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Digital Disruption
Challenges & Opportunities

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INDIAN INSTITUTE OF BANKING & FINANCE
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MISSION

The mission of the Institute is to develop professionally qualified and competent bankers and finance professionals primarily through a process of education, training, examination, consultancy / counselling and continuing professional development programs.

ध्येय

संस्थान का ध्येय मूलत: शिक्षण, प्रशिक्षण, परीक्षा, परामर्शिता और निरंतर विशेषज्ञता को बढ़ाने वाले कार्यक्रमों के द्वारा सुयोग्य और सक्षम बैंकरों तथा वित्त विशेषज्ञों को विकसित करना है ।

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Mr. Biswa Ketan Das
Chief Executive Officer,
IIBF, Mumbai

“You’ve got to start with the customer experience and work back toward the technology, not the other way around.”

- Steve Jobs

With the unwavering support of all the members of the Institute along with the entire banking & finance fraternity, the Institute has stepped into 96th year of establishment. The Annual General Meeting of the Institute for the year 2022-23 was held on 02.09.2023. Shri Dinesh Kumar Khara, President, IIBF and Chairman, State Bank of India had addressed the members of the Institute on this occasion and discussed the growth and progress of the Institute during the preceding year. We are opening this issue of Bank Quest with the address by Shri Dinesh Kumar Khara, President IIBF.

India is on the progressive path to rise as a leading nation with a complete ecosystem of Digital Banking services powered by Digital Public Infrastructure. Digital disruptions in banking domain has redefined customer expectations. The diversification of various channels of banking along with integration of several banking services has undisputedly resulted in penetration of banking services among masses, hetherto not getting access to financial services. Acknowledging the contribution of digital disruptions in shaping today’s banking products and services, we have kept the theme of Bank Quest, July – September, 2023 as “Digital disruption – Challenges and Opportunities”.

The first article on the theme of Bank Quest, July – September, 2023 is penned by Dr. Vighneswara Swamy, Professor, IBS, Hyderabad on “Adapting to Digital Disruption: A Digital Transformation Strategy for Indian Banks”. This article outlines a strategy for dealing with legacy systems, cybersecurity, compliance, customer expectations and cultural shifts. According to the author, strategy should focus on delivering customized, convenient, secure banking services through digital channels.

There are several school of thoughts in regard to the role and importance of Neo-banks and their contribution to the financial ecosystem. The article by Mr. Jigmit Stobdan, Research Scholar, Department of Commerce, University of Jammu, and Dr. Sunil Kumar, Assistant Professor, Department of Commerce, University of Jammu on “NeoBanks: Future Prospects, Challenges and Strategies” discusses key features and innovations offered by Neobanks and their future prospects.

The next article of the issue is authored by Dr. Lakshmi Prasad Padhy on “Digital Disruptions in the Indian Banking Sector - Opportunities and Challenges”. The author has concluded that the road ahead for digital disruption in the banking industry is exciting and holds tremendous potential for innovation and transformation.

This issue also features an article in Hindi written by Ms. Naushaba Hasan, Assistant General Manager, State Bank of India on ''डिजिटल लेंडिंग: अवसर एवं चुनौतियाँ''. Ms. Hasan has emphasised that the India has a strong potential to be the leader in digital banking services.

Green Bonds are one of the latest products of investments in the market that have garnered lots of interest from several stakeholders. The article by Dr. Satyendra Kumar, Chief Manager and Faculty, Bank of Baroda and C.A. Lalit Kundalia, Senior Manager & Research Associate, Bank of Baroda on "Green Bonds - Role and Scope in India's Financial and Fiscal Landscape" suggests that India can leverage the second mover advantage by learning from the mistakes of the West and proactively deal with issues like greenwashing, low greenium and green bond audits.

The Institute has taken an initiative to develop Strategic Reports on contemporary issues relating to banking & finance. The Strategic Reports are developed with the specific intent to timely identify the changes in the banking & finance domain and may help in drawing recommendations in response to those changes. In this issue of Bank Quest, we are also publishing the summary of IIBF's first Strategic Report on "Cross Border Insolvency: Present Framework, Model Law & Emerging Issues from Banking Perspective" prepared by Mr. Jitin Boolchandani, DGM, IDBI Bank.

Digital disruptions are one of the prominent enablers that has led to India's transformation as a strong, prosperous and self-confident nation. I hope this issue of Bank Quest with thought provoking articles on digital disruption in banking, Neobanks and Green bonds will be appreciated by the readers.

I extend best wishes to all the readers for the forthcoming festive season.

Biswa Ketan Das

Shri. Dinesh Kumar Khara
President, IIBF and Chairman, State Bank of India

Ladies and Gentlemen,

It is my pleasure to welcome you all to this 96th Annual General Meeting of the Indian Institute of Banking & Finance. The report of the Council and the audited accounts for the year 2022 – 2023 have already been circulated and with your permission, I take them as read.

India’s GDP has touched USD 3.75 trillion mark in 2023 and is poised to catapult to USD 5 trillion economy in coming years. India, as the fifth largest economy of the world, is a ‘bright spot’ in the global economy maintaining its growth momentum. International Monetary Fund has projected India’s GDP growth at 6.1% for 2023 and kept its growth forecast for 2024 at 6.3%.

In order to maintain the growth trajectory of Indian economy, the country needs to have a vibrant financial sector. India’s Banking sector is undergoing radical changes in terms of leveraging technology, increased competition, tightening regulations and improved risk management. The success of Indian Banking in adapting to these changes will determine their pivotal role in India’s economic activities.

Under these circumstances, capacity building in Banking and Financial Services sector assumes importance for equipping employees with the understanding and necessary skills to enable them to perform effectively. IIBF has always played a pivotal role in capacity building in Banking and Financial institutions by way of education, training and certification.

The Institute has demonstrated laudable adaptability and enthusiasm in strategizing and reinventing itself in the post-pandemic world that has been increasingly dependent on technology. The Institute has leveraged the digital infrastructure for education, training and conducting the examinations seamlessly. Facilities such as AI-driven remote proctoring of examinations and training through web-based platforms have emerged as important tools in the Institute’s overall repertoire to reach out to its members.

Before I proceed with the highlights of the Institute’s performance during the financial year 2022 - 2023, I would like to share with all of you some of the recent initiatives taken by the Institute.

- JAIIB and CAIIB continue to be the flagship courses of IIBF, well-accepted by the Banking and Financial Services sector over nine decades. To maintain its uniqueness and relevance in the modern-day Banking, the syllabi for the Institute’s flagship courses, JAIIB and CAIIB, have been thoroughly restructured and the courseware revised to reflect the ever evolving and practical nature of the banking & finance.

The address was delivered on the occasion of 96th Annual General Meeting (AGM), held on Sep 2, 2023.

- The syllabi for the Institute's Capacity Building Courses, offered in accordance with the mandate from RBI in the specialised domains of Treasury, Credit, Risk Management and Accounting & Audit, have also been updated in line with the industry expectations.
- The Institute has signed an MoU with International Finance Corporation (IFC), World Bank Group, to launch a unique e-Learning cum certification programme on 'Climate Risk and Sustainable Finance' for banking and finance professionals in India.
- In partnership with UNEP-FI, the Institute successfully concluded a series of workshops, in Mumbai on 'Responsible Banking', for the Banking & Finance Professionals, which covered the Board members also. IIBF, in collaboration with UNEP-FI, will conduct these programmes at other cities in the country.
- The Institute has been successful in providing customised academic solutions for various Banks, both in public sector and private sector. The Institute has developed customised courseware and bank-specific examinations in the remote proctored mode for those banks.
- It is a matter of pride that IIBF is one of the few academic institutes identified by The Department of Economic Affairs (DEA), Government of India to provide customised training programme in Infrastructure Finance for Government/PSU Officials.
- 'e-Learning' is fast becoming the preferred mode of learning especially for working professionals who require continuous learning and upskilling. The Institute has been proactive in assimilating e-Learning in its pedagogical repertoire. New e-learnings on important subjects like Treasury Management and Risk Management have been rolled out this year.
- The Institute has responded to the growing industry demand for customized and specialised training programmes for Banking & Finance professionals at all levels. The growing number of training programmes bears testimony of the quality of the programmes offered by the Institute.
- 226 Training Programs have been conducted by the Institute in FY 2022-23, which is at all-time high. The Institute has entered into strategic collaborations with XLRI, Jamshedpur for Leadership Development Programmes and JBIMS, Mumbai for Strategic Management Programmes.
- Advanced Management Programme (AMP) offered by the Institute in association with IIM Calcutta has gained acceptance in the industry and the 12th batch of AMP with 91 participants has started successfully.

- The annual HR Conference of the Institute was organised on 4th March, 2023 with participants from regulators, academic institutions and banks. The Institute will redraw its strategies based on the valuable inputs and feedbacks received from the HR officials of Banks and Financial Institutions on their future requirements.
- The 12th R K Talwar Memorial Lecture was organised on 21st October 2022 in the physical mode, with Mr. M Rajeshwar Rao, Deputy Governor, RBI delivering the keynote address. The Lecture was well received by the audience for its rich contents.
- The 38th 'Sir Purshotamdas Thakurdas Memorial Lecture' was successfully organised by the Institute in virtual mode on April 6, 2023 and was delivered by Shri Injeti Srinivas, Chairperson, IFSCA.
- IIBF, as part of its Member Education Series, organised Webinars on contemporary topics - "INR in 2022-23", jointly with FEDAI on 12th May, 2022 and "Green Finance and Climate Risk Mitigation in India" in coordination with Global Association of Risk Professionals (GARP) on 17th August, 2022.
- IIBF has published the second edition of the "Banking & Finance Yearbook", which is a comprehensive digest of all major developments, trends, expert views and regulatory changes in respect of Banking & Financial sector.
- The Institute successfully conducted India's only Inter Bank Quiz Contest-Banking Chanakya 2022 for Banking professionals. The National Finals of Banking Chanakya 2022 was held on 05th November 2022 at the Institute's Corporate Office. The programme was live streamed on IIBF's Facebook and YouTube Channel and was later telecast on ETNow.

Now, let me share some of the highlights of the Institute's performance during the year 2022-23.

The Institute recorded a robust growth in turnover and profitability during the year under review.The turnover of the Institute during 2022-23 was Rs. 152.76 crore, with a gross surplus of Rs. 83.20 crore. The amount transferred to General Reserve was Rs. 70.37 crore after tax.

With the addition of 54,602 new members, the membership strength of IIBF now stands at 10,48,347, making it one-of-its-kind Institute in India.

During the year, 6.91 lakh members have enrolled for various courses of the Institute.

The Institute has taken up Corporate Social Responsibility (CSR) initiatives voluntarily, as a matter of good corporate governance. The CSR Policy of the

Institute is intended at promotion of education including special education and employment enhancing vocational skills among different groups of society, along with promoting equality among the different sections of the society, including men, women, differently abled persons, economically and socially backward classes of people in both urban and rural areas.

The Banking and Financial Services sector is poised for a radical change in product designing and service delivery, in line with the evolving customer expectations. Technology will play a crucial role in shaping the Banking of the future. The skillsets and knowledge-base of new-age Bankers are also in a constant state of flux. Re-skilling is the key to keep the employees productive and make them future-ready.

IIBF is gearing up to the challenges and is in the process of initiating suitable measures in consultation with all the stakeholders. More specialised and customised training programmes will be developed by the Institute, keeping an eye on the requirement of various Banks. Going forward, the Institute is also looking to revamp its Certificate programmes to make them more conceptual, practical and relevant to the entire BFSI sector.

In line with its ambitious growth trajectory, the Institute has come up with a vision document "Vision-2025", clearly recording its objectives and the strategies to be adopted. This document, in my opinion, will play the guiding role in the development of the Institute in future.

The Institute will endeavour to provide its academic and training support for the emerging yet critical area of climate risk and sustainable finance by promoting awareness and skill development amongst the banking professionals. The Institute will, in consultation with banks and financial institutions, roll out new and customised courses for reskilling and upskilling their employees.

The Institute will continue to keep the interests of its members at the forefront and work towards creating courses on topics of importance to the Bankers, so as to be the preferred learning partner for the banking and finance professionals.

I, on behalf of the Governing Council, thank you all for attending the AGM.

Adapting to Digital Disruption: A digital transformation strategy for Indian Banks

Dr. Vighneswara Swamy*

Abstract

Digital disruption has transformed the way organizations function and engage with their consumers. Indian banks are under pressure to modernize in the digital era. To stay competitive, banks must have a digital transformation plan. This article outlines a strategy for dealing with legacy systems, cybersecurity, compliance, customer expectations and cultural shifts. The strategy focuses on delivering customized, convenient, secure banking services through digital channels. It emphasizes investment in technology such as AI, blockchain, cloud computing and workforce upskilling. A long-term commitment and willingness to change are required for successful digital transformation.

Introduction

Traditional banking techniques are under threat from digital innovation and disruption. To adapt and to remain competitive is a challenge for Indian financial institutions. This study investigates the effect of digital disruption on Indian banks. It also finds difficulties and drivers, which suggests the success factors and best practices. According to the study, shifting customer expectations, technological advancements, coupled with regulatory requirements drive digital transformation; while legacy systems, cybersecurity concerns, talent recruitment and regulatory compliances pose challenges. This article suggests digital transformation plan for Indian banks to achieve long-term development with competitive edge. The suggested approach includes customer-centricity, new technologies, IT infrastructure, talent acquisition, regulatory compliance and cooperation (McKinsey & Company, 2019).

This study is important for several reasons. It intends to address a needed research in the Indian banking industry on digital transformation and provide practical recommendations for Indian banks to remain competitive. The study is relevant to multiple stakeholders including Indian banks, regulators, policymakers and customers. It guides on developing and implementing effective digital transformation strategies, insights into the challenges as well as digital disruption opportunities and the role of technology in enhancing customer experiences. Overall, this article provides an all-inclusive understanding of digital transformation in Indian banks and practical recommendations for adapting to digital disruption.

Insights on Digital Disruption

The integration of digital technology in all parts of an organization's operations, business models and customer experience is a complicated process. The banking industry is heavily affected by digital disruption and banks worldwide are investing in digital transformation initiatives to stay competitive. Key trends include changing customer expectations, evolvement of new competitors, changing regulatory policies and changing business models (Reserve Bank of India, 2021). Failing to adapt to these trends could lead to losing market share and relevance in the digital age.

A systematic review of 58 peer-reviewed studies published between 2001 and 2019 shows that

*Professor & Dean of Research, IBS Hyderabad.

some areas including the speed of transformation, organizational culture and work environment and middle management perspective are considerably under-developed (Nadkarni & Prugl, 2021).

Incumbents must create independent, affiliated organizations to successfully integrate disruptive technologies (Bower and Christensen, 1995). Managers should protect these technologies by placing them in new organizations working with future customers (Gans, 2016). Innovations can be viewed as an opportunity to enable local adaptation and increase sensitivity to environmental changes (Gilbert and Bower, 2002).

Digital disruption can enhance efficiency, supply diversity and competitiveness but may pressure incumbents for risk-taking. Restructuring is necessary alongside new competition, with no entrenched dominant positions. New entrants, particularly BigTech, must obtain market share through increased efficiency rather than through skirting restrictions. Regulators must detect new threats to financial stability from new systemic risks (OECD, 2020).

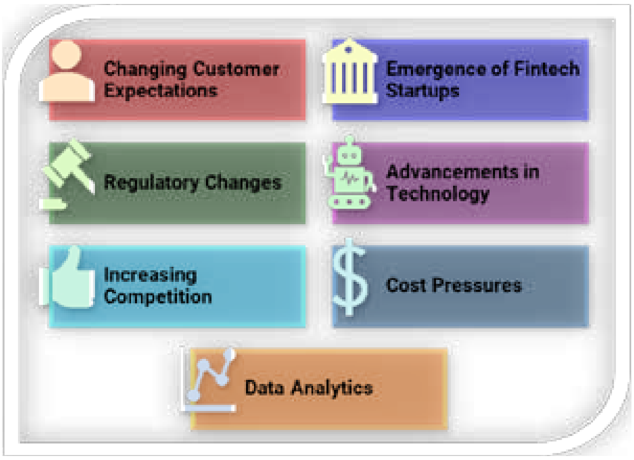
Key Drivers of Digital Disruption and Transformation

The main factors behind digital disruption and transformation are:

Changing Customer Expectations: One of the primary forces driving digital disruption is changing customer expectations and ease of doing business. Customers are expecting faster, more convenient and more personalized services. Banks must adapt to these changing expectations by leveraging digital technologies to improve customer experience (Gilbert & Bower, 2002).

Emergence of FinTech Startups: Technology has reduced entry barriers and allowed FinTechs to enter the financial services. They have unbundled the financial services in a manner that is economically viable even at a lower scale of operations. In turn, consumers have benefited by better customer experience and convenience. Payment sector innovations in India is a typical example. FinTech startups disrupt banking by innovating financial services. Banks must collaborate, acquire or develop FinTech capabilities to compete.

Figure 1: Key Drivers of Digital Disruption and Transformation



Regulatory Changes: Regulations like Open Banking and data protection drive digital transformation in banks, creating opportunities for better digital capabilities.

Advancements in Technology: Banks are adopting Artificial Intelligence (AI), Machine Learning (ML), blockchain and cloud computing to remain competitive and meet customer demands for new services and efficiency.

Increasing Competition: Digital banks and tech companies are increasing the competition. Banks need innovative and digital technology to differentiate themselves.

Cost Pressures: Banks seek cost reduction and efficiency improvement through digital transformation, automating processes and enhancing operational efficiency.

Data Analytics: Banks require data analytical capabilities to drive digital transformation, personalize the services and to mitigate risks.

In addition, digital disruption in financial sector is driven by supply and demand factors like advancements in technology and changing customer expectations (Carstens, 2018).

Digital Revolution: Challenges & Opportunities

Digital transformation in banking brings both challenges and opportunities. Literature on this topic highlights critical themes such as legacy systems, cybersecurity risks, talent acquisition, regulatory compliance and strategic partnerships.

In the context of digital transformation in banking, the challenges and opportunities can be distinguished as follows:

Challenges

- Legacy systems consist outdated and complex technologies and softwares, hindering the implementation of emerging digital technologies.
- Cybersecurity risks include cyber-attacks and data breaches that can damage the reputation of a financial institution and customers' trust.
- Talent acquisition and retention are challenging in acquiring skilled and diverse talent in digital technologies and data analytics.
- Regulatory compliance means ensuring compliance while adopting digital transformation initiatives.

Opportunities

- Strategic partnerships with FinTech firms, tech vendors and partners are crucial for enhancing digital capabilities and customer experiences (Sinha et al., 2020).
- Enhanced digital capabilities: Banks can improve their digital capabilities as a result of digital transformation. Banks may enhance efficiency, streamline procedures and provide innovative products and services to clients by embracing new technologies.
- Cost savings: Digital transformation may result in cost reduction in various sectors. Banks can lower operating expenses and increase overall cost-effectiveness by replacing old systems with more efficient and streamlined technologies.

Digital Transformation: Success Factors

The banking industry's digital transformation literature also identifies several best practices and success factors to help banks achieve successful digital transformation initiatives. These include Strong leadership and governance as well as clear vision and plan, customer-centric approach, agile and flexible organizational structure, focus on data analytics, culture of innovation, experimentation, partnerships and collaborations.

We are discussing below some of the digital transformation success factors in banking like Digital transformation framework, Digital Transformation Roadmap, Customer Journey Mapping and Ecosystem Mapping within the framework of digital transformation.

Digital Transformation Framework

A digital transformation framework may consist of four stages. Firstly, assessing the bank's current digital capabilities and defining desired outcomes. Secondly, developing a strategy that aligns with business goals, customer needs and emerging technologies. Thirdly, implementing the strategy through process automation initiatives. Lastly, monitoring and measuring effectiveness using Key Performance Indicators (KPIs) such as customer satisfaction, revenue growth and operational efficiency.

Digital Transformation Roadmap to achieve Competitive Advantage

Financial organizations need to make a strategy to successfully meet the challenges of digital disruption. Figure 3 is a visual representation of the steps in implementing the bank's digital transformation strategy. It encompasses:

- **Current State Assessment:** Evaluate the current digital capabilities of the bank, including technology, processes and people, to identify strengths, weaknesses and gaps.
- **Define Digital Vision:** Define digital vision aligned with business strategy to articulate the desired end-state of digital transformation efforts.

