

Default Management: Leveraging AI in Debt Collections

Abstract

Financial institutions' attempts to monitor potential defaulters or collect overdue amounts often result in negative experience and alienates customers. Moreover, banks have been slow to leverage digital technologies in the area of default management, whether to increase efficiency or improve customer experience. This paper examines how banks can use artificial intelligence (AI) to enable alternative channels of interaction with defaulters and highlights the potential of AI to reimagine the customer experience.

Breaking Barriers in Default Management

Financial institutions have traditionally relied on emails and phone calls in their attempts to drive collections from delinquent customers or turn around delinquent accounts or accounts about to turn delinquent. While banks offer customers alternatives to help them tide over the crisis, the methods used are considered intrusive and often create a negative impact exposing banks to customer churn. The solution lies in leveraging alternative channels of communication for banks to reach out to customers and vice versa before delinquency occurs. Multiple channels such as mobile apps, online portals, and social media messaging platforms can be used to enable delinquent customers to interact with banks and improve default management (see Figure 1).

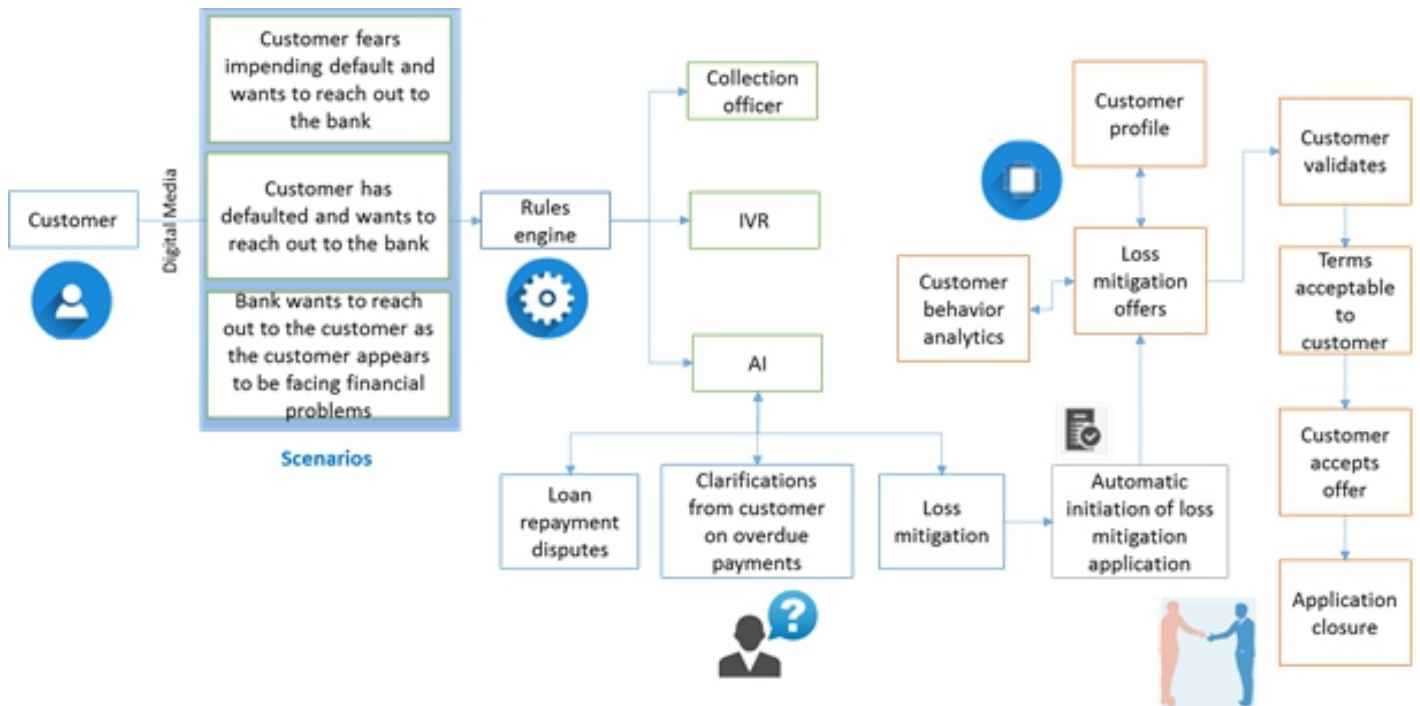


Figure 1: AI-enabled Setup to Engage with Delinquent Customers

Depending on the scenario (see Figure 1), intelligent chat bots can guide customers and provide options most suited to their specific need. Bots help reduce human interactions across default management processes, like defining the optimal collection or recovery strategy, loss mitigation, asset management, and so on. This helps customers overcome the embarrassment associated with default and poor financial management and makes them more responsive to banks' attempts to collect dues. Opening up such alternative digital channels of communication will spur customers to reach out to their banks when faced with looming default problems.

