

February 11, 2022

By electronic submission¹

European Banking Authority
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Re: EBA Discussion Paper on Machine Learning for IRB Models

The Institute of International Finance (IIF) welcomes the European Banking Authority (EBA)'s discussion paper on *Machine Learning for IRB models*, published on November 11, 2021.

We appreciate the opportunity to comment and are supportive of regulatory efforts to promote responsible adoption of artificial intelligence (AI) and machine learning (ML). We view the strong history of collaboration between policymakers and industry as a fundamental building block towards a sound and responsible approach to developing policy for AI and ML. As such, we are particularly appreciative that the IIF's previous work in this area has been considered in the drafting of the discussion paper.

The IIF is currently undergoing a survey of our members' use of machine learning in credit risk, anti-money laundering (AML) and fraud, as well as the end-to-end governance of machine learning models. This updated study will update data points presented in previous reports and will assess the current state of ML adoption in financial services, whilst gathering specific use cases to illustrate our findings. The data collection process is currently underway, and we anticipate publication in Q2 or Q3 of 2022.

Given our current timeline, we believe our data points and answers will be more beneficial once our report has been finalized. We view the EBA's discussion paper as an important step towards continuing the dialogue and a valuable effort to continue to encourage innovation and show tolerance as financial institutions (FIs) start using AI and ML.

Similarly, we share the view that regulatory initiatives should take a risk-based approach to determine appropriate controls that are commensurate with the materiality of each specific use case.

In 2020, we conducted a survey that provided an overview of the governance of ML models – looking at the end-to-end model governance process for ML models. Most firms in our sample reported using ML in production (68%), and over a quarter of participants reported having active pilot projects in place (26%).

Similarly, our 2019 Machine Learning in Credit Risk study found that the adoption of ML in credit risk modeling and management had nearly doubled when compared to the results of our 2018

¹ Submitted electronically to <https://www.eba.europa.eu/discussion-machine-learning-irb-models-o> on February 11, 2022.

study.² The sophistication of ML models and the breadth of application across customer segments also saw a significant increase. In the credit risk area, most FIs were using ML focusing on existing retail (consumer) portfolios, where typically FIs possess larger volumes of standardized, high-quality data. However, our 2019 survey results showed that ML is increasingly being used for SMEs and other non-retail (i.e., CRE and public sector) portfolios. We believe this trend will continue and look forward to sharing our updated results from our 2022 survey once those become available.

Our previous studies show that the adoption of ML techniques continues to deliver tangible benefits to FIs, including improved model accuracy, the ability to overcome data deficiencies and inconsistencies, and discovery of new risk segments or patterns.

For instance, ML's increased analytical power has been used for model development, in particular for model building and variable selection, allowing FIs to filter through several more variables in search of significant predictors. For many firms, the use of ML in model development has resulted in an increase in model accuracy.

Although the power of ML in making predictions is often discussed, what is truly impactful is the power to help organize and understand data. Given the potential for ML to provide a broad range of benefits, any policy action should not constrain the responsible development and innovative use of this technology. We are of the view that all models should be subject to an appropriate control framework, i.e., that FIs should manage the risks of deploying ML by applying governance that is structured to ensure that appropriate controls are in place commensurate with the materiality of each specific use case, regardless of whether AI or ML techniques are used.

FIs are prepared to partner with the official sector to come up with more innovative and more collaborative ways to monitor and manage risks arising from the use of AI and ML. The IIF stands ready to convene a roundtable to facilitate dialogue between the industry and policymakers on issues around the use of AI/ML.

The IIF looks forward to continuing the dialogue on this important topic, and to contributing to the further development of safe and effective innovations that benefit the economy and support stability. My colleague Dennis Ferenzy (dferenzy@iif.com) and I (jrenier@iif.com) stand ready to engage in additional discussions and consultations.

Respectfully submitted,



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² IIF, *Machine Learning in Credit Risk*, March 2018; and IIF, *Machine Learning in Credit Risk, 2nd Edition Detailed Report*, July 2019. The full Detailed Reports are limited to official sector and participating firms. The survey results include a wider scope than credit scoring and decisioning, including credit monitoring (including early warning systems), and for collections, restructuring, and recovering. While there are indeed instances where machine learning techniques are being used or explored for modeling purposes, survey results extend to areas that are better characterized as 'Credit Risk Management'. A short-form Summary Report can be accessed at:

<https://www.iif.com/Publications/ID/3525/Machine-Learning-in-Credit-Risk-2nd-Edition-Summary-Report> and <https://www.iif.com/publication/regulatory-report/machine-learning-credit-risk>