Financial Services Data and Analytics Newsletter

February 2023

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Introduction

We are pleased to present the first Financial Services Data and Analytics (D&A) newsletter of 2023. This year is expected to bring major changes in the industry – for instance, the recent budget and introduction of artificial intelligence (AI) technologies like ChatGPT, which has generated considerable interest among both individuals and organisations.

In this edition's topic of the month, we will delve deeper into how banks can capitalise on digital banking units (DBUs) to maximise the benefits of D&A. Due to the increased adoption of digital banking in the past few years, banks around the world are exploring new avenues to enhance customer experience and expand their businesses by leveraging the emerging technologies. The recent guidance to banks from the Reserve Bank of India (RBI) regarding DBUs is a huge step in this direction.

The newsletter also contains industry news around new partnerships between banks and technology companies, and other regulatory news from the Indian ecosystem.

Happy reading!

Topic of the month: Empowering DBUs with D&A

Introduction

Digital banking has gained considerable momentum in the past few years and has emerged as a preferred channel for the delivery of banking services. Recognising the emerging scenario, the RBI issued guidelines for the set-up of DBUs by commercial banks in India on 7 April 2022. All domestic scheduled commercial banks (SCBs) (excluding local area, payments and regional rural banks) can now open a specialised hub or business unit in Tier 1 to Tier 6 centres. These hubs will contain suitable infrastructure to provide digital banking services and products in both assisted and self-service mode. For the disclosure under AS-17, the existing retail banking segment will now be subdivided into digital banking and other retail banking. Since DBUs have to be separate from an existing banking outlet, banks must prepare a strategic roadmap to maximise the benefits in terms of reach, revenue and customer satisfaction from this opportunity.

DBUs

Majorly, the success of banking units is driven by three crucial pillars – technology, customer experience and people/processes.

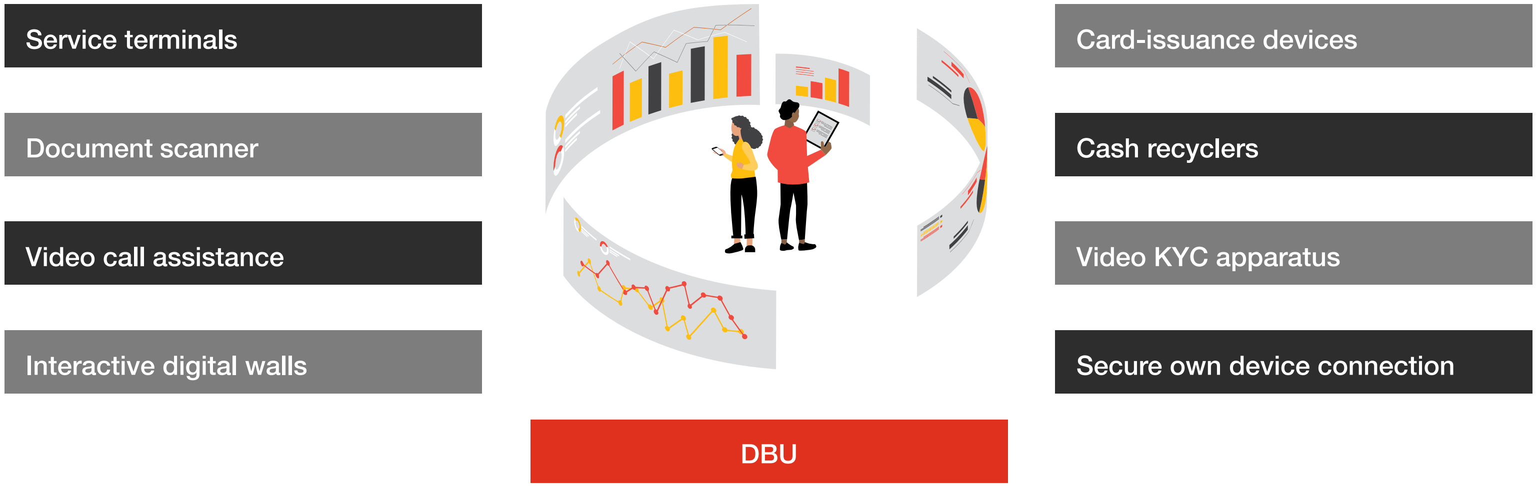
Topic of the month: Empowering DBUs with D&A

