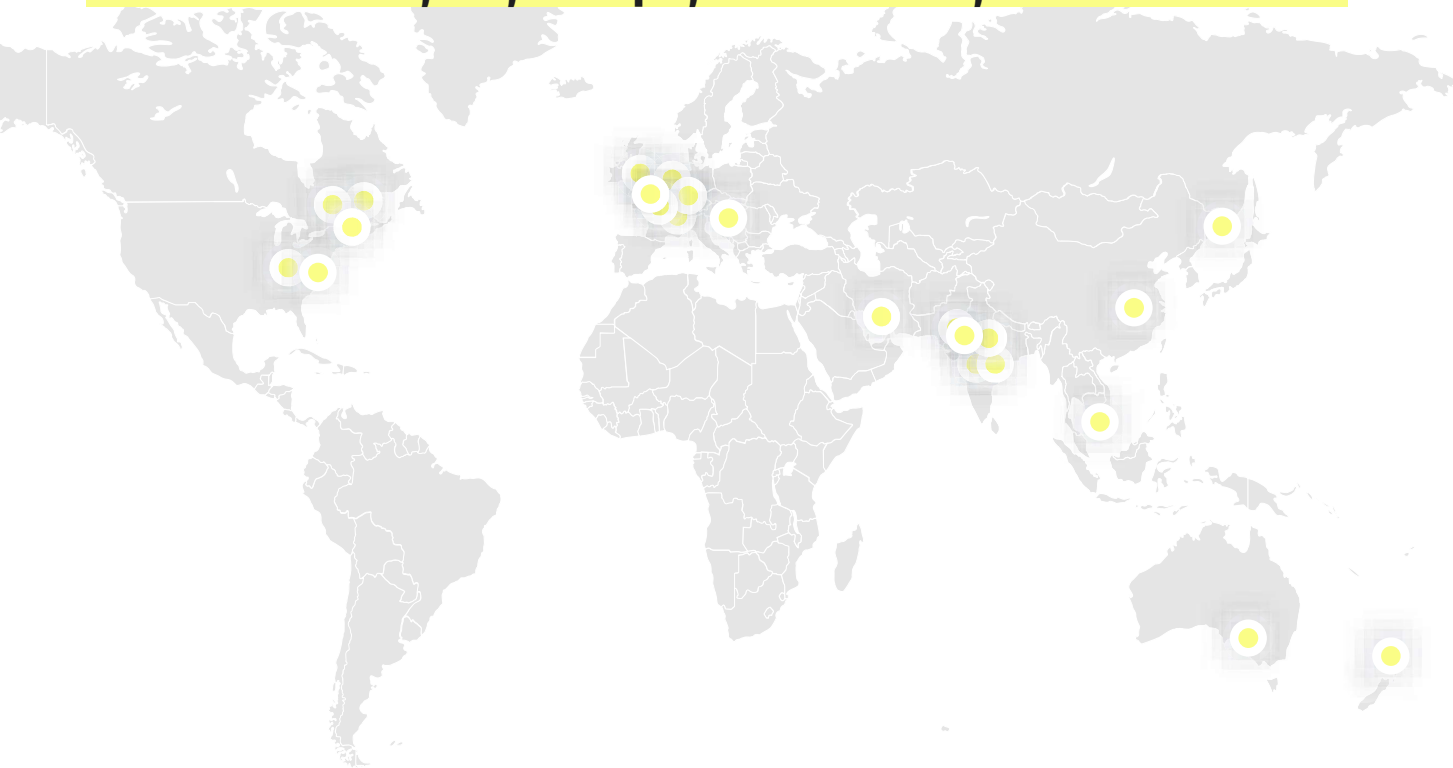
SUNIL KUMAR
SPECIALIST MACHINE
LEARNING FINLABS

AN INTRODUCTION TO SYNECHRON

Building at the
intersection of
regulatory compliance
and **innovative**
technology



Synechron has offices in key markets around the world in **North America, UK, Europe, Middle East, APAC and India**



14,000 +

Team Members Globally

100 + Clients

Marquee Financial Institutions

40 Offices

Across 17 Countries

End-to-end service offerings that put **your strategy first**



Consulting

Providing strategy, planning and leadership to accelerate end-to-end digital transformation.



Data

Helping enterprises move to modern data solutions and deliver reliable analytics at scale.



Design

Creating user experiences that people love, by exceeding expectations.



Cloud

Accelerating Cloud & DevOps adoption to increase the speed of delivery.



Engineering

Assisting clients to create change that matters – transformation, enabled by technology and sustained through capabilities.

