# DIGITAL STRATEGY AND TRANSFORMATION OPPORTUNITIES AND CHALLENGES IN THE BANKING INDUSTRY IN INDIA

by

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#### Dedication

THIS DISSERTATION IS DEDICATED TO CXOS AND PROFESSIONALS WHO ARE WILLING TO DESIGN DIGITAL STRATEGY AND EMBARK UPON DIGITAL TRANSFORMATION JOURNEY FOR BANKING INDUSTRY IN INDIA BUT NOT ABLE TO FIND A SUITABLE FRAMEWORK AND ROADMAP THAT WILL ASSIST IN THE JOURNEY.

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#### ABSTRACT

# DIGITAL STRATEGY AND TRANSFORMATION OPPORTUNITIES AND CHALLENGES IN THE BANKING INDUSTRY IN INDIA

Ranjan Kumar Sahoo 2024

Dissertation Chair: <Chair's Name> Co-Chair: <If applicable. Co-Chair's Name>

Digital transformation is becoming a necessity instead of a good-to-have or a luxury. It becomes important as various fintech companies and startups are moving rapidly, taking away customers, creating new white space, or discovering new segments that were once unviable. Various supply-side factors are triggering this rapid change, among them Low cost, ubiquitous internet, 5G speed, the rise of Mobility, and social media, which are triggering direct customer engagement digitally. Also, the rise of India stack, like identity rails like Aadhar and KYC, is causing immediate identification through biometric means, payment rails like UPI and IMPS are triggering immediate buying or transferring money in a secured way, e-sign, PAN validation, OCEN (open credit enablement network), ONDC (open network digital commerce), AA (account aggregator), etc. are helping onboard customers, underwrite them, sign all the documents, and finalize the loan disbursal in a matter of minutes to hours. The state is innovating a lot, which leads to building the foundations for others to leverage and build entrepreneurship. Also, the rise of artificial intelligence, machine learning, and big data analytics is helping to manage credit and

market risk quickly. RBI (Reserve Bank of India) regulations are trying to control the growth of credit as it may lead to systemic risks. A small crisis can trigger large-scale delinquencies, threatening the whole banking system. Hence, all these are creating not only new opportunities but also challenges for RE (regulated entities). RBI's digital lending guidelines are helping streamline and set the overall regulatory landscape for transparency for all players. RBI's FLDG (First Loss Default Guarantee) will bring innovation in risk underwriting and distribution between fintech and RE players, which will help deepen the credit in the Indian economy help in more entrepreneurship, and production, and create employment opportunities. In this study, we aim to understand the digital strategy, transformation challenges, and opportunities in the Indian banking sector and to develop a framework to address these challenges and opportunities in the Indian banking banking sector and develop a case study through case study methods.

#### **KEYWORDS**

RBI, Digital Strategy, Digital Transformation, Fintech, India stack, Risk, Innovation, Market Risk, Systemic Risk, Credit Risk

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# CHAPTER I: INTRODUCTION

#### **1.1 Introduction**

According to Venkatraman (2017), only 61, which is 12% of the companies in the magazine's original list of Fortune 500 companies from 1955, are present in the 2015 Fortune 500 list, which means that the life expectancy of a company is just fifteen to twenty years. Past performance is no indicator of future returns. In other words, you can't rely on your existing business strategies, no matter how successful they are, they don't guarantee future success. Rapid changes in the technology landscape like social, mobile, big data analytics, cloud, IoT, robotics, etc. are bringing new possibilities for transforming the customer experience. Customers are moving from being simple consumers of products and services to becoming dynamic customer networks (Rogers, 2016) through participation by promoting, liking, sharing, and commenting on social media, the company's portal, or a search network like Google. New digital technologies, or Industry 4.0, are disrupting traditional industries, be they media, agriculture, or sports goods companies. In the current era of low-cost Internet, which provides free information to consumers, they are not willing to pay for physical newspapers or Television (TV), which in turn makes companies struggle with their legacy model of print and TV-based advertising. For instance, The Weather Channel faced strong pressure, with channel subscriptions going down when the economy was going up around 2010. The world of digital transformation is impacting every industry and society, from agriculture to media to sports, etc. If we try to apply the same lens as above and analyze the Indian banking sector and

see how banks are adapting technologies and progressing on digital transformation like rapid credit analysis and underwriting, faster customer onboarding and information collection on income, employer, etc., easier customer identification and authentication, and faster loan disbursals, then we can identify several factors related to technology creation, adoption, and dissemination.

First, the rise of the internet and high-speed 4G and 5G networks are helping build direct-toconsumer (D2C) markets. Banks and other financial institutions can leverage technology to reach a larger audience. The rise of smartphone penetration is also helping banks reach the unreached. Second, the proliferation of low-cost technologies such as cloud, mobile, social media, and big data analytics has hastened banks' adoption of digital strategy. These are helping companies maximize their reach toward customers in need of credit. In this internet era, companies are transforming their business models by reaching customers through various digital distribution channels. Companies are rapidly scaling due to the deeper reach of the internet. Hence, companies require digital credit, which banks need to fulfill without taking unnecessary risks and also sacrificing business. Decision-making is now faster due to rapid digital penetration; hence, a rapid digital transformation of banks is necessary, be it big data analytics-based decision-making or new product development like BNPL (Buy now, pay later), co-lending, or new reach through social media, e-commerce, or mobility.

Third, the Rise of India Stack (a set of technologies developed by the Government of India) is another example of the government's effort towards building a more inclusive society in terms of access to credit, which is helping MSMEs (micro, small, and medium enterprises) to produce, market, and distribute their products. IndiaStack is helping banks with rapid payment, underwriting, identification, loan servicing, and other activities. Fourth, Banks are leveraging technologies like UPI (unified payment interface), Aadhar (biotech identity), NeSL (National e-governance Services limited) API, CSDL (Central Depository Services) API, Digi Locker is helping document authentication, CIC (credit information companies) API, Account Aggregator, Bharat Bill Pay System (BBPS), ONDC (open network digital commerce), and OCEN (open credit enablement network). All these technologies are helping in the rapid delivery of credit through underwriting efficiency, payment, and settlement, PAN (permanent account number) verification, credit score, income, etc., with near zero physical touch points. There are a lot of opportunities in terms of credit delivery, both in terms of channels and speed, credit assessment, microcredits, and the plurality of access to various banks. There are a lot of challenges emerging from fintech or big techs, those who can scale credit delivery rapidly, creating systemic risks in terms of financial stability through a sudden surge in delinquencies that will hit the bottom line of banks and making large-scale losses, which in turn cut off credit to productive sectors of the economy.

The general business sector has moved into the digital era over the previous There are enormous opportunities for the banking sector in India in terms of credit growth. As per RBI's (Reserve Bank of India) Nachiket Mor committee report, 63.38 million people lack access to credit to the tune of 25 trillion rupees, but their share of manufacturing is 45% of all India's manufacturing, 28% of GDP, and employs around 111 million people, which can support almost 500 million family members. Challenges faced by traditional banks include high transaction costs, a lack of cash flow data, and a lack of underwriting capability in this segment. Though the RBI issued payment banks and small finance banks license to fill that gap, enormous gaps still exist. Though opportunities from the supply side like the India stack, which includes identity rails like Aadhar, PAN validation, e-KYC, e-sign, and Digi locker, and payment rails like UPI, the Aadhar-enabled payment system, IMPS (immediate payment services), Rupay card, and BBPS (Bharat Bill Payment Systems) for enabling digital transformation are there, they are not leveraged to their potential. If we look at opportunities arising out of the 5G network, high-speed internet, low-cost Internet, a high degree of digitally savvy youth, and a potential billion smartphones by 2026 as per the Delloite study, with the RBI's progressive policy on digital banking units (DBU), new business models like BNPL (Buy now and pay later) are simply huge, but the potential is yet to be leveraged in terms of entrepreneurship. Apart from opportunities, there is a fair share of challenges coming from regulatory oversight, among them are the RBI's digital lending Guidelines, which clearly state that its RE's (Regulated entities) responsibilities include partnerships with fintech. The RBI wants to control credit growth and its orderly evolution, not the sudden accumulation of risks in the system. RBI is closely monitoring loan repayments, including delinquency growth, risk governance, and giving more freedom to consumers in terms of exit, foreclosure, and settlement. RBI is directing compliance and audit functions to be more vigilant. RBI directed all REs to have a chief compliance officer (CCO) and directed the CCO to directly report to the board. It's asking banks to address customer grievances in a time-bound manner. All these are creating challenges to innovations and the speed of transformation.

Other structural challenges like poor acceptance of digital tools by financial illiteracy, lack of access to credit, lack of education, lack of trust in the invisible digital system, and high cyber fraud despite large investments in digital transformation exist and need to be addressed.