1. Technology

Each DBU must offer defined minimum digital banking services and products on both the liabilities and assets side. DBUs are aimed to blend human touch with digital infrastructure. Use of smart equipment at DBUs will provide ample room for technological innovation in hardware to enable a seamless digital experience for customers end to end. For instance, security can be automated through machine learning (ML) vision cameras and thus, only a few security personnel will be required at a branch as opposed to the usual number.

As per the RBI guidelines, DBUs will house suitable smart equipment to provide personalised assistance to customers in vernacular languages.

Indicative equipment at DBU as per the RBI guidelines



Source: RBI

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On the backend, the RBI has encouraged banks to form a digital strategy to adopt digital native technologies, which can be independent from the existing core banking technologies and offer better scalability in creating flexible digital environments through agile and interconnectivity of equipment/databases for this business segment specifically.

Banks can also collaborate with FinTech companies and use application programming interface (API) integration to connect with third-party application providers.

2. Customer experience

DBUs will become the banking hub for customers to gather information about a bank's products, register for know-your-customer (KYC)-related processes, perform transactions and get personalised assistance. Unlike traditional banking branches, DBUs will be operational 24x7, providing more flexibility and convenience to customers, and thus serving more customers with the same infrastructure. DBUs will also incur less operational expenses in comparison to bank branches due to no full-time employees and only a contractual workforce for maintenance.

3. People/processes

Smart equipment at DBUs will be more efficient and accurate in performing transactions as well as providing information to customers than their human counterparts. This will lead to a decrease in errors and possible frauds that occur due to manual human intervention.

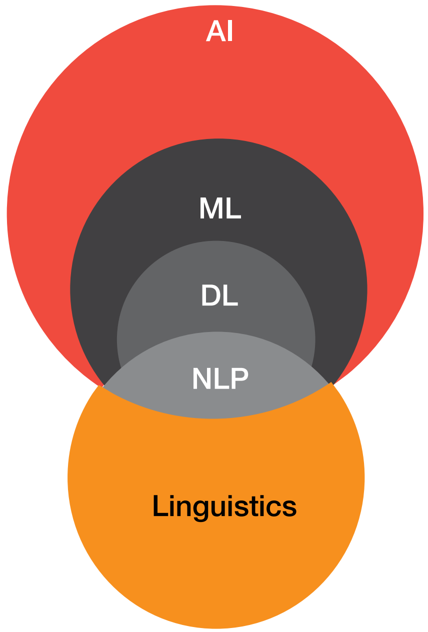
Leveraging D&A at DBUs

Below are some indicative use cases that can be explored by banks to generate opportunities using D&A at DBUs.

1. Technology

i. Natural language processing (NLP)-based assistance

NLP is the ability of machines to understand and analyse human language. It is a part of the AI domain that significantly overlaps with linguistics.



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a. Conversational assistance in vernacular languages

Conversational assistance and interfaces could be made available in vernacular languages, customer-preferred languages on request, or based on past interactions across all channels for effortless operation and improved customer experience. NLP-based interfaces can be used to provide a more immersive assisted-banking experience where a chatbot can analyse and understand the intent of the conversation before responding to queries, rather than just using static information to communicate.

b. Queries/grievance categorisation

While filing a query or complaint, customers are often asked to choose a category. However, most customers are unaware of business terms and often choose the wrong category. This is a major issue and leads to long wait times and incomplete resolution of customer complaints. To fix this, we can use ML algorithms to categorise and route the complaint or customer care call to the correct team for quick resolution.

