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12th October, 2018

Ms. Jennifer Piorko Mitchell
Office of Corporate Secretary
FINRA
1735 K Street, NW
Washington, DC 20006-1506

Cc: Alex Khachaturian, Director, Office of Emerging Regulatory Issues & Eric Wall, Research Analyst, Office of Emerging Regulatory Issues

Delivered via eMail (pubcom@finra.org).

Re: Special Notice July 30, 2018 "Financial Technology Innovation"

Dear Ms. Piorko Mitchell,

The issues you raise in the above notice are very important to the future of our industry and we thank you for the opportunity to comment on them. As a supplier of archiving, supervision, discovery and analytics capabilities to many of the world's leading financial institutions we have a perspective that you may find interesting.

The maintenance and strengthening of the regulatory environment is obviously necessary for the safe operation for the financial markets and in the interests of all participants. FINRA can play an important role in fostering innovation to encourage improved effectiveness and efficiency.

These goals, increased market reliability and increased efficiency, will be achieved by applying analytical technologies to reduce "false positives" and improve detection rates, aka "Hit Rates". This is in line with FINRA's own goals to protect consumers, reduce cost, create opportunities for business development and reduce risk.

Rules

The competitive nature of the current financial market and limited patent protection for new products means that it is hard for financial firms to make high-risk-adjusted profits on already well-established products.

As a result, they create financial innovations that are inherently more risky, but less susceptible to imitation by competitors. The market for these products (at least initially) is not very competitive and allows the innovator to earn high-risk-adjusted profits. Incentives are, therefore, created for banks to create innovative products with limited risk data (e.g., credit swaps; subprime mortgage bundles, etc.) that are less susceptible to poaching by competitors and ensures disagreement among potential competitors about the profitability of these products. Competitor disagreement limits entry into the market, while bolstering profits for the innovator bank.

This means that banks must invent products that are unfamiliar to the marketplace. The downside of this is that these products are also equally unfamiliar to investors, thus the likelihood of the scenario above happening is higher, the more unfamiliar the product.

Data aggregation

There is real benefit for consumers and obvious concerns with data protection and privacy. As an industry, we have the technology to address these concerns. The larger challenge will be to aggregate unstructured data, which is full of useful information. However, different data standards make it very difficult to exchange this type of data. In addition, if the data is shared it frequently requires data transformation which results in loss of fidelity.

Micro Focus is supporting a new community initiative to address these challenges such as data standardization, interoperability and data provenance. We would welcome the opportunity to make you more aware of this work. With data standardisation and interoperability we can make the process of data aggregation easier, faster, cheaper and richer. All of this will improve the services offered to consumers.

We would encourage FINRA to play a leadership position in these endeavours.

Supervisory Processes

Turning to the supervisory process, the current regulations lead industry practice to be based on lexical analysis. This has served us well, but we have the opportunity to improve on this. In initial work with customers we have found that the addition of behavioural and contextual metadata, such as sentiment, entity identification and use of language (e.g., friendly, professional or aggressive), coupled with analytics and machine learning enables them to tune supervisory policies resulting in greater policy performance. Policy performance can be improved in terms of substantially more true positives and more “hits” finding items that require further investigation. We would encourage FINRA to work to increase the sharing of best practices to apply analytics and machine learning in the interest of the industry and consumers.

We see great opportunities for data enrichment, analytics and machine learning to improve supervision process in the areas of policy creation and tuning (optimization) resulting in:

- Fewer false positives
- Reducing human intervention/effort

FINRA can help the industry work cooperatively to investigate the appropriateness of different methods to perform these tasks such as linear regression, random forests, neural networks and combinations of these and other techniques. In addition to the economic benefits the whole market would experience the benefit of earlier adoption which in turn reduces risk.

These results can be achieved with such analytical techniques because they are often more effective. However, they also present challenges in “explaining” the decision process, which can be an issue. Here, too, FINRA can play a leadership role by encouraging the industry to explore these methodologies.

Taxonomy for machine readable rule books

We would support moves to make the rule books more machine readable. This will result not just in the potential to express regulations as code, but also the possibility to reduce ambiguity of interpretation.

FINRA can play an important role in driving U.S. and global markets toward more customer safety and efficient operations by supporting the application of the types of solutions we have identified in this comment. The regulatory environment needs to progress in step with industry practice.

In the interest of brevity we have confined this comment to these pages. As stated earlier, FINRA has a very important role to play and we see your interest as very positive. We would welcome the opportunity to delve deeper into these topics with you in the near future, if they are of interest to you.

Yours Sincerely,

A handwritten signature in black ink that reads "Michael McGrath". The signature is written in a cursive, flowing style with a large, decorative flourish at the end of the name.

Dr. Michael McGrath
Chief Strategist
Archiving & eDiscovery