TransUnion

July 1, 2021

Chief Counsel's Office
Attn: Comment Processing
Office of the Comptroller
of the Currency
400 7th St. SW, Suite 3E-218
Washington, D.C. 20219
Docket ID OCC-2020-0049

Ms. Ann E. Misback
Secretary
Board of Governors of the
Federal Reserve System
20th Street and Constitution Ave. NW
Washington, D.C. 20551
Docket No. OP-1743

Mr. James P. Sheesley
Assistant Executive Secretary
Attn: Comments-RIN 3064-ZA24
Federal Deposit Insurance Corporation
550 17th St. NW
Washington, D.C. 20429
RIN 3064-ZA24

Comment Intake
Bureau of Consumer Financial Protection
1700 G Street, NW
Washington, D.C. 20552
Docket No. CFPB-2021-0004

Ms. Melane Conyers-Ausbrooks
Secretary of the Board
National Credit Union Administration
1775 Duke St.
Alexandria, V.A. 22314-3428
Docket No. NCUA-2021-0023

Re: Request for Information and Comment on Financial Institutions' Use of Artificial Intelligence, Including Machine Learning

To Whom It May Concern:

TransUnion welcomes the opportunity to respond to the agencies' request for information on the growing use of Artificial Intelligence (AI). As a global information and insights company, TransUnion provides data and AI models to business customers that expand and promote consumer access to credit, employment, housing, and other life-changing opportunities. We also act as a service provider to financial institutions, offering an array of analytical services to lenders. Our work across the consumer credit ecosystem indicates that expanding the use of AI solutions will enable more accurate, fair, predictive, transparent and rapid decision-making outputs.

The combination of AI and Machine Learning (ML)[1] is transforming many aspects of social and economic activity, enabled by three mutually reinforcing factors: the exponential growth in computing power, the availability of massive amounts of unstructured digital data, and the growth in data science research and innovation, AI and ML help financial institutions interact with each other, manage risk,

[1] AI may be defined as a field within computer and data science that enables computers to imitate human behavior. ML can be thought as a subset of AI, which comprises data processing and statistical methods to enable machines to improve their decision making through optimization and self-learning.

and extend credit. TransUnion believes establishing industry best practices and a flexible and transparent regulatory framework will be critical to making AI adoption fast, broad-based, and orderly.

This submission addresses three critical topics: (i) how AI and ML can enhance consumer opportunities and welfare; (ii) how broader adoption of AI and ML tools can preserve and promote sound risk management and lending practices; and (iii) the appropriate regulatory framework to facilitate appropriate AI and ML adoption.

I. AI and ML Benefits for Consumers

The uses of AI and ML will have broad-based benefits for consumers. Increased adoption across the financial services industry will promote further improvements in model–fitting techniques, while simultaneously expanding the use of alternative data. Taken together, these enhancements will lead to better risk predictions for grantors of financial services and greater access to credit for consumers. AI and ML algorithms are designed to capture complex relationships in data that can often remain hidden when using other data science techniques. Generally, AI and ML models provide better and more predictive separation of risk, which expands the universe of credit worthy consumers. While the use of advanced AI and ML in financial institutions' risk management applications is not wide-spread at this point, TransUnion's empirical observations demonstrate that the use of AI and ML models allows lenders to extend credit to more consumers than is feasible using existing modeling techniques. The adoption of AI and ML by lenders increases their market reach, thus increasing access to capital for consumers, and consequently leading to an increase in consumer welfare.

AI and ML techniques can be further enhanced and even more valuable when data is unstructured to some degree, as is the case with many sources of so-called alternative data (e.g. open banking data, streaming data, free-form text data). While the use of unstructured data in traditional analytic methods requires a significant investment in data staging pre-work and discovery, many AI and ML techniques integrate unstructured data seamlessly into the algorithms, thus optimizing utility and yield . TransUnion believes that this ability of AI and ML to handle unstructured data is likely to have a multiplicative effect on model performance beyond the gains that are attainable using structured data. It is important to note that while unstructured data can yield benefits in risk management in the absence of AI and ML, these benefits are significantly magnified when this data is paired with techniques that are much more adept at processing it and extracting insights from it. Unstructured data adds an additional layer of risk-predictive data, which could expand the ecosystem of credit worthy borrowers, and thus, further increase access to capital and consumer welfare.

II. AI and ML tools Promote Sound Risk Management and Lending Practices

TransUnion believes model explainability will be a critical component in the successful adoption of AI and ML by financial institutions[2]. Explainability tools are a critical counterbalancing force to ensure that AI and ML models remain within the boundaries of fair lending and model risk management, which is particularly important for lenders, as models will inform decisions that directly affect consumers' welfare. Approaches to explainability vary greatly in terms of technical complexity, and consequently, a broad consensus on best practices does not yet exist. Moreover, the heightened level of complexity that comes with the use of some alternative and unstructured data further emphasizes the need and adoption

[2] Explainability is the extent to which the internal mechanisms of ML can be explained in human terms.

of an explainability framework. The development of a robust explainability framework that includes best industry practices will be instrumental in facilitating adoption of AI and ML techniques.

Explainability tools each come with different strengths and weaknesses. However, challenges of explaining AI and ML models can best be overcome by overlaying a variety of explainability techniques, tailored to relevant business domains and governance frameworks. Frequent monitoring and validation will remain a necessary part of ensuring stable performance. For instance, as models evolve over time regulatory expectations will need to account for a multiplicity of factors that will transform model use by financial institutions. These considerations include the heightened sensitivity of AI and ML models to unexpected input data distributions; the increase in the rate at which AI and ML models will be updated and deployed (e.g. adaptive ML frameworks); and the introduction of additional layers of model validation aimed at detecting unintended bias and disparate impacts.

III. Ensuring an Appropriate Regulatory Framework

TransUnion believes that a flexible and transparent regulatory framework governing the use of AI and ML will significantly enhance adoption by fostering confidence in their long-term viability and, in turn, encourage long-term investments in technology and skilled data science talent required to support them. Capitalizing on the benefits of AI and ML will require regulatory guidance that outlines accepted practices in model risk management. These guidelines should be comprehensive and address all relevant aspects of model development, such as data sourcing and staging, accepted modeling methodologies, validation/benchmarking/sensitivity requirements, and approved explainability methods.

Having clear guidance on these topics will encourage investment in technology and data science innovation. Conversely, the absence of regulatory guidance will discourage firms from investing in AI and ML at scale, slowing adoption timelines and indirectly creating an opportunity cost in terms of forgone consumer welfare. In addition to the model methodology expectations for AI and ML that should be included in any regulatory guidance there are two additional items meriting policymaker attention. First, regulators should consider the reporting requirements and usage constraints that will apply to various sources of unstructured data. Second, the self-learning and adaptive features of AI and ML will likely lead to more frequent model updates and will require a model governance regulatory framework flexible enough to accommodate these features of AI and ML systems.

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TransUnion looks forward working with the agencies to develop best practices for AI. If you have any questions, please contact Rachel Goldberg, Head of U.S. Government Relations, at Rachel.Goldberg@TransUnion.com.

Sincerely,

Michael Umlauf
Senior Vice President, Data Science and Analytics
TransUnion