

Whalen Global Advisors LLC

June 1, 2021

Mr. James P. Sheesley
Assistant Executive Secretary
Attention: Comments-RIN 3064-ZA24
Federal Deposit Insurance Corporation
550 17th Street NW, Washington, DC 20429

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

Dear Sirs,

I response to you request, below please find my observations about the use of AI in the world of bank and non-bank credit, particularly in consumer finance and related areas. I began my career working in the bank supervision function of the FRBNY and have advised depositories, technology firms and most recently non-bank mortgage lenders for the past three decades.

The FDIC and other bank regulatory agencies are faced with a challenge. The narrative around what people call "artificially intelligence" or AI is intense, largely due to the influence of commercial interests. These commercial companies and consultants promote AI as a means of marketing existing products. The world of for-profit media supports this narrative of AI via films, news reports and other advertiser promoted content.

But in fact, machines, are never going to be "intelligent" in the way that we apply this term to human beings. As a result, prudential bank regulatory agencies as a group must parse the difference between the promise of AI, as marketing and media concepts, and the technical and practical realities as applied to owning and managing insured depositories. William Janeway noted in an October 2018 interview:

"AI systems seem to be good at pattern recognition when they have been properly trained as to the pattern in question," "They are good at playing games where the rules of the game are given exogenously such as in chess or go. They are good at that. But the games that really matter, like the Three Player Game, are those where we must co-invent the rules as we go along. For example, in any conversation, even with

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people you know well, you are constantly trying to understand the context of the words used by the other speaker and vice versa.”¹

What Janeway illustrates is that no matter how much you train an AI system to identify patterns, to apply *quantitative* methods to understand human behavior, the ability of consumers and creditors to change the rules of the game as they go through time renders such systems vulnerable to failure or deliberate gaming. But beyond the question of the fragility and brittleness of AI systems, there is the large question of how AI is being used today to replace or augment people involved in managing credit and operational risk.

In the world of consumer credit, AI is held up as a means to lower cost and improve operational performance in managing credit risk. We are told, as we have been told for decades, that machines can replace human beings in the process of servicing consumer loans and even dealing directly with customers. But since machines ultimately only do a couple of things well, namely count and sort numerical values, asking them to replace a human’s intelligence and capacity for *subjective* judgment in the credit process is likely to produce more instances of failure than success in managing actual events of default (EOD). This is particularly the case during periods of credit and market stress.

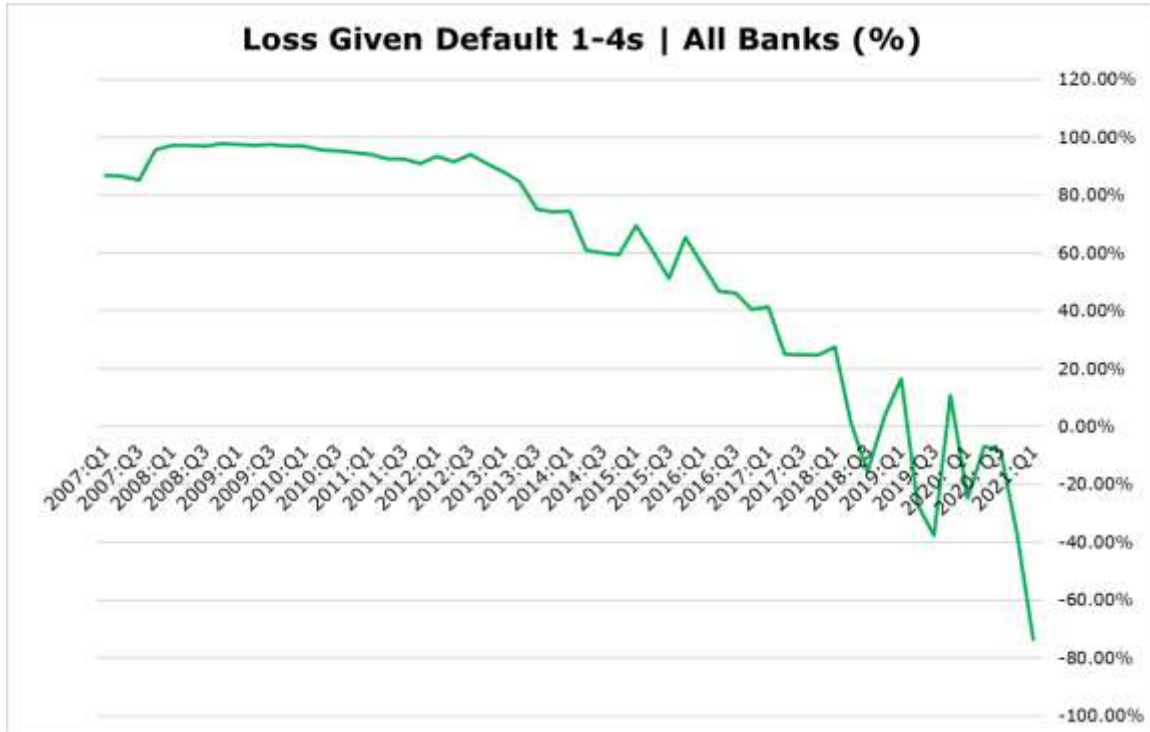
Take a real-world example. In the world of consumer credit, understanding the intent of the customer is perhaps the single most important factor in managing EODs. In order to understand the customer, you need to communicate with them, preferably in person or by telephone. In order to communicate effectively with a person, especially a distressed borrower, you must make it easy for them to reach you. Placing machines armed with AI between you and the borrower is unlikely to contribute to your success and will likely only result in dropped calls and frustrated borrowers. Every time that a bank or nonbank fails to communicate with a distressed borrower, huge financial and operational risk is created.