Figure 2: Digital Transformation Framework

Assessment

- Identifying customer needs and expectations
- Assessing the bank's current digital capabilities and limitations
- Benchmarking against industry best practices
- Developing a roadmap for digital transformation

Strategy Development

- Defining the digital transformation vision and objectives
- Identifying the key digital initiatives to be undertaken
- Establishing a governance structure and resource allocation plan
- Defining the Key Performance Indicators (KPIs) and metrics to measure success

Implementation

- Developing and deploying digital products and services
- Implementing process automation and workflow improvements
- Enhancing data analytics and artificial intelligence capabilities
- Developing partnerships and collaborations with fintech firms and other technology vendors

Monitoring

- Measuring customer satisfaction and engagement levels
- Tracking revenue growth and profitability
- Monitoring operational efficiency and cost savings
- Conducting regular reviews and assessments to ensure continuous improvement

- **Prioritize Initiatives:** Prioritize impactful digital initiatives for business goals based on current state assessment and digital vision. Identify quick wins and long-term projects.

- **Develop a Roadmap:** Create a digital roadmap aligned with the bank's strategy, prioritizing the initiatives by their impact, timelines and resources.

- **Secure Funding and Resources:** Allocate funds for digital transformation. Seek investments or reallocate budget to support the initiatives outlined in the roadmap.

- **Implement Initiatives:** Use agile methodologies to implement digital initiatives identified in the roadmap for quick and iterative progress.

- **Monitor and Adjust:** Monitor digital transformation progress and adapt roadmap based on new information or changing priorities.

Customer Journey Mapping

The customer journey in a digital banking setting is depicted in Figure 4. This could include touchpoints like online account opening, mobile app usage and chatbot interactions.

1. **Identify the Customer Touchpoints:** This step involves identifying all the points of contact between the customers and the bank, from the early level of awareness through post-purchase activities such as customer service and feedback.

2. **Gather Customer Feedback:** Collect customer input at each touchpoint to better understand their expectations, pain spots and overall experience.

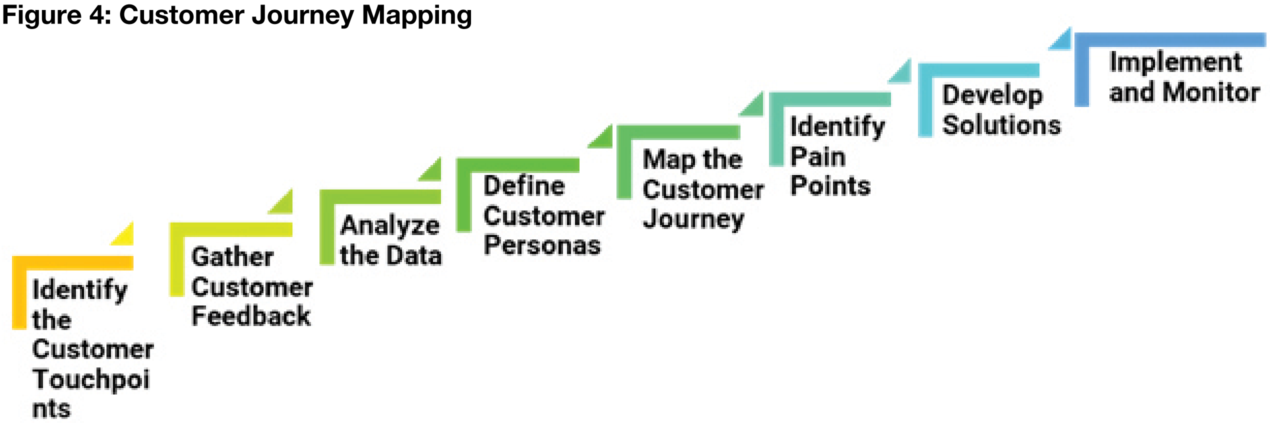
3. **Analyze the Data:** Analyze the obtained data to find patterns, common issues and areas for improvement.

4. **Define Customer Personas:** Create customers' personas based on the data gathered better to understand the various customers and their specific demands.

Figure 3: Digital Transformation Roadmap

5. **Map the Customer Journey:** Create a customer journey map with touchpoints to improve their experiences.
6. **Identify Pain Points:** Determine customers' pain spots and areas of difficulty such as long waiting time or complex processes.
7. **Develop Solutions:** Develop solutions to address the pain points and improve the overall customers' experience.
8. **Implement and Monitor:** Implement the solutions and continuously assess their efficacy, utilizing customers' input to tweak and improve the customers' journey.

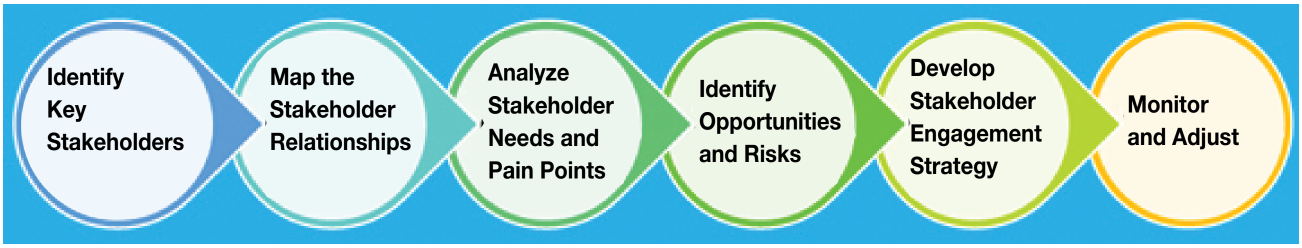
Figure 4: Customer Journey Mapping



Ecosystem Mapping

Figure 5 depicts the essential processes in ecosystem mapping and emphasizes the significance of knowing stakeholder connections, requirements and pain areas in order to effectively manage digital transformation activities.

Figure 5: Ecosystem Mapping



- **Identify Key Stakeholders:** The first stage in ecosystem mapping is identifying the major stakeholders participating in or impacted by the bank's digital transformation activities. Customers, workers, partners, suppliers and regulators may be among these stakeholders.

- **Map the Stakeholder Relationships:** Mapping stakeholder interactions entails identifying how stakeholders in a project are interrelated and impact one another. For instance, in digital transformation in banking, stakeholders include customers, employees, regulators, vendors and FinTech firms. Understanding of dependencies aids in assessing potential consequences if a stakeholder fails or suffers difficulties. This helps with relationship management, risk mitigation and harnessing positive impacts. Mapping allows businesses to foresee problems, discover possibilities for collaboration, and meet stakeholder demands.

- **Analyze Stakeholder Needs and Pain Points:** Examine the needs and concerns of each stakeholder group. This entails learning about their motivations, ambitions and obstacles in relation to the bank's digital transformation activities.

- **Identify Opportunities and Risks:** Identify the potential and threats related to the bank's digital transformation activities as well as their influence on the stakeholders.

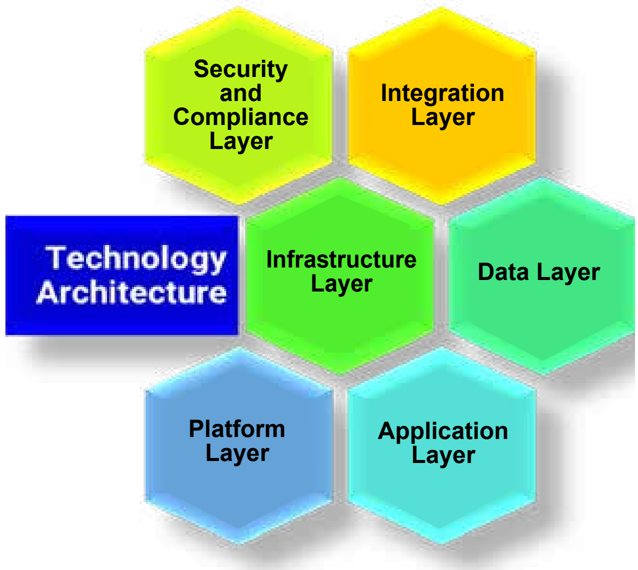
- **Develop Stakeholder Engagement Strategy:** Identify communication channels, engagement strategies and message points to develop a stakeholder engagement plan for digital transformation.

- **Monitor and Adjust:** Monitor the stakeholder ecosystem and change the engagement approach depending on new facts or changing stakeholder demands.

Technology Architecture

Figure 6 outlines the technology infrastructure required to support digital banking services.

Figure 6: Technology Architecture



Technology Architecture has following layers:

- **Infrastructure Layer:** It comprises hardware and software for digital transformation, e.g., servers, storage, network devices and security systems.

- **Platform Layer:** The bank's digital applications and services are built and deployed on the platform layer, which includes software platforms, frameworks and middleware.

- **Application Layer:** The application layer includes the actual digital applications and services the bank offers such as mobile apps, online banking portals and digital payment systems.
- **Data Layer:** Databases, management systems and analytical tools to store and manage digital data and gain insights.
- **Integration Layer:** It connects technology components such as APIs, messaging systems, etc., ensuring they work together seamlessly.
- **Security and Compliance Layer:** The security and compliance layer ensures regulatory compliance and security for digital initiatives via access control, encryption, monitoring and reporting.

Chat GPT in the Digital Transformation

Indian banks are undergoing digital transformation and Artificial Intelligence (AI) is critical in this process. Chat GPT, an AI tool that can provide human-like responses to text-based queries, is gaining popularity. The future use of Chat GPT in the digital transformation strategy of Indian banks is discussed in the table below.

Chat GPT in the Digital Transformation of Banks	
Enhanced Customer Experience	24/7 customer support. Chat GPT can enable real-time responses to queries and personalized recommendations based on customer data and boost satisfaction.
Efficient Operations	Automating customer support with Chat GPT can increase query capacity and reduce costs.
Fraud Detection	Chat GPT can analyze the transactions to detect suspicious activity, prevent fraud and improve security measures in banks.
Improved Sales and Marketing	It can identify potential customers, improve sales and marketing and thus, increase banks' revenue.
Data Analytics	It can be used for data analysis to improve banking operations.

Indian banks can use Chat GPT and other AI tools to drive digital transformation, improving customer experience, efficiency, fraud detection, sales and data-driven decision-making. Embracing AI and digital technology is crucial for Indian banks to stay competitive in today's banking landscape.

Global and Indian Experiences

Global Experience

DBS Bank, Bank of America, BBVA and Capital One are examples of successful digital transformation in the banking industry. DBS Bank's cloud-based digital platform, Bank of America's mobile apps, chatbots, virtual assistants, BBVA's digital banking platform, Capital One's mobile app and voice-activated assistant, Eno have improved customer experience and led to cost savings. Clear vision, investment in technology, infrastructure and customer-centric approach has enabled these banks to achieve growth and operational efficiencies through digital transformation.

Indian Experience

In India's banking sector, digital payments are predicted to increase to $135.2 billion by 2023, growing at a CAGR of 12.7% from 2020 to 2025. By August 2021, there were 425 million mobile banking users and 141 million internet banking users in India. Banks spent $8.6 billion on IT in 2020, expected to increase to $11.3 billion by 2023. The adoption of digital banking increased from 42% in 2019 to 66% in 2020, with mobile banking being the preferred banking channel. PwC India conducted a survey that revealed that 87% of banking industry respondents in India considered digital transformation to be a top priority (Reserve Bank of India statistics). These statistics demonstrate the potential for digital transformation in India's banking sector and highlight customers' increasing adoption of digital banking channels and high IT investment by banks.

Digital Strategy for Indian Banks

Indian banks are adopting digital transformation strategies to improve efficiency, customer experience, risk management and innovation to remain competitive in the digital era. Customer experience is enhanced with mobile banking apps, internet banking and chatbots that offer personalized services. Robotic process automation, artificial intelligence, and machine learning increases operational efficiency. Predictive analytics, real-time transaction monitoring and blockchain helps to improve risk management.

Banks also employ emerging technologies such as AI, blockchain and IoT to develop new products and services. As digital disruption continues transforming the banking industry, these tactics are critical for Indian banks to stay competitive and relevant in the digital era.

Digital Banking Success in India

India has over 500 million internet users and is quickly adopting digital technology, which has the potential to revolutionize the whole economy. State Bank of India, HDFC Bank, ICICI Bank and Kotak Mahindra Bank have all made substantial investments in digital transformation to improve customer experience, promote growth and innovation and gain operational efficiency. These banks have embraced digital efforts, including mobile applications, online banking systems, chatbots and data analytics. These examples show how Indian banks are adjusting to digital disruption and investing in digital transformation projects to remain competitive in the digital era.

Digital Disruption: Indian Banks' Challenges

Indian banks have faced considerable challenges in adjusting to digital disruption. Outdated legacy systems, lack of digital skills among staff, security issues, increasing consumer expectations and developing regulatory frameworks are among the obstacles. To meet these difficulties, Indian banks must invest in new technologies, train employees in digital skills, implement robust security measures, offer customized solutions while maintaining regulatory compliances. By doing so, they can effectively traverse the digital disruption landscape and become digital leaders.

To boost efficiency and respond to digital disruption, Indian banks must replace outdated systems and train workers in digital skills. They must put in place robust security safeguards and offer customized digital solutions. It is critical to comply with regulatory obligations. While tremendous progress has been achieved, there is always room for improvement in customer experience, data management, cybersecurity and people management. We suggest a digital transformation approach for Indian banks, including cultivating a digital culture, investing in customer experience, utilizing data analytics and AI, strengthening cybersecurity measures and developing a digital workforce pool. To create a smooth and customized client experience, Indian banks should invest in Omni channel banking systems and new technologies such as chatbots, voice assistants, virtual reality and data analytics. Banks should support innovation, agility and encourage staff to accept new technologies in their working.

Embracing Digital Disruption

Digital disruption transforms India's banking sector by altering business models, customer's expectations and competitive pressure. Banks must implement new digital strategies, technology and procedures to remain competitive. Customer-centricity, leadership commitment, talent development, innovation culture, engagement with FinTech startups and agile methodologies are among the best practices and success factors for digital transformation in Indian banks. A strong emphasis on customer demands, innovative leadership, competent staff and collaborative and agile culture are required for successful digital transformation. Collaborating with FinTech companies and applying agile approaches will help Indian banks expedite their digital transformation activities, allowing them to differentiate themselves in a competitive market (Sankar, 2022).

Summary & Implications for Practice

Overall, there is a need for development of a customized digital transformation strategy for Indian banks to address the unique challenges and opportunities of the Indian banking industry and align with the objectives of Digital India and financial inclusion. Successful digital transformation can enhance customer experience, operational efficiency and create new business models that benefit the Indian economy.

The study emphasizes the need to prioritize digital transformation as a strategic imperative focusing on customer-centricity, innovation and collaboration with FinTechs while ensuring cybersecurity and data privacy. The study provides insights, identify challenges and best practices, raise awareness among policymakers, regulators and customers and contributes to the body of knowledge about digital transition in the banking industry, particularly in emerging economies.

Indian banks can take several recommendations to overcome challenges in implementing digital transformation initiatives, including developing a clear strategy, building a digital culture, addressing cybersecurity and data privacy concerns, partnering with FinTechs and collaborating with regulators and policymakers. To remain competitive, Indian banks need to embrace digital transformation strategies that are customer-centric, innovative, agile and data-driven, investing in digital infrastructure, talent development, change management and creating a customer-centric culture. Although implementing these strategies poses challenges, following best practices and addressing these challenges can enable Indian banks to adapt to digital disruption.

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NeoBanks: Future Prospects, Challenges and Strategies

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Introduction

The first Neobank was First Direct, launched in the UK in 1989. The possible use of the term "neobank" can be traced back to the year 2017. They have been around for over a decade, but they have only recently started to gain traction. The rise of neobanks is due to the fact that they offer more convenient and user-friendly banking experience than traditional banks. They are also able to offer lower fees and better interest rates because they do not have the same overhead costs as traditional banks. In India, Niyo Solutions is one of the first companies to emerge in this sector. These are digital-only banks that offer a wide range of services through digital platforms. They originated when technology-based financial service companies challenged traditional banks. Some of the first players emerged in the United Kingdom and Germany. Neobanks are online-only financial institutions that are similar to banks. The offerings of these banks are usually limited compared to traditional banks. The slimmed-down model often allows neobank customers to enjoy lower fees, competitive interest rates and customized products. They bridge the gap between the services that traditional banks offer and the evolving expectations of customers in the digital age.

Overview of Growth of Neobanks

During the past decade, neobanks have smartly carved a niche for themselves by consistently expanding the range of services they offer their customers (Bradford, 2020). The growth and adoption of neobanks show no signs of slowing down, with Statista's (2023) estimates predicting a user base of 376.9 million worldwide in 2027, a twenty-fold increase from 18.95 million users in 2017. These trends indicate a shifting dynamic in banking, but the extent to which neobanks challenge traditional banking remains unclear. Between 2018 and 2022, neobanks witnessed their transaction value soar from \$0.45 trillion to \$3.21 trillion and their user count during the same period increased from 32.61 million to 188.4 million users worldwide (Statista, 2023). The significant growth potential for neobanks is mainly driven by their low-cost model for end consumers with no or very low monthly fees on banking services such as minimum balance maintenance, deposits and withdrawals. Factors such as faster process of loan approval and funding compared to traditional banks with lower-interest rates via banking applications are driving the growth of the market. The main growth factors concerning neobanks—mainly related to regulatory frameworks, customer preferences and competition—will undoubtedly continue to exist during the next few decades.

Significance of Neobanks

The phenomenal growth of neobanks and completely digitised banks have brought a paradigm shift in the entire banking system, resulting in drastic shift in the offering of financial services to customers (OECD, 2020). They differentiate themselves through a wholly digital methodology and contemporary, innovative business models, making physical branches unnecessary for their operations (Buchi et al., 2019). During the major portion of the 20th century, traditional banking entities dominated the financial services industry. These entities initially offered services like

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deposit, lending and wealth management. Later in the 20th century, traditional banking witnessed a trend shift towards consolidation and significant deregulation, giving rise to large multinational banks. These institutions efficiently leveraged technology to enhance efficiency and broaden their operations in the 21st century (Gorton, 2015). In spite of the considerable influence of digitalisation on the structure and operations of conventional banking, many still heavily depend on physical locations and face-to-face interactions as part of their customer offering. Neobanks symbolise a novel banking reality stemming from evolving customer preferences and needs. First appearing in the early 2010s, they are fully accessible via the internet or mobile devices, utilising their technology to offer a customer experience that includes services like account opening, mobile payments, deposit facilities, savings and investment management tools and various loan services. They also provide access to trading markets like the stock market, raw materials market and cryptocurrency markets (Martinčević et al., 2022).

Although numerous studies such as those by Gulieva et al. (2019) and Temelkov (2020) discuss how the neobanks' business model could challenge traditional banks, statistics show that neobanks are still in developing stage. Therefore, academic literature on this topic should continue to evolve. The quick growth of neobanks, the introduction of new services and emerging trends have created a gap in theoretical knowledge concerning current and future competition within the banking industry, as well as shifts in customer preferences and behaviors. Thus, significant void exist in the literature that assesses the emerging prospects of neobanks in the financial services industry, potential risks posed by their newly established role, how they distinguish themselves for customers and their relationship with traditional banks.

Key features and innovations offered by neobanks

Neobanks represent a peculiar category of financial institutions that exclusively carry out their operations online, typically without physical branches. They deliver their banking services through mobile apps and websites, focusing on offering their customers an effortless, user-friendly and entirely digital experience. To provide innovative features such as real-time transaction notifications, budgeting and investment tools, straightforward account setup procedures, as well as access to a broad spectrum of trading markets, including cryptocurrency and stock exchanges, neobanks often lean on technological advancements (Gulieva et al., 2019).

On the contrary, traditional banks are long-established financial entities with physical branch networks. They offer a basket of banking services including savings and time deposits accounts, loans, mortgages and select investment services. Due to their physical presence and Automated Teller Machines (ATMs), customers can avail the traditional banks' services in person. Additionally, they typically offer an array of additional services such as wealth management, insurance and financial planning.

Thus, neobanks offer several key unique features and innovations that set them apart from traditional banks. The main landmark feature of neobanks is their mobile-first approach. They are designed to be used primarily on mobile devices, which makes them more convenient for customers who are always on the go. Another key feature is their focus on user experience. Neobanks are designed to be simple and easy to use, with intuitive interfaces that make it easy for customers to manage their finances. They also offer a range of innovative services such as budgeting tools, savings goals and real-time notifications. Neobanks are also known for their affordability and easy accessibility. They do not have the same overhead costs as traditional banks, which allows them to offer better rates to their customers. Finally, neobanks are known for their fast and efficient customer service. They use technology to provide quick responses to customer enquiries and complaints.

