PAYMENTS:
GOING FROM AI TO AI-FIRST

The payments domain is eager to adopt the latest technologies, including Artificial Intelligence (AI), to continue growing and innovating. One estimate says the AI payments market will expand at a compounded annual growth rate of more than 20 percent between 2022 and 2027.[1] However, in this dynamic market, financial institutions (FIs) and payment service providers are facing increasing challenges from rising customer expectations, heightened regulatory scrutiny, operational concerns as well as fintech disruptors.

To thrive in these conditions, Infosys recommends that FIs adopt a three-pronged AI-First approach as follows:

Improve operational efficiencies

Deepen wallet share and attract new customers

Reimagine business models

This AI-First payments blueprint delivers several advantages across the payments value chain, as illustrated by a selection of use cases:

1. Improve operational efficiencies

Intelligent fraud detection and risk management: Global real-time payment transactions, which topped 195 billion in 2022, are expected to cross 511 billion by 2027, accounting for 27.8 percent of the world's total electronic payment transactions.[2] The flip side of this growth is the risk of payment fraud costing hundreds of billions of dollars.[3] Since real-time payments are processed instantly, it is nearly impossible for banks and payment providers to detect and prevent fraudulent transactions with traditional methods. However, AI and Machine Learning (ML) algorithms can process massive quantities of customer and transaction data to detect anomalous patterns indicative of fraudulent activity and alert providers in real-time, enabling them to mitigate the damage. AI-based solutions go beyond traditional fraud signals (amount, time, location) to analyze and dynamically assign weights to a wider range of data points, enabling sophisticated fraud detection techniques like multi-factor logistical regression. By constantly learning and adapting, AI progressively improves its ability to distinguish legitimate purchases from fraudulent ones.

2. Deepen wallet share and attract new customers

Personalized services: Payment service providers are personalizing customer service with the help of chatbots that can answer queries, walk customers through apps, or even help with online purchases. For instance, Capital One has a chatbot called "Eno" that allows customers to make simple account inquiries or transfer money.[4] Similarly, Ingenico, a smart payment technology provider has partnered with IBM Watson to create a messaging chatbot for merchants in the retail and hospitality sectors to undertake seamless payment transactions with customers.[5]

AI-powered payments: Retail payments are getting a makeover with concepts like AI-powered stores, which employ recognition sensors to detect items being picked up by customers and charge them for it without the traditional checkout. Another trend in payments is hyper-personalized finance, where AI customizes loan offers based on a deeper understanding of individual customers.

3. Reimagine business models

FIs can unlock new revenue by applying advanced AI and ML to big data to uncover business opportunities. From here, they can evolve into analytics-driven enterprises that employ data platforms to generate actionable insights for monetizing both internal and external data in the following ways:

Create revenue upside through consumer intimacy built on an understanding of consumer spending patterns, consumer segmentation, churn analysis, and consumer lifetime value

Create revenue upside through merchant sales analytics, such as postal code-based purchase trends, new store location identification, campaign effectiveness reporting, optimization of local marketing strategy, merchant sales benchmarking etc

Improve cost /operational efficiencies through interchange fee optimization, value-added services at point of sale, sales growth etc

Generate new revenue streams by launching new products, entering new markets, and adopting new business models

Stay on guard

An AI-First stance is highly beneficial to payment providers, but it comes with several concerns and challenges. Data of a personal or confidential nature must be safeguarded from accidental or deliberate exposure outside the AI system. Even within the organization, Personally Identifiable Information (PII) and other sensitive data should be accessible only to authorized personnel, based on role, need, and permissions. Ethicality of AI models is a serious concern that organizations should address by ensuring clean training data and algorithms that do not propagate bias or produce discriminatory outcomes, such as denial of credit to customers of a certain race or ethnicity. Banks and payment providers must also guard against hackers from exploiting AI (i.e. injecting prompts or toxic information or jailbreaking) to elicit information or direct the system to act in a certain manner.

A challenge unique to AI is explainability – explaining why an algorithm has taken a particular decision. This challenge is amplified in the case of Generative AI, which is known to make mistakes, spread misinformation, or even hallucinate at times. It can be mitigated by improving the transparency of the AI model, enabling the organization to justify a decision, or in case it is flawed, correct it immediately. Finally, there must always be a human in the loop supervising the working of the models.

Being first with AI-First

When it comes to AI, banks and payment providers can only look forward. However, while pursuing opportunities, organizations should also be mindful of risks. A balanced foundation for AI adoption should include robust data governance frameworks to ensure data quality, integrity, and compliance; transparent and explainable AI models; a culture of innovation and continuous learning; and collaborations with fintechs and ecosystem partners for leveraging the latest solutions. The most important success factor is talent: there should be a cross-disciplinary team of data scientists, domain experts, business users, and ethicists to innovate, manage, and oversee AI.

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