#### **1.2 Research Problem**

Banks play an important role in enhancing the productive capacity of the economy, helping capital formation in the economy. As per RBI (Reserve Bank of India) Nachiket Mor committee report, 63.38 million people lack access to credit to the tune of 25 trillion rupees, but their share of manufacturing is 45% of all India's manufacturing, 28% of GDP, and employs around 111 million people, which can support almost 500 million family members. Challenges faced by traditional banks include high transaction costs, a lack of cash flow data, and a lack of underwriting capability in this segment. Though the RBI issued a payment banks and small finance banks license to fill that gap, enormous gaps still exist.

Banks help credit disbursals to SMEs (small and medium enterprises), and individual credit needs. It will help foster financial inclusion and bridge the credit gap. With the current age of disruptive technologies, data data-driven alternate underwriting mechanisms, fintechs are emerging with credit lines to help grow SMEs, generate employment opportunities, and formalize the economy. The state is coming up with various technology platforms for fintechs and banks to deepen credit to underserved segments. Banks are also leveraging various tech-led platforms, doing partnerships with various fintechs/LSPs(lending service providers) to source demands. This study will focus on various digital transformation opportunities that are emerging due to the India stack, various protocols like OCEN, ONDC, UPI, etc., and various technologies like 5G, cloud computing, AI and ML, Mobility and Social media, etc. and RBIs digital lending guidelines. It will explore the challenges that are posed due to various internal processes, and governance gaps that restrict the adaptation of technologies, protocols, and India stacks to transform banking and help enhance not only the economy but all internal top line and bottom line of the company.

#### **1.3 Objective of Research**

Direct interviews are conducted with C-level executives of banking, NBFC (nonbanking finance companies), IT companies, and FinTechs. Banks play such a vital role in the economy of India or any other country. It is responsible for the creation of credit. Banks disburse credits to millions of SMEs that are responsible for the production of goods and services. SMEs in turn provide large employment opportunities to the tune of tens of millions of jobs. GOI scheme PMMY (Pradhan Mantri Mudra Yojana) loans disbursals around 815 billion rupees in the first quarter of FY23-24. It means a run rate of 3.3 trillion rupees (INR) for the whole year FY23-24. Through the Jandhan yojana, almost 500 million accounts were opened with the majority of women and deposits worth 2 trillion rupees.

The study will try to understand Digital transformation opportunities, challenges from regulators, FinTech players, and Internal processes and governances. How lending institutions can innovate and succeed in digital transformation efforts that will make credit access easier, greater financial inclusion, and credit deepening to tier 2,3 and 4 cities.

#### 1.4 Aim of the Study

- To get insights from top management of banks to understand the challenges to investments and progress on digital transformations
- Identify the opportunities emerging from various regulatory interventions
  like India stack, Digital lending guidelines
- To provide a structured framework that will help overcome challenges in various internal issues towards digital transformation and help leverage various regulatory interventions like India stack- payment rail, digital

lending guidelines, FLDG (first loss default guarantee), etc. to grow and deepen business.

#### **1.5 Research Questions**

The following questions will be addressed:

- 1 What kinds of opportunities are emerging from the India stack that the government is building, from identity rail to payment rail to data sharing rail?
- 2 What kinds of opportunities are emerging from the Central Bank's (RBI) digital lending guidelines?
- 3 What are the challenges emerging from fintech that are challenging banks' digital transformation investments?

The above questions need to be answered, as this will help customers and citizens get the most benefit.

This research and recommendation will help in accessing services faster with low transaction costs, greater financial inclusion, and a better customer experience. This research will also help companies build new business models, penetrate markets faster, be closer to customers, nudge customers toward transactions, etc.

### 1.6 Definition of the terms used in the study

Bank: A bank is a financial institution that gives a scope of monetary administrations to people, organizations, and states. These administrations basically rotate around overseeing and defending cash, working with installments and exchanges, and offering financial items and administrations. Here is a more detailed definition of banks:

A bank is an authorized and regulated financial institution that accepts deposits. Banks allow individuals and organizations to deposit their money, such as savings, checking, or time deposits (certificates of deposit). These deposits are held in accounts and can earn interest.

Provides Loans and Credit: Banks loan cash to people and organizations as advances, contracts, Visas, and credit extensions. They charge revenue on these credits, which is an essential source of income for banks.

Facilitates Payments: Banks offer payment services, including checking accounts and electronic funds transfers (EFTs), to enable customers to make payments to others. This can include issuing checks, facilitating wire transfers, and providing debit and credit card services.

Offers Investment Services: Many banks offer speculation and abundance the executives administrations, including the trading of stocks, securities, shared reserves, and other monetary instruments. They may also provide financial advice and portfolio management.

Safeguards Deposits: Banks are responsible for the safekeeping of customers' deposits and ensuring their availability when needed. They often offer deposit insurance to protect customers against bank failures up to certain limits.

Currency Exchange: Banks give money trade administrations, permitting clients to trade unfamiliar monetary standards for movement, exchange, or venture purposes.

Acts as Financial Intermediaries: Banks assume a significant part in the economy by going about as mediators between those with excess assets (savers or contributors) and those needing capital (borrowers). They collect funds from depositors and lend them to borrowers, earning a margin from the interest rate differential.

Risk Management: Banks offer various financial products to help customers manage financial risks. This includes insurance products, derivatives, and hedging services.

Electronic Banking: In the modern era, banks give on the web and portable financial administrations, permitting clients to get to their records, make exchanges, and deal with their

funds electronically.

Compliance and Regulation: Banks are dependent upon broad unofficial laws and oversight to guarantee their strength, respectability, and consistence with monetary regulations. These guidelines fluctuate by country however frequently incorporate capital necessities, revealing norms, and against tax evasion measures.

Digital Transformation: Digital transformation alludes to the coordination of digitized innovations into all parts of a business or association to essentially change how it works and conveys worth to clients. With regards to banks, it includes embracing advanced answers for upgrade tasks, client experience, and development.

FinTech: Short for Financial Technology, FinTech alludes to the utilization of innovation to offer monetary types of assistance, for example, portable banking applications, online installment stages, and robo-counsels. Banks often collaborate with or compete against FinTech companies in their digital transformation efforts like sourcing leads/demands, sourcing technologies like the Leads platform.

Blockchain: A conveyed record innovation that empowers secure, straightforward, and alter safe exchanges. Banks may explore blockchain for various purposes, including improving the security and efficiency of financial transactions.

Artificial Intelligence (AI): Artificial intelligence includes the improvement of PC frameworks that can perform errands commonly requiring human knowledge, for example, regular language handling, AI, and information examination. Banks use computer-based intelligence for chatbots, extortion identification, credit scoring, and client bits of knowledge.

Big Data: Enormous information alludes to the tremendous volumes of organized and unstructured information that associations gather. Banks utilize large information investigation to acquire bits

of knowledge into client conduct, settle on information driven choices, and foster customized monetary items and administrations.

API (Application Programming Interface): A Programming interface is a bunch of decides and conventions that permit different programming applications to impart and connect with one another. Banks use APIs to associate with outsider administrations and empower information trade between frameworks, encouraging development and joining.

Customer Experience (CX): Customer experience encompasses all interactions and touchpoints between a bank and its customers. Digital transformation often focuses on improving CX through user-friendly interfaces, personalized services, and omnichannel experiences.

Cybersecurity: The act of safeguarding PC frameworks, organizations, and information from unapproved access, cyberattacks, and information breaks. As banks progressively depend on digital innovations, network protection is basic to defend delicate monetary data.

RegTech: Regulatory Technology or RegTech, alludes to the utilization of innovation to assist monetary foundations with conforming to administrative prerequisites all the more proficiently and cost-actually. It frequently includes computerization and information investigation to guarantee consistence.

Cloud Computing: The conveyance of registering administrations (e.g., capacity, handling, and programming) over the Web, empowering banks to scale their IT framework, diminish costs, and further develop spryness.

Robotic Process Automation (RPA): RPA includes the utilization of programming robots to computerize dull and manage based errands in financial tasks, for example, information section and archive handling.

Digital Ecosystem: A digital ecosystem is a network of interconnected digital services, platforms,

and stakeholders. Banks may create or participate in digital ecosystems to offer a broader range of services and reach new customer segments.

Data Privacy and GDPR: Data privacy refers to protecting individuals' personal information. GDPR (General Data Protection Regulation) is a European Association guideline that sets severe principles for the assortment and handling of individual information.

#### **1.7 Research Limitations**

This research will consider organizations that fall under the banks, NBFC, small finance banks (SFB), payment banks, and Fintech players regardless of their location. It will try to get insights about the digital transformation challenges, new product development, or business models around digital lending which are internal as well as somewhat confidential information about the organization that will be difficult for the top management to share. It's critical to understand the restrictions and ethical issues associated with getting such internal and secret information from firms, even when doing so may yield insightful study results. It could be necessary for researchers to use different information sources or techniques that adhere to the restrictions imposed by the organizations in question.

#### **1.8 Educational implications and significance of the study**

Digital transformation is a thorough and progressing process that includes the reconciliation of advanced innovations, techniques, and practices into all parts of an association's tasks, culture, and client encounters. It is driven by the acknowledgment that innovation is quickly changing the way in which organizations work and connect with their partners, and associations need to adjust to remain serious and important in

the digital age.

