



Comments of the Center or Economic Justice

To the NAIC Market Information Systems Task Force

Regarding the Draft MISRD WG Review of AI Techniques in Market Analysis

November 22, 2021

The Center for Economic Justice (CEJ) appreciates the thoughtful draft of the MISRD WG regarding AI Techniques in Market Analysis. We offer the following comments and suggestions for MISTF's consideration.

The paper correctly identifies an important issue of correlation versus causation and warns that AI tools developed through data mining can produce spurious correlations and unreliable outcomes. However, we suggest that this danger is over-emphasized and posits an unnecessary either/or scenario in which there is either a classical scientific method (statistics) or a data mining exercise (AI). In fact, the two can inform one another. We suggest that the issue be framed more as a consideration in the development and application and use of AI as opposed to a fatal flaw.

We also suggest that the most important message is that current market regulation data is insufficient – in granularity and volume – for traditional analytics, let alone for AI. As such, the starting point to develop AI for market analysis is a thorough review and reinvention of market regulation data collection to support both improved traditional analytics and potential AI techniques.

The report's recommendation to address the limitations of existing market regulation data available for market analysis is far too limited. While noting that market analysis suffers from a paucity of detailed data, the analysis and recommendations focus on the existing, limited market analysis data siloes – a variety of data collection tools with limited ability to relate one data set to another. For example, the discussion of MCAS focuses on poor data quality of the summary data reported and recommends improved reporting. But the problems identified with MCAS data are endemic to summary reporting.

The obvious need – and path forward – is the development of a more granular and frequent reporting of consumer market outcomes. It is only through transaction data that the types of advanced analytics and AI can be developed and applied. We see no need to survey existing market analysis data and identify substantive deficiencies – we’ve been pointing out the deficiencies for two decades. Consequently, we suggest that the first recommendation be replaced by recommendation five – developing routine transaction-detailed market regulation data collection.

While we support the concept in Recommendation 2 – develop more rigorous statistical analysis tools – such efforts with existing – largely summary – data would be nibbling at the edges. The ability to employ rigorous statistical analytic tools requires more granular data. Nothing produced from the currently-proposed recommendation one would permit the implementation of recommendation two.

The third recommendation is to incorporate promising AI models of analysis in combination with more rigorous statistical analysis. Yet, the paper has already acknowledged that AI – as well as more rigorous statistical tools – requires more robust data for analysis. It seem contradictory to suggest incorporating promising AI tools when it’s clear that there are insufficient data to employ such tools.

We strongly support recommendation four regarding the use of AI for pattern recognition and suggest that such applications can be developed now. We also suggest that, in addition to AI tools applied to complaint text, AI tools can be applied to policy form analysis to relate policy form language to problematic consumer outcomes.

While we generally support recommendation five, we suggest that this should be the first recommendation. Further, the recommendation suggests exploring potential data sources and then supplies the answer to such exploration – the transaction data provided in standard data requests. Again, it is clear that the more robust statistical tools needed for market analysis as well as the raw material needed for development of AI market analysis tools is more granular and frequently-reported quote, sales and claims data from insurers. Such improved market regulation data collection is demonstrated not only by the documented need for more robust market analysis tools, but by the comparison of limited insurance market regulation data collection to the far more granular data collection found in insurance financial regulation and market regulation for other financial services, as identified in our presentation to the working group.

Based on the above, we suggest the following edit to the Summary, followed by edits to the paper to reflect the differences in emphasis and priority of key points.

Executive Summary

This report fulfills the Market Information Systems Research and Development (D) Working Group charge to evaluate the potential benefits of artificial intelligence (AI) in relation to market analysis. After careful consideration, the Working Group concluded that there may be possible benefits to using AI tools to improve market analysis techniques. Several caveats are discussed as well. Currently available market regulation data limits the use of both more rigorous statistical analysis tools and AI because both are designed for, and typically require, very large datasets for training and development. It is also important to distinguish between AI tools that largely automate current manual processes – such as reviewing policy forms for illegal language or provisions or pattern recognition in consumer complaint texts – and AI tools designed to predict future outcomes or behavior. For the latter, which are typically the result of a data mining operation, particular care must be taken to ensure clear interpretation of AI outcomes. The development of AI for insurance market regulation should be done in parallel with needed improvement and expansion of market regulation data collection and related analytic tools.