Finlabs - A look at Synechron's Domain-focused accelerators



PayTech

2021

Address key imperatives within retail and wholesale payment ecosystems through digital & intelligent interfaces

Accelerators

- PayEasy Pay Later
- Liquify Treasurers Portal
- ISO 20022 Simulator
- Black Swan fraud prevention
- Payments Data Platform



InvestTech

2020

Focus on key needs of buy-side firms by offering front-to-back design architecture and technology acceleration

- ESG Booster
- ESG Navigator
- Digital Compliance
- Visual RE
- WillPower
- Customer 360+



WealthTech

2019

Empower wealth managers with technology that streamlines and enhances the full client lifecycle

- Client Onboarding
- Client Prospecting
- Efficient Suitability
- Pricing Insights
- Asset Tokenization
- Smart Statements
- VR Wealth Journey



RegTech

2018

Take control of regulation through better defined, documented and auditable digital operations

- KYC Remediation
- Intelligent Controls Testing
- Accounting Standard Normalizer
- Capital Walk Forward
- Fundamental Review of Books



InsurTech

2017

Use emerging technologies to solve the most pressing challenges of the Insurance industry

- Digital Underwriting
- Cognitive Machine Learning
- Internet-of-Things
- Robotic Process Automation
- Customer Experience Design
- Blockchain

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FINRA SPECIAL NOTICE 10/21/22

Synechron's response to the sections of the FINRA Special Notice



Response to Section A. - Interactions with the FINRA Rulebook

Synechron interacts with the FINRA rulebook directly in the context of providing services to our clients, many of whom are subject to FINRA rules. Our experts are seconded to such clients to play leading roles in complex regulatory change programs or to hold senior compliance department roles.

We also interact with FIRST when we support firms in developing inhouse tooling to assist them in efficiently scanning the regulatory horizon for updates from regulators (In the form of new regulations or amendments to existing regulations). This type of tooling is being developed as part of a switch whereby technology plays a stronger role in upstream regulatory compliance monitoring processes. This change also facilitates broader innovation whereby firms can use technology to augment their processes of:

- identifying new applicable regulations
- updating internal policies that reflect the latest requirements
- using GRC tooling to send information to more granular operational procedures and risk control records, so that operational processes are also updated similarly.

Utilizing technology to track regulatory requirements will facilitate this change. This change will greatly improve efficiency and lower compliance cost. Synechron's role in this change process, as a services company, is to provide clients with regulatory experts who understand how regulations should be interpreted, and Artificial Intelligence and Data Engineers, who build the tooling for our clients (client references are available).

To demonstrate our capability to potential clients, Synechron has built its own regulatory horizon scanning tool: the Digital Compliance Accelerator. Synechron Accelerators consist of working reusable codebase, machine learning models, design systems and architectures that can be customized and scaled based on client requirements.

In the context of our work with our clients and with our Digital Compliance accelerator, we are considering using FIRST and the API in the following way:

- Creating of in-app filtering capabilities comparable to FINRA website.
- Tagging of regulatory obligations beyond rules issued by FINRA – e.g., EU rules and regulations.
- Exploring use-cases in downstream compliance process such as assigning rules to departments based on FIRST taxonomy.

Response to Section A. - Interactions with the FINRA Rulebook (Cont'd)

In our opinion the Summary Topics taxonomy provides the most benefit to user when searching because it is more intuitive in use and allows to filter down applicable rules even when the user does not have a set objective or prior knowledge of the FINRA rulebook.

We believe using the Detailed Topics taxonomy only yields meaningful results if the user has a prior knowledge of the FINRA rulebook and/or has a very clear outline of what they are looking for.

Therefore, the Summary Topics taxonomy in FIRST™ is more likely to be used.

Response to Section B. - Uses of FIRST and FINRA's API

We believe that the value of FIRST lies in the fact that it creates a regulator driven tool that compliance professionals can use to analyze regulations. In doing so, FINRA is signaling to firms that technologies (RegTech approaches) should be embraced (where appropriate) in compliance processes. This reflects a similar approach to that taken by EU regulators, recognizing that innovation and change in this space can contribute to cost and efficiency gains in regulatory compliance processes.

The value of FIRST also lies in the fact that it creates a regulator driven common machine-readable taxonomy for the FINRA rulebook that can be extended beyond this initial purpose to various use cases.

In our opinion the beneficiaries of FIRST and the related API will be regulated firms who adopt this taxonomy (and others like it), to reduce compliance costs and inefficiencies. RegTech and GRC-related software providers also benefit, because it offers them opportunities to enhance their solutions with a taxonomy that has been created by a regulatory body. Using a regulator driven taxonomy may take away potentially concerns around proprietary taxonomies from software providers.

A specific use case for FIRST that may be realized using the FIRST taxonomy is the potential to tag the existing (regulatory) risk and control framework. Once these risk and controls are tagged it unlocks the possibility to create data visualization based on the FIRST taxonomy allowing both financial institutions and regulators to gain insight on the state of compliance on any topic.

With our clients and with our Digital Compliance Accelerator, we see the following paths as interesting use cases for FIRST can take:

- Creating of in-app filtering capabilities comparable to FINRA website.
- Tagging of regulatory obligations beyond rules issued by FINRA – e.g., EU rules and regulations.
- Establish lineage between different segments of regulation across using paragraph – topic relationship for better visibility & improvised processing.
- Enabling different users to engage with regulatory texts in a new way (topic focused)
- Exploring innovative & efficient use-cases in downstream compliance process such assigning rules to departments based on FIRST taxonomy.

