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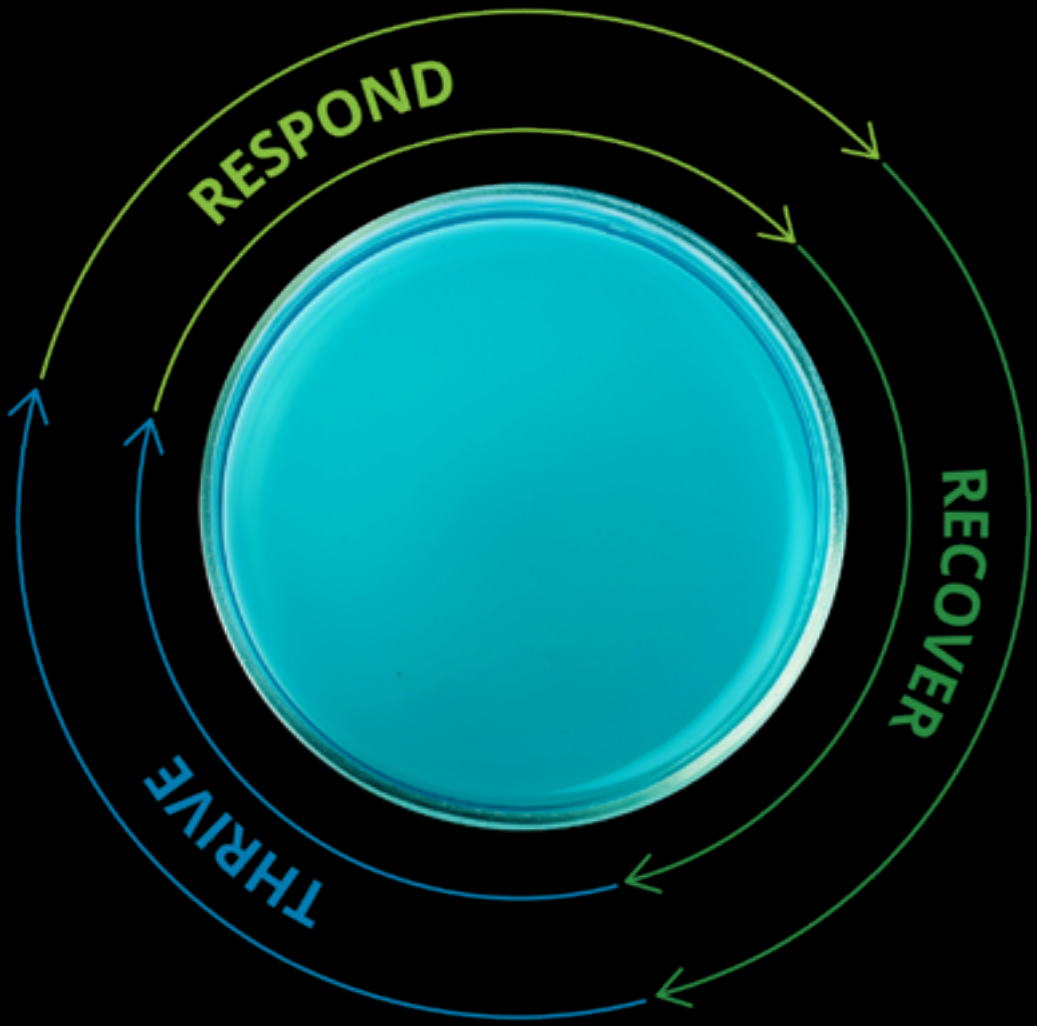

Digital innovations for retail and SME banking in a post COVID-19 world

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Introduction

Technology-led innovations have become the backbone of modern-day banking, helping effectively meet the needs of diverse sets of customers. In the past decade, Indian banks and non-banking financial companies (NBFCs) have adopted technology to drive growth, operational efficiency, and customer experience for retail, and micro, small and medium enterprise (MSME) customers.

However, the COVID-19 outbreak and resultant government response have triggered significant structural and behavioral changes across retail and MSME customers. Irrespective of how the pandemic plays out (an optimistic scenario leading to a "V" shape recovery in the short term or a pessimistic scenario leading to an "L" shape recovery in the long term), the new normal is likely to see a significant manifestation of social distancing (preference for contactless and remote business operations) and innovative business models (to survive and thrive amid disruptions).