Future Prospects for Neobanks

The future potentials for neobanks are seemingly bright. The primary reason for the growing popularity of neobanks is their fully digital nature and the simplicity of their services. These services enable customers to perform banking tasks from the comfort of their homes or any location of their choice, eliminating the need to visit physical branches (Padmanabhan, 2021). Despite the shift towards digitization in traditional banks, they still maintain a significant market share in the banking industry. Nevertheless, recent trends and research indicate a consistent migration of customers towards banks that provide "online-only" solutions (Statista, 2023). The global neobank market is expected to grow at a CAGR of around 46.5% between 2019 and 2026, generating around USD 394.6 billion by 2026. The growth of the market is driven by several factors such as the increasing adoption of smartphones, the growing demand for digital banking services and the increasing number of partnerships between traditional banks and fintech companies. Some of the future prospects for neobanks are discussed below:

- **Market Expansion**

  As internet penetration and smartphone usage are on the rising trend, neobanks are expected to onboard more customers, especially among the younger generation, who are more open in using digital banking services (Nasir & Rizvi, 2020). Furthermore, neobanks are well-positioned to expand their services to unbanked and underbanked populations in emerging markets (Demirgüç-Kunt et al., 2018).

- **Technological Innovation**

  Efficiency is the area that has undergone a significant transformation with the advent of modern and sophisticated technology. Banks have been able to automate a substantial proportion of their operations, reducing their dependence on manual labor and in turn, contributing to greater efficiency and a leaner cost structure (Gulieva et al., 2019). Nowadays, banks extensively employ Artificial Intelligence (AI) for a variety of tasks, including fraud detection, automation of customer services (Digalaki, 2022), etc. In this context, neobanks are poised to continue leading the way in the adoption of advanced technologies such as Artificial Intelligence, blockchain and biometrics to provide more efficient and secure banking services (Jabbari & Ouerghi, 2020). For instance, AI can be utilized for better risk analysis and personalized financial recommendations.

- **Partnerships and Ecosystem Development**

  Neobanks typically rely on alliances and partnerships with other financial service providers to offer their services due to a variety of reasons. One of the leading causes of this is that these institutions generally face the paucity of the required infrastructure, regulatory clearances and licenses necessary to directly offer services, such as loans and credit cards.They are in a position to offer these services owing to the fact they collaborate with established financial institutions, which enables them to do so without having to invest in the infrastructure or obtain regulatory permissions and licenses on their own (Koibichuk et al., 2021). They are likely to build extensive ecosystem through partnerships with fintech firms, traditional banks and non-financial companies to offer a broader range of services, from lending and insurance to retail and travel (Chen, 2020).

- **Novel revenue generation models**

  Neobanks use various strategies for revenue generation and monetisation. A prevalent model involves levying charges for special services, including overdraft protection, foreign currency transactions and ATM withdrawals. Some neobanks also impose fees on specific transaction types, like wire transfers. Many neobanks attract customers with high-interest savings accounts, allowing customers to accrue interest on their savings. Some neobanks also provide investment options such as mutual funds and Exchange-Traded Funds (ETFs), enabling customers to invest their savings. Some collaborate with retail businesses to offer cashback rewards when customers use their debit cards for purchases. Other partnerships may be with fintech companies to provide auxiliary services, including insurance products.

In short, the future prospects for neobanks are bright. They are expected to continue growing at a rapid pace over the next few years, driven by several factors such as the increasing adoption of smartphones, the growing demand for digital banking services and the increasing number of partnerships between traditional banks and fintech companies. Neobanks are also expected to benefit from the increasing use of AI and ML technologies as well as blockchain technology.

Challenges for Neobanks

While neobanks enjoy a multitude of advantages over conventional banks, they also face several challenges. Considering that the use of neobanks and digital banks is a new concept that has emerged in the last decades, there are potential challenges.

- **Security issues and cyber threats**

  Cybercrimes and hacking are some challenges or risks that can haunt the banking industry and others that conduct their businesses online (Larisa et al., 2019). The banking sector is particularly vulnerable to cyber threats due to the vast amount of sensitive financial information it handles, the unauthorized exposure of which can have significant consequences. Ahsan et al., (2022) delineate a few of these risks such as malware attacks, Distributed Denial of Service (DDoS) attacks, phishing attacks and insider threats.

- **Lack of brand recognition**

  Another challenge is the lack of brand recognition. Neobanks are relatively new to the market and many people are not familiar with them. This can make it difficult for neobanks to attract new customers. Moreover, over-relying on a partner comes up with several dangers, including possible conflicts of interest, a loss of control over the client experience and complete lack of brand recognition. (Leffert, 2022).

- **Lack of customer loyalty**

  As the number of neobanks and digital banking platforms proliferates, a key obstacle these new-age banks encounter is the lack of consistent customer loyalty. This presents a notable challenge in maintaining a stable customer base (Corander, 2021).

- **Regulatory challenges**

  Compliance with various regulations is another challenge that neobanks have to encounter. Just like their traditional counterparts, they are legally required to follow the same regulations, which can be both resource-intensive and time-consuming. Furthermore, they must prioritize strong security protocols to safeguard their customers' data. Another issue faced by neobanks is implementing the necessary laws and regulations to conduct banking operations effectively. Kokh & Kokh (2020) highlight the licensing dilemma faced by many neobanks. This often leads them to register their businesses and collaborate with conventional banks, which ushers in another issue — a heavy reliance on such partnerships.

- **Profitability and Scalability issue**

  Majority of neobanks are still in the growth phase and are not yet profitable. Achieving scalability while maintaining a lean cost structure remains a significant challenge (Stoughton & Nagar, 2019). Offering services at lower cost, a common practice among many neobanks, may impede their ability to generate and sustain revenue. Furthermore, their operational model demands substantial investments in technology, leading to high expenditure.

- **Competition**

  With a saturated market, competition is fierce. Neobanks need to continuously innovate and differentiate their services to retain customers and attract new ones (Nasir & Rizvi, 2020). Conventional banks have started offering digital banking services almost similar to those offered by neobanks. Other fintech companies are also entering the market, which can make it difficult for neobanks to stand out.

Strategies for Overcoming Challenges

Despite the numerous challenges and security threats looming over the neo-banking sector, there exist several measures that neobanks can implement to mitigate or avoid these challenges. Some are discussed below:

- **Building strong compliance and risk management systems:** It is essential for neobanks to align with all relevant regulations and enforce robust security measures to safeguard their customers' data. They should also identify potential risks and devise strategies to handle them effectively.

- **Creating solid customer relationships and engagement:** Neobanks should strive to build strong bonds with their customers to instill trust. This can be achieved by delivering superior customer service, maintaining transparency about fees and costs and innovating with their products and services.

- **Discovering innovative revenue channels and partnerships:** Neobanks should explore new avenues for revenue and partnerships. This could involve collaborating with other companies to offer additional services or designing new products tailored to their customers' needs.

- **Improving customer acquisition and retention tactics:** Neobanks must formulate efficient strategies for customer acquisition and retention. This could include offering incentives for account creation, providing top-notch customer service and creating loyalty programs.

- **Investing in enhanced cybersecurity and data protection:** Neobanks must prioritize investments in cybersecurity to protect their customers' data. Like all other industries, banking continues to adapt and discover ways to shield itself from the constant threat of cyber attacks. Some of these protective measures include: enhanced cyber security awareness among employees and suitable training. (Abdulrahman et al., 2020), data encryption (Lakhani, 2018), multi-factor authentication (Ometov et al., 2018), incident response planning (Ghelani et al., 2022) and third party risk management (Serkebayev, 2023).

Conclusion

Neobanks have potential to redefine the banking experience through technological innovation and customer-centric approaches. There is no doubt that neobanks have emerged as a disruptive force in the banking industry. However, they face several challenges, including regulatory compliance, cybersecurity risks and customer acquisition and retention. Despite these challenges, neobanks have a bright future ahead of them. To sustain growth and compete effectively, they need to address challenges like regulatory compliance, scalability, cybersecurity and differentiation. They are well-positioned to take advantage of the growing demand for digital banking services. As more consumers adopt mobile banking and other digital technologies, they will continue to grow and expand. To succeed in the competition, they will need to innovate and develop new products and services. They will also need to build strong relationships with their customers and establish trust. By doing so, they can overcome the challenges they face and continue to grow and thrive in the years ahead.

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Bank Quest included in UGC CARE List of Journals

IIBF's Quarterly Journal, Bank Quest has been included in UGC CARE list of Journals. The University Grants Commission (UGC) had established a "Cell for Journals Analysis" at the Centre for Publication Ethics (CPE), Savitribai Phule Pune University (SPPU) to create and maintain the UGC-CARE (UGC – Consortium for Academic and Research Ethics). As per UGC's notice, research publications only from journals indexed in UGC CARE list should be used for all academic purposes.

डिजिटल ऋण प्रणाली: अवसर एवं चुनौतियां

नौशाबा हसन*

प्रौद्योगिकी मानवता के लिए बड़ी धरोहर और संपदा है क्योंकि इससे उत्पादकता बढ़ती है, अधिक आय प्राप्त करने में मदद मिलती हैं और जनोपयोगी नीतिगत उपायों को अपनाकर विश्व अर्थव्यवस्था की विकास दर भी तेज़ की जा सकती है। सकारात्मक व्यवधान उत्पन्न करते विभिन्न नवोन्मेषों के इस दशक यानी 'टेकेड' में प्रगति तथा लाभ और उद्देश्य के बीच संतुलन बनाने के लिये प्रौद्योगिकी अपरिहार्य बन चुकी है। प्रौद्योगिकी की दुनिया में हमें आए दिन कोई न कोई बड़ा नवाचार (इनोवेशन), आविष्कार या उत्पाद देखने को मिलते ही रहता है। देखते ही देखते न जाने कितनी नई प्रौद्योगिकियां आज हमारे दैनिक जीवन, कामकाज या बातचीत का हिस्सा बन चुकी हैं। इन नवोन्मेषी तकनीकों के विकास के साथ ही ऐसी अनेक नई संभावनाएं भी जन्म ले रही हैं जिनके बारे में आज से लगभग एक दशक पूर्व तक तो सोचा भी नहीं जा सकता था। कृत्रिम मेधा अर्थात आर्टिफ़िशियल इंटेलिजेंस, क्लाउड कम्प्यूटिंग, ब्लॉकचेन, क्वांटम कम्प्यूटिंग, मशीन लर्निंग, एन.एफ.टी., डाटा ऐनेलिटिक्स और मेटावर्स जैसी तकनीकों के चमत्कारिक परिणाम सामने आ रहे हैं, जिनका विस्तार होने के साथ ही भविष्य की संभावनाओं में असीम वृद्धि हो रही है। पिछले तीन दशकों में कम्प्यूटर और संचार तकनीक आधारित विकास ने जिस चौथी औद्योगिक क्रांति का पदार्पण किया है, उसे डिजिटल क्रांति कहा जाता है। डिजिटल क्रांति से न केवल आर्थिक वृद्धि के मापदंड बदल रहे हैं बल्कि 'सम्पर्क-विहीन' सेवा के नए मानक भी स्थापित हो रहे हैं। वैसे तो इस क्रांति का प्रभाव पूरे विश्व पर पड़ा है और पूरी दुनिया डिजिटल क्रांति का लाभ ले रही है, लेकिन इसके केन्द्र-बिन्दु के रूप में भारत तेज़ी से स्थापित हो रहा है। भारत में सूचना-प्रौद्योगिकी तंत्र के गतिशील और त्वरित विकास ने देश को वैश्विक डिजिटल भुगतान क्षेत्र में एक ताकत के रूप में स्थापित किया है और आज हमारी प्रौद्योगिकी क्रांति ज्यादातर देशों को पीछे छोड़ती हुई जनसाधारण के स्तर तक आ पहुंची है। भारतीय अर्थव्यस्था में आभासी और स्पर्श रहित तौर-तरीकों ने प्रमुख स्थान बना लिया है। ऐसी ही स्पर्श-रहित और सकारात्मक व्यवधान उत्पन्न करती एक प्रणाली है डिजिटल लेंडिंग या डिजिटल ऋण प्रणाली जो हमारी अर्थव्यवस्था में तेज़ी से अपने कदम जमा रही है।

भारतीय अर्थव्यवस्था और ऋण की स्थिति

आज विश्वमंच पर किसी भी देश की साख, राजनीतिक या सैन्य-शक्ति की बजाय उसकी आर्थिक सबलता पर निर्भर करती है। कोविड और रूस-यूक्रेन युद्ध से उपजी अनिश्चितता ने वैश्विक स्तर पर विभिन्न देशों की अर्थव्यवस्थाओं को बुरी तरह प्रभावित किया है। कुछ देश सॉवरेन डिफॉल्ट के कगार पर हैं तो कुछ पहले ही डिफॉल्ट कर चुके हैं। इन सब के उलट भारत विश्व में सबसे तेज़ी से बढ़ने वाली अर्थव्यवस्था बनकर उभरा है। आज भारत सकल घरेलू उत्पाद के मापदंड में यूनाईटेड किंगडम को पछाड़ कर विश्व की पांचवी सबसे बड़ी अर्थव्यवस्था और क्रय-शक्ति

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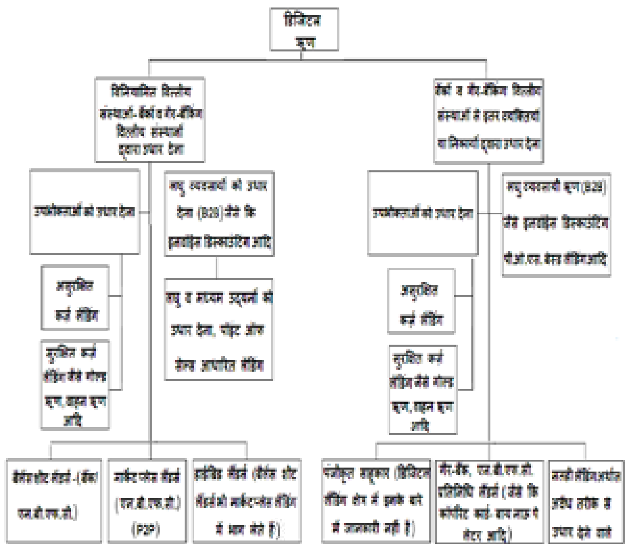
समानता (Purchasing Power Parity) के आधार पर विश्व की तीसरी सबसे बड़ी अर्थव्यवस्था बन चुका है।

कहते हैं कि किसी भी देश की अर्थव्यवस्था उतनी ही प्रगतिशील होती है, जितनी कि उसकी वित्तीय प्रणाली मज़बूत होती है। यद्यपि आज भारत की गिनती दुनिया की सबसे तेज़ी से प्रगति करती अर्थव्यवस्थाओं में होती है तथापि ऋण तक सभी देशवासियों की आसान और निर्बाध पहुंच आज भी नीति-निर्माताओं के लिए चिंता का विषय बनी हुई है। आंकड़ों के अनुसार वित्त-वर्ष 2022-23 तक भारत[1] का घरेलू ऋण प्रति सकल घरेलू उत्पाद की तुलना में, केवल 14.3% ही रहा (जबकि यही अनुपात चीन[2] में 63.3% और संयुक्त राज्य अमेरिका[3] में 65.7% के स्तर पर था), जो दर्शाता है कि हमारे देश में अभी भी ऋण की मांग और उसकी आपूर्ति के मध्य एक बड़ा अंतर व्याप्त है। विश्व बैंक द्वारा प्रकाशित The Global Findex Database 2021[4] रिपोर्ट के अनुसार, 14% से भी कम भारतीयों की ही औपचारिक ऋण स्त्रोतों तक सहज पहुँच है। इस स्थिति के पीछे अनेक कारण हैं जैसे सुदूर अथवा दुर्गम क्षेत्रों तक संस्थागत ऋण स्त्रोतों जैसे बैंक आदि की सीमित पहुँच, परंपरागत तरीकों से ऋण प्राप्त करने में होने वाली दिक्कतें जैसे आवश्यक दस्तावेज़ों का अभाव, संपार्श्विक या कोलेटरल प्रस्तुत करने में अक्षमता, ऋण स्वीकृत होने में लगने वाला लंबा समय, जटिल प्रक्रियाएं एवं उनसे संबद्ध उच्च लागत आदि। इन समस्याओं के समाधान के रूप में डिजिटल ऋण प्रक्रियाएं एक कारगर समाधान के रूप में उभर कर सामने आई हैं।

डिजिटल लेंडिंग या डिजिटल ऋण प्रणाली क्या है?

डिजिटल ऋण प्रणाली एक दूरस्थ और स्वचालित उधार देने की ऐसी प्रक्रिया है जिसके अंतर्गत ग्राहकों को ऋण देने हेतु मुख्यत: सकारात्मक व्यवधान उत्पन्न करती विभिन्न डिजिटल प्रौद्योगिकियों के माध्यम से ग्राहक अधिग्रहण, क्रेडिट मूल्यांकन, ऋण अनुमोदन, संवितरण और वसूली जैसी कार्य पूर्ण किए जाते हैं। सरल शब्दों में कहें तो डिजिटल ऋण विभिन्न ऑनलाइन प्लेटफॉर्म जैसे मोबाइल और वेब-आधारित एप्लिकेशन के माध्यम से आवेदन और प्रबंधित किए जाने वाले ऋणों की पेशकश की ऐसी प्रक्रिया है जिसमें ऋणदाता, डिजिटल डाटा का उपयोग क्रेडिट निर्णयों को सूचित करने और ग्राहक जुड़ाव बनाने के लिए करते हैं। भारतीय अर्थव्यवस्था के परिप्रेक्ष्य में डिजिटल ऋण की कार्य-प्रणाली संक्षेप में निम्नानुसार है:

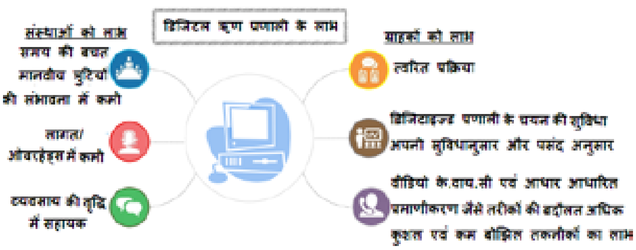


डिजिटल ऋण प्रणाली के लाभ

डिजिटल लेंडिंग उन क्षेत्रों में भी वित्तपोषण उपलब्ध करवा रही है जो अब तक पारंपरिक वित्तीय संस्थाओं द्वारा असेवित या अल्पसेवित रहे हैं। डिजिटल ऋण सुविधा संभावित उधारकर्ताओं को किसी भी स्थान और किसी भी इंटरनेट-सक्षम डिवाइस से ऋण उत्पादों के लिए आवेदन करने में सक्षम बनाती है। आधुनिक डिजिटल तकनीकों के उपयोग से डिजिटल लेंडिंग पारितंत्र में उपभोक्ता सहभागिता (कस्टमर

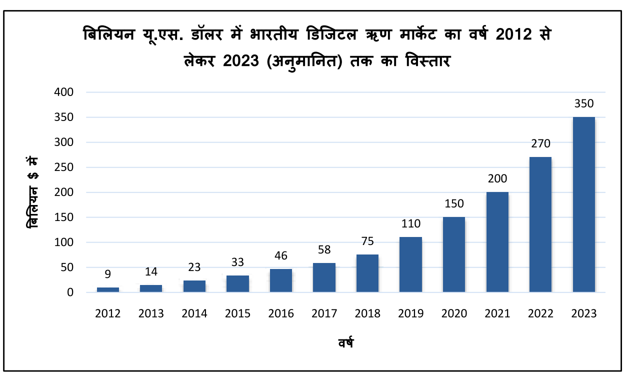
[1]https://www.ceicdata.com/en/indicator/india/ household-debt--of-nominal-gdp
[2] https://www.ceicdata.com/en/indicator/china/household-debt--of-nominal-gdp
[3] https://www.ceicdata.com/en/indicator/united-states/household-debt--of-nominal-gdp
[4] https://thedocs.worldbank.org/en/doc/4c4fe6db0fd7a7521a70a39ac518d74b-0050062022/original/Findex2021-India-Country-Brief.pdf

इंगेजमेंट), ऋण उत्पत्ति (क्रेडिट ओरिजिनेशन), हामीदारी (अंडरराईटिंग), जोखिम निगरानी (रिस्क मॉनिटरिंग), अनुपालन (कम्प्लायंस), शासन (गवर्नेंस) और संग्रह (कलेक्शन) इन सभी क्षेत्रों में क्रांतिकारी बदलाव हो रहे हैं। नए ज़माने के डिजिटल ऋणदाता ग्रामीण, अर्ध-शहरी और असंगठित क्षेत्रों में कम आय वाले ग्राहकों की ऋण संबंधी आवश्यकताओं को पूरा करने के लिए सरल डिजिटल उत्पाद विकसित कर, देश भर में वित्तीय समावेशन को सक्षम कर रहे हैं। डिजिटल प्रक्रिया से ऋण देने वाली संस्थाओं और ग्राहकों अर्थात सभी पणधारियों को कई लाभ हुए हैं, जिनमें से कुछ निम्नानुसार हैं:



डिजिटल ऋण: अवसरों का अनंत आकाश

डिजिटल ऋण प्रणाली में संभावना है कि यह आने वाले दिनों में भारतीय वित्तीय प्रणाली और ऋण देने के तौर-तरीकों को बदल कर रख सकती है। बीते कुछ वर्ष में भारत के डिजिटल ऋण बाज़ार में निम्नानुसार उल्लेखनीय वृद्धि दर्ज़ की गई है:



स्रोत- https://www.statista.com/statistics/1202533/india-digital-lending-volume/#:~:text=Digital%20lending%20is%20one%20of,350%20billion%20dollars%20by%202023.