Key elements of digital transformation typically include:

- 1. **Technology Adoption:** Embracing arising advances like artificial intelligence, cloud computing, data investigation, the Internet of Things (IoT), and computerization to further develop proficiency, direction, and advancement.
- 2. **Data Utilization:** Leveraging data as a strategic asset to gain insights, make informed decisions, and enhance customer experiences. This involves data collection, analysis, and the use of data-driven tools.
- 3. **Process Optimization:** Reengineering and optimizing internal processes to make them more agile, efficient, and responsive to customer and market demands.
- 4. **Cultural Shift:** Fostering a digital-first mindset and culture within the organization, encouraging innovation, collaboration, and adaptability among employees.
- 5. **Customer-Centricity:** Placing the customer at the center of all digital initiatives, focusing on improving their experiences, and using data to personalize interactions.
- Business Model Innovation: Exploring and implementing new business models that leverage digital technologies, potentially disrupting traditional ways of doing business.
- 7. Strategic Alignment: Guaranteeing that digital transformation endeavours are

lined up with the association's general business system and objectives.

8. Security and Compliance: Addressing network safety and consistence worries

to safeguard information and keep up with trust in the digital biological system. Technological advancements by FinTechs are the aftereffect of the interaction between the underlying.

(i) digital public foundation, (ii) institutional plans, and (iii) policy initiatives It will help in educating about various technologies of Digital Public Infrastructure like Jan dhan yojna, Aadhar, mobile connectivity, UPI. On institutional arrangement, the research will talk about (i) foundation of the Organization for Improvement and Exploration in Financial Innovation (IDRBT)12 which has been playing a crucial role in shaping the Indian financial industry's digital transformation, (ii) production of the Public Installment.

Corporation of India Ltd (NPCI)13 which has arisen as a significant association driving the change of retail computerized installments in India, (iii) setting up of the Indian Financial Innovation and Unified Help (IFTAS)14, an establishment to configuration, convey and give fundamental IT-related administrations, as expected by the RBI, banks, and monetary foundations, (iv) setting up the Hold Bank Data Innovation Pvt. Ltd. (ReBIT)15 in 2016 to fortify the digital strength of the Save Bank and that of the financial area, (v) development of the FinTech division in RBI in 2022, and (vi) foundation of the Hold Bank Advancement Center (RBIH) to advance development in monetary administrations. On Strategy Drives, it will discuss account aggregators (AA),pre-paid instruments, distributed (P2P) loaning, receipt limiting (Exchange Receivable and Limiting Framework TReDS) (2018), and Advanced Loaning Rules (2022, 2023), First misfortune default guarantee(FLDG). It will discuss the

computerized change system that will be proposed by me, which will assist with utilizing different arrangements, organizations, and advanced framework of government. This system will assist organizations with speeding up advanced change be it on development on client scene or activities or association and administration aspects.

#### **Chapter II:**

#### **REVIEW OF LITERATURE**

#### 2.1 Introduction: Background of Digital transformation

The literature on digital transformation is extensive. Several studies have examined the drivers of digital transformation, the challenges and opportunities associated with digital transformation, and the strategies that banks are using to respond to digital transformation.

Digital technologies have made product design and production more efficient and quicker than ever before, as stated by Westerman et al. (2014). Nike's digital capabilities improved visibility and performance throughout the company's operations, leading to greater efficiency, less waste, and better CSR across the company's worldwide supply chain. While all organizations are putting resources into innovations like virtual entertainment, portability, investigation, and installed gadgets, just a subset of these, known as Digitized Bosses, are seeing critical profits from their business.

The advent of digital technology has had far-reaching consequences, altering whole economic sectors while allowing some businesses, such as Amazon and Facebook, to expand at an exponential rate. While the rise of the digital age has presented a challenge to the established order, it has also opened up vast new potential for businesses operating in more conventional sectors. As an example, consider the weather corporation. In response to customers' shift away from television, the firm refocused on digital and released weather, an app that analyzes weather data to assist shops in forecasting how the meteorological will impact sales. Companies typically follow three strategies for digital transformation (Gupta, 2018). In the first place, make little and autonomous units, or new companies, inside bigger associations. Second, doing a progression of digitized tests, third, utilizing innovation to reduce expenses and further develop effectiveness. Gupta (2018) has developed a framework for reinventing business. 1. Rethink your business. 2. Reconsidering your value chain 3. Reconnecting with clients 4. Reconstructing your association.

Digital Masters succeed in two basic aspects: "what innovations" to put resources into, which is called computerized abilities, and "how to lead" the change, which is called administration capacities (Westerman et al., 2014). Computerized Experts consider innovation to be a way to have an impact on the manner in which they carry on with work, be it client commitment, inward tasks, or plan of action re-examination. Digital Masters like Nike address greatness in both the advanced and authority aspects. As per Westerman et al. (2014), Companies are classified into 4 categories based on digital tool adoption and leadership capabilities: beginners, conservatives, fashionistas, and digital masters.

Venkatraman (2017) states that we can't depend on existing business techniques, regardless of the fact that they are, to convey us into what's in store. Advanced innovation is eating the world as 3D printing, mechanical technology, blockchain, counterfeit and increased knowledge, robots, nanotechnology, and computer-generated reality develop quicker. Digital is not on the agenda because of four kinds of traps: 1. Competency trap 2. Ecosystem trap, 3. Talent trap, and 4. Metrics trap. These traps are essentially existing arrangements where companies are currently succeeding, but this will not guarantee future success in the digital world.

There are five spaces of computerized change: 1. customers, 2. contest, 3. data, and 4. advancement. 5. Value. Clients are a unique organization and key powerhouse who partakes in discussion and put remarks, likes, and offers on Facebook and Twitter. Contest inside characterized ventures to rivalry across liquid businesses, obscuring the qualification among accomplices and adversaries. Essentially, information is adding esteem and being created all over the place, unstructured information like recordings and pictures are turning out to be progressively

usable and significant. The value of data lies in associating across storehouses. Advancements through nonstop investigations lead to minimum viable products (MVP). The offer is characterized by changing client needs and revealing the following an opportunity for clients.

Schwab (2017) contends that applications empowered by the fourth modern upset, like the Internet of Things (IoT), are one of the critical extensions between the physical and digital universes. There has been a phenomenal increase in the availability of sensors and other mechanisms for linking real-world objects to computer networks. Homes, clothing, and accessories, cities, transportation systems, energy grids, and factories are just some of the places where smaller, cheaper, and more intelligent sensors are being used. These are assisting with the development of "smart" houses and towns, as well as maximizing a wide range of assets and decreasing overall energy usage.

In the face of digital upheaval, many businesses are finding it difficult to adapt. One of the most exciting developments of our day is digital disruption, but it also presents a formidable obstacle. A volatile, uncertain, complex, and ambiguous (VUCA) future has been envisioned by Seth (2020). The volatility, uncertainty, complexity, and ambiguity (VUCA) of the modern world make it hard to pick winners.

Seth (2020) has described eight new rules to win in the VUCA world: 1. Innovate and shape the future. 2. Strategy lies in connecting the dots. 3. Co-create with customers. 4. Every company has to become a technology company. 5. Simplify organizational structure and processes. 6. Build a learning and knowledge-sharing organization. 7. Build an open organization and a web of partnerships. 8. Foster entrepreneurial leaders and culture. With these eight rules, companies can win the digital age, transform their organizations, and not only survive but grow and innovate in this VUCA world.

The government of India has introduced many new ideas in the banking sector, known as India Stack. These ideas include things like using Aadhar-based biometric authentication for identity verification, e-KYC (electronic Know Your Customer), e-Sign (electronic signatures), estamps, and PAN API (Application Programming Interface). They have also created a payment system called UPI (Unified Payments Interface), which has seen a large number of transactions, reaching 7.83 billion in volume in November 2022, with a value of over 12 trillion Indian Rupees. Another innovation is ONDC, which helps make online shopping more accessible to everyone.

IndiaStack allows SMEs, logistics players, retailers, and customers to come together to benefit from the institutions and It restricts the monopoly of big players like Amazon. Then Innovations like AA (Account Aggregator), which is a data-sharing platform based on the customer's consent, help provide easy and faster access to credit. Similar to innovations in banking like OCEN, this protocol is going to help centralize sourcing by partnering with lending institutions, which will help financial inclusion and credit deepening across various customer segments, particularly the poor.

The PWC report talks about the digital transformation of banks that can happen through partnerships with various fintech partners like Paytm, Mobikwik, MoneyView, etc. It helps banks onboard customers faster, underwrite them, and disburse them faster. Banks can not only increase their balance sheet but also reduce operating costs due to the application of technology, reach much beyond their physical reach, and have very different segments of customers. This report also talks about how adjacent expanders like e-commerce companies are partnering with banks to expand credit. Also, incumbent banks are accelerating digital transformation and onboarding customers directly through digital channels. The regulator is encouraging banks to set up digital banking units (DBU), which will extend the offline offerings as part of pure online. DBUs will educate customers on financial literacy and onboard customers digitally. The RBI's digital lending guidelines are trying to create some control around sudden surges in digital lending. Encouraging RE (regulated entities) to take ownership and accountability over customers, their grievances, exit, foreclosure, collections, regulatory, and bureau reporting.