ii. Automated security through ML and video analytics

ML-powered software can be used for real-time monitoring by using the audio or video captured at DBUs to identify suspicious activities. Algorithms can be trained to differentiate between usual behaviour of a customer and abnormal activities at DBUs like loud noises, person bent over for a long time and camera blocking. A centralised control centre can be established to monitor the alarms raised by the system and take appropriate action. This can be used to prevent frauds like card skimming/trapping, cash trapping, malware and physical attacks and will reduce the number of security personnel required across the DBU network.

iii. Transactions without cards, PINs and OTPs at DBUs for seamless user experience

Two-factor authentication for DBU transactions can be achieved through the biometrics of DBU users. High-definition cameras installed at DBUs can be used to identify users through ML-based facial recognition, and fingerprint scans can be used as the second layer of security.

2. Customer experience

i. Generating demand through customer education

Smart equipment at DBUs will have a comprehensive, intuitive and easy-to-navigate user interface. Users can also be provided with limited browsing functionality at a separate machine where he/she can browse the products and supplementary information offered by the bank. Other information might include:

a) personal finance curated as per customer segment based on the history of account balances, loans, insurances, interactions at DBUs, etc.

b) banking-related Government schemes

c) taxation rules and tax benefits associated with different products

d) effective utilisation of commercial loans by providing business-related counselling – e.g. agricultural knowledge or sectoral research sharing.

All user interactions at the DBU can be linked to a unique customer ID. This will help banks to understand customers' needs and provide relevant product and service recommendations.

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ii. Lead generation through customer segmentation

Different customer cohorts may have different behaviours and needs. Customers can be shown relevant products and services over the DBU equipment screens based on their cohort, which could lead to increased engagement or sales.

a. Demographics

A person in the age group of 45–50 years with an existing account in a bank can be offered a pre-approved education loan for higher education of his/her child as per the bank KYC details and a good credit history. Alternatively, a customer in the age group of 25–35 years who has a salary account with the bank and taken a home loan in the past might be looking for an auto loan or a top-up personal loan. This customer might also be interested in health insurance and other tax-saving products like life insurance and equity-linked savings scheme (ELSS) mutual funds.

Similarly, working capital loans can be offered to merchants purchasing digital kits from a DBU based on the KYC details and transaction data in their current account. Banks could also partner with FinTech companies (e.g. android applications for billing and payroll management) for alternative data like accounts receivables and payables data of merchants. This will help banks to offer appropriate deposit, loan and insurance products to customers. Likewise, if a customer is a farmer as per the KYC details, a suitable crop insurance can be offered.

b. Past transactions

Customer recommendations can be personalised on the basis of previous transactions. For instance, when an individual purchases a flight ticket using any banking channel, the recommender system at the DBU would suggest that they buy a travel insurance bundle.

Similarly, if a person has opted for a car loan, the chances of that customer buying a car insurance are high, so he/she can be suggested a suitable car insurance policy.

3. People/processes

Preventing frauds by digitising operations at DBUs

Synthetic identities often appear and behave like legitimate persons or entities, making them difficult to discover using conventional manual methods. Graph analytics, or link analysis, is a very powerful tool for identifying fraud-prone patterns in data. In a graph model, data is structured as a network – i.e. individual data points are stored as nodes connected to each other by edges, representing the relationships between them. Here, you can quickly observe if there are pieces of data shared by multiple applicants or account holders. Several individuals or entities interconnected through personally identifiable information such as an address, a phone number or date of birth may indicate a group of fraudsters operating with synthetic identities. Preventing frauds mitigates the financial and reputational damage for financial institutions.

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Reporting

DBUs will be added as an additional source of data in the existing IT infrastructure and be tightly coupled with the existing data to attain maximum benefits. Data management systems will also be optimised for fast processing and retrieval in order to use the insights generated from the data during live user operation at DBUs.