उक्त ग्राफ से स्पष्ट है कि विगत कुछ वर्षों मे भारत में डिजिटल लेंडिंग बाज़ार का विस्तार हुआ है। डिजिटल लेंडिंग का मूल्य वित्त-वर्ष 2015 में 33 बिलियन अमेरिकी डॉलर था, वह वित्त-वर्ष 2020 में बढ़कर 150 बिलियन अमेरिकी डॉलर हो गया है और इसके वित्त-वर्ष 2023 के अंत तक 350 बिलियन अमेरिकी डॉलर तक पहुंच जाने का अनुमान है। डिजिटल ऋण को बढ़ावा देने वाली अनेक संभावनाएं एवं अवसर हैं जो आने वाले दिनों में डिजिटल लेंडिंग स्पेस को नई गति देंगे। इनमें से कुछ उल्लेखनीय अवसर निम्नानुसार हैं:

1. भारतीय रिज़र्व बैंक द्वारा जारी 'भुगतान विज़न 2025' दस्तावेज़ के अनुसार देश में मार्च 2019 और सितंबर 2021 के बीच मोबाइल बैंकिंग ओर इंटरनेट बैंकिंग के प्रयोक्ताओं में क्रमश: 99% और 18% की वृद्धि दर्ज की गई है। देश में हो रही मोबाईल फोन क्रांति, किफ़ायती हैंडसेट्स की लोकप्रियता, सस्ती डाटा दरों और इंटरनेट की उपलब्धता जैसे कारणों के चलते लोगों की वित्तीय आवश्यकताओं के रुझान तेज़ी से बदल रहे हैं जो डिजिटल ऋण की बढ़ती मांग का प्रमुख कारण है। ऐसा इसलिए भी है क्योंकि लोग डिजिटल लेनदेन से प्रतिरक्षित हो गए हैं। वे शारीरिक रूप से अपनी बैंक शाखाओं में जाने से बचते हैं और अपनी सुविधानुसार कहीं भी, कभी भी कैशलेस लेनदेन को प्राथमिकता देते हैं।

2. देश में वित्तीय समावेशन के लिए भारी दबाव के बावजूद, देश में कई क्षेत्र ऐसे हैं जहाँ भौतिक रूप से बैंक या अन्य वित्तीय संस्थाओं की शाखाएं नहीं हैं। देश के दूर-दराज़ के इलाकों में डिजिटल लेंडिंग प्रभावी रूप से उन लोगों तक पहुंच रही है, जिनकी वित्तीय सेवाओं तक सीमित या फिर बिल्कुल भी पहुंच नहीं है। इसके अलावा, इस बात में भी कोई दो मत नहीं कि यद्यपि देश भर में

डिजिटल को अपनाना सकारात्मक रहा है, तथापि ऋण प्राप्त करने के डिजिटल तरीकों के बारे में सीमित जागरूकता के चलते इस क्षेत्र में अभी भी बढ़ोतरी के अनेक अवसर व्याप्त हैं।

3. कई ग्राहकों को अपनी निजी आवश्यकताओं हेतु छोटी राशि के ऋणों की आवश्यकता होती है। संस्थागत स्त्रोतों से छोटे राशि के ऋणों हेतु भी अनेक कागज़ी औपचारिकताएं पूर्ण करनी होती हैं। कई बार ग्राहकों के पास या तो आवश्यक दस्तावेज़ उपलब्ध नहीं होते अथवा वे इन कागजों को उपलब्ध करवाना एक समय लेने वाली एवं जटिल प्रक्रिया मानते हैं। ग्राहकों का ऐसा तबका अब तेज़ी से डिजिटल लेंडिंग स्पेस की ओर आकृष्ट हो रहा है। नए युग के स्टार्ट-अप अर्थात फिनटेक ऋणदाता असंगठित क्षेत्रों में ग्रामीण, अर्ध-शहरी और कम आय वाले ग्राहकों की वित्तीय आवश्यकताओं को पूरा करने के लिए सरल उत्पाद विकसित करके देश के कोने-कोने में अपनी पैठ बना रहे हैं। वे अपने ग्राहकों को न्यूनतम कागजी कार्रवाई के साथ-साथ कम समय में ही डिजिटल ऋण उपलब्ध करवा रहे हैं।

4. अनेक ग्राहकों को अक्सर संपार्श्विक की अनुपलब्धता, क्रेडिट स्कोर की कमी या क्रेडिट के लिए नया होने के कारण वित्तीय सेवाओं के औपचारिक दायरे से बाहर रखा जाता है। नतीजतन ऐसे ग्राहक वित्तपोषण के अनौपचारिक स्त्रोतों अर्थात साहूकारों के पास जाने को विवश हो जाते हैं। डिजिटल लेंडिंग एक समावेशी इकोसिस्टम का निर्माण कर, वंचित आबादी के लिए इस क्रेडिट गैप को पाट रही हैं। डिजिटल उधारदाता क्रेडिट स्कोरिंग प्रक्रियाओं के एक अलग सेट पर भरोसा करते हैं जो उन्हें अधिक आवेदकों को ऋण वितरित करने में सक्षम बनाती है।

5. वित्तीय समावेशन के प्रयासों को बल देने के लिए डिजिटाईज़ेशन को बढ़ावा देना भारत सरकार की नीतिगत प्राथमिकता बनी हुई है। ग्रामीण अंचलों में सेवाओं का डिजिटलीकरण भारतनेट की चरणबद्ध सफलता से जुड़ा हुआ है, जो दुनिया का सबसे बड़ा ग्रामीण ब्रॉडबैंड कनेक्टिविटी कार्यक्रम है। ग्रामीण भारत अब शहरी भारत के उलट अलग-थलग नहीं रह गया है और तेज़ी से इंटरनेट की रफ्तार पकड़ रहा है। देश के कोने-कोने में हो रहे बुनियादी ढांचे के विकास और विभिन्न पहलों जैसे इंडियास्टैक, जी.एस.टी, अकाउंट एग्रीगेटर, पीयर-टू-पीयर (पी2पी) लेंडिंग प्लेटफॉर्म और 24x7 डिजिटल भुगतान प्रणाली आदि डिजिटल ऋण प्रणाली को देश के कोने-कोने तक पहुंचाने मे अत्यंत कारगर सिद्ध हो रहे हैं।

6. अनेक नवीन तकनीकों के चलते विभिन्न डिजिटल प्रक्रियाएँ काफ़ी चुस्त-दुरुस्त एवं यूज़र-फ्रेंडली हो कर उभरी हैं। हमारे देश में जनवरी 2023 तक लगभग 137 करोड़ लोगों को यूनिक आईडेंटिफिकेशन नंबर अर्थात आधार कार्ड[5] जारी किए गए हैं और 14 करोड़ से भी अधिक रजिस्टर्ड उपयोगकर्ताओं को डिजिलॉकर[6] की सुविधा प्रदान की गई है। ई-के.वाई.सी. और यू.पी.आई. का उपयोग ई.एम.आई. एकत्र करने के लिए एक पुल फ़ंक्शन के रूप में किया जा रहा है। त्वरित, आसान और स्वचालित ऋण प्रक्रियाओं को आज की युवा पीढ़ी एवं टेक-सेवी ग्राहक बढ़-चढ़ कर अपना रहे हैं।

7. पारंपरिक वित्तीय संस्थानों और नए जमाने की फिनटेक कंपनियों के मध्य रणनीतिक साझेदारी और सहयोग के चलते डिजिटल लेंडिंग क्षेत्र नई संभावनाओं तक पहुँच रहा है। फिनटेक कंपनियाँ जहां अपने साथ आधुनिक और उन्नत तकनीकों

[5] https://en.wikipedia.org/wiki/Aadhaar

[6] https://economictimes.indiatimes.com/tech/technology/budget-2023-entity-digilocker-to-cut-costs-enable-seamless-finance-access-to-underserved-population-industry/articleshow/97532603.cms?from=mdr

को लाती हैं तो वहीं परंपरागत संस्थान अपने साथ ड्यू-डिलिजेंस और लोन प्रकरणों को परखने की आवश्यक दक्षता प्रस्तुत करते हैं। इस तरह इन दोनों संस्थानों का आपसी सहयोग न केवल डिजिटल लेंडिंग स्पेस को गति प्रदान कर रहा है बल्कि प्रक्रियाओं को और भी दक्ष तथा सक्षम बना रहा है।

8. भारत में डिजिटल ऋण नए और उभरते व्यापार मॉडलों जैसे क्लाउड इन्फ्रास्ट्रक्चर, मशीन लर्निंग, डेटा एनालिटिक्स, और ब्लॉकचेन जैसी तकनीक से संचालित हो रहा है। देश में 5G तकनीक का भी आगमन हो चुका है जो डिजिटल ऋण के विस्तार को नई गति देगी। ओपन ए.पी.आई., ऑटोमेशन और आर्टिफ़िशियल इंटेलिजेंस (ए.आई.) जैसी तकनीकों की सहायता से नए क्रेडिट अंडरराइटिंग मॉडल उपयोग में लाये जा रहे हैं जो डिजिटल ऋण के लिए एक मजबूत आधारभूत संरचना का विस्तार करते हैं।

9. डिजिटल ऋणदाता वैकल्पिक क्रेडिट मॉडल के निर्माण के लिए ग्राहकों के ऑनलाईन खरीद इतिहास और खर्च पैटर्न में अंतर्दृष्टि के लिए ए.आई., मशीन लर्निंग, डेटा एनालिटिक्स और एप्लिकेशन प्रोग्रामिंग इंटरफेस जैसी अत्याधुनिक तकनीकी क्षमताओं को अपना रहे हैं। बैंकों तथा अन्य वित्तीय संस्थाओं के पास उपलब्ध डाटा जो डिजिटल फुटप्रिंट (अर्थात पता लगाने योग्य डिजिटल गतिविधियों) को संदर्भित करता है, व्यावसायिक संभावनाओं के अनंत द्वार खोलता है। आर्थिक क्षेत्रों/अंचलों में उत्पन्न डेटा, विशेष रूप से वित्तीय क्षेत्र से संबंधित डेटा को बड़े पैमाने पर नए व्यावसायिक ऊर्जा स्रोत के रुप में देखा जा रहा है। डेटा के विभिन्न स्रोत जैसे PoS से प्राप्त लेनदेन डेटा, यूटिलिटी बिल भुगतान आदि इस बात का व्यापक दृष्टिकोण प्रदान करते हैं कि ग्राहक वित्तीय संस्थाओं के साथ किस तरह का व्यवहार या लेन-देन करते हैं या उनकी क्या वित्तीय आवश्यकताएं हैं। इस जानकारी का उपयोग डिजिटल लेंडिंग स्पेस में आवश्यकता और प्रोफ़ाइल विशिष्ट ऋण उत्पादों की पेशकश हेतु किया जा रहा है।

डिजिटल ऋण और संबद्ध चुनौतियां

जिस तरह हर सिक्के के दो पहलू होते हैं, ठीक वही स्थिति डिजिटल ऋण प्रणाली के साथ भी है। यद्यपि ऋण देने के डिजिटल तौर-तरीकों ने भारतीय वित्तीय अर्थव्यवस्था में अनेक संभावनाओं को जन्म दिया है तथापि इन पद्धतियों से जुड़ी कुछ चुनौतियां भी मुंह बाए खड़ी हो गई हैं जिन्हें यदि कम नहीं किया गया तो डिजिटल ऋण तंत्र पर से जनता का विश्वास कम हो सकता है। ये चुनौतियां मुख्य रूप से तीसरी पार्टी के अनियंत्रित कार्य, गलत बिक्री, डेटा गोपनीयता का उल्लंघन, अनुचित व्यावसायिक आचरण, अत्यधिक ब्याज़ दर लगाने, अनैतिक वसूली परिपाटियों आदि से संबंधित हैं जिन्होंने भारतीय रिज़र्व बैंक तक को इन समस्याओं का संज्ञान लेने हेतु विवश कर दिया है:

1. डिजिटल ऋण के बढते प्रचार-प्रसार ने भारतीय वित्तीय क्षेत्र में अनियंत्रित प्रौद्योगिकी खिलाड़ियों के लिए पिछले दरवाजे खोल दिए हैं। गूगल प्ले-स्टोर या आई.ओ.एस. स्टोर पर ऐसे ढेरों डिजिटल लेंडिंग ऐप की भरमार है, जिनमें से कई एप्स तो किसी भी विनियम या फेयर प्रैक्टिस कोड का पालन तक नहीं करते हैं। इससे गलत बिक्री, ग्राहक गोपनीयता का उल्लंघन, अनुचित व्यावसायिक आचरण और अनैतिक ऋण वसूली प्रथाओं सहित कई चिंताएँ उत्पन्न होती हैं। ये डिजिटल ऋण प्लेटफॉर्म कई बार अत्यधिक ब्याज़ दर और अतिरिक्त छिपे शुल्क वसूलते हैं जिसके कारण ग्राहकों को ऋण लेने के बाद अधिक राशि का भुगतान करना पड़ता है।

2. संसद में पूछे गए डिजिटल ऋण से संबंधित समस्याओं और उपभोक्ता संरक्षण से जुड़े एक सवाल के जवाब में केंद्रीय वित्त राज्यमंत्री ने सदन को बताया कि अप्रैल 2021 से नवंबर 2022 के दौरान आर.बी.आई. एकीकृत लोकपाल योजना के तहत डिजिटल ऋण और रिकवरी एजेंटों से जुड़ीं 13,000 के करीब शिकायतें मिली हैं। अनधिकृत और अनियमित उधार देने वाले एप्स के विशाल नेटवर्क के बारे में मीडिया में भी लगातार खबरें सामने आ रही हैं। यह एप्स देश में किसी भी नियामक प्राधिकरण के रडार के दायरे से बाहर चल रहे हैं जो पुनर्भुगतान में एक छोटी सी चूक पर अपनी आक्रामक वसूली/हार्ड-सेलिंग रणनीति को लागू करने के लिए एक क्षण भी नहीं गंवाते हैं।

3. कई डिजिटल लेंडिंग प्लेटफॉर्म अस्वीकार्य और उच्च-स्तरीय पुनर्प्राप्ति ऋण विधियों को अपनाते हैं। देखा गया है कि ऐसे एप्स अनाधिकृत तरीकों से उपभोक्ताओं के मोबाइल फोन का डाटा हासिल कर लेते हैं। समय पर कर्ज नहीं चुकाने वाले ग्राहकों को लगातार ऋण-प्रदाता या उनके एजेंट्स की तरफ से फोन कर या मैसेज आदि भेज कर परेशान किया जाता है, यहाँ तक कि उन्हें फर्जी एफ.आई.आर. और कोर्ट नोटिस के मैसेज तक भेजे जाते हैं। यह सब बातें ग्राहकों को इस हद तक परेशान कर देती हैं कि कई बार वो घातक कदम तक उठा लेते हैं।

डिजिटल ऋण प्रणाली से उपजी चुनौतियां और आर.बी.आई. के तत्सम्बन्धी दिशा-निर्देश

भारतीय रिज़र्व बैंक द्वारा डिजिटल लेंडिंग एप्स (Digital Lending Apps - DLAs) द्वारा किए जाने वाले गैर-कानूनी तौर-तरीकों तथा कपटपूर्ण व्यवहारों पर रोक लगाने एवं ग्राहक संरक्षण सुनिश्चित करने हेतु कुछ दिशा-निर्देश जारी किए गए हैं, इनमें से मुख्य दिशा-निर्देश निम्नवत हैं:

1. आर.बी.आई. विनियमित संस्थाओं (आर.ई.), उनके ऋण सेवा प्रदाता और डिजिटल ऋण ऐप के लिये सभी ऋण वितरण और पुनर्भुगतान केवल उधारकर्ता के बैंक खाते के बीच निष्पादित किये जाने की आवश्यकता है। इसमें किसी भी पूल अकाउंट, लोन सर्विस प्रोवाइडर या किसी तीसरे पक्ष के किसी भी पासथ्रू का हस्तक्षेप नहीं होगा।

2. क्रेडिट मध्यस्थता प्रक्रिया में ऋण सेवा प्रदाता को जो शुल्क/फीस देनी है उसका भुगतान केवल संस्थाओं द्वारा किया जाएगा न कि उधारकर्ता द्वारा।

3. ग्राहक की व्यक्तिगत जानकारी या उनसे जुड़े पूरे डेटा की सुरक्षा करना ऋण-प्रदाता की ज़िम्मेदारी होगी। कोई भी डिजिटल लेंडिंग कंपनी ग्राहकों की निजी जानकारी को खुद स्टोर नहीं करेगी। ऋण संविदा निष्पादित करने से पहले उधारकर्ता को एक मानकीकृत मुख्य तथ्य विवरण प्रदान किया जाना चाहिए।

4. ऋण-प्रदाता द्वारा एकत्र किया गया डेटा आवश्यकता आधारित होना चाहिए, उसका स्पष्ट ऑडिट ट्रेल्स हो और उसका उपयोग केवल उधारकर्ता की सहमति से ही किया जाए।

5. उधारकर्ता के मोबाइल फोन संसाधनों तक गैर-ज़रूरी पहुँच का प्रयास न किया जाए। उधारकर्ता की स्पष्ट सहमति से केवल ऑन-बोर्डिंग/के.वाई.सी. आवश्यकताओं के प्रयोजन के लिए कैमरा, माइक्रोफोन या अन्य सुविधा के लिए एकमुश्त पहुँच प्राप्त की जा सकती है। उधारकर्ता की ऑन-रिकॉर्ड स्पष्ट सहमति के बिना क्रेडिट सीमा में स्वचालित वृद्धि नहीं हो सकती है।

निष्कर्ष

जिस प्रकार भारत ने सॉफ्टवेयर तकनीक में अपनी वैश्विक काबिलियत को कायम किया है, उसी प्रकार डिजिटल तकनीक में वैश्विक दिग्गज बनने में भी हम पूर्णत: सक्षम हैं। इस लक्ष्य की प्राप्ति तभी सम्भव हो सकेगी, जब डिजिटल सुविधाओं की पहुँच सार्वभौमिक और सीमान्त समूहों व क्षेत्रों तक सुनिश्चित हो और देश की बहुसंख्यक आबादी डिजिटल तकनीकों के उपयोग में सक्षम हो। इसके लिए बहुआयामी अवसंरचना सुधारों के साथ ही कारगर नियामक नीतियों का प्रभावी क्रियान्वयन अत्यंत आवश्यक है ताकि देश में डिजिटल लेंडिंग जैसी प्रणालियों का बहुमुखी संवर्धन संभव हो सके। इस बात में कोई दो मत नहीं कि आने वाले समय में डिजिटल ऋण प्रणाली वैकल्पिक वित्तपोषण का एक सशक्त स्रोत बन कर उभरेगी। इस प्रणाली का सकारात्मक और अधिकतम उपयोग उठाने हेतु यह आवश्यक है कि डिजिटल ऋण-प्रदाता संस्थाएं उपलब्ध अवसरों का भरपूर लाभ तो उठाएं मगर साथ ही ग्राहक हितों का भी पूरा ध्यान रखें ताकि इस प्रणाली से संबद्ध चुनौतियों से प्रभावशाली ढंग से निपटा जा सके। डिजिटल ऋण प्रणाली के समक्ष आ रही विभिन्न चुनौतियों के समाधान में यदि भारत सफल होता है, तो यह डिजिटल तकनीक देश की आर्थिक प्रगति को नई गति प्रदान कर सकती है।

आंकड़ों के स्रोत

1 https://www.ceicdata.com/en/indicator/india/household-debt--of-nominal-gdp

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3 https://www.ceicdata.com/en/indicator/united-states/household-debt--of-nominal-gdp

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10 https://www.thehindu.com/business/rbis-modified-digital-lending-norms-to-come-in-effect-from-december-1/article66206533.ece

11 https://economictimes.indiatimes.com/topic/digital-lending

12 दृष्टि आई.ए.एस. की वेबसाईट, गूगल से रिडायरेक्टेड अन्य वेबसाइट आदि।

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BANK QUEST THEMES

The themes for forthcoming issues of "Bank Quest" are identified as:

1. October – December, 2023: Climate Risk & Sustainable Finance
2. January – March, 2024: Leveraging technology for effective credit appraisal
3. April – June, 2024: Risk Management in Banks – Beyond Regulations
4. July – September, 2024: Emerging trends in International Trade and Banking
5. October – December, 2024: Emerging opportunities for savings and investments
6. January – March, 2025: Cyber Risk Management

Digital Disruptions in the Indian Banking Sector - Opportunities and Challenges

Dr. Lakshmi Prasad Padhy*

Introduction

A strong, vibrant, resilient and well–functioning financial sector is a sine qua non for the growth and development of the economy. Banking is a subset of the economy. The core functions of the financial sector such as intermediation, payments, asset price discovery and risk transfer are undergoing a process of transformation across the globe. The Indian Banking Sector is not an exception. The Indian Banking Sector has experienced a transformative shift in recent years with the advent of digital disruption. Digital disruptions have permeated every aspect of society and the banking sector has been at the forefront of this transformation process. Traditional banking practices are being reshaped and new opportunities are emerging as a result of these digital disruptions. The rapid digitization of the Indian economy, fuelled by the government's push towards a cashless society and increased smart phone penetration, has created a fertile ground for digital disruption in the banking sector. Traditional brick-and-mortar banks are now competing with tech-savvy fintech start-ups, offering a wide array of digital services that are reshaping the industry. The convergence of technology and finance has paved the way for new business models, enhanced customer experiences and improved operational efficiency.