In terms of access and inclusiveness of credit, as per the RBI MSME report chaired by Nachiket More, there are almost 63 million MSMEs, which represent almost 45% of manufacturing, 28% of GDP, and provide 111 million jobs, with an addressable credit gap of 25 trillion rupees.

Banks don't have the right tools to do credit assessments and underwrite them. Hence, digital transformation, data-led assessment, and the development of new institutions are critical if we need to support such a large number of enterprises in their working capital and growth capital gaps. RBI is innovating through small finance banks and payment banks. Payment banks can partner with banks to reach those customers and underwrite them by reducing operating costs, making onboarding cheaper and faster.

If we do a deeper dive into various aspects of transformation, we will find

- 1. Customer experience transformation
- 2. Operational excellence transformation
- 3. Institutional and policy transformation of state
- 4. Business model transformation
- 5. Leadership and governance transformation

#### **2.2 Customer experience transformation**

Customer experience (CX) alludes to how clients collaborate with and see an organization's items, administrations, and brand through digital channels and innovations. Lord (2012) states that we are seeing an ocean change shift in financial way of behaving. Conduct that will deliver superfluous a significant number of the cycles, develops, business rules, measurements, and frameworks of the ongoing retail bank. Customer experience is the manner in which a brand communicates with the clients and is characterized not by an interest in individuals but rather interest in innovation. The people component is no doubt important for branch services, and relationship building for bigger accounts but technology makes the whole experience of interactions with banks, discovering information, applying for loans, check deposits, buying TPP (third party products) like insurance, pension funds, mutual funds seamless. For digital aces, new innovations are objectives to accomplish or motions toward ship off financial investors yet the devices that can be consolidated to draw nearer to customers (Westerman et al., 2014). Client experience works out in a good way past sites and portable applications to genuinely change client connection and how clients can be enabled easily through it. It conveys an incentive for customers and firms. It drives maintenance and customer faithfulness. There are various difficulties to client maintenance, First, Customer assumptions have expanded multi-overlay with the ascent of cutthroat contributions and fast innovative turns of events. Second, incorporating new digital channels into existing tasks can authoritatively challenge. Third, these computerized communications can drive a development in a culture like new clock speed, new dynamic strategies, and new guidelines that might possibly oppose conventional arrangement.

According to King (2012), retail banking clients will visit branches two times every year or as an exception three to four times each year, however they will visit at least multiple times through versatile application, web, tablet, and ATM. There is a strong evolution from visiting and calling branch managers in the 70s and 80s to ATMs 90s and early part of the 21st century. But with arrival of the internet and subsequent adoption of core banking by banks and low-cost internet supply by telecom companies revolutionized digital transformation in not just access to deposits, but a highly responsive credit culture. The whole landscape transformed with India's stack of UPI-based payment solutions, aadhaar-based authentication faster underwriting, and immediate disbursal of credit. The rise of fintech led to various product innovations in the payment space, and prepaid credit instruments like buy now pay later.

The competition also helped in innovation around various payment innovations, credit innovations, and underwriting innovations. With state and central banks providing various innovations around India stack, be it UPI payment, aadhaar-based authentication, ONDC (open network digital commerce), E-Sign, digital locker to store API-based authenticated documents, OCEN(Open credit enablement network), Fintechs are rising and leveraging the technology, agile processes, less corporate overhead to empower customers with agile underwriting, quick disbursals of credit. Banks are either building partnerships with fintechs to beat the corporate slowness of and leveraging the proprietary risk models of their own but sourcing the loans through digital channels and doing revenue sharing with fintechs or paying per leads.



Figure 1.1 Creator: Hexaware Technologies

#### (Rogers, 2016)

2.2.1 Multichannel Engagement: In a digitally transformed environment, customers have multiple channels through which they can engage with a company. This includes websites, mobile apps, social media, email, chatbots, and more. The customer experience is about ensuring a consistent, seamless, and user-friendly experience across all these touchpoints. Multichannel engagement is centered around meeting the needs and preferences of customers. It acknowledges that customers have diverse communication preferences and habits, and it aims to provide them with seamless and personalized experiences across various digital touchpoints. On-demand, customizable, connected, and sharable – the same qualities that lifechurch. TV offers to engage digital-age parishioners are what customers seek from every business today(Rogers, 2016).



Figure 1.2 Creator: Intel - Connected social media

(Rogers, 2016)

2.2.2 Personalization: Digital transformation enables companies to collect and analyze customer data to create personalized experiences. By understanding customer preferences, behavior, and history, companies can offer tailored recommendations, content, and promotions. This personalization enhances the customer's sense of being understood and valued. Customization of experiences helps customers engage content effectively and have lower bounce rates. Customers should be allowed to choose or modify the assortment of information, products, and services. Customers can be offered the right products and services at the right time through various artificial intelligence, machine learning, and other deep learning initiatives of companies. Personalized interfaces allow for the delivery of targeted marketing and advertising content, based on users' preferences and behavior.

This targeted approach can increase the effectiveness of marketing campaigns and improve the overall return on investment for businesses. When users feel that a platform or application understands their needs and preferences, it can foster a sense of loyalty toward the brand. Personalized interfaces contribute to building a strong and lasting relationship between users and the brand, resulting in increased customer retention and advocacy. Offering a personalized interface can give businesses a competitive edge, as it demonstrates a commitment to understanding and catering to users' specific requirements. This can differentiate a product or service from competitors and attract more users.

- 2.2.3 Self-Service Options: Customers increasingly expect the ability to find information and resolve issues on their own. Digital transformation often involves implementing self-service portals, knowledge bases, and AI-powered chatbots to assist customers in real time. This empowers customers and improves their overall experience by providing quick and convenient solutions. Customers seek to access digital data, content, and interactions as quickly, easily, and flexibly as possible (Rogers, 2016). Any offering that enhances this access is incredibly compelling. From the convenience of e-commerce to today's latest instant messaging apps, customers are drawn to anything that provides immediacy of simple, instant access and engagement. Customers seek to engage with digital content. Customers' expectation is on-demand, live-streaming video services based on their own needs not mass needs of broadcasting. Netflix, Disney, and Amazon Prime are examples of that service on-demand videos based on individual interests.
- **2.2.4** Data-Driven Insights: Digital transformation generates vast amounts of data. Companies can leverage data analytics and artificial intelligence to gain insights into customer behavior, trends, and pain points. These insights can inform decisions about product

development, marketing strategies, and customer support improvements. Personalized user interfaces can be designed to help improve user experiences making them more relevant and engaging. Through data analytics, users will be offered content and features aligned with interest, which helps less bounce rates from the web interface, and higher customer retention. Understanding the pattern of data helps unlock customer's behavior patterns, be it several orders, or the kind of products the customer is interested in. By analyzing user data, personalized interfaces can provide customized recommendations, such as product suggestions, content recommendations, or tailored services, based on users' interests and preferences. Data-driven insights empower organizations to make wellinformed decisions based on the analysis of relevant data. By leveraging data from various sources within the digital ecosystem, businesses can gain valuable insights into customer behavior, market trends, and operational efficiencies, allowing them to make strategic decisions that drive business growth. organizations can identify inefficiencies, streamline workflows, and optimize resource allocation, leading to improved productivity and reduced operational costs. Data-driven insights aid in effective risk management and compliance. By analyzing data, organizations can identify potential risks, fraud, or compliance issues, enabling them to implement proactive measures to mitigate these risks and ensure regulatory compliance. By leveraging data analytics, businesses can tailor their marketing campaigns, improve customer targeting, and optimize sales strategies, leading to increased customer acquisition and retention. Digital transformation facilitated by datadriven insights promotes a culture of continuous improvement and innovation within organizations. By collecting and analyzing data, businesses can identify areas for

improvement, implement changes, and innovate new processes, products, or services, ensuring sustained growth and relevance in a rapidly evolving digital landscape.