The RBI has requested separate reports on the digital banking segment. This will be treated as a sub-segment within the retail banking segment. Moreover, performance updates will have to be furnished to the RBI in a predefined format on a monthly basis and in a consolidated format in the associated bank's annual report. Apart from the RBI, senior management will also review the key performance indicators of DBUs at suitable intervals, which will help them in defining the strategy around DBUs. Creating separate data marts for DBUs could be a smart strategy as, in addition to the easy generation of key performance metrics reports, they will be used extensively for data analysis related to the performance of DBUs.

Way ahead

DBUs could prove to be pivotal in driving the digitalisation of banking in the country and delivering a superior customer experience. As DBUs will generate huge volumes of visitor data, they will enable banks to maximise opportunities for business growth and further improve customer service. Furthermore, DBUs will help banks to reach a wider customer base using a leaner and more cost-effective operating model with fewer traditional banking branches.

Industry news

1. Yes Bank partners with Falcon to enter the embedded finance space

Yes Bank has collaborated with Falcon, a banking-as-a-service (BaaS) company, to explore the embedded finance sector. The partnership is focused on providing innovative and personalised financial solutions to customers by utilising Falcon's extensive product line, ably supported by a cutting-edge technological infrastructure. The bank will utilise the Azure platform to build an application that would provide customers with customised dashboards, rewards and other benefits.

2. HDFC Bank collaborates with Microsoft in a bid to develop in-house IPs and partner with FinTech organisations

HDFC Bank has declared that it would be partnering with Microsoft to boost its digital transformation through Azure and revamp and streamline its enterprise data landscape.

3. Deutsche Bank ties up with NVIDIA to leverage AI scope in financial services

Deutsche Bank has announced its multi-year partnership with NVIDIA to enhance and empower its cloud transformation journey through the efficient use of AI and ML. The bank plans to use NVIDIA AI Enterprise for speeding up the AI development in its systems which can be deployed in the cloud or its data centres.

4. Business experts anticipate more partnerships among non-banking financial companies (NBFCs), FinTechs and banks for best customer service

In Business Today's Banking and Economy Summit 2023, Ramesh Iyer (Vice Chairman and Managing Director, Mahindra Finance) and Manish Shah (Managing Director and CEO, Godrej Capital) shared their insights and way forward for the banking, financial services and insurance (BFSI) sector in India. Iyer also stressed on how shrinking regulatory arbitrage would not impact NBFCs, as NBFCs are built around strong customer-centric models.

Knowledge bytes

1. The RBI selects six firms under its regulatory sandbox to assess anti-fraud solutions

The RBI has selected six corporate entities – including Crediwatch information analytics, Bahwan CyberTek and HSBC – under the fourth cohort of its regulatory sandbox on the theme ‘prevention and mitigation of financial frauds’ to test their products. The sandbox is aimed at monitoring risks and mitigating them by collecting evidence through various field tests of the innovative products in a regulated environment.

2. Indian Bank’s lending towards NBFCs surpasses the pre-COVID levels

As per a report published by Care, credit extended to NBFCs was 150% higher in November 2022 compared to February 2020. The reason for these borrowings is the considerably larger difference between the market yield of commercial papers and interest rates offered by banks. Additionally, increased sizes of the NBFC asset books are contributing to higher borrowings from banks.

3. Drop in demand for motor insurance after making KYC mandatory

The demand for motor insurance policies have dropped by 30–50% after the Insurance Regulatory and Development Authority of India (IRDAI) made KYC compulsory.

4. Insurance companies under surveillance by the Income Tax department

Insurance companies are allegedly involved in making payments to agents well above the cap set by the regulator. Last year, goods and service tax (GST) authorities informed that insurance companies were making such bogus payments via shell companies. Currently, the Income Tax department is probing transactions above INR 12,000 crore paid to agents by insurers.

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