Today, huge digital disruption has become the norm in the banking domain. Deposits, payments or loans – the disruption pervades through the sector from top to bottom. Banks need to integrate their functionality with their existing systems or fully revamp them, or else they find themselves losing their customers and business as well in a highly competitive and dynamic environment.

Digital disruption

Digital disruption is the change that occurs when new digital technologies and business models affect the value proposition of existing goods and services. The rapid increase in the use of mobile devices for personal use and work has increased the potential for digital disruption across many industries.

Digital disruption is a transformation that is caused by emerging digital technologies and business models. The term 'disruption' is used as the emergence of these new digital products/services/businesses that disrupts the current market and causes the need for re-evaluation.

Generally, digital disruption happens after digital innovations, such as big data, machine learning, internet of things. Digital innovation then affects how customer expectations and behaviours evolve, causing organizations to shift how they create products and services, produce marketing material and evaluate feedback. This shift in digital strategy can occur on an individual, organizational, industry or societal level.

Digital disruption also drives innovation in a company and allows companies to exceed outdated standards and reach new heights in terms of service and product quality, productivity, efficiency and profitability.

Gartner defines digital disruption as "an effect

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that changes the fundamental expectations and behaviours in a culture, market, industry or process that is caused by, or expressed through, digital capabilities, channels or assets."

Disruption in commerce means a radical break from the existing processes in an industry. In the digital age, this sort of disruptive innovation usually comes from new internet-enabled business models that are posing problems to established industry structures. To maintain a competitive advantage, businesses and organizations are being forced to adopt these new operating practices, or face loss of business.

Digital disruption is the result of digital technology dramatically transforming traditional businesses and industries through innovation. It is also the opportunity for new businesses to emerge by using digital technology to create innovative products or services that compete with established businesses. Digital disruption transforms business model, shifts the focus to convenience, improves efficiency, develops business flexibility, offers opportunities for growth and increases customer satisfaction.

Digital disruption vs. Disruptive technology

The term digital disruption has become something of a truism in recent years and is often misrepresented to describe any product involving digital technology or the use of digitization to better compete against marketplace peers. It is often confused with disruptive technology, a term coined by Harvard Business School professor Clayton M. Christensen to describe a new technology that displaces an established technology.

There is also a difference between digital transformation and digital disruption. Digital disruption refers to the radical change and even dissolution of traditional business processes and models, while digital transformation describes a rather continuous process of change.

Literature Review

Digital disruption does not merely mean digitisation of an existing business model or its replacement with a digital alternative (Karim and Walter 2015). In this perspective, digital disruption refers to our understanding of what counts as meaningful, valuable and the right way of performing business practices, giving meaning to, or understanding of our business and work-life practices (Riemer et al 2015) and how people within that culture socially respond and innovate for themselves (Lindgren 2013). Digital disruption is "neutral and as with any kind of change, it brings opportunities as well as challenges" (Deloitte 2012). This means it can be comprehended and its impact managed both as a threat (negative) and an opportunity (positive) in a given context.

Digital disruption also offers new opportunities for the creation of innovative business model to compete with established businesses (Hirt and Willmott 2014). Digital disruption can facilitate better product experiences, building stronger customer relationships and bringing it all to market faster (McQuivey 2013). It enables new business or operating models such as Peer-to-peer product innovation or customer service. Management decisions could also be improved as algorithms can analyze large amount of information in quick time. According to Deloitte (2012) "understanding and awareness can help businesses fend off disruptions or indeed take advantage from it."

Bastid and Rao (2016) note bank model disruption and attribute this to incessant innovation accompanied by disruptive threats, with the risk of losing market share to Fintechs omnipresent, as over 73% of customers consume products from multiple platforms.

Mobile digital technologies (dig-techs) and social media are digitising bank value chains, concurrently responding to and shaping customer needs and expectations (Dedu and Nitescu, 2014).

Chrishti and Barberis (2016) concur and indicate that social media-inspired platforms significantly disrupt business models. Further, while blockchain has a persistently pervasive impact on large banks' models, the Fin-Techs' disruptive threat is incredibly high and has a radical impact on bank models.

Types of Digital Disruption

Functionality disruption

The pace of the transformation has left several financial institutions stuck with obsolete technology. Banking has taken a tangible shift towards a customer-centric platform-based model and banks must survive for their own sake.

Supply & Demand side disruption

When it comes to technological disruption, the supply side refers to technological developments while the demand side is about changes in consumer expectations of service. The supply side mainly includes factors like Application Programming Interfaces (APIs), Block chain Technology, Digital Currencies, Cloud Computing, and Smart phones. APIs are keys to seamless data sharing, which works behind Open Banking applications. Cloud computing is a process that involves a gamut of remote servers for the provision of IT services and data storage/ sharing. Smart phones have played a phenomenal role in making banking services personal in real terms, enabling customers to execute functions like payments, deposits, online shopping, and more. Digital Wallets and Mobile Banking have removed any practical need to visit a branch. Block chain technology has liberated financial services from the clutch of centralized authorities, while digital currencies have added another dimension to the prevalent financial ecosystem.

The demand-side driver is the greater service expectations of the customers today. Cutting-edge digital banking solutions have made customers used to higher speed, greater convenience, and simplified operations.

Digital Disruption – Seminal Changes in the Indian Banking Sector

The Indian banking sector is undergoing a profound transformation as digital disruptions reshape the way financial services are delivered and consumed. With the increasing adoption of digital technologies, the opportunities and challenges presented to the Indian banking industry have become more apparent than ever before. As traditional banking practices are being challenged by innovative digital solutions, it is crucial to explore the opportunities and challenges that this disruption brings to the Indian banking landscape and discuss the strategies to overcome the same.

Digital Disruption- Opportunities

- **Superior Customer Experience:** Digital disruptions enable banks to deliver enhanced customer experiences through convenient, personalized, and efficient services. Customers can perform a wide range of banking activities anytime, anywhere, using mobile banking apps, online portals, and self-service kiosks. Digital platforms allow for faster transaction processing, real-time updates, 24/7 availability, improving customer satisfaction and loyalty.
- **Accelerating Financial Inclusion:** Digital disruptions have opened up opportunities for financial inclusion by extending banking services to previously underserved segments of the population. This promotes economic empowerment, reduces the reliance on informal channels, and helps in bringing the unbanked population into the formal banking system.
- **Offering Financial Education and Empowerment:** Digital disruptions provide opportunities for banks to educate and empower customers through digital channels. Banks can offer online financial literacy programs, interactive tools, and educational content to enhance customers' financial

knowledge and decision-making capabilities leading to the overall financial well-being of individuals and society.

- **Streamlining Operational and Cost Efficiency:** Branchless banking and digital transactions significantly decrease the need for physical branches and associated overheads. Automated processes, such as digital on boarding, e-KYC (electronic Know Your Customer), and online loan applications, streamline operations, reduce paperwork, and improve efficiency thereby enabling banks to allocate resources more effectively and invest in innovative solutions.
- **Leveraging Data Analytics and Insights:** Digital disruptions generate vast amounts of data, which banks can leverage to gain valuable insights and improve decision-making. Advanced analytics, machine learning, and AI enable banks to analyze customer behaviour, identify trends, design targeted marketing campaigns, enhance risk assessment models, and create customized financial solutions that better meet customer needs.
- **Fostering Innovation, Cross-Selling and Up-Selling:** Digital disruptions foster innovation in the banking sector, leading to the development of new products and services. Digital disruptions enable banks to cross-sell and up-sell their products and services more effectively. By analyzing customer data and behaviour, banks can identify opportunities to offer relevant and tailored products and targeted loan or investment options to customers, thereby increasing customer engagement and revenue potential.
- **Facilitating Ecosystem Integration and Open Banking:** Digital disruptions facilitate ecosystem integration and open banking, allowing banks to collaborate with third-party service providers and share customer data securely through standardized APIs (Application Programming Interfaces). This integration creates opportunities for banks to expand their service offerings, offer value-added services, and create seamless customer experiences across different platforms.
- **Increasing Global Expansion and Market Access:** Digital disruptions enable banks to expand their reach beyond traditional geographical boundaries. Through digital platforms, banks can provide services to customers globally, facilitating cross-border transactions, international remittances and increase revenue potential for banks.
- **Encouraging Collaboration and Partnerships:** Digital disruptions encourage collaboration and partnership between traditional banks and fintech companies to leverage their technological expertise and innovation, allow banks to tap into new markets, offer innovative products, and deliver seamless customer experiences.

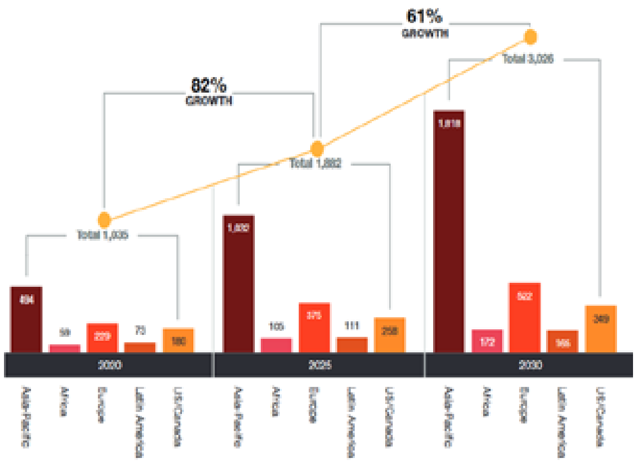
Opportunities specifically in the areas of Deposits, Lending, and Payment:

- **Deposits:** Digital platforms enable customers to open bank accounts online, eliminating the need for physical visits to branches. Through competitive interest rates and digital banking features, banks can incentivize customers to deposit their savings, promoting long-term customer relationships. Banks can use data analytics to identify specific customer segments and create targeted deposit products.
- **Lending:** Digital platforms enable customers to apply for loans online, streamline the loan

application process and reduce paperwork. This expedites the loan approval process, enhancing customer convenience and improving operational efficiency for banks. Digital disruptions allow banks to leverage non-traditional data sources (e.g., utility bills, social media activity) and advanced analytics to assess creditworthiness. This enables banks to offer loans to individuals with limited credit history, expanding the customer base and promoting financial inclusion. Most importantly, Digital disruptions have facilitated the growth of peer-to-peer lending platforms. Banks can explore partnerships or create their own P2P lending platforms to connect borrowers and lenders, enabling individuals to lend directly to others and diversify their lending portfolios. Banks can leverage digital platforms and technologies to offer supply chain financing solutions. By integrating with various stakeholders in the supply chain, banks can provide timely financing to small businesses and suppliers, promoting growth and economic development.

- **Payments:** Digital disruptions have popularized mobile wallets, providing customers with a convenient and secure way to make payments. Banks can develop their own mobile wallet solutions or collaborate with existing wallet providers to offer seamless and cashless payment options. Banks can leverage UPI to offer quick and secure payment services, allowing customers to transact seamlessly across different banks and payment service providers. The adoption of digital disruptions has accelerated the shift towards contactless payments using Near Field Communication (NFC) or QR code technology which offers customers a fast and secure payment experience. Digital disruptions have transformed the remittance landscape, enabling individuals to send and receive money across borders at lower costs and faster speeds. The India mobile payment market size reached US$ 510.1 Billion in 2022. Looking forward, IMARC Group expects the market to reach US$ 2,063.8 Billion by 2028, exhibiting a growth rate (CAGR) of 26.59% during 2023-2028.

Figure 1: Cashless Transactions



Note: Cashless transactions totals for 2025 and 2030 are projective

Source: PwC Strategy & Global Payments Model, 2021

- **Offering Wealth Management and Personalized Financial Planning Services:** Digital disruptions offer opportunities for banks to enhance their wealth management services. Banks can leverage robo-advisory platforms powered by artificial intelligence and machine learning to provide personalized investment advice based on customer preferences, risk appetite, and financial goals. Banks can offer digital asset management platforms that allow customers to track and manage their investments in real-time. Banks can provide digital tools and applications that help customers track their expenses, create budgets, and gain insights into their spending habits.

- **Strengthening Risk Management and Fraud Prevention Architecture:** Digital disruptions create opportunities for banks to enhance risk management and fraud prevention measures. Banks can leverage advanced analytics and AI technologies to analyze vast amounts of data for risk assessment. AI algorithms can detect fraudulent activities by analyzing vast amounts of transactional data in real-time. Machine learning techniques can identify patterns, anomalies, and potential fraud indicators, enabling banks to proactively prevent financial fraud. Digital disruptions enable the use of biometric authentication methods such as fingerprint, facial recognition, or iris scanning for secure and convenient access to banking services which strengthens security, mitigates identity theft risks, and enhances the customer experience. According to RBI's Trend and Progress of Banking in India-2021-22, 9102 bank frauds accounted a loss of Rs 60389 crore in 2021-22. During the period from April to September 2022, 5406 fraud cases with total amount of Rs 19485 crores were reported.
- **Enhancing Personalized Customer Engagement:** Banks can leverage customer data and analytics to deliver personalized offers, recommendations, and communication tailored to individual customer preferences. This enhances customer engagement and fosters long-term loyalty. Banks can utilize social media platforms to engage with customers, address their queries, provide timely updates, and offer personalized assistance. Further, Banks can leverage AI-powered chat bots and virtual assistants to provide round-the-clock customer support, address queries, and offer personalized recommendations. AI can analyze customer interactions; understand patterns, and thereby continuously enhancing the overall customer experience.
- **Encouraging Sustainable Banking:** Banks can capitalize on the growing demand for sustainable and environmentally friendly initiatives by offering green financing options. This can include financing for renewable energy projects, energy-efficient infrastructure, and sustainable businesses. Banks can integrate ESG (Environmental, Social, and Governance) factors into their risk assessment and lending processes.
- **Capitalizing on Voice Banking and Smart Assistants:** With the increasing adoption of smart speakers and voice assistants, banks can explore voice banking solutions. Customers can perform banking transactions, check account balances, and receive personalized financial advice through voice commands, making banking more accessible and convenient. Banks can develop AI-powered smart assistants that provide real-time financial information, answer customer queries, offer personalized financial management tips, help customers make informed financial decisions and improve their financial well-being.

  These opportunities discussed above reflect the evolving landscape of the Indian banking sector, driven by technological advancements, changing customer preferences, and the need for financial inclusion. By capitalizing on these opportunities, banks can foster innovation, cater to diverse customer segments, and contribute to the growth and development of the Indian economy.

Digital Disruptions-Challenges

Digital disruptions in the Indian banking sector have brought about numerous opportunities. However, along with the opportunities; digital disruption in Indian banking also brings forth significant challenges that need to be addressed. These challenges along with the strategies to overcome the same are discussed below:

- **Critical Concern for Data Security and Privacy:** Cyber threats such as hacking, identity theft, and phishing attacks pose significant risks. Banks must invest in robust cyber-security measures, including advanced encryption techniques, multi-factor authentication, and real-time monitoring systems. Compliance with data protection regulations, such as the General Data Protection Regulation (GDPR), is crucial to protect customer data and maintain their trust.
- **Emerging Digital Divide:** While India has made significant strides in digital adoption, there is still a substantial digital divide across the country. Many individuals, especially in rural and economically disadvantaged areas, lack access to smart phones, reliable internet connectivity, and digital literacy. Bridging this divide requires infrastructure development, including expanding broadband connectivity, reducing internet costs, and promoting digital literacy programs. Banks and the government need to collaborate to ensure that digital banking services reach all segments of society.
- **Robust Technological Infrastructure:** Banks need to upgrade their existing IT systems and networks to handle the increasing transaction volumes and ensure seamless integration across digital platforms. This may involve adopting cloud computing, modernizing core banking systems, and embracing emerging technologies such as artificial intelligence (AI) and blockchain. Investing in scalable and secure infrastructure is essential to deliver efficient and reliable digital banking services.
- **Gap in Regulatory Compliance:** Digital disruptions often outpace existing regulatory frameworks, creating challenges for banks and fintech companies to navigate the regulatory landscape. Financial regulations designed for traditional banking may not adequately address the unique risks and complexities of digital banking. It is crucial for regulators to adapt and develop clear guidelines that balance innovation and consumer protection. Banks and fintech players must remain updated on regulatory changes and proactively ensure compliance to avoid legal and reputational risks.
- **Building Customer Trust and Education:** Many individuals may have concerns about the security of digital banking, such as data breaches or unauthorized access to accounts. Technical glitches, system failures, or cyber attacks can disrupt banking services and erode customer trust. Banks must invest in robust customer education and awareness campaigns to address these concerns and adopt security measures, data protection policies which can help build trust in digital banking services. Banks need to ensure robust backup systems, disaster recovery plans, and regular testing to maintain operational resilience. Failure to adapt to evolving customer needs can result in customer attrition and loss of market share.
- **Compatibility of Legacy Systems and Processes:** Traditional banks in India often rely on legacy systems and processes, which can impede the seamless integration of digital solutions. Banks need to invest in agile, scalable, and modular systems that enable efficient digital operations while ensuring minimal disruption to customer services.
- **Staying Competitive in Digital Landscape:** Traditional banks face the challenge of adapting to changing customer preferences and expectations. To remain competitive, banks need to embrace digital transformations, collaborate with fintech players through partnerships or acquisitions, and offer unique value propositions such as personalized services or seamless customer experiences.

- **Navigating Regulatory and Compliance Complexity:** The regulatory environment surrounding digital banking is complex and continuously evolving. Banks need to navigate various regulations and compliance requirements, such as know-your-customer (KYC) norms, anti-money laundering (AML) regulations, and taxation laws. Adhering to these regulations can be challenging, especially when operating across different states or jurisdictions. Banks must allocate resources to stay abreast of regulatory changes and ensure compliance to mitigate legal and reputational risks.
- **Problem of Talent Acquisition and Skill Gap:** Digital disruptions demand a skilled workforce proficient in emerging technologies such as data analytics, AI, and block chain. Banks face challenges in attracting and retaining skilled professionals who can navigate the complexities of digital banking. Investment in talent development, up-skilling programs, and partnerships with educational institutions can help bridge the skill gap and build a future-ready workforce.
- **Vulnerability in Integration and Interoperability:** Achieving seamless integration and interoperability between different systems and platforms can be complex, requiring standardized protocols, APIs, and secure data exchange mechanisms. Collaboration and open banking initiatives can facilitate better integration, enabling banks to offer customers a wider range of services and experiences.
- **Need for Robust Risk Management Framework:** Operational risks, cyber-security risks, fraud risks, and technology-related risks are amplified in the digital banking landscape. Banks must implement robust risk management frameworks, including risk assessment, monitoring, and mitigation strategies, to safeguard against potential threats and vulnerabilities. Regular risk assessments, stress testing, and comprehensive incident response plans are essential components of effective risk management.