- 2.2.5 Mobile Optimization: As mobile devices become the primary means of digital interaction, optimizing the mobile experience is crucial. This includes having responsive websites and mobile apps that are easy to navigate, load quickly, and offer a seamless experience. Mobile optimization focuses on enhancing the performance of digital assets, including websites and applications, to ensure faster loading times and smoother functionality on mobile devices. This optimization is essential for meeting the expectations of mobile users, who generally expect fast and responsive experiences. Mobile optimization is crucial for improving a website's search engine ranking, as search engines prioritize mobile-friendly websites in their mobile search results. By optimizing for mobile devices, businesses can enhance their online visibility and reach a larger audience through mobile searches. Mobile optimization allows businesses to gather valuable data on user behavior and preferences, which can be utilized to personalize the user experience. By understanding how users interact with mobile content, businesses can tailor their offerings to meet specific user needs and preferences
- **2.2.6** Omnichannel Experience: Customers often move between digital and physical channels when interacting with a brand. Digital transformation aims to provide a unified and consistent experience across all these channels. For example, a customer can start an online purchase and complete it in a physical store, with their preferences and data seamlessly transferred. Digital transformation involves integrating various digital channels to create a cohesive customer experience. This integration ensures that customer interactions are consistent and seamless across all digital touchpoints, including websites, mobile apps,

social media, and other online platforms. Through digital transformation, companies can employ advanced communication and engagement tools to interact with customers in realtime across multiple digital channels. This enables proactive and personalized customer engagement, fostering stronger relationships and improving overall customer satisfaction. Digital transformation facilitates the creation of a unified customer journey that seamlessly integrates online and offline touchpoints. This ensures that customers have a consistent and integrated experience regardless of the channel they use, leading to a more cohesive and satisfying customer journey. Digital transformation streamlines internal processes and operations, enabling better coordination and management of customer interactions across various digital channels. This efficiency ensures that customer data and preferences are shared seamlessly across different departments, leading to a more efficient and effective omnichannel experience.

- **2.2.7** Real-Time Communication: With digital tools like live chat and messaging apps, companies can engage with customers in real time. This enables quick response to inquiries and immediate issue resolution, which enhances customer satisfaction. Customers seek to connect by sharing their experiences through text, images, and social media. This behavior has driven the entire explosion of social media from blogging to social networks like Facebook, LinkedIn, Twitter, etc.
- 2.2.8 Feedback Loops: Digital transformation allows companies to collect feedback from customers more effectively through online surveys, reviews, and social media monitoring. This feedback can be used to continuously improve products and services, demonstrating a commitment to customer satisfaction. If we look at the e-commerce landscape, customers often provide feedback on product pages and state their experiences of using the product

influencing future buyers. Amazon and Flipkart customers provide ratings between 1 to 5 and provide qualitative ratings by describing the products. Sellers in the platform take the feedback, analyze, and improve upon the products e-commerce platforms like Amazon or Flipkart will penalize them. These feedback loops allow continuous innovation in products, packaging, presentation, etc. These feedback loops will bring customer centricity in this digital era and quick dissemination of information not just in the comment section product but also on social media like Facebook, LinkedIn, and Twitter forcing sellers to innovate or go out of business as the potential experiences or videos can be viral in any time.

- **2.2.9** Security and Trust: Customers are increasingly concerned about the security of their data. Digital transformation includes robust cybersecurity measures to protect customer information and build trust. Companies that prioritize security send a strong message about their commitment to customer privacy. With more opening up, work from home and greater power to customers, security can be often compromised through password leaks, incorrect network accesses, and breaking VPN (virtual private network). It's critical to continuously invest in cyber security, be it building investing on technologies, governance and continuous process improvements, audits, and enforcement of actions.
- **2.2.10** Scalability: Digital transformation should enable companies to scale their operations efficiently to meet growing customer demands. Scalability ensures that the quality of customer experience remains consistent even as the customer base expands.
- **2.2.11** Accessibility and Inclusivity: A customer-centric digital transformation should also consider accessibility for all users, including those with disabilities. Ensuring that digital
touchpoints are accessible to everyone demonstrates a commitment to inclusivity and a positive customer experience.

#### **2.3 Operational excellence transformation**

Operational excellence transformation, from a digital transformation perspective, is a strategic initiative aimed at optimizing and improving an organization's internal operations and processes using digital technologies and data-driven insights. This transformation seeks to enhance efficiency, agility, quality, and overall performance, ultimately leading to a better customer experience, reduced costs, and increased competitiveness. Codelco, the world's the biggest maker of copper searched inside, changing its functional cycle to increment the two its effectiveness and inventiveness (Westerman et al., 2014). The enterprises like mining can be a grimy perilous and work concentrated process, security becomes basic. Coordination is frequently troublesome in light of the fact that exceptional data is just accessible where the work is occurring, not at any focal area, where data can be scattered across the undertaking to different areas.

With centralized intelligence through technology-based intervention, companies like Codelco can ensure the highest standard of worker safety, productivity and environmental protection. The functional change's objective was to drive extremist enhancements in mining mechanization and to help chiefs in creating, conveying, and developing a drawn-out digital vision (Westerman et al., 2014).

Here's a closer look at operational excellence transformation within the context of digital transformation:

2.3.1 Digital Process Optimization: One of the central goals of operational excellence

transformation is to streamline and automate processes using digital tools. This includes adopting workflow automation, robotic process automation (RPA), and business process management (BPM) systems to eliminate manual, repetitive tasks, reduce errors, and accelerate process execution. Other processes include real-time monitoring, which is a comprehensive real-time view of operations from a centralized operation with the help of data feeds across functions and departments with the goal of improving operational performance across the enterprise that will save costs, boost productivity and enhance the bottom line by controlling the middle line.

- 2.3.2 Data Analytics and Insights: Digital change empowers associations to gather and investigate immense measures of information from different sources, both inward and outer. Functional greatness drives influence information examination to acquire important experiences into activities, empowering information driven navigation. Prescient investigation can be utilized to expect issues, enhance asset designation, and work on generally speaking proficiency. Incorporated data organizations.
- **2.3.3** IoT and Sensor Integration: The Internet of Things (IoT) plays a significant role in operational excellence transformation. By connecting physical assets, equipment, and machinery to the internet, organizations can monitor performance in real time, detect anomalies, and schedule preventive maintenance, leading to increased uptime and cost savings.
- **2.3.4** Supply Chain Optimization: Digital technologies, including blockchain, AI, and data analytics can be employed to optimize the supply chain. This includes further developing stock administration, request estimating, coordinated operations, and

provider connections, bringing about decreased costs, quicker conveyance times, and improved consumer loyalty.

- **2.3.5** Responsive Underwriting: Digital technologies particularly predictive analytics, AI/ML will help understand risk better and faster, hence it will enable faster and responsive underwriting. Due to responsive underwriting, we can price better and enhance NIM (net interest margin), contributing significantly to our profitability.
- **2.3.6** Cloud Computing: The adoption of cloud computing allows organizations to scale their operations rapidly and access the latest technologies without significant upfront investments. Cloud-based solutions support operational excellence by providing flexibility, scalability, and cost-efficiency.
- **2.3.7** Advanced Analytics and AI: Machine learning and artificial intelligence (AI) technologies are used to automate complex tasks, such as predictive maintenance, quality control, and customer support. AI-driven insights can optimize resource allocation and improve decision-making.
- **2.3.8** Lean and Agile Methodologies: Operational excellence transformation often involves the implementation of lean and agile methodologies. Lean standards center around taking out squander and enhancing processes, while nimble systems empower associations to answer rapidly to changing economic situations and client needs.
- **2.3.9** Employee Empowerment: Digital transformation can empower employees by providing them with tools and data to make informed decisions and collaborate more effectively. This incorporates worker preparing in digital devices and encouraging a culture of continuous improvement.
- 2.3.10 Customer-Centricity: Operational excellence transformations from a digital

perspective should also prioritize customer-centricity. Digital tools and data investigation can assist organizations with better comprehension client requirements, inclinations, and ways of behaving, prompting further developed items and administrations.

- **2.3.11** Continuous Improvement: An essential aspect of operational excellence is a commitment to continuous improvement. Digital transformation provides the means to monitor and measure operations continually, identify areas for improvement, and implement changes quickly.
- **2.3.12** Risk Management: Digital technologies can be used to enhance risk management practices by identifying potential risks and implementing preventive measures. This includes cybersecurity measures to protect sensitive data and operations.

#### 2.4 Business model transformation

Business model change with regards to computerized change alludes to a principal change in how an organization makes, conveys, and catches esteem by utilizing digital advances. It involves rethinking traditional business models and processes to adapt to the opportunities and challenges presented by the digital age. A successful model has three components 1. Customer value proposition 2. Profit formula 3. Key resources and processes.

- 2.4.1 Customer value proposition:
- The model assists clients with performing explicit positions that elective contributions don't address. It has three components a. Target customer b. Jobs to be done or problems to be addressed c. company offerings, how the offerings can fulfil the pain point of customers or satisfy the needs or wants of customers

2.4.2 Profit formulae:

- The model creates esteem through the income model, cost construction, edges, and stock turnover. Either through differentiated pricing or focus on niche markets, companies target better revenue models and higher margins. Companies focused on premium margins must focus on building great customer experience, creating quality products, great distribution, and last-mile coverage.
- 2.4.3 Key resources and processes:
- The organization needs individuals, innovation, items, offices, brands, channels, and gear to convey incentives to designated clients. The organization additionally needs functional and administrative cycles to use secret weapons to help the organization and conveying worth to clients and different partners like workers and investors. The assignments that are important for the cycles incorporate preparation, advancement, arranging, spending plan, deals, and administration. Key cycles likewise incorporate the organization's principles, measurements, and standards.

