

To: Attn: Comment Processing
Chief Legal Officer
Office of the Comptroller of the Currency
400 7th Street SW, Suite 3E-218
Washington, DC 20219
Docket No. OCC-2020-0049

Attn: Ann E. Misback, Secretary
Board of Governors of the Federal Reserve
20th St. & Constitution Ave. NW
Washington, DC 20551
Docket No. OP-1743

Attn: James P. Sheesley,
Assistant Executive Secretary
Docket No. RIN 3064-ZA24
Federal Deposit Insurance Corporation
550 17th Street NW
Washington, DC 20429

Attn: Comment Intake
Bureau of Consumer Financial Protection
1700 G Street NW
Washington, DC 20522
Docket No. CFPB-2021-0004,

Attn: Melane Conyers-Ausbrooks
Secretary of the Board
National Credit Union Administration
1775 Duke Street
Alexandria, VA 22314-3428
Docket No. NCUA-2021-0023

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

To The Above Listed Agencies and Interested Parties:

I appreciate the opportunity to express my views to you collectively and comment on the above-referenced Notice published in 86 Fed. Reg. 16837 on March 31, 2021. I direct my comments at (1) Question 5 (specific uses of AI for which alternative data are particularly effective), (2) Question 16 (other uses of AI by financial institutions and any risk management challenges or other factors that may impede adoption and use of AI), and (3) Question 17 (benefits or risks to financial institutions' customers or prospective customers from AI adoption by financial institutions).

Professionally, I am a sixteen-year banking and wealth management, FINRA licensed industry veteran. I served in various capacities and roles throughout my financial services career, all of which were front office and client-facing, within the retail/community, business banking, and wealth management/private bank lines of businesses. On a macro-level, working through the 2008 Great Financial Crisis and COVID-19 Pandemic shape my experiences. In addition to my professional experience, I hold my Master of Business Administration from Loyola Marymount University. Furthermore, I am a fourth-year law student at the University of La Verne College of Law. My academic background also informs my insights. Finally, I offer my comments as a private citizen and not as a representative of my firm.

A. AI/ML can be effective, useful tools to improve credit underwriting, such as collateral valuation and income analysis, for tangible assets, public securities, private market vehicles, and in the future, long-term digital assets. (Question 5)

Sound financial institutions serve a greater public good and contribute to economic growth through the prudent extension of credit. Today, each lender utilizes its formula for extending credit within the appropriate regulatory framework. However, the "five-Cs-of-credit" remains an industry-standard¹ because the methodology evaluates a potential borrower using qualitative and quantitative measures to ascertain an individual applicant's creditworthiness.²

In addition to a sound credit policy framework, lenders rely on their experienced personnel to effectively ascertain, underwrite, and package a credit product. Credit professionals depend on various resources and tools to effectively assess, measure, underwrite, and structure a credit deal. A credit professionals' industry expertise, pipeline capacity, access to adequate data modeling and reporting tools are critical to effectively delivering credit. Thus, the lender's personnel are the most effective human asset and means to extend credit prudently and competitively.

But the credit professional's unique skill sets may also create challenges for the credit professional, the lender, and a credit applicant. Some challenges include an underwriter's unconscious bias and risk tolerance which may color how an underwriter evaluates qualitative data, assigns a borrower's risk rating, specialization expertise with the deal, and risk appetite to advocate for a deal's approval with the credit committees. These factors carry minimal downside risk when the credit request is simple, such as for credit cards or unsecured personal or business loan under \$50,000. In said circumstances, AI/ML can help mitigate credit underwriting risks and improve credit delivery more efficiently and fairly. However, AI/ML application is particularly relevant and noteworthy when the credit request is complex, such as in real estate, marketable securities, private market transactions, alternative investments, and possibly in the future with long-term digital assets.

AI/ML adoption can enhance credit delivery by drawing on multiple, disparate data sets within the financial institution and their respective lines of business to collect, analyze, and present tailored data on either the sponsor or the underlying asset. The quality data collection via AI/ML will improve the request's credit assessment and risk modeling. Improved data collection and evaluation will alleviate the potential for unconscious

¹ Corporate Finance Institute. (2021, June 27). *What are the 5 Cs of Credit*. Retrieved 2021, from Corporate Finance Institute. <https://corporatefinanceinstitute.com/resources/knowledge/credit/5-cs-of-credit/>

² Lenders examine a credit applicants' credit reports, credit scores, income and asset statements, and any other documents relevant to the applicant's financial picture. Depending on the complexity of the credit request, lenders generally evaluate both the borrower(s), otherwise known as the sponsor(s)/guarantor(s), as well as the quality of the asset to assign a credit and risk rating for the purposes of extending credit.

human biases. A credit professional armed with quality data and analysis may feel more comfortable with the soundness of the risk assessment and be better informed to advocate or deny a deal prudently.