Addressing these challenges requires a collaborative effort among banks, fintech companies, regulators, and policymakers. By actively addressing concerns related to data security, digital divide, regulatory compliance, customer trust, technological infrastructure, legacy systems, and competition, the Indian banking sector can navigate the digital disruptions landscape and unlock the vast opportunities presented by the digital era.

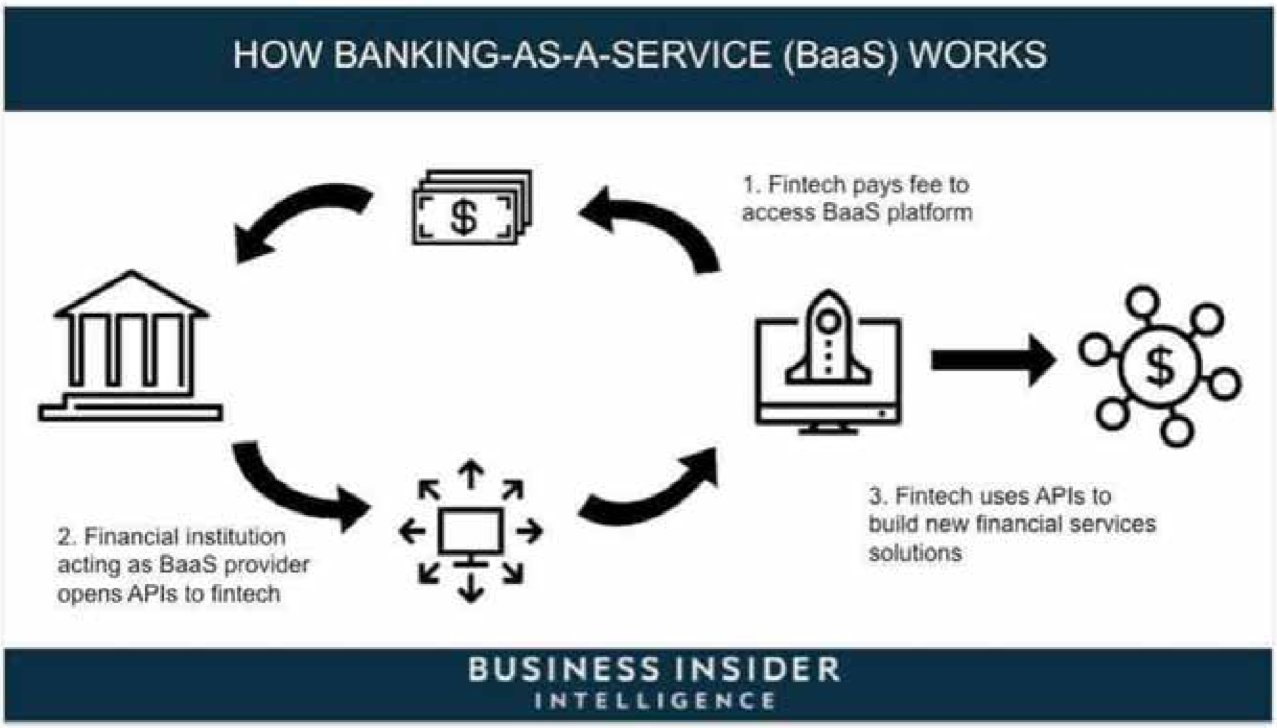
Implications of Fintech for the Banking Industry

Traditional banks are facing increased competition from Fintech companies, which are offering services that are more attractive to customers. Banks must adapt to this new reality by embracing digital technology, improving customer experience, and innovating their business models. One potential strategy for traditional banks is to partner with Fintech companies. Banks can collaborate with Fintech firms to offer innovative products and services, such as digital wallets, robo-advisors, and peer-to-peer lending platforms. By partnering with Fintech companies, traditional banks can leverage their existing customer base and brand recognition, while benefiting from the agility and innovation of Fintech start-ups.

Another strategy for traditional banks is to create their own digital offerings. Banks can invest in developing their own digital platforms that offer similar services to those offered by Fintech companies. This strategy can help banks to retain their existing customer base, while attracting new customers to the convenience and efficiency of digital banking.

Large technology companies (BigTech) which have entered into provision of financial services could potentially be another source of disruption to the financial system. The big-techs also pose concerns related to competition, data protection, data sharing and operational resilience of critical services in situations where Banks and NBFCs utilise the services of big tech companies. The Reserve Bank should issue suitable guidelines and measures to make the digital lending ecosystem safe and sound while enhancing customer protection and encouraging innovation.

Figure 2: BaaS – Banking as a Service: A model that facilitates a symbiotic relationship between banks and fin techs



Source: Business Insider India

The fintech industry is constantly evolving, marked by significant developments in technology and changes in consumer behaviour. The Year-2023 is set to witness many important trends in digital banking and mobile payments, AI and machine learning, block chain, cyber security, fraud prevention, open banking and API integration. These trends have the potential to transform the financial industry and provide more personalised, convenient,

and secure services to customers. The Year-2023 is going to be a watershed year for the dynamic evolution of digital banking and finance in the country and the world as well.

Way Forward

The road ahead for digital disruption in the banking industry is exciting and holds tremendous potential for innovation and transformation. Open banking initiatives and APIs allow banks to collaborate with fintech firms, third-party service providers, and developers to create innovative solutions. Banks can share customer data securely, enabling seamless integration of services, enhancing customer experiences, and fostering innovation.

Banks can explore block chain-based payment systems to enhance efficiency and reduce settlement times. Block chain-based smart contracts can automate and streamline processes such as loan agreements, trade finance, and supply chain financing. Banks can develop digital solutions and frameworks to ensure compliance with evolving data protection and privacy regulations.

Digital disruptions enable banks to leverage Aadhaar-based eKYC (electronic Know Your Customer) processes. This allows for remote customer verification and eliminates the need for physical document submission, enhancing customer convenience and reducing operational costs.

Digital disruptions enable the development of online microfinance platforms that provide financial services to underserved segments such as micro-entrepreneurs and small businesses. Digital disruptions provide opportunities for banks to integrate agri-tech solutions into their operations. This includes leveraging technologies like remote sensing, satellite imaging, and IoT (Internet of Things) for crop monitoring, weather forecasting, and smart farming practices. Banks can develop Farmer-Focused Digital Platforms that cater specifically to the needs of farmers, providing access to financial services, market information, weather updates, and crop insurance.

The future of digital disruption in Indian banking holds immense potential to revolutionize banking services, reach underserved populations, and drive economic growth across the country. Through proactive adaptation, collaboration, and a steadfast commitment to innovation can Indian banks truly harness the potential of digital disruption and navigate the path to a digitally empowered banking sector.

Conclusion

The opportunities demonstrate the transformative potential of digital disruptions in the Indian banking sector. By embracing digital technologies like open banking, artificial intelligence, and block chain, along with robust cyber security measures, collaborating with fintech players, and leveraging data-driven insights, banks can enhance customer experiences, drive financial inclusion, streamline operations, tap into new markets to stay ahead in the dynamic and competitive banking landscape. By actively addressing concerns related to data security, digital divide, regulatory compliance, customer trust, technological infrastructure, legacy systems, and competition, the Indian banking sector can navigate the digital disruptions landscape and unlock the vast opportunities offered by the digital era. Banks need to embrace a culture of innovation, invest in technology infrastructure, nurture talent, collaborate with stakeholders, continuously monitor and adapt to evolving customer expectations and regulatory requirements to drive sustainable economic growth and create a future-ready banking ecosystem that serves the needs of all customers and enhance the well-being of millions of Indians.

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Green Bonds - Role and scope in India's financial and fiscal landscape

Dr. Satyendra Kumar*

C.A. Lalit Kundalia**

Abstract

India's financial and fiscal landscape is rapidly changing and evolving. The Government has taken several steps to reduce the country's fiscal deficit. The introduction of green bonds has been a major development in this landscape, providing an innovative way to finance green projects. Green bonds are debt instruments that are issued to finance projects that have a positive environmental impact. They are designed to encourage investments in renewable energy, energy efficiency, sustainable agriculture and other projects that promote sustainability. The Indian Government has taken a number of steps to promote green bonds, including the launch of the Green Bond Market in India in 2015. The Government's efforts to promote green bonds have been successful in encouraging investments in green projects and have helped to create a more sustainable financial and fiscal landscape in India.

This paper examines the role and scope of green bonds in India's financial and fiscal landscape. It discusses the various types of green bonds available in India, the regulatory framework governing their issuance and the potential benefits of investing in green bonds. The paper also highlights the challenges associated with green bonds in India and suggests measures to promote their growth. The paper concludes by arguing that green bonds have the potential to play an important role in India's financial and fiscal landscape.

Introduction

In India, the financial and fiscal landscape has the potential to benefit greatly from the introduction of green finance solutions such as green bonds. They can provide an alternative method of financing long-term sustainable projects while continuing to serve their traditional role of promoting economic development. They are becoming more popular as an investment option for individuals and institutions looking to invest in environmentally responsible projects. In India, green bonds have been gaining traction in recent years as the country looks to reduce its carbon footprint and transition to a more sustainable economy.

What are Green Bonds?

Green bonds are debt instruments that raise capital to finance environmental or climate-related projects. While green bonds are similar to conventional bonds as they have a fixed or variable interest rate, they differ since they are specifically designated for financing or refinancing environmental projects that have positive effects on the environment or the climate such as the use of renewable energy, energy-efficient transportation, clean energy, sustainable water management and the reduction of greenhouse gas emissions. They are issued by Government, Corporations or International Development Banks.

Types of Green Bonds

Green bonds are defined as debt instruments used to finance projects that have positive environmental and/or climate impact. These bonds are designed to promote the transition to a low-carbon and climate-resilient economy. Green bonds come in a variety of forms, including:

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Table 1: Types of Green Bonds		
Sr. No.	**Name of Green Bonds**	**Purpose**
1	Climate Change Bonds	These bonds are issued to fund projects that focus on mitigating climate change. E.g. renewable energy and energy efficiency projects.
2	Renewable Energy Bonds	These bonds are issued to finance projects that create and/or use renewable energy sources. E.g. wind, solar and hydroelectric power.
3	Energy Efficiency Bonds	These bonds are issued to finance projects that increase energy efficiency and reduce energy consumption. E.g. building retrofits and upgrades to equipment and appliances.
4	Social or Sustainable Development Bonds	These bonds are issued to finance projects that promote sustainable development such as projects that create jobs, reduce poverty and improve public health. E.g. affordable housing, education and healthcare.
5	Green Infrastructure Bonds	These bonds are issued to finance projects that promote green infrastructure, such as projects that protect natural resources and ecosystems. E.g. urban green spaces, reforestation and water conservation projects.
6	Natural Resources Bonds	These bonds are issued to finance projects that promote the conservation and sustainable use of natural resources. E.g. sustainable forestry management, reforestation, rehabilitation of mined areas and the development of clean energy initiatives.
7	Project-linked bonds	These bonds are linked to specific projects, such as the construction of a wind farm or the development of a public transportation system. E.g. light rail or bus rapid transit system.
8	Asset-linked bonds	These bonds are linked to a portfolio of assets such as a group of wind turbines, a fleet of electric buses, electric vehicle charging stations or construction of a green building.
9	Corporate green bonds	These bonds are issued by companies to finance their own green projects or to refinance existing projects. For e.g. Bonds issued by a major car manufacturer to finance the development and production of electric vehicles (EVs) and related infrastructure.
10	Sovereign Green bonds	These bonds are issued by National Government to finance green projects such as renewable energy, sustainable infrastructure and climate change adaptation.
11	Green bond funds	These are funds that invest in a diversified portfolio of green bonds, enabling investors to gain exposure to the green bond market without having to buy individual bonds. E.g. fund that invests primarily in bonds issued by companies in the renewable energy sector such as solar and wind power companies.
Note: It's important to note that different organizations and countries may have different definitions and criteria for what constitutes a green bond.		

Role and Importance of Green Bonds in India's Financial and Fiscal Landscape

The primary role of green bonds in India is to finance or refinance green or climate-related projects. Additionally, they can be used to raise funds for renewable energy projects, clean transportation projects, eco-friendly farming projects and other environmental infrastructure projects. Green bonds also play a role in encouraging Public-Private Partnerships (PPPs) as well as providing incentives to corporate entities to invest in green initiatives. Furthermore, green bonds could potentially lead to a more structured and focused approach to green finance.

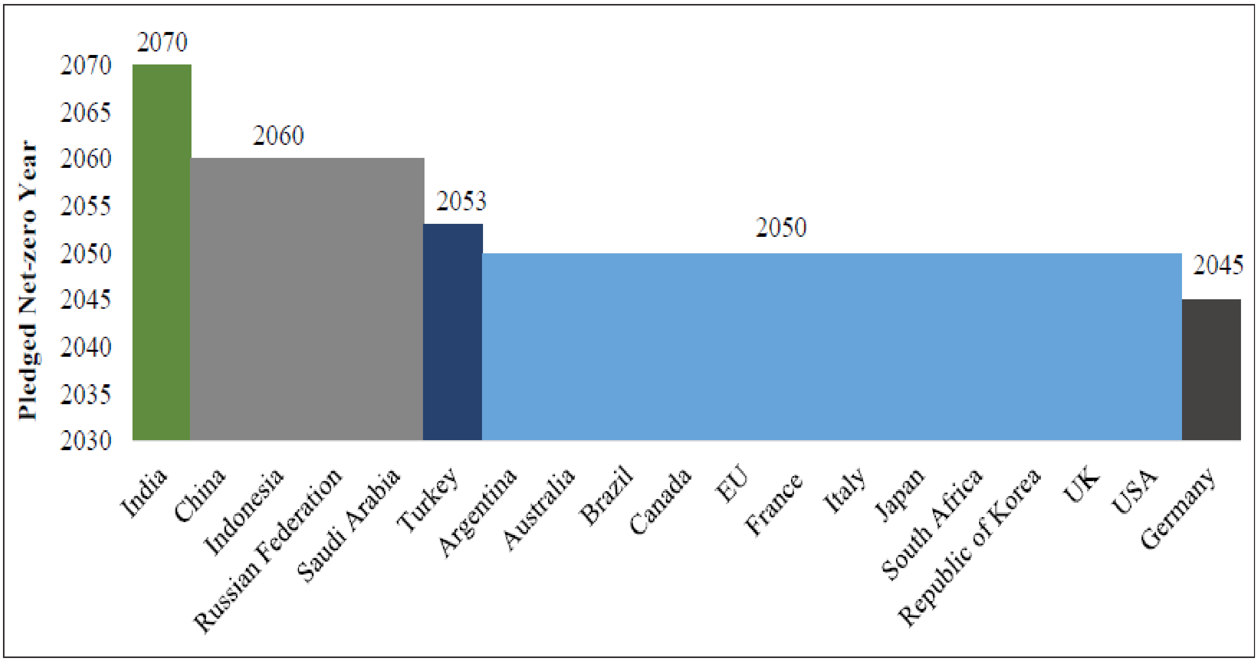
The Government of India has been actively promoting the use of green bonds in the country. In 2015, the Indian Government launched the Green Bond Scheme, which provides tax incentives to companies issuing green bonds. Green bonds are an important tool in India's financial and fiscal landscape as they are considered as an important source of capital for financing green projects. The Government has also set up the Green Bond Fund which provides grants to green projects and the Green Infrastructure Fund, which provides funds to green infrastructure projects. The role of green bonds in India's financial and fiscal landscape is expected to continue to grow in the future. Green bonds are important for India for several reasons:

Table 2: Role and Importance of Green Bonds in India

Sr No.	Particulars	Details
1	Climate change	India is one of the countries, being most vulnerable to the impacts of climate change, including rising sea levels, extreme weather events and crop failures. Green bonds can help finance projects that mitigate these impacts and promote sustainable development.
2	Renewable energy	India has set a target to increase its renewable energy capacity to 175 GW by 2022 and green bonds can help finance this transition to cleaner energy sources.
3	Infrastructure	India is in the process of expanding its infrastructure and green bonds can help ensure that this infrastructure is built in a sustainable and environmentally responsible way.
4	Job creation	Investing in green projects can create jobs in areas such as renewable energy, energy efficiency and sustainable transportation.
5	Access to finance	Green bonds can provide an additional source of funding for Indian companies, Municipal Corporations and Government agencies looking to finance environmentally beneficial projects.
6	Attracting foreign investment	Green bonds can help to attract foreign investment from investors looking to invest in environmentally responsible projects.
7	Improving Global Rating	By issuing green bonds, a country can demonstrate its commitment to sustainable development, which can have a positive impact on its credit rating. This can make it easier for the country to access capital markets and secure lower interest rates on its debt.

8	Diversifying the investor base	Green bonds can also help to diversify the investor base by attracting socially responsible investors that focus on Environmental, Social and Governance (ESG) criteria. This way corporations and even the country can leverage the 'green halo effect'. The effect allows us to expect that if a company's environmental CSR activity receives higher support from the consumers, it is less likely for the consumers to avoid advertisements endorsed by the same company.

Figure 1: Pledged Net-Zero Year[1]



Source: Emissions Gap Report 2022, UNEP

In summary, green bonds can play a significant role in helping India to address the challenges of climate change, promote sustainable development and create jobs and economic opportunities. India has consistently engaged in demonstrating global leadership towards adopting various measures and ensuring a low-emission growth pathway with a commitment to the net-zero emissions goal by 2070.

Objectives

The objectives of the study are:

1. To analyze role and scope of Green Bonds in India's financial and fiscal landscape.
2. To identify the future growth opportunities and challenges for green bonds in India.
3. To discuss global green bonds scenario and to provide a comparative analysis of global growth vs. growth in India.

[1]Ministry of Finance, Government of india. Economic Survey - Climate Change and Environment. India Budget. [Online] Ministry of Finance, January 28, 2023. [Cited: February 01, 2023.] https://www.indiabudget.gov.in/ economicsurvey/doc/eschapter/echap07.pdf.

Research Methodology

The study undertook descriptive research and used mixed approaches i.e. Primary & Secondary research method to fulfil the research objectives. The study uses convenience sampling and a sample size of 20 seasoned industry executives, of which most associated to banking or academics. The primary data collection have been done through google form link. The survey questionnaires has been developed based on an extensive review of the literature. The study seeks to understand the “Role and scope of Green Bonds in India’s financial and fiscal landscape” based on the banking experience of senior officials through a five point Likert scale in terms degrees of agreement or disagreement i.e. (i) strongly disagree (ii) disagree (iii) neutral (iv) agree (v) strongly agree, where a value of 1 expresses strongly disagree and a value of 5 expresses strongly agree, to rate the banks’ seasoned industry executive’s opinions. The 10 statements related with Green Bonds are being identified to understand the “Role and scope of Green Bonds in India’s financial and fiscal landscape”. The statistical technique i.e. frequency analysis was used to fulfil the objectives of the study.