Reimagining the Delinquent Customer Journey with AI

Traditionally, default management has not been a focus area for the adoption of digital technologies. However, we believe that adopting artificial intelligence (AI) in loan default management can help banks reimagine the delinquent customer journey. Collections is not just about reminding customers to repay overdue installments and regularize their loan accounts. It goes beyond that to suggesting a way out of the crisis and this is where AI can act as a bridge between banks and customers. Besides making default management customer-centric, AI-driven automation will deliver efficiencies and help free up resources for higher value-adding activities.

Identifying potential defaulters

By combining the insights gleaned from customers' accounts and their online and social activities, banks can gain an accurate view of their situation. This can help identify potential instances of default and initiate action before it actually occurs. For instance, bots built using machine learning (ML) and natural language processing (NLP) technologies can be used to analyze customers' digital interactions to identify customers facing adverse financial situations. Suppose a customer's bank account shows a sudden fall in income and an analysis of their digital activity points to job loss as a possible cause, banks can proactively reach out with credit counselling support to help the customer prioritize finances and adapt to the new financial situation. Such contextual offers will play an important role in building and sustaining customer loyalty.

Collection strategy definition

Collection strategies are no longer based on customer segments; they are personalized for individual customers making mass personalization a reality in the default management space. To arrive at the right collection strategy for each customer, banks must evaluate past repayment behavior, strategies that were successful in bringing delinquent customers to the mainstream, as well as methods that failed. By analyzing this data, banks can build predictive models based on persona segmentation. Given the changing market and customer dynamics, prediction models will need to be modified on a continuous basis. AI will play an important role in identifying critical new factors and tweaking the weightages assigned to existing factors to ensure that the model aligns with the evolving conditions, thereby improving its predictive capabilities. Subsequently, bots can be deployed to define the

optimal strategy based on an evaluation of these factors gained by leveraging the ML algorithms, and facilitate the best possible collection outcome.

Loss mitigation

Banks are under a regulatory obligation to offer loss mitigation strategies to delinquent mortgage or motor vehicle customers to prevent foreclosure and loss of ownership. Banks can deploy intelligent bots to leverage ML models to perform customer profile analysis and identify the optimal mitigation strategy. Where the mitigation strategy identified by a bot is accepted by a customer, the subsequent approval process too can be handled by bots with minimal intervention from underwriters. Bots can prefill customer information in the loss mitigation application, simplifying the process for the customer. In cases where the customer is not satisfied with the loss mitigation strategy identified by the ML model, underwriters must connect with the customer and draw up a strategy that meets with their expectations. In such scenarios, banks can leverage ML models and analytics to identify the resource with the right skills for handling each case.

Recovery strategies

Banks must leverage ML and analytics technologies to assess the cost associated with each default and determine the right recovery strategy – in-house recovery process, delegation of recovery to collection agencies, or sale to third parties at a discounted price. Routine queries can be handled by bots to keep costs down and facilitate faster turnaround. Banks can leverage AI technologies to evaluate and identify efficient collection agencies. In addition, AI technologies can be used to evaluate parameters like customer feedback, percentage of recovery, timeliness, the process used, and so on, and identify agents that require retraining or reskilling. The information gleaned can then be stored in a central default management knowledge repository built on ML algorithms for the benefit of internal and external stakeholders such as collection agencies.

Enablers for AI in Loan Default Management

Given that individual banks will be at different stages of digital maturity, implementation approaches will vary. We therefore present a high-level conceptual design for adoption of AI in loan default management (see Figure 2). Based on their business requirements and IT architecture, banks can draw up a suitable strategy. One approach could be to identify programs

that can be implemented in-house to achieve quick gains while partnering with a technology vendor for more complex models and solutions.

Figure 2 depicts how banks can leverage open banking APIs to source data from service providers, external sources, and digital channels, which is then integrated with internal data sources to create data lakes. The customer relationship management (CRM) application can leverage data lakes for persona definition and collection systems can use it to identify indicators that signal oncoming delinquency and proactively rework collection priorities. All the systems will continuously update the data repository to ensure revalidation of prediction models and facilitate efficient default management.