Additionally, the application of AI/ML will reduce the time-intensive nature required of the credit underwriting process. Depending upon the credit request, a deal can take between a few days to months. Much of the delay is due to the volume, personnel, and complexity of the deal request. In addition, credit underwriting is a research and labor-intensive process. This technology can improve the efficiency of a credit professional's deal pipeline and reduce bottlenecks by utilizing AI/ML for the data collection and analysis, thereby freeing the credit professional with the necessary time to appropriately review, manage, and oversee the AI/ML recommendations. The result for financial institutions is improved quality of the lender's credit portfolios, greater volume, and a fairer and tailored credit delivery process and experience.

AI/ML technology is limited in its ability to compute and address qualitative metrics effectively. This limitation presents a risk for which credit professionals play a critical mitigating role. Additionally, AI/ML technology may draw on datasets where regulatory "steel screens" exist. Credit risk and compliance professionals will be necessary to limit, monitor, or "scrub" tainted data sets. Ultimately, lending money is and will always be fundamentally a relationship business. AI/ML adoption will not replace the lender's need for qualified credit professionals across all segments of the credit delivery process. Instead, the adoption of this technology may complement and improve the ability of a credit professional to deliver credit, in a prudent, efficient, informed manner within our regulatory framework.

B. AI/ML can be effective, beneficial tools to strengthen KYC/BSA requirements and strengthen AML/CFT detection, mitigation, and prevention. However, poor data quality management, limited holistic customer view, and lack of knowledge in AI/ML may impede AI/ ML adoption and use.³ (Question 16 &17)

For at least the last two decades, financial institutions and their employees have had to navigate the rising swell of regulatory and compliance requirements. In response, financial institutions have dedicated resources and capital to adhere to the multi-agency regulatory rules and to protect their customers and the financial system from bad actors and criminals laundering illicit funds through the global banking system. This effort is particularly evident regarding requirements related to anti-money laundering (AML)/ counter-terrorist financing (CTF), Bank Secrecy Act (BSA), and Know Your Customer (KYC) rules.

Today, many financial institutions work with legacy technology systems, and software improvements are ad-hoc additions, not unlike a patchwork quilt. Moreover, the

³ *Evolving AML Journey*. Chicago, IL: Accenture Consulting, 2017

AML/CFT methodology is a rule-based Transaction Monitoring Systems (TMS) and potentially outdated for financial institutions dealing with mountains of big data housed in separate data systems/sets.⁴ For example, bad actors or operators of federally prohibited businesses that are cash-intensive may evade rules-based TMS by structuring cash transactions that evade the TMS, triggering SARs reporting. This situation presents a unique opportunity to incorporate AI/ML technology solutions to improve AML/CFT detection, monitoring, reporting, and mitigation processes. AI/ML systems can cull, analyze, and risk-assess mountains of big data to trigger a SAR-level filing. Adoption of AI/ML systems can also improve volumes of TMS alerts and any false positives.⁵

Other applications for AI/ML are in the area of KYC/BSA requirements. AI/ML can also improve the quality of KYC information collected and analyzed by front-office, client-facing personnel. Information collected by front office staff may be inaccurate, outdated, or incomplete. This information feeds into the TMS systems used by compliance personnel and bank investigators for KYC/BSA reporting and monitoring. Utilizing AI/ML technology can help detect high-risk customers, entities, and locales. It can detect specific customer patterns and differentiate between legitimate and illegal transactions and activities. AI/ML-based engines can identify when a transaction behaves outside the baseline range of other similar transactions. This data can be passed through an algorithm and risk scoring model.

Another example is with businesses. Banks apply North American Industry Classification System (NAICS) codes to identify and classify businesses and their intermediaries. AI/ML algorithms can detect suspicious activity between businesses with specific NAIC codes that do not customarily interact with one another. As a result, AI/ML systems are uniquely adaptive to identify anomalies by identifying and learning from patterns, ordinary relationships, and the direction, frequency, and amount of transactions occurring within a customer profile or account.

Significant barriers are limiting the adoption of AI/ML engines in financial institutions. I provided the above examples where poor data quality management and a limited holistic view of the data set create a barrier to AI/ML adoption. *The Evolving AML journey*, a research report prepared by Accenture Consulting, outlines a few others. But one roadblock mentioned in the piece I have witnessed directly is the limited talent pool of financial professionals with a data science skillset. Financial institutions struggle to find and train talent with a data science skillset. The lack of qualified professionals can impede technology adoption when financial services professionals need to manage and oversee the AI/ML output and functioning. Financial institutions can create awareness for the importance of this skill set, implement talent learning and training programs, and attractively compensate talent this unique skill set to attract talent and improve AI/ML adoption and acceptance.

⁴ (Accenture Consulting, 2017)

⁵ Id.

Another barrier is the current risk management models, most of which are rule-based, TMS. While these models continue to play a pivotal role, the adoption of AI/ML technology may stress these models in unique ways. In response, agencies, regulators, and financial institutions may need to collectively review their risk management models to accommodate AI/ML technologies. A comprehensive AI/ML risk management model, iterative and agile, will be necessary to mitigate potential risks and procure benefits for financial institutions and the financial system as a whole.

Respectfully,

Yolla S. Kairouz