FIRST is also innovative in a useful way in that it allows the financial industry to engage with it in ways that stimulate further innovation even if such use case might not be thought of up front.

Response to Section C. - Feedback on Taxonomy Terms, FIRST and the API

Synechron deeply value and respect the effort of FINRA towards generating a regulator driven taxonomy for the subset of 40 FINRA rules. At the same time, we have identified a few challenges that we highlight for FINRA's benefit in response to Special Notice 10/21/22.

Challenge 1: Connection between Summary Topics and Detailed Topics

It is not easily apparent to users how the Summary Topics and Detailed Topics taxonomy of FIRST are intended to relate to each other. Users may struggle with understanding they can use some of the tags in the Detailed Topics taxonomy in a way that adds value to their process.

Challenge 2: Link between Topics of taxonomy and the rule

There is currently no reference or connection between keywords in the taxonomy and paragraphs or snippets of the rule. Even smaller rule documents contain an overwhelming number of assigned keywords. For example, while a user may see a keyword such as "Account Opening" in the Summary Topics taxonomy, they cannot determine from which section or paragraph of the rule this topic was referenced.

As far as we are aware there currently is not a document available on the FINRA website that outlines the methodology used to produce the Summary and Detailed Topics taxonomies. We believe that such an explanation can help users overcome the challenges outlined above. An added benefit of publication of the methodology is that it provides a blueprint for building machine learning models that can create a relatable, robust, automated & scalable taxonomy.

Challenge 3: Ensuring relevant stakeholders are included in the design of the taxonomy

A further challenge with a regulator-designed taxonomy is that regulators do not always know what it means to sit in the chair of the compliance professional. The way the compliance professional works can be different to how regulators would anticipate. It could be useful to incorporate insights from compliance professionals into the process of designing the taxonomy, as different design choices might be made that would lead to more value for firms.

Challenge 4: Heavy human centric process

Certain keywords in the taxonomy have little or no context in the rule to which they are applied, indicating that extensive human knowledge has been utilized, making scalability difficult.

Response to Section C. - Feedback on Taxonomy Terms, FIRST and the API (Cont'd)

Challenge 5: FIRST as a tool for informational purposes only

One of the draw-backs of FIRST is that it is intended 'for informational purposes only and does not provide regulatory or compliance advice'. This means that financial institutions cannot assume that any result produced by the FIRST taxonomy is complete. Although understandable, this means that a lot of the benefit cannot be realized because financial institutions would still need their internal teams to validate the results.

Being unable to rely on it undermines its operational value significantly. We see that financial institutions currently rely on RegTech tooling that developed an internal taxonomy. We think a financial institution could easily misinterpret one of the Summary Topics or could otherwise fail to use FIRST correctly. But it would be more helpful if correct use of FIRST would be a defense in the scenario of a compliance interpretation error. In that sense, the precise risk that the qualification is seeking to mitigate could be revisited.

Response to Section D. - Future Development

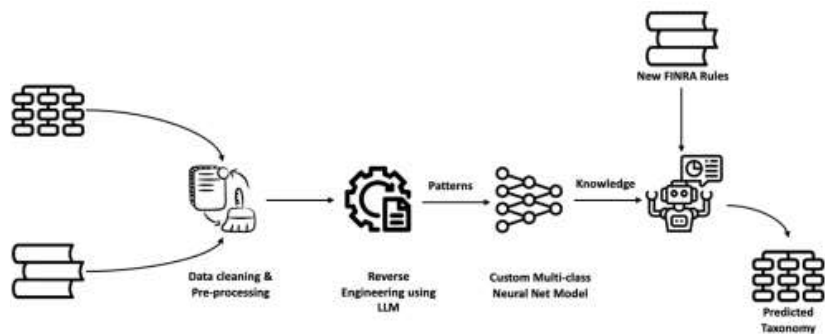
In response to Special Notice 10/21/22, Synechron explored how to create a reliable, robust, automated & scalable taxonomy. The results of this exploration are presented below.

Synechron's approach to creating an automated and scalable taxonomy

- Use existing Summary Topics taxonomy as base of the solution, which essentially means building the solution on knowledge shared by key members of FINRA.
- Use state of the art LLM (Large Language Models) for reverse engineering to learn correlation between paragraphs and keywords from the Summary Topics taxonomy.
- Present this learnt correlation to deep neural network to further learn the patterns & preserve them for future use.
- Showcase new (unseen) Rules to the model and ask it to make predictions about keywords from the Summary Topics taxonomy.

Benefits of this approach

- The efforts and knowledge of the FINRA team will be preserved through this process.
- The accuracy of the engine will be significantly improved, as it will be based on valuable human knowledge.
- Development time will not be lengthy, as we are leveraging existing data points.
- The use of LLM allows us to tap into the full power of NLP, which has been refined through analyzing billions of documents.
- By utilizing NLP and other components in a highly robust manner, we can enable automation and scalability.
- Our plan is to utilize open-source frameworks, which means there will be no subscription fees or close coupling with any vendors.





Synechron

Thank you

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