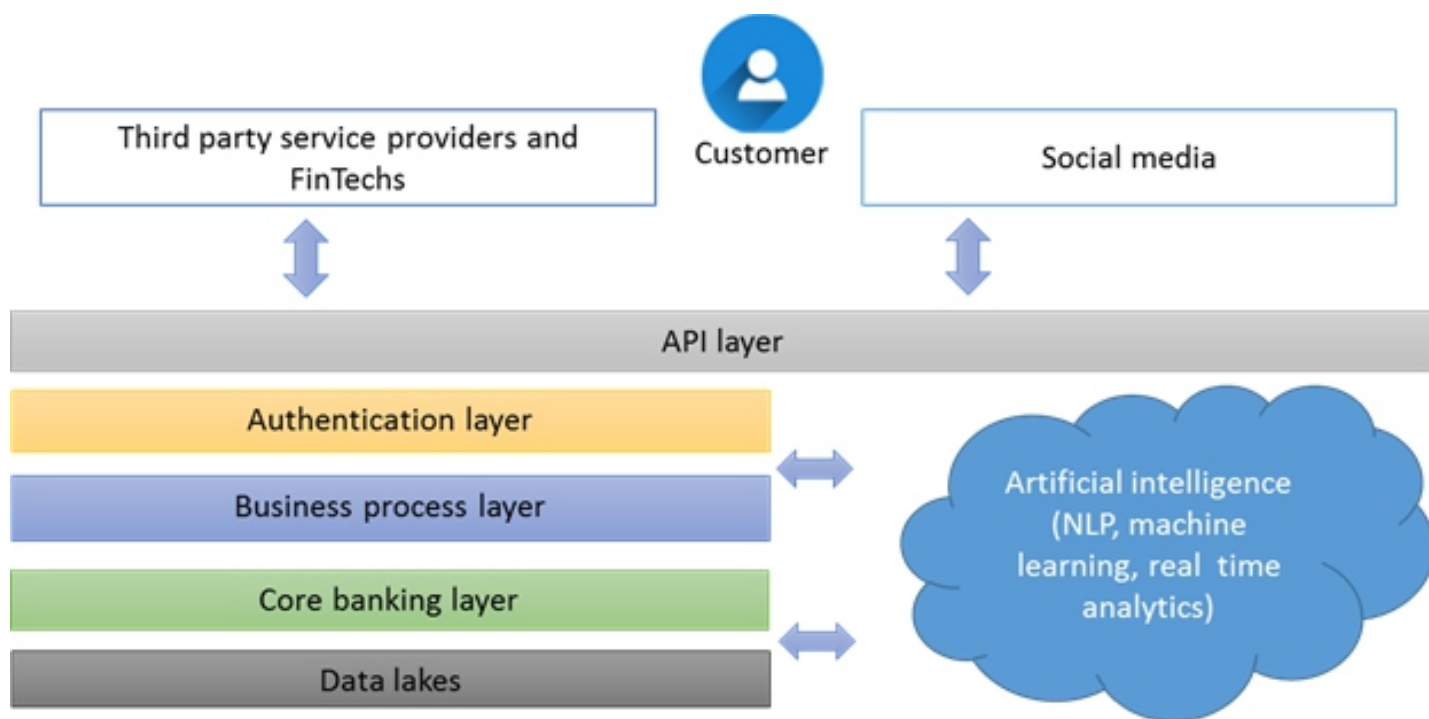


Figure 2: AI-enabled Architecture for Loan Default Management

While the potential of AI in loan default management is immense, it will require substantial investment in infrastructure to enable collection and storage of data, as well as skilled resources. Initiating some preliminary steps before embarking on full-fledged adoption will help enable hassle-free execution:

- Build cloud based PaaS models to run pilots and test the market before initiating a large-scale implementation. If the solution does not find customer uptake, the engagement can be stopped at the pilot stage, thereby saving costs.
- Implement an API strategy and Open Banking APIs to integrate with existing third-party service providers or tie up

with fintech companies to support the AI layer with validations being handled by the bank's back office. Banks must put in place API wrappers and integration tools that sit on top of legacy systems and expose data to third parties.

- Build an AI-powered analytics framework that not only generates valuable insights but also learn on its own, constantly, with minimal human intervention. A comprehensive analytics framework can help banks identify the optimal ways of supporting and guiding customers through the collections process.
- Build a strong compliance team to enforce stringent audit mechanisms to ensure the security of sensitive customer data especially while communicating through social channels. Such mechanisms must also drive compliance with privacy requirements mandated by regulations like General Data Protection Regulation (GDPR) and the Payments Service Directive 2 (PSD2).

What Lies Ahead?

The transformational potential of AI in collections and recovery is immense and banks are looking at different use cases for implementation. This could well prove to be a godsend for banks looking for non-intrusive methods of communicating with delinquent customers and bring them back into the mainstream. AI-powered solutions can potentially transform the way collections are handled and ultimately help banks to improve customer experience and create exponential value.

About The Author

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