Data Analysis and Findings

Figure 2: Pictorial Presentation (Pie Charts) of Secior Bankers' Opinions

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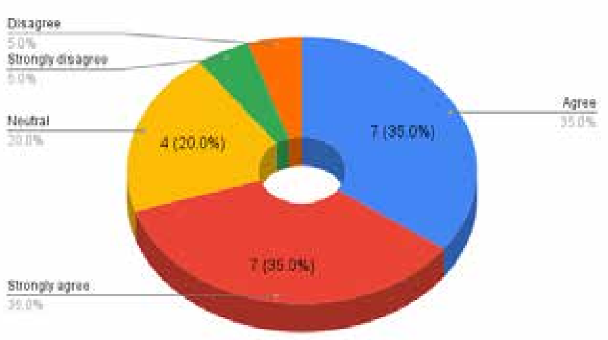
<tr>
<td>
</td>
<td>There is faith in Indian culture of being sustainably innovative and respondents agree (70%) that Green Bonds can prove to be one of the major reason for future capital inflows in the country.</td>
</tr>
<tr>
<td colspan="2">1. Green bonds are debt instrument (like normal bonds) to raise funds for climate and environmental projects. Green bonds forms part of ESG (Environmental, Social, Governance) investing and by looking at the many benefits of the Green Bonds, it is surely going to provide an additional source of long term sustainable financing in India.</td>
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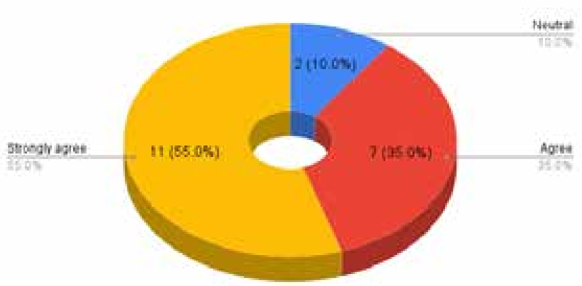
<td>
</td>
<td>As per the responses, it can be inferred that most of the respondents (90%) are of unanimous view that Green Bonds will provide an additional source of long term financing in India.</td>
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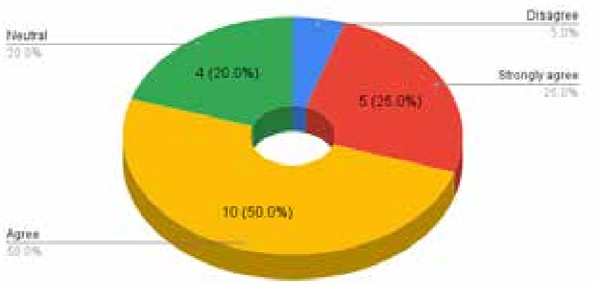
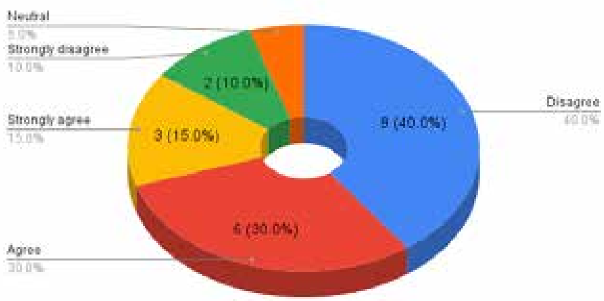
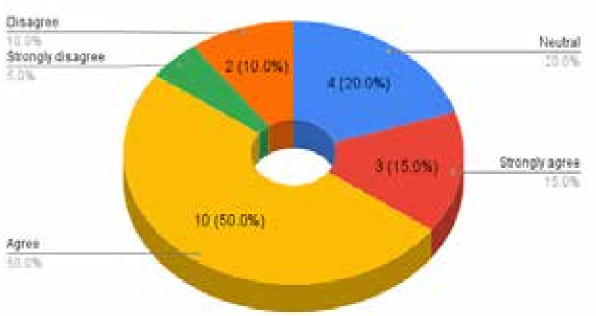
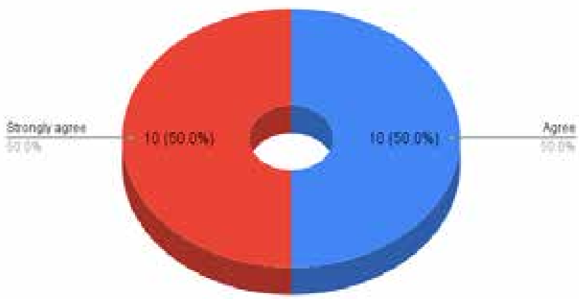
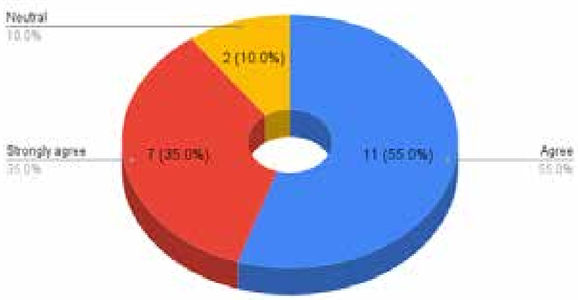
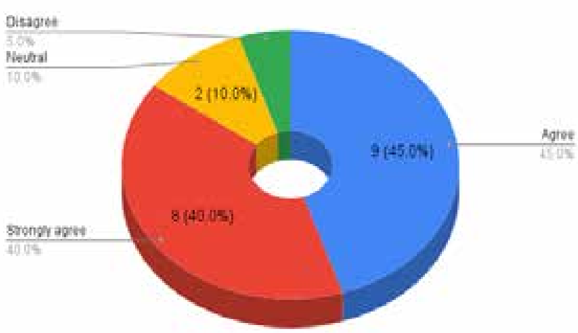
<tr><td colspan="2">2. Global green initiatives such as the Paris Agreement on Climate Change and the UN Sustainable Development Goals have helped the expansion of Green Bonds markets In India.</td></tr>
<tr><td>
</td><td>3/4th of the respondents agree that these initiatives have helped the expansion of green bonds market in India.</td></tr>
<tr><td colspan="2">3. As of mid-June 2022, 25 nations have issued Sovereign Green Bonds worth US$ 227 billion, according to the research compiled by Climate Bonds Initiative. The Union Ministry of Finance has announced that it would issue Sovereign Green Bonds worth INR 16,000 crore as part of its October-March (H2FY23) borrowing respondents. Are we doing enough to promote Green Bonds markets in India?</td></tr>
<tr><td>
</td><td>With almost 50% disagreeing to the statement, the responses hint that more efforts are required to promote Green Bonds markets in India.</td></tr>
<tr><td colspan="2">4. The Green Bond issuance in India in 2021 exceeded US$ 6.5 billion. Yet they contributed only 0.7% to India's Bond Market and 1.4% to the global green bond market. Inspite of such meager contribution, Green bonds will play a significant role for achieving India's net carbon neutrality target by 2070.</td></tr>
<tr><td>
</td><td>A good proportion of respondents are of the opinion that Green bonds will play a significant role for achieving India's net carbon neutrality target by 2070.</td></tr>
</table>

<table>
<tr><td colspan="2">5. Greenwashing (Refers to the practice of making false or misleading claims about the green credentials of a company or a project) makes it difficult to quantify the benefits of green projects and remains a major challenge for the market in green bonds and other sustainable investments.</td></tr>
<tr><td>
</td><td>There's a unanimous opinion of the respondents about the greenwashing issues the world at large has acknowledged. Thus, reporting models should be calibrated in such a way to be able to tackle with possible greenwashing.</td></tr>
<tr><td colspan="2">6. Not having any global standard or recognised legal definition of Green Bonds makes it difficult to identify the authenticity of Green Bonds, increasing the scepticism around the effectiveness of such bonds.</td></tr>
<tr><td>
</td><td>Most of the respondents (90%) echo the same view about non-availability of global standard or recognised legal definition of Green Bonds.</td></tr>
<tr><td colspan="2">7. The Green Bond Market has grown rapidly during the last decade. However, it has not realized its true potential and yet to reach the scale necessary to address the challenges posed by the imminent climate change and the need for enhanced green finance.</td></tr>
<tr><td>
</td><td>Most of respondents (85%) acknowledge that green finance market needs more efforts from the regulators and the Government for the intention for its existence to be justified.</td></tr>
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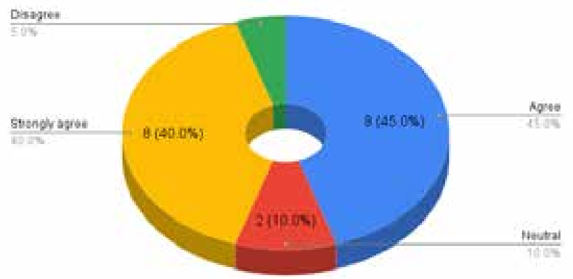
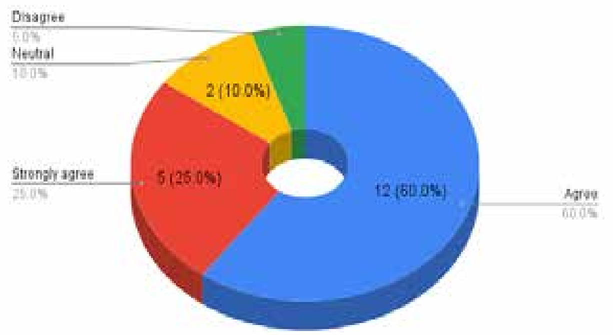
<tr><td colspan="2">8. Addressing the concerns like greenwashing timely and making them more lucrative for investors, can attract private investments in green projects, which may help in expansion of Green Bond Market in India?</td></tr>
<tr><td>
</td><td>We can possibly infer from the responses (85%) that to bring in trust factor, pro-active work should be done to address issues like greenwashing.</td></tr>
<tr><td colspan="2">9. For a country like India, success of Green Bonds is a distant dream, for its Bond Market itself isn't mature enough. As a first step, the bond market has to be strengthened (both primary and secondary) with regulations and services aligned to our investors need.</td></tr>
<tr><td>
</td><td>A strong and matured bond market is the need of the hour (85%) and the first step in shaping a healthy green bond market.</td></tr>
<tr><td colspan="2">10. India can be a game-changer for the International Green Bonds market for it has always proved to be sustainably innovative. Green Bonds can prove to be one of the major reasons for future capital inflows in the country and reflecting the green commitment of the land.</td></tr>
</table>

Future Growth and Scope of Green Bonds in India's Financial and Fiscal Landscape

In terms of their scope, green bonds can be used to finance projects across the country in both rural and urban areas. They can help to create green jobs and promote green growth, which are essential for the development of India's economy. Additionally, green bonds can be used for various types of investment activities including research and development, capacity building and project implementation. The Government of India is committed to support the growth of green investments and the use of green bonds is seen as a key part of this strategy.

As more companies and investors become aware of the benefits of green bonds, the market for these bonds is likely to grow. Green bonds can help to fund projects that reduce carbon emissions, promote a more sustainable economy, attract foreign capital and promote the development of green technologies. In addition, green bonds can help to reduce the cost of financing green projects and provide a way to raise funds for green investments, create jobs, spur economic growth, create a more sustainable financial and fiscal landscape in India and increase the visibility of green projects, which can help to attract more investors and increase the overall demand for green investments.

Lastly, it is expected that green bonds can help India achieve its climate change goals as outlined in the Paris Agreement. The future growth of green bonds in India is expected to be positive for several reasons:

Table 3: Future growth of green bond in India

Sr. No.	Particulars	Details
1	Government support	The Indian Government has shown support for the development of the green bond market in India through policy and regulatory measures. This will continue to drive the growth of the market. Issuance of sovereign green bonds by the Government provides confidence to the public in similar bonds being issued by other corporations and institutions and also the issuers feel confident of raising funds through this medium. For example, just after the Indian Government's maiden sovereign green bond issuance, SBI has announced to raise $500 million via green bonds in India.
2	Increasing demand for renewable energy	India's ambitious renewable energy targets are expected to drive increased demand for green bonds as a means of financing renewable energy projects.
3	Growing awareness	As awareness of the benefits of green bonds grows among investors and issuers, more companies and organizations are likely to consider issuing green bonds.
4	Attracting foreign investment	India's growing green bond market can help attract foreign investment from investors looking to invest in environmentally responsible projects.
5	Impact investing	With increasing interest in impact investing, green bonds can be an attractive option for investors looking to align their investments with their values.
6	Increasingly stringent environmental regulations	As India becomes more serious about addressing environmental issues, more stringent regulations will drive the need for more green investments, leading to increased demand for green bonds.
Note: - It's important to note that the growth of the green bond market in India will also depend on other factors such as the overall economic conditions, investor sentiment and competition from other forms of financing.		

Future Growth Opportunities and Challenges for Green Bonds in India[2]

India is one of the fastest-growing economies in the world and is expected to become the third-largest economy by 2030. This provides a great opportunity for green bonds to be used to finance projects that have a positive environmental impact. It also has a large population and a growing middle class, which provides a large potential market for green bonds.

[2]RBI. Green Finance in India:Progress and Challenges, RBI Bulletin January 2021. RBI. [Online] RBI, January 31, 2021. [Cited: January 15, 2023.] https://rbidocs.rbi.org.in/rdocs/Bulletin/PDFs /04AR_2101202185 D9B6905ADD465CB7DD280B88266F77.PDF.

Table 4: Future Growth Opportunities and Challenges for Green Bonds In India		
Sr. No.	**Opportunities**	**Challenges**
1	Expansion of Green Bond Market: India has the potential to become a major player in the global green bond market. The Government can create a conducive environment for the growth of green bonds by providing tax incentives, creating a supportive regulatory framework and encouraging public-private partnerships.	Increasing Investor Awareness: Despite the growing popularity of green bonds in India, there is still lack of awareness among investors about the benefits of investing in green bonds. This is due to the fact that green bonds are relatively new in India and there is lack of education and information about them.
2	Financing Renewable Energy Projects: India has a large renewable energy sector, which provides an opportunity for green bonds to be used to finance projects in this sector. India also has ambitious plans to increase its renewable energy capacity. Green bonds can be used to finance these projects, which will help the country meet its renewable energy targets.	Developing a Robust Regulatory Framework: The Indian Government has taken some steps to promote green bonds such as introducing tax incentives for green bonds and setting up a green bond exchange. However, there is still a need for a more robust regulatory framework to ensure that green bonds are issued in a transparent and responsible manner.
3	Financing Sustainable Infrastructure Projects: India is in the process of building a large number of infrastructure projects. Green bonds can be used to finance these projects, which will help the country meet its sustainability goals.	Improving Access to Capital: In India, access to capital remains a challenge. This is due to the fact that green bonds are still relatively new and there is a lack of liquidity & lack of tax incentives in the market, which makes it difficult for investors to trade and invest in them.
4	Financing Sustainable Agriculture Projects: India is in the process of modernizing its agricultural sector. Green bonds can be used to finance sustainable agriculture projects, which will help the country meet its sustainability goals.	Developing a Standardized Framework: There is a need for a standardized framework for green bonds in India, which ensure issuing them in a consistent and transparent manner. Lack of standardization makes it difficult for investors to compare different green bonds.
5	Financing Sustainable Transport Projects: India is in the process of modernizing its transport sector. Green bonds can be used to finance sustainable transport projects, which will help in achieving the sustainability goals.	Increasing Transparency: Lack of transparency in the green bond market, makes it difficult for investors to assess the environmental impact of the projects they are investing in. Transparency is essential for the success of green bonds in India. This includes providing investors with clear and accurate information about the projects that are being funded by green bonds. Greenwashing, also called "green sheen" is also a big challenge. It refers to a form of advertising or marketing spin in which green marketing are deceptively used to persuade the public that an organization's products, aims and policies are environmental-friendly.
6	Financing Sustainable Water Projects, Waste Management Projects and Forestry Projects: India is in the process of modernizing its water sector, Waste Management sector and Forestry sector. Green bonds can be used to finance sustainable water projects, waste management projects and forestry projects.	Developing a Sustainable Market: The green bond market is still relatively small compared to the overall bond market and there is a lack of liquidity in the market. This can make it difficult for investors to buy and sell green bonds. The Indian Government needs to take steps to ensure that the green bond market is sustainable in the long-term. This includes providing incentives for investors to invest in green bonds and ensuring that the projects funded by green bonds are of high quality.

Global Green Bonds scenario

The global green bond market has been growing rapidly in recent years and it is considered to be one of the fastest-growing segments of the fixed-income market. With the growing focus on the environmental sustainability of projects, green bonds have become widely accepted as an instrument to raise funds to support climate and environmental projects and command a relatively lower cost of capital vis-à-vis regular bonds.

Major countries that resorted to green bonds to raise funds include the UK, France, Germany the USA and China.

- In the United States, Green bonds have been issued by Municipal Corporations, State Government and other Corporations, as well as by International Organizations such as the World Bank.
- In Europe, green bond issuance has been led by France, Germany and the United Kingdom, with the European Investment Bank being one of the largest issuers of green bonds.
- In China, green bond issuance has been growing rapidly, driven in part by the Government's ambitious renewable energy targets and the need to finance large-scale infrastructure projects.
- In Canada and Australia, green bond issuance has been relatively limited so far, but the market is expected to grow as more Canadian and Australian issuers look to finance environmentally beneficial projects.

Overall, green bond market is becoming more mature and globalized, with a growing number of countries and regions issuing green bonds. This trend is expected to continue in the future as the need for financing environmentally beneficial projects becomes more pressing.

The Global Growth of Green Bonds vs. Growth in India: Comparative Analysis

Green bonds are becoming increasingly popular as investors look for ways to invest in projects that have a positive environmental impact. Overall, the global and Indian green bond markets have both experienced rapid growth in recent years. This growth has been driven by increased investor demand for green investments, as well as increased issuance from Government and corporations.

Table 5: Comparative Analysis: Global Growth of Green Bonds Vs. Growth in India

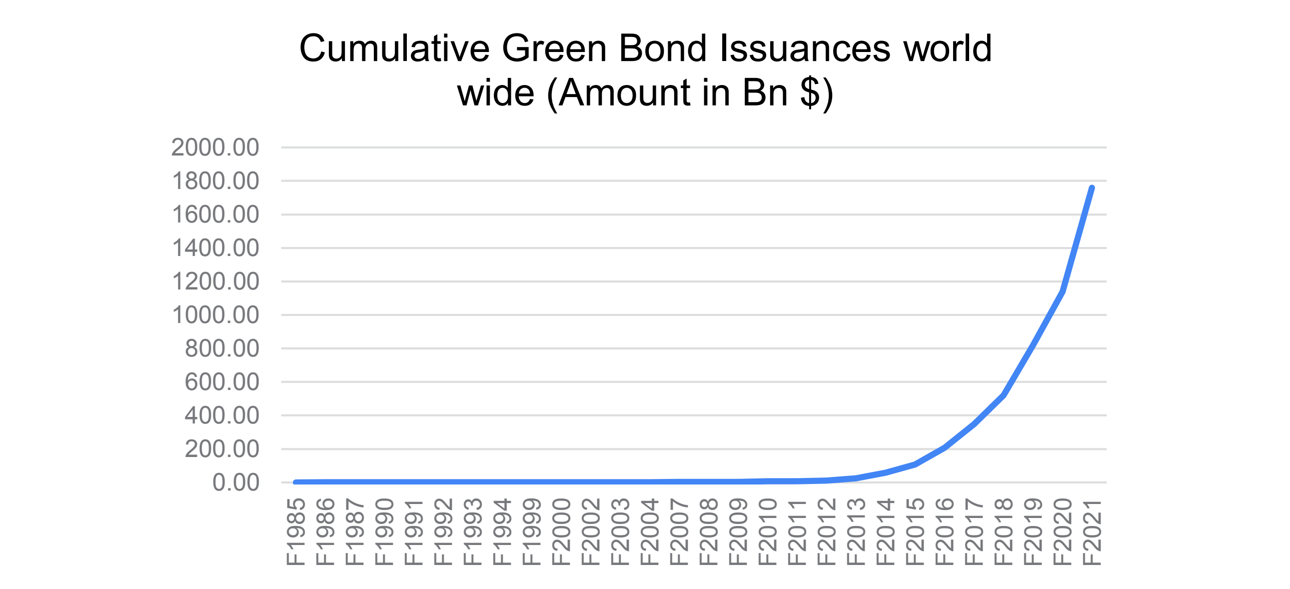
Sr No.	Global Growth	Growth in India
1	The global green bond market has grown rapidly in recent years. According to the Climate Bonds Initiative, the global green bond market grew from $37 billion in 2013 to $167 billion in 2018. This represents a CAGR of over 40%. This growth has been driven by increased investors demand for green investments, as well as increased issuance from Government and corporations.	The green bond market in India has also grown rapidly in recent years. According to the Climate Bonds Initiative, the Indian green bond market grew from $1.2 billion in 2013 to $7.2 billion in 2018. This represents a CAGR of over 50%. This growth has been driven by increased investor demand for green investments, as well as increased issuance from Government and corporations.
2	IMF data indicates that green bonds of value around US$ 620 billion were issued across the world in the year 2021, in which countries issued green bonds of value US$ 587.7 billion and international organisations issued bonds of value US$ 32.3 billion.	As per SEBI's data on green debt securities, during the period of 2017 to September 2022, 15 Indian corporates have issued green bonds of value Rs. 4,539 crore. Most of these are related to renewable energy generation, while one is slated to be used for the tertiary treatment of wastewater.