According to Teacher Rita McGrath, the significance of plans of action are rising a result of three reasons

- 2.4.4 Speed-Item life cycles and plan life cycles are shortening, in the event that you check out Zara, its plan life cycles and item life cycles are extremely short and it does exceptionally responsive obtaining and charges a higher edge for this development. With this speed, client assumption is expanding on the lookout and industry.
- 2.4.5 Competition: Competition is coming from unexpected places. Google and

Apple is investing in a self-driven automobile based on artificial intelligence and deep learning. Apple's iPod disrupted the entire music industry, and Sony's walkie-talkie was once visible everywhere became history.

2.4.6 Customer experience: The customer is not expecting a product but the experience that comes with the product, how easily it solves the problem, the ease of use, feel, and the kind of comfort the customer is getting when using the product matter. Better customer experience is driving the sales, not low-cost product.

Please find below a detailed explanation of business model transformation.

- 2.4.7 Value Proposition Shift: Digital transformation is frequently started by revaluating the basic belief suggestion of a business. To stay ahead in the market, companies need to consider how digital technologies can enhance their existing products or services or create entirely new value offerings that cater to changing customer needs and preferences.
- 2.4.8 Digital Products and Services: One of the key aspects of business model transformation is the creation of digital products and services. This may involve developing software applications, mobile apps, subscription-based services, or digital content that can be monetized online.
- 2.4.9 Subscription and SaaS Models: Many businesses are shifting from one-time sales to subscription-based models or Software as a Service (SaaS) offerings. This provides recurring revenue streams and ongoing customer engagement, often facilitated through cloud-based platforms.

- 2.4.10 Ecosystem Building: Digital transformation frequently requires building or participating in digital ecosystems. Companies can collaborate with partners, suppliers, and even competitors to create platforms that offer a broader range of products or services to customers.
- 2.4.11 Data Monetization: Businesses can transform by leveraging data as a valuable asset. By collecting, analyzing, and monetizing data, companies can offer datadriven insights, personalized experiences, and targeted advertising to customers.
- 2.4.12 Online Marketplaces: Companies may transition into online marketplaces connecting buyers and sellers in a digital environment. These platforms provide convenient and efficient way to facilitate transactions and create value through commissions or fees.
- 2.4.13 Digital Marketing and Advertising: Digital transformation often involves a shift from traditional advertising and marketing channels to digital ones. This includes social media advertising, content marketing, influencer partnerships, and other digital marketing strategies to reach and engage customers online.
- 2.4.14 Supply Chain Optimization: Digital technologies like IoT, blockchain, and AI can optimize supply chain operations. Businesses can transform their models by improving inventory management, reducing logistics costs, and ensuring product traceability.
- 2.4.15 Personalization and Customer Insights: Data analytics and AI can enable highly personalized customer experiences. Businesses can transform by offering

products or services tailored to individual preferences and needs, leading to increased customer loyalty and satisfaction.

- 2.4.16 E-commerce and Online Sales: Traditional brick-and-mortar retailers often transform by expanding into e-commerce, allowing customers to shop online, and implement features such as online catalogs, virtual try-ons, and easy online payment options.
- 2.4.17 Rapid Experimentation: A key characteristic of digital transformation is the ability to quickly test and iterate on new business models. Companies can use agile methodologies to experiment with different approaches, learn from customer feedback, and adapt accordingly.
- 2.4.18 Customer Engagement Platforms: Businesses may transform into customer engagement platforms, offering a comprehensive digital experience where customers can access services, interact with the brand, and provide feedback through a single digital interface.
- 2.4.19 Remote Work and Collaboration: In the digital age, remote work and collaboration tools have become essential. Businesses can transform by embracing flexible work arrangements and digital collaboration platforms to enhance productivity and reduce costs.
- 2.4.20 Cybersecurity and Data Privacy: As digital transformation exposes businesses to cybersecurity threats; a transformational shift involves implementing robust security measures and ensuring compliance with data privacy regulations to protect both the business and its customers.

S1	Туре	Example	Description
No			
1	Affinity club	MBNA	Cooperate with
			participation
			affiliations and other
			proclivity gatherings to
			offer an item only to its
			individuals, trading
			eminences for
			admittance to a bigger
			client base.
2	Automation-	Betterment, IBM Watson	Harness programming
	enablement		that robotizes processes
	services		already requiring
			human work and
			discernment to decrease
			working expenses.
3	Brokerage	Century 21, Orbitz	Unite and work with
			exchanges among
			purchasers and dealers,
			charging an expense for

Please find below Business model analogies by Mark Johnso

			every achievement full
			exchange.
4	Bundling	iPod/iTunes, Microsoft office	Make buying of
			packaged
			contributions.
5	Crowd sourcing	Wikipedia, YouTube	Re-appropriate tasks to
			a more extensive
			gathering to contribute
			content for nothing or
			portion of ads.
6	Data into assets	Waze, Facebook	Use information the
			executives and
			investigation to catch
			esteem from
			approaching or
			responsibility for.
7	Digital platforms	OpenTable, Airbnb, Uber	Empower value making
			communications
			between outside makers
			and shoppers through
			open participative
			framework with set

			administration	
			conditions.	
8	Disintermediation	Dell, WebMD	Convey	
			straightforwardly to	
			client an item or	
			administration that has	
			generally gone through	
			a delegate.	
9	Fractionalization	Time sharing condos, NetJets	Permit clients to claim	
			part of an item or	
			administration and	
			appreciate a large	
			number of the	
			advantages.	
10	Freemium	LinkedIn, drobox, Spotify	Offer essential	
			administrations free of	
			charge however charge	
			for redesigned or	
			premium	
			administrations.	
11	Leasing	Luxury,cars,xerox,MachineyLink	Make high edge and	
			high worth items, yet	

			make it reasonable	
			through renting.	
12	Low-touch	Southwest, Walmart, Xiameter	Offer low cost, low	
			help rendition of	
			customarily top of the	
			line offering.	
13	Negative	Amazon	Produce high benefits	
	operating cycle		by keeping up with low	
			stock and having the	
			client pay forthright,	
			yet amazon postpones	
			settlements to few	
			weeks for dealer.	
14	Pay-as-you-go	Amazon web services, Azure	Charge the client for	
		cloud, google cloud	metered	
			administrations in light	
			of genuine use rates.	
15	Razors/blades	Gillete, personal printers	Offer high edge razors	
			at low costs then sell	
			sharp edges at nearly	
			exorbitant costs.	

16	Reverse	iPod/iTunes, amazon kindle	Offer low edge sharp	
	Razors/blades		edges at low or no	
			expense to energize	
			deals of high edge	
			razors.	
17	Product to service	IBM, Hilti,Zipcar	Instead of sell the items	
			inside and out, sell the	
			assistance the item	
			performs.	
18	Standardization	MinuteClinic/Ford	Give cheaper	
			normalized answers for	
			issues that once tended	
			to through tweaked	
			arrangements.	
19	Subscription club	Netflix, Disney, Dollar shave club	Charge the client a help	
			expense to get to an	
			item or administration.	

## **Table 1: Business Model Transformation**

Business model transformation in the context of digital transformation is a continuous process of adaptation to the evolving digital landscape. It requires a strategic vision, commitment to innovation, and a willingness to embrace new technologies and approaches to create sustainable competitive advantages and deliver value to customers in a digitally connected world.

#### 2.5 Institutional and policy transformation of state

Reserve Bank of India (RBI) and the Government of India have taken several institutional and policy measures to foster fintech transformation in the country. The landscape of fintech and regulatory policies are evolving rapidly

- 2.5.1 Regulatory Sandbox: The RBI introduced a regulatory sandbox framework to encourage innovation in fintech. Under this framework, fintech start-ups can test their products and services in a controlled environment with relaxed regulatory requirements. This allows for experimentation while ensuring consumer protection and financial stability.
- 2.5.2 Payment and Settlement Systems: The RBI has introduced several initiatives to modernize payment and settlement systems in India. This includes the Unified Payments Interface (UPI), has revolutionized digital payments in the country by enabling seamless fund transfers and mobile-based payments.
- 2.5.3 Digital KYC: The RBI introduced the concept of digital Know Your Customer (KYC) norms, which allow financial institutions to use digital methods for customer verification. This has streamlined customer onboarding processes for fintech companies, making it easier for them to acquire customers.
- 2.5.4 Licensing Framework for Payment Banks and Small Finance Banks: The RBI

issued licenses for Payment Banks and Small Finance Banks, which are allowed to provide a range of banking and financial services. This move aimed to increase financial inclusion and promote digital banking services.