Given the divergence of scenarios that the economy could chart, technology is likely to be the single most important factor to help organisations sail through the chaos swiftly. Although most technologies required to drive innovation are widely available and quite mature, banks and NBFCs will need to find creative ways to use these technologies to overcome the challenges posed by the pandemic.

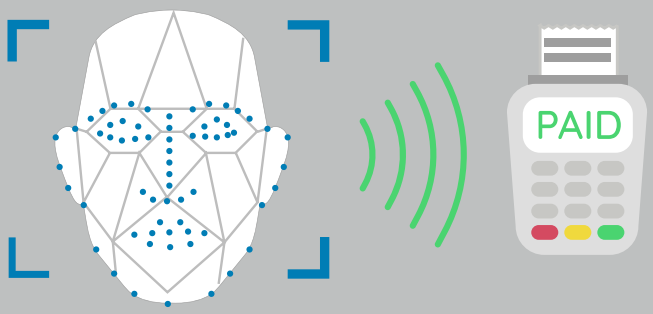
Innovations for contactless or less-contact operations

Social distancing translates into restrictions on mobility and ways of working for both customers and employees, thereby resulting in increasing preference for contactless banking and remote working.

1. Select contactless banking solutions

a. **Digital onboarding enabled by video KYC:** Adopting Aadhar and Video Customer Identification Processes (V-CIP) based digital onboarding can help drive new customer acquisition, while offering cost efficiencies and lowering turnaround time. Artificial intelligence (AI) and facial recognition technologies could help enhance the veracity of customer data during this process.

b. **Contactless authentication and payments:** Customers are likely to opt for this to minimise physical interactions. Using technologies such as facial or voice recognition and wearables can help maintain social distancing norms and enhance customer experience during merchant payments, ATM, and business correspondent-enabled banking transactions.



A bank in Russia is piloting facial recognition enabled payments in partnership with retail chains. In addition to making payments contactless, the technology also decreased the transaction time by 75 percent.

c. **Virtual customer servicing:** While many banks and NBFCs have adopted chatbots and voicebots for basic service requests, contact centres continue to be critical for managing complex requests. The pandemic has disrupted contact centre operations, affecting response time and quality for a range of services. Enhancing the capabilities of chatbots/voicebots and contact centre virtualisation through cloud-based systems can help address this issue to a large extent.

d. **Immersive banking experience:** With substantially reduced human interactions in branches, recreating immersive experiences virtually can help build a differentiated customer value proposition. Virtual and augmented reality based technologies can be used to develop interactive banking apps and create a virtual branch experience.

An Australian bank launched an AR app for car loans that provide details on make, model, etc., for any car by just pointing the app towards the car. Users can also pre-qualify themselves based on these details and obtain customised quotes through the app.

2. Select remote working solutions

a. **Remote employee access:** As a significant portion of the workforce is expected to continue to work from home, a robust, distributed, and secure environment becomes crucial for uninterrupted operations. Financial institutions can consider deploying appropriate cloud-based solutions to offer secure remote access to major systems. This could also provide flexibility to quickly scale up/down in case of a rise in transaction volumes due to increased volatility.

b. **Employee productivity enhancement:** The new ways of working have highlighted many limitations of traditional performance enhancement and training programmes. AI-based productivity enhancement tools could help assess and predict human behaviour, identify development areas in real-time, and track performance. Further, virtual/augmented reality based training programmes have the potential to increase the efficacy of remote learning, thereby improving employee productivity.

An Indian start-up offers AI-enabled personal digital coach, which assesses employees' performance and behavioural traits to identify improvement areas, and enhances performance through visual and cognitive nudges.

c. **Employee health management:** As financial institutions scale up physical branch and office operations to the pre-COVID levels, their primary concerns would be employees' physical and psychological wellbeing, and safety assurance to customers. Touch-free attendance, temperature checking, and video-based social distancing compliance monitoring solutions can aid overall health management at branches. Staff access to virtual medical assistants for their physical and psychological wellbeing can further maintain employee health and morale.