While AI may certainly be used by lenders to support the sales and marketing process, using machines to make credit underwriting decisions or manage distressed credits is likely only to end in tears. You cannot “know your customer” using AI any more than you can start new relationships on Zoom. You may collect and sort numerical data, but the machine will not have a good understanding of the intent of the customer. Machines do not think, they merely count and sort data with great efficiency. They can be taught to recognize patterns, but take them off script and the machine becomes useless. This same observation applies to commercial loans.

Also, we must factor in the impact of current Fed monetary policy on current market conditions, where loss given default (LGD) in many secured real estate portfolios is actually negative. In such an environment, AI may today seem to

¹ [The Interview: William Janeway on Capitalism and the Innovation Economy](#), *The Institutional Risk Analyst*, October 3, 2018

deliver good or even superior results in managing credit risk. But as and when credit markets revert to the mean in areas such as 1-4 family and multifamily residential mortgages, it is likely that the failures of AI that we have observed over the past several decades will be repeated.



Source: FDIC/WGA LLC

Prior to the great financial crisis in 2008, there were some leaders in the world of residential mortgages who thought that application of algorithms would help lower the cost of making and servicing residential mortgage loans. The explosion of private label mortgage issuance, however, created outsized credit and operational risks that ultimately led to the failure of several large banks and non-bank loan servicers. We did not call the automation of the credit and risk management process "AI" in those days, but very little has changed since then. AI is a promise, but a promise that is largely empty in terms of replacing the intelligence and insight that only a human being can bring to any analytical task.

Machines are superior at performing *quantitative* tasks, but fail utterly when confronted with the need to make *qualitative* judgments. Ray Kurzweil noted years ago that there is no such thing as AI, merely simulated cognition. He later recanted some of this judgment, in part due to intense pressure from commercial interests behind the AI narrative. Janeway noted in our 2018 discussion that today's fascination with AI is really the third wave of computer techniques being hyped as artificial intelligence. He explained:

“First was the 1960s when DARPA funded some of the earliest AI research in an example of effective state support. Then came expert systems in the 1970s and 80s. Now we have Machine Learning based on “deep networks”. Clearly there are applications where it can be very powerful, but based on my research and discussions with many people in the field, AI systems seem to be very brittle. They are subject to the implicit and explicit bias of the people who set up the training set.”

The FDIC and other agencies must draw the line on AI. In many respects, relying upon AI to originate or manage credit risk exposures for insured depository institutions amounts to doing nothing at all. Using AI in key decision points in the lending process might even be construed as an act of negligence and dereliction of duty to the bank.

If we assume that AI has only a limited role to play in managing credit and operational risk, then this implies that we must have people in key decision-making roles in order to manage this risk adequately. AI may indeed be *helpful* in creating and managing credit exposures, but it is not sufficient. And we have not even discussed fraud, AML or other areas of risk management where vendors are clamoring for banks to adopt AI as part of their operations.

Not only does AI have the potential to actually create credit and other financial risks for banks, but the failure of AI-enhanced systems to perform a given task for a bank or non-bank could create substantial reputation risk that can also threaten the existence of a lender. Names like Countrywide, Washington Mutual, ResCap, Citibank, Bear Stearns, Lehman Brothers, and Wachovia, who all used automated systems to originate and service consumer mortgage loans in the 2000s, should be top of mind as the FDIC and other agencies consider the uses for AI within insured depository institutions.

Yours sincerely,

Christopher Whalen
Chairman