- 2.5.5 Regulation of Peer-to-Peer (P2P) Lending: The RBI issued regulations for P2P lending platforms to bring them under a regulatory framework. This move aimed to protect the interests of lenders and borrowers while promoting the growth of P2P lending as a fintech innovation.
- 2.5.6 Revised Framework for Prepaid Payment Instruments (PPIs): The RBI revamped the framework governing prepaid payment instruments like mobile wallets and prepaid cards. This included guidelines for interoperability between different PPIs, increasing their utility.
- 2.5.7 Data Localization: The RBI introduced rules requiring certain categories of data collected by fintech companies to be stored and processed within India. This was done to ensure data security and compliance with local data protection laws.
- 2.5.8 Open Banking and API Standards: The RBI has encouraged the adoption of open banking practices by setting up API (Application Programming Interface) standards. This facilitates data sharing and interoperability between banks and fintech companies, promoting innovation.
- 2.5.9 Fintech Promotion Council: The Indian government established a Fintech Promotion Council to facilitate dialogue between the government, regulators, industry participants, and other stakeholders. This council aims to address regulatory challenges and promote fintech growth.

- 2.5.10 Blockchain and Cryptocurrency Regulation: The Indian government and RBI have explored various approaches to regulate blockchain technology and cryptocurrencies. There have been periods of uncertainty, with regulatory developments still evolving.
- 2.5.11 Financial Inclusion Initiatives: Both the government and the RBI have continued to focus on financial inclusion through various fintech initiatives, including the Jan Dhan Yojana and Aadhaar-based services.

It's important to note that the regulatory landscape for fintech in India is dynamic, and changes may have occurred since my last update in September 2021. Fintech companies and stakeholders should stay informed about the latest regulations and policies to ensure compliance and take advantage of opportunities in this rapidly evolving sector.

#### 2.6 Leadership and governance transformation

Leadership and governance transformation in the context of digital transformation refers to the fundamental changes in leadership styles, organizational structures, decision-making processes, and governance models that are necessary to effectively navigate and succeed in the digital age. Here's a detailed description of leadership and governance transformation from the perspective of digital transformation:

2.6.1 Visionary Leadership: Digital transformation requires visionary leaders who can see the potential of technology to disrupt and reshape industries. These leaders set a clear vision for how digital technologies can drive innovation, enhance customer experiences, and create value for the organization.

- 2.6.2 Digital Literacy: Leaders need to be digitally literate, which means they should have a deep understanding of emerging technologies and their implications. They should be able to assess the impact of digital trends on their industry and organization.
- 2.6.3 Agile Leadership: Traditional top-down leadership models may not work well in the fast-paced world of digital transformation. Agile leadership emphasizes adaptability, quick decision-making, and the ability to pivot when necessary. Leaders must be open to experimentation and willing to learn from failures.
- 2.6.4 Cross-Functional Collaboration: Digital transformation often involves breaking down silos within an organization and encouraging cross-functional collaboration. Leaders should promote a culture of teamwork and facilitate communication between different departments to drive innovation and efficiency.
- 2.6.5 Data-Driven Decision-Making: Leaders should promote data-driven decisionmaking throughout the organization. They should understand the importance of data analytics and ensure that data is used to inform strategies, track progress, and make informed choices.
- 2.6.6 Customer-Centric Leadership: In the digital age, customer experience is paramount. Leaders should be customer-centric, focusing on understanding and meeting customer needs and expectations. This requires the ability to collect and analyze customer feedback and data to make improvements.
- 2.6.7 Innovation Culture: Digital transformation thrives in organizations with a culture of innovation. Leaders should foster an environment where employees

are encouraged to come up with new ideas, experiment, and take calculated risks.

- 2.6.8 Change Management: Effective leadership in digital transformation involves skilful change management. Leaders should be able to communicate the need for change, inspire employees to embrace it, and provide the necessary resources and support for a smooth transition.
- 2.6.9 Governance Structures: Traditional hierarchical governance structures may not be suitable for digital transformation. New governance models that empower cross functional teams and distribute decision-making authority may be more effective in was responding to the agility required in the digital era.
- 2.6.10 Ethical and Legal Considerations: Digital transformation often involves the collecting and using large amounts raises ethical and legal questions. Leaders should ensure that their organizations comply with data privacy regulations and adhere to ethical standards in data use.
- 2.6.11 Cybersecurity and Risk Management: Leaders must prioritize cybersecurity and risk management in the digital age. They should allocate resources to protect the organization from cyber threats and establish risk management processes to assess and mitigate digital risks.
- 2.6.12 Digital Ecosystem Engagement: In many cases, digital transformation involves partnerships and collaborations within a broader digital ecosystem. Leaders should be skilled in negotiating and managing these partnerships for mutual benefit.
- 2.6.13 Continuous Learning: Digital leaders perceive the requirement for nonstop

learning and improvement. They ought to remain informed about arising advancements, industry patterns, and best practices to stay important and powerful.

2.6.14 Measuring Digital Success: Leaders ought to lay out key performance indicators (KPIs) and measurements to quantify the progress of advanced change endeavours. They m ought to routinely audit progress and change techniques on a case by case basis.

In summary, leadership and governance transformation in the context of digital transformation is essential for organizations to thrive in a rapidly changing digital landscape. It requires leaders who are forward-thinking, adaptable, and capable of driving cultural and structural changes to embrace digital opportunities while managing associated risks.

# CHAPTER III: METHODOLOGY

#### 3.1 Overview of the Research Problem

Of the total population of India, 63.38 million people do not have access credit, totaling a whopping 25 trillion rupees. The manufacturing, GDP, and employment of the nation are greatly influenced by these neglected groups, which presents a huge potential for the banking industry. India has created a strong digital infrastructure that includes payment rails and the India Stack, and this infrastructure has the ability to propel the digital transformation of financial services. With the integration of technologies like Aadhar, UPI, and others, this infrastructure promises to provide financial services that are easier to use and more effective. An environment that is ideal for novel banking models such as Buy Now, Pay Later (BNPL) is created by the introduction of 5G networks, high-speed internet, a youth population that is skilled in digital media, and the expectation of one billion smartphones by 2026. These developments present tremendous opportunities for entrepreneurial endeavors in the banking sector.

The Reserve Bank of India (RBI), which places a strong emphasis on risk management and prudent lending, is closely monitoring the banking industry's digital transformation. The regulatory framework, in particular the digital lending guidelines issued by the RBI, places obligations and rules on fintech partners and regulated businesses that might potentially stifle innovation. Despite large expenditures in digital transformation, problems including financial illiteracy, mistrust of digital systems, and cybersecurity concerns impede the use of digital financial instrument. High transaction costs, poor cash flow information, and limited underwriting capacity are some of the operational difficulties that traditional banks confront, especially in the neglected markets. These gaps were addressed with the introduction of small financing banks and payment banks, although notable differences still exist. The challenges of delivering financial services to marginalized communities are exacerbated by elements like low educational attainment and restricted credit availability.

### **3.2 Operationalization of Theoretical Constructs**

Examining the total credit demand in rupees as well as the number of underbanked or unbanked individuals is one method of estimating the extent of the credit gap. Evaluating the adoption rates of digital services and technologies like e-KYC, UPI, Aadhar, and others may help operationalize the maturity and efficacy of digital infrastructure. The operationalization of technical preparedness may be achieved by an analysis of the growth of smartphones, high-speed internet, and 5G network penetration and acceptance. By looking at compliance rates, the quantity of fintech partnerships, and compliance with RBI's rules for digital lending, the influence of regulatory control may be put into practice. Surveys, consumer behaviour analysis, financial literacy programmes, and trust-building activities may all be used to operationalize the degree of customer education and trust in digital systems.

Through an evaluation of transaction costs, cash flow data availability, and underwriting skills in the underserved areas, the operational issues faced by traditional banks may be operationalized. The operationalization of structural difficulties may be achieved through the assessment of variables including financial literacy, education, and credit availability in marginalized communities. Researchers may gather and evaluate data to obtain a thorough grasp of the potential and difficulties associated with digital strategy and transformation in the Indian

banking sector by operationalizing these theoretical constructs. This data-driven approach helps in the development of plans to successfully address these difficulties and allows for a more accurate evaluation of the existing state of things.

#### **3.3 Research Purpose and Questions**

The purpose of the study is to comprehend and investigate how executives see potential and difficulties for the future of banking from a digital perspective, given that consumers and individuals sometimes find it difficult to use or profit from technology. Recognize and assess the new opportunities that the India stack presents, including the government's programmes for identification rail, payment rail, and data sharing rail. Examine the new prospects brought about by the Reserve Bank of India's (RBI) introduction of rules for digital lending and evaluate how they could affect the financial environment. Examine and comprehend the difficulties that fintech presents to banks' investments in digital transformation, paying particular attention to the difficulties and complications encountered along the way.

#### **RESEARCH QUESTIONS:**

- What kinds of opportunities are emerging from the India stack that the government is building, from identity rail to payment rail to data sharing rail?
- What kinds of opportunities are emerging from the central bank's (RBI) digital lending guidelines?
- What are the challenges emerging from fintech that are challenging Indian banking sectors digital transformation investments?

### Hypothesis:

Hypothesize that the executives in the banking sector perceive significant opportunities for

enhanced customer engagement, streamlined processes, and increased financial inclusion. There will be a surge in new opportunities for financial institutions to expand their lending operations.