Innovations to drive economic recovery and growth

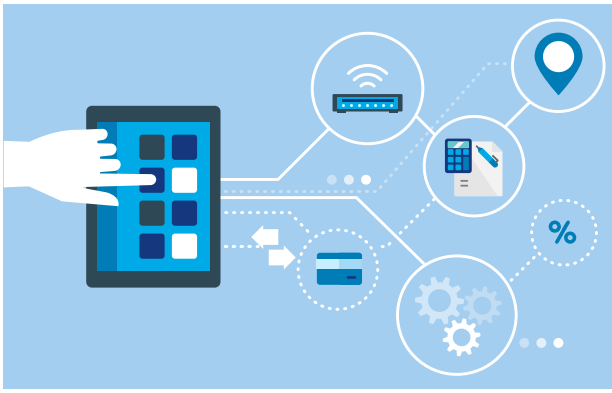
The COVID-19 crisis has significantly affected demand and supply across sectors, which in turn has adversely affected credit growth and collections. However, financial institutions are looking to deploy innovative technology enabled offerings and models to drive lending and revive economic activity.

1. Hyper-customisation of offerings

a. Micro-market level customisation of financing products: Varying levels of COVID-19 restrictions in different geographies, sectors and segments have led to increased uncertainty and risk in MSME lending. Geospatial analytics can provide rich micro-market level understanding of each sector/segment, and enable the customisation of offerings. These, along with remote sensing solutions, can help financial institutions identify clusters with business potential and monitor risk levels, especially in sectors such as mining, infrastructure, and farming.

An Indonesian bank deployed a GIS-based solution to optimise its branch and ATM network considering market potential by region, leading to a 10 percent increase in customer acquisition with 40 percent fewer branches.

b. Remote asset evaluation and monitoring: With mobility restrictions posing challenges to physical movement, remote asset evaluation through IoT-based systems can help drive credit growth. Products such as trade and lease financing, asset maintenance financing (e.g., car tyre replacement), and manufacturing and infrastructure financing can significantly benefit from these solutions.



A leading global bank collaborated with a telecommunications player to develop IoT solutions for trade financing that help track goods in real-time and trigger automatic financing or payment instructions.

2. Innovative business models

a. **Alternate data based risk assessment:** With increased business uncertainty, traditional data sources may be insufficient for a comprehensive risk assessment of MSME and retail customers. Alternate data, including cash flows, social media footprint, psychometric analysis, mobile data analysis, and proximity to virus hotspots, can help assess customers' creditworthiness. Given this, financial institutions can look to AI/ML enabled alternate data based risk models to augment their risk assessment capabilities and build robust early warning systems (EWS) for assistance in monitoring risk. Players can also consider deploying AI-enabled social media cluster analytics for the early identification of virus outbreak hotspots based on first-hand social media posts.

b. **Ecosystem financing:** Financial institutions can build ecosystem partnerships with corporates by integrating APIs to offer supply chain financing, marketplace lending, and POS-based lending products to their MSME partners. This could tap into cash inflows of MSME customers, thereby improving underwriting, pricing, and collections.

A leading Asian bank partnered with a consumer electronics conglomerate to offer low-cost financing to its distributors with limited paperwork and quick processing.

c. **Trade assurance through real-time tracking:** COVID-19 related restrictions are likely to lead to increased trade barriers and hence, a higher cost of trade. These restrictions are also expected to raise the importance of traceability of goods to ensure safety. As a result, distributed ledger-based solutions to connect to the trade value chain could see a wider adoption. Therefore, trade financiers may consider exploring distributed–ledger technology based value added services to catalyse trade.

A Chinese bank has launched blockchain-based supply chain financing product to eliminate fraudulent transactions and minimise risk.

As financial institutions look to evaluate and deploy these solutions, they would need to be mindful of the associated challenges. Some of these challenges are discussed below.

- Given the limited maturity of some of these technologies, financial institutions will need to ensure adherence to applicable regulations, especially around data privacy and localisation. They may also engage in discussions with government and regulators on required policy changes.

- Deploying these solutions would require significant capability building in terms of both technology and people. While strategic partnerships with FinTechs can help address this to some extent, the competition for scarce and niche talent pools could limit financial institutions' ability to quickly launch and scale these solutions.

- With the adoption of digital by a larger set of customers, fraud and cyber security related challenges are likely to increase significantly. Financial institutions would need to guard against these through technological interventions, such as machine learning based fraud detection systems, advanced end-to-end encryption protocols, AI-based user behaviour validation, and awareness initiatives for employees and customers.

The available technologies are largely sufficient to overcome most, if not all, of the challenges that the COVID-19 pandemic is likely to throw at Indian financial institutions. However, creative adoption of these technologies to bring about innovation is likely to separate the winners from the rest.

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