3	Emerging market green bond issuance is expected to grow to more than USD 100 billion by 2023, according to a report from Amundi and the International Finance Corporation (IFC) (Amundi & IFC, 2021).	India has made its debut in Sovereign Green Bonds in the year 2023 with the maiden Sovereign Green Bond (SGrB) auction of Rs. 8,000 crore held on 25.01.2023 got oversubscribed owing to robust demand from various market participants, primarily banks.[3]
Indian Government initiatives for Sovereign Green Bonds: The final Sovereign Green Bonds framework[4] of India has been issued, which has been designed to comply with the components and key recommendations of the International Capital Market Association (ICMA) Green Bond Principles (2021). A Green Finance working committee has also been set up to oversee and validate key decisions on the issuance of Sovereign green bonds, which has the mandate to select the projects for allocation of proceeds, do a time-bound review of the allocation and carry out annual reporting along with an impact assessment of the proceeds from sovereign green bonds issued.[5]		

Pointers from IMF Data

- Green bonds have been issued since 1985 (US and Norway) and have been growing with a CAGR of 47% in the last 27 years and a CAGR of 77% in the last decade.[6]

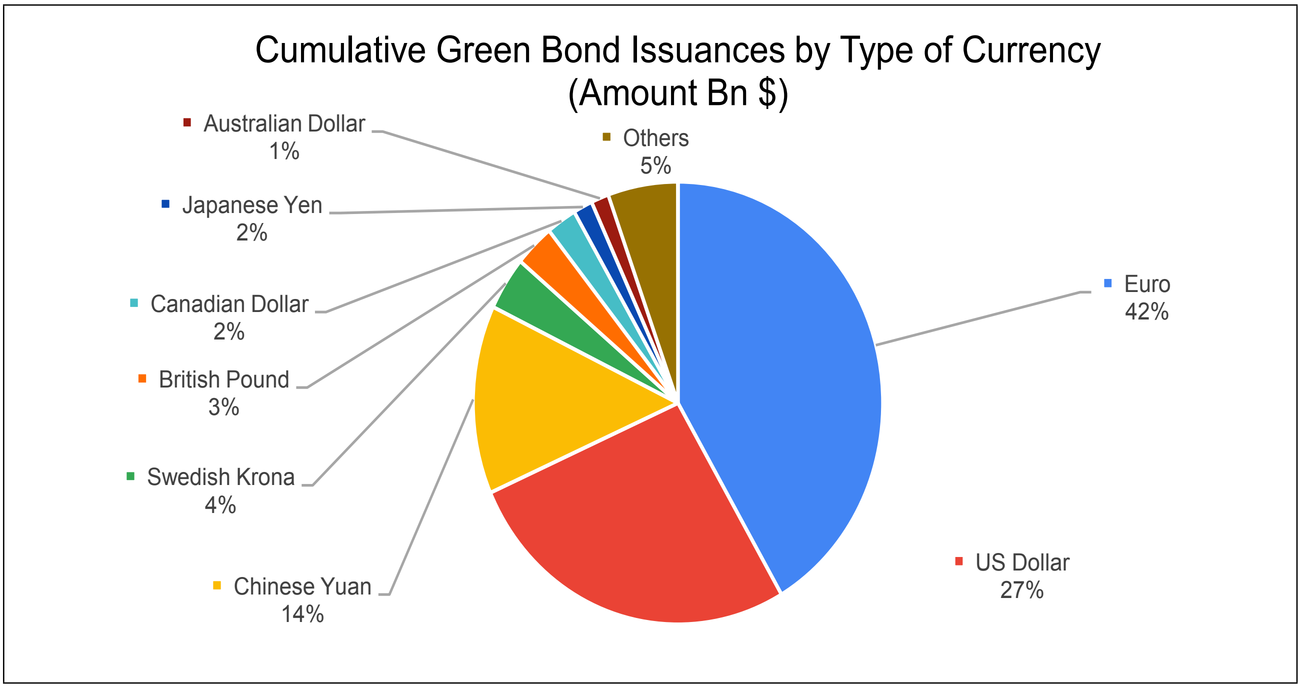
Figure 4: World Wide Cumulative Green Bond Issuances (1985-2021)



- Till 2021, for most of the green bonds issuance have been in Euro and US Dollars followed by Chinese Yuan. Only $3.15 bn worth of green bond issuance had happened in Indian Rupee which is approx. 0.18 %.

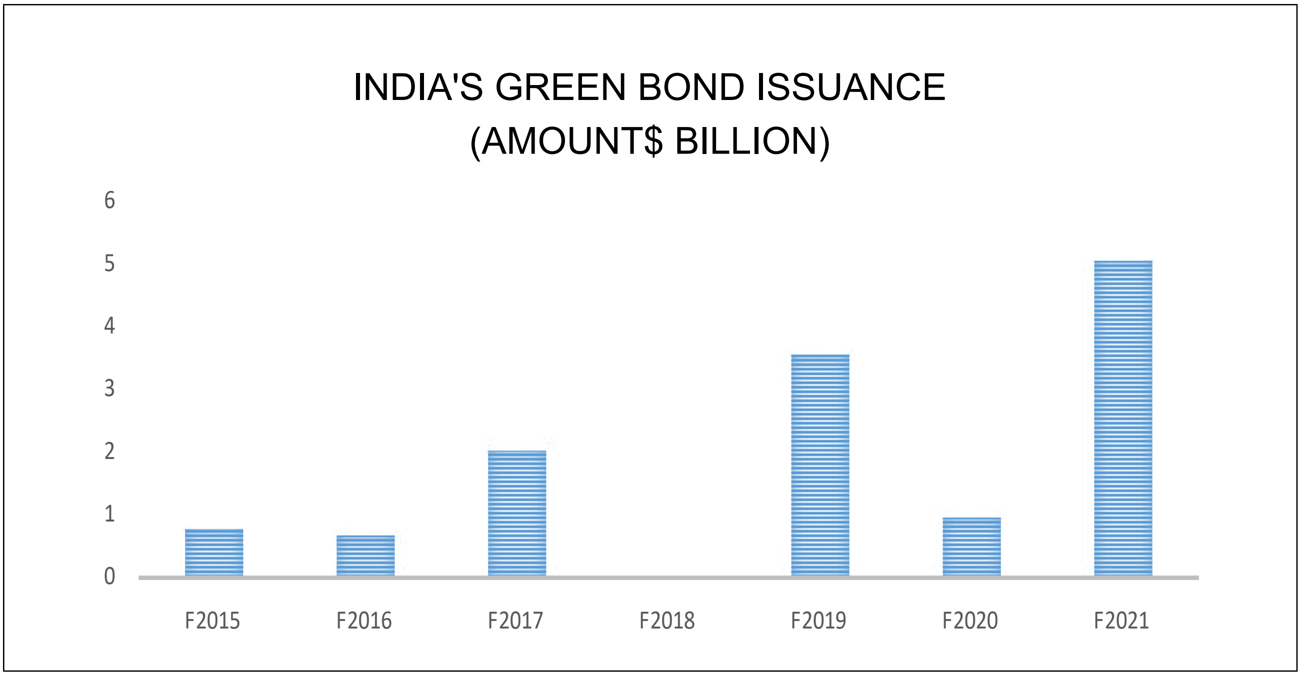
[3]Reserve Bank of India. Press Releases. RBI. [Online] RBI, 2023. [Cited: February 11, 2023.]
[4]Department of Economic Affairs, GOI. Framework for Sovereign Green Bonds. New Delhi : Finance Unit, 2022.
[5]International Finance Corporation, World Bank Group. Green bond handbook. Washington, D.C. : IFC, 2022.
[6]International Monetray Fund. Climate Change Dashboard. [Online] 2022. [Cited: January 15, 2023.] https://climatedata.imf.org/datasets /8e2772 e0b65f4e33a 80183ce9583d062_0/ explore.

Figure 5: Cumulative Green Bond Issuances- Currency Wise (1985-2021)



- India's journey of Green bonds issuance started in the year 2015 and has since then been growing at CAGR of 37% (No issuance in year 2018).

Figure 6: India's Green Bond Issuances (2015-2021)



- Compared to other green bonds, Sovereign Green bonds are way younger having started their journey in FY 2016 with Republic of Poland being the front-runner. The share of Sovereign Green Bonds has been merely 11% of the universe of green bonds. India took its first step towards Sovereign Green Bonds in January 2023.

Conclusion

Green bonds have become an important part of India's financial and fiscal landscape. They provide an effective way to finance projects that promote sustainability and environment protection. The Government has taken steps to promote the use of green bonds by providing incentives and tax benefits to investors. The success of green bonds in India has been encouraging and has opened up new avenues for financing sustainable projects. The Government should continue to promote the use of green bonds and create a conducive environment for their growth. This will help India move towards a greener and more sustainable future. India can also leverage the second mover advantage by learning from the mistakes of the West and proactively tackle issues like greenwashing, low greenium and green bond audits.

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3. Reserve Bank of India. PRESS RELEASES. RBI. [Online] RBI, 2023. [Cited: February 11, 2023.]
4. Department of Economic Affairs, GOI. Framework for Sovereign Green Bonds. New Delhi : Finance Unit, 2022.
5. International Finance Corporation, World Bank Group. Green Bond Handbook. Washington, D.C. : IFC, 2022.
6. International Monetray Fund. Climate Change Dashboard. [Online] 2022. [Cited: January 15, 2023.] https://climatedata.imf.org/datasets /8e2772 e0b65f4e33a 80183ce9583d062_0/explore.

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3) Autobiographical note and photograph:

   A brief autobiographical note should be supplied including full name, designation, name of organization, telephone and fax numbers, and e-mail address (if any), or last position held, in case of retired persons. Passport size photograph should also be sent along with the submission.

4) *Format:*

   The article, should be submitted in MS Word, Times New Roman, Font Size 12 with 1½ line spacing. A soft copy of the article should be sent by e-mail to admin@iibf.org.in

5) *Figures, charts and diagrams:*

   Essential figures, charts and diagrams should be referred to as 'Figures' and they should be numbered consecutively using Arabic numerals. Each figure should have brief title. Diagrams should be kept as simple as possible. in the text, the position of the figure should be shown by indicating on a separate line with the words: 'Insert figure 1'.

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   Words to be emphasised should be limited in number and italicised. Capital letters should be used only at the start of the sentences or for proper names.

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Summary of Strategic Report (2022-23)

on

Cross-border Insolvency: Present Framework, Model Law & Emerging Issues from Banking Perspective

By:

Jitin Boolchandani, Deputy General Manager, IDBI Bank Ltd.

- The rapidly growing and globalising corporate world has given birth to Multinational Entities (MNEs) that surpass national boundaries, creating a nearly borderless relation among several businesses.
- Almost every country has commercial relations that extend beyond one or more jurisdictions and thus, economic entities consequently have debtors and creditors located at various such locations.
- Globalisation is multidimensional and includes international trade investments, bilateral tie-ups, technology transfer and human and cultural exchange and thus, the world is becoming borderless. As time passes and technology develops with each passing second, globalisation evolves in its meaning.
- India is now among the core economies of the world with global business and diplomatic relations, both of which have seen an enormous jump over the last two decades.
- The Indian banking and financial market has also witnessed borrowing-lending relationships, counterparty exposures, derivative contracts, collateral obligations, etc. across countries.
- The importance of Cross-border Insolvency now takes center stage. Cross-border insolvency deals with circumstances where the insolvent debtor has assets and creditors in multiple countries or when insolvency proceedings have been initiated against the insolvent debtor in multiple countries.
- In India, to review and assess the functioning and implementation of the Insolvency and Bankruptcy Code, 2016 (IBC), the Insolvency Law Committee (ILC) was constituted by the Ministry of Corporate Affairs. The ILC, in its report, proposed to re-evaluate the current insolvency framework and to bring it at par with the Global Standards and adopt the United Nations Commission on International Trade Law (UNCITRAL Model Law, which is hereon referred to as the "Model Law") on Cross-Border Insolvency to resolve the concerns relating to cross-border insolvency in India.
- The existing Model Law on Cross-Border Insolvency (MLCBI), 1997, has emerged as the most widely accepted legal framework to deal with cross- border insolvency issues. The Model Law provides a legislative framework that can be adopted by countries with modifications to suit the domestic context of the enacting jurisdiction. It has been adopted by 49 States to date. This includes developed as well as developing countries such as Singapore, UK, US, South Africa, Republic of Korea, etc.
- The Government is working on assimilating the Model Law in the IBC. Enacting legislative provisions on cross-border insolvency is essential to address the emerging issues on cross-border insolvency.
- The Indian banking system has been dealing with a large number of such corporate debtors/ promoters having assets/liabilities abroad and hence, the understanding and applicability

of cross-border insolvency has become unavoidable for Indian Banks/FIs to enforce insolvency for corporate debtors/guarantors with foreign assets. The Indian banking system needs to analyse the requirement of capacity building to deal with cross-border insolvency appropriately.

- The strategic report aims to bring out the emerging issues for Indian banking system in cross-border insolvency for both the scenarios - Indian company with foreign assets & liabilities and foreign company with Indian assets & liabilities.
- The cross-border insolvency requirement arises when an Indian company has foreign liabilities, assets or operations or when a foreign company has Indian liabilities, assets or operations. The term "foreign assets" generally indicates the presence of assets and operations in a foreign jurisdiction, for example – cash holdings in a bank account in a foreign country, a production facility or an office in a foreign country and so on, including intangible forms, not always to be in the form of physical presence or human interventions. Such intangible assets will include investments in foreign securities, licenses, supply agreements etc. The notion of foreign operations, too, may or may not be linked to physical presence. For instance, operations with physical presence may include branches or offices in foreign jurisdictions. However, even without their physical presence, companies may have customers or may have dues to be recovered or paid in foreign jurisdictions. A foreign liability may exist as long as the creditor is a foreign person or entity depending upon whether it is in foreign/local currency or contracted in the debtor's home jurisdiction or a foreign jurisdiction. A foreign liability can be financial as well as operational liability.
- The Indian banking system has been taking direct/indirect exposure by funding for foreign assets or wherein guarantors/corporate debtors have foreign assets or liabilities. Accordingly, with increase in Non-Performing Assets in the Indian banking system, it becomes more crucial to equip Indian Banks with the right protocols and prepare for enforcement under Cross-border Insolvency considering the increasing pace of globalisation in banking and lending.
- Likewise, the systematic development and learning under Insolvency and Bankruptcy Code (IBC) within the Indian banking system is prudent to gather a common understating of procedures, laws, rights and challenges pertaining to Cross-border Insolvency.
- The understanding and applicability of Cross-border Insolvency has become unavoidable for Indian Banks/FIs to enforce insolvency for corporate debtors/guarantors with foreign assets. The Indian banking system needs to analyse the requirement of capacity building in Indian banking system to deal with Cross-border Insolvency.
- Indian Banks will require to keep records of companies' debts and defaults involving overseas insolvency and to consider challenges involved in enforcement of foreign assets along with the impact of foreign representative filings proceedings in the case of cross-border transactions and trade. It would be desirable to develop Standard of Procedures (SoPs) on how cross-border matters are to be handled under sole/multiple/consortium banking arrangements, the right policy to engage legal counsel, to bring understanding of its contents and cost involved in cross-border insolvency proceedings and to train staff in dealing with the wide range of issues & challenges.

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IIBF Invites Research Proposals on "Unclaimed deposits and Pathways for banks" (Funded by Reserve Bank of India)

The Reserve Bank of India (RBI) has established "The Depositor Education and Awareness Fund" in 2014. Under the provisions of Section 26 A of the Banking Regulation Act, 1949, the amount to the credit of any account in India with any bank which has not been operated upon for a period of ten years or any deposit or any amount remaining unclaimed for more than ten years shall be credited to the Depositor Education and Awareness Fund (DEAF), within a period of three months from the expiry of the said period of ten years. The depositor, however, is entitled to claim from the bank his/her deposit or any other unclaimed amount or operate his/her account after the expiry of ten years, even after such amount has been transferred to the Fund.

The Indian Institute of Banking & Finance (IIBF) has been entrusted by RBI to establish a research scheme to undertake a study on "Unclaimed Deposits" in order to identify the factors contributing to such unclaimed deposits in banks and to find pathways to reduce the quantum of such deposits in the banking system and arrive at the suitable methods for returning such deposits to their rightful owners/claimants.

The Indian Institute of Banking & Finance (IIBF) hereby invites research proposals to study Unclaimed Deposits and provide actionable suggestions. The study will be undertaken by three different academicians/researchers under the same caption. Each researcher will exclusively focus on one of the following entities.

1. Public Sector Banks
2. Private Sector Banks
3. Urban Co-operative Banks (UCBs)

Therefore, there will be a total of three studies comprising of three different researchers and each study will be based on one of the above three categories of banks.

Objectives of the Study

Objectives of the study shall be to:

(i) Identify major underlying factors that contribute to unclaimed deposits.

(ii) Identify the hurdles faced by banks in implementing the existing strategies/practices.

(iii) Based on the outcome of comparative analysis, suggest best practices/strategies which could be adopted by banks.

(iv) Suggest and recommend leveraging of technology and innovation to deal with inoperative accounts and unclaimed deposits in banks.

Who can participate?

Full-time regular employees of banks, faculty members of colleges/ universities, and other academic and financial institutions. The individuals applying under this scheme should not be more than 58 years as on 30.06.2023.

The employees of IIBF & RBI are not eligible to undertake the proposed study.

Methodology

The study will aim to identify the factors contributing to unclaimed deposits in banks and suggest strategies for reducing them. The study may be conducted using a mixed-methods approach, that combines quantitative and qualitative data collection and analysis.

Quantitative Analysis

The research proposal should clearly specify the requirement & nature of data that will be utilised for undertaking the research work. Data available with banks and DEA Fund Section may be shared for quantitative analysis. Only relevant (& masked) data will be shared and shall be treated as strictly confidential. Further, the data will not be attributed to individual banks or the Reserve Bank of India. Factor analysis of the data could be used to identify underlying factors that contribute to inoperative accounts/ unclaimed deposits. This could help to identify specific areas that banks need to focus on to reduce such accounts/ deposits. The study could also conduct a comparative analysis of the practices/ strategies employed by different banks to reduce inoperative accounts/ unclaimed deposits. This could help to identify the most effective strategies and best practices that can be adopted by other banks.

Qualitative Analysis

The study may use qualitative data based on inputs collected through a survey/questionnaire from cross-section of sample banks and experts in banking industry. The survey would aid in gathering information about the challenges being faced by banks in implementing present day strategies and help in gathering suggestions to further improve upon it.

Expected Outcomes from the Study

(i) Eliciting the causative factors for accumulation of unclaimed deposits.

(ii) Furnishing of various strategies and methods which could be adopted by banks to deal with the unclaimed deposits.

(iii) Recommending innovative solutions to reduce the quantum of unclaimed deposits.

Evaluation

The Research proposals will be evaluated in terms of its objective, relevance and methodology. Action points flowing from the research for policy making, should be clearly listed out in the final research report to be submitted. All the research proposals will be prima facie considered for suitability and further scrutiny will be done for shortlisting the proposals. The final selection will be done based on the presentation of the shortlisted proposals to the members of the Research Advisory Committee (RAC) of IIBF and representatives from RBI.

Research Grant

The selected research project carries an award of Rs 10 lakhs. The award money will be released only after the approval of the final project report.

Time frame

After completing the research work, the final research report should be submitted within a maximum period of three months from the time the project is awarded. **In case of delay in submission of report, the award may be forfeited.** The copyrights of the report will lie with RBI. The report in part or full, cannot be reproduced in any form without prior approval from the RBI.

Applicant research organizations/researchers are required to submit proposals neatly typed in English along with a forwarding letter from their employer. The research proposals should clearly indicate the objectives of the study, research methodology & possible outcomes. The front page of the proposal should contain following details:

Name	
Designation	
Address	
E-mail	
Phone No./Mobile No.	
Title of Research Proposal	
The study will focus on which bank type	
List 3 major outcomes of proposed Research	

The last date for submission of the proposal is **31.10.2023.**

The soft copy of the proposals can be sent at kratika@iibf.org.in

The Director of Academic Affairs, Indian Institute of Banking & Finance, Kohinoor City, Commercial-II, Tower-I, 2nd Floor, Behind Kohinoor Mall, Off. L.B.S. Marg, Kurla (West), Mumbai-400 070.

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