#### **3.4 Research Design**

This research will use a case study methodology that will be enhanced by in-depth interviews. This design has been specifically created to provide users a thorough knowledge of the potential and difficulties the Indian banking sector is facing as it transforms into a digital enterprise. The primary goals of the exploratory and descriptive study design are to explore, assess, and comprehend the distinct possibilities and problems that the Indian banking sector faces as it undergoes a digital transition. Choose a number of case study companies from the Indian banking industry, including fintech partners, digital platforms, and conventional, payment, and small financing banks. Every case that is chosen should highlight different approaches to and difficulties with digital transformation. Interview important decision-makers and stakeholders from each case study organization in a semi-structured manner. Incorporate delegates from several areas, such as top management, IT, compliance, and customer service. Gather qualitative data to learn about their viewpoints, approaches, and experiences in relation to the opportunities and difficulties presented by the digital transition.

In the research interview, participants who are mostly c-level executives such as CEO, CTO, Chief compliance officer, Head Treasury, Head Risk policy etc. are considered.

### 3.5 Population and Sample

In order to guarantee diversity in terms of banking type, size, and digital approach, the questions will be carefully chosen. A limited number of participants from each case who are well-versed in their company's digital transformation efforts will be interviewed. The whole Indian banking sector, including all different kinds of banks and financial organizations engaged in digital transformation, is included in the population under investigation in this case study research. Establishment financial institutions, nationalized banks, and sizable commercial banks. fundamental banking services are offered by specialized banks. banks that cater to the underbanked and underserved populations. technologically advanced financial startups and associates that work with banks. Financial services are used by both individuals and companies, especially through digital media. include the Reserve Bank of India (RBI) and additional pertinent regulatory bodies in charge of the banking industry.

#### **3.6 Participant Selection**

To guarantee diversity in terms of responsibility, knowledge, contribution and digital strategy, various participants are carefully chosen. Participants include heads of risk, treasury, business and senior management for interviews. Select participants who interacts with regulatory bodies such as the RBI are chosen to gain further insight into regulatory matters. In this study research, sampling is used to ensure representation, variety, and a comprehensive understanding of the numerous actors and stakeholders in the Indian banking system

#### **3.7 Instrumentation**

It's crucial to properly organize and prepare for the instrumentation of data when utilizing interviews as a data collecting method in case study research on digital strategy and transformation in the Indian banking industry. A well-organized interview process that lists the main themes of investigation and questions. Participants were chosen for a thorough understanding of the possibilities and difficulties based on their jobs, relevance to the research, and diversity. In case study research, data instrumentation for interviews guarantees that the

information gathered is trustworthy, well-organized, and appropriate for analysis. Conducting interviews with precision and utilizing efficient instrumentation techniques are essential for yielding insightful information on the digital transformation scenario in the Indian banking sector

#### **3.7.1 Interview Method**

The goal of this study is to better understand the digital strategy and transformation landscape in the Indian banking sector, with a particular focus on identifying possibilities and problems faced by important stakeholders. The study takes a qualitative tack, with semi-structured interviews serving as the main means of gathering data. To ensure a variety of viewpoints, ten participants were carefully selected based on their noteworthy positions in spearheading digital initiatives within well-known Indian institutions. Each participant had fifteen questions about the banking industry, and they were all actively involved in developing or putting into practice digital initiatives. The 15 open-ended questions in the carefully crafted interview guide, which was created after a thorough literature assessment, cover important facets of the digital transition in banking. The study complies with ethical guidelines by securing participants' informed consent and ensuring the privacy of their answers. In order to ensure reliable data collection, interviews are recorded with consent.

#### **3.8 Data Collection Procedures**

The complete context and significance of real-world events, such as academic achievement, international cooperation, community transformation, group dynamics, organizational and managerial processes, and human development, can be preserved by employing the case study method. In numerous disciplines, including psychology, political science, sociology, social work, anthropology, business, nursing, education, and community planning, case studies are commonly

utilized. Direct observation, archival records, interviews, physical artifacts, papers, and participant observation are the six types of evidence used in case studies. Additional evidence may be gathered for the study if additional sources are used.

This research includes 9 interviews as the primary source and document analysis and archival study as the additional sources. By using a blended methodology (interviews, document analysis), the author is hoping to reach more depth within the research. Interviewing experts and end users will help the researcher collect the necessary data, experience, and dynamics. The second set of data collections are from various documents of RBI and other institutions in the form of reports, guidelines, directions, notifications, and annual reports

#### **3.9 Data Analysis**

Make sure the gathered data is well-structured and prepared for analysis by organizing and cleaning it. Make an archive of data with transcripts of interviews. Utilize theme analysis to examine the qualitative information gathered from interviews. This entails locating and classifying recurrent ideas, themes, and patterns in the data. Create a coding scheme and categorize the data based on themes pertaining to digital strategy and transformation, as well as possibilities, obstacles, and particular interest components. Analyzing data from interviews is a crucial stage in case study research on digital strategy and transformation in the Indian banking sector in order to extract insightful information. Put interview dates, participant IDs, and other pertinent background on the transcripts and arrange them methodically. Start with the open code: Find the starting codes, or descriptive labels for important data portions, by reading through the transcripts. Sort similar codes into more general themes or groups. Finding links and patterns in the data is a step in this process. Create a codebook or coding framework that includes definitions, examples, and themes. Utilizing the pre-established coding framework, code every

interview transcript.

### 3.9 Research Design Limitations

In-depth interviews combined with a case study methodology is a strong way to look into the possibilities and difficulties of digital strategy and transformation in the Indian banking sector. It could be difficult to extrapolate the case study research's conclusions to the whole Indian banking sector. Because they reflect particular examples and their distinct circumstances, it is difficult to generalize that apply to all banks. A researcher's discretion, desire to participate, and accessibility are some of the elements that may affect the choice of case study organizations. This may reduce the diversity of situations and induce selection bias. This might lead to a very limited sample size, which could affect how thorough the study. Notwithstanding these drawbacks, the study design is intended to ease these problems as much as possible and offer insightful information about the state of the Indian banking sector's digital transformation. The results provide a comprehensive perspective of the potential and difficulties encountered by banks and fintech partners in their digital shift, but they should be interpreted in light of these limitations.

#### **CHAPTER IV:**

#### RESULTS

#### 4.1 Introduction

In the preceding chapters, all this research and extensive exploration into the digital transformation and strategy within the Indian banking sector was undertaken. The investigation was structured to address specific research questions that form the backbone of the study. These questions were critical in guiding the research process and are reiterated here to provide clarity and focus as we move into the analysis of the findings.

The first research question sought to identify opportunities emerging from the India stack initiative a government-led project encompassing identity rail payment rail and data sharing rail this question was fundamental in understanding how digital infrastructure developments are influencing the bank sectors.

The second question delved into the opportunities presented by the Reserve Bank of India's (RBI) digital lending guidelines. This aspect was crucial in comprehending how regulatory frameworks are shaping the future of digital banking and financial services in India.

The third question aimed to cover the challenges arising from fintech innovations, particularly how they are impacting traditional banks' competitive dynamics and adaptation strategies within the banking industry.

Each of these questions was approached through a qualitative research methodology, involving interviews with key stakeholders in the banking sector. Their purpose was to gather rich, detailed insights that would shed light on the complex and evolving landscape of digital banking in India. As this chapter unfolds, the analysis of the data collected will be presented with the research questions outlined. The findings aim to offer a comprehensive understanding of the current state and prospects of digital banking in India, providing valuable insights for industry stakeholders, policymakers, and academic researchers. The objective is to not only answer these questions but also to contribute meaningfully to ongoing discourse in digital financial services and strategy.

Name	Age	Company name	Sizes	Туре	Comments
	group		501	<b>F</b> <sup>1</sup>	
Ankit Jain	40-50	Moneyview	501-	Financial	
			1000	services	
Vikash	40-50	Jio finance	1000-	Financial	
Jhunjhunwala			5000	services	
Rajib dutta	40-50	SMFGrihashakti	1000-	Financial	
			5000	services	
Ekhlaque Bari	50-60	Jubilant food	10000+	Supply chain	Earlier CIO in
					financial
					industry
Tina singh	50-60	SMFG india credit	10000+	Financial	
				services	
Bodjhisatwa	40-50	SMFG india credit	10000+	Financial	
Gupta				services	
Chittaranjan	50-60	Nagarro	10000+	Information	Only focused on
Behera				Technology	Financial
					services
					product
	50-60	SMFG india credit	10000+	Financial	
Nitin Agarwal				services	
	40-50	Mannapuram	10000+	Financial	
Susil Mishra		Finance		services	

# 4.1 Presentation of Interview Profiles and data

# The above are the interview profiles, detailed interview is part of Appendix

#### What are the opportunities India stack like UPI offer for fintech and banks?

In response to this question, the participant 2 says "UPI has revolutionized the payment landscape in India, offering a seamless platform for fund transfers". Vikash talks about various opportunities emerging like lending, cross selling of products including apart from lending is mutual funds, insurance, Participant 2 also says that credit products for underserved segments enhancing financial inclusion, Participant talks of achieving through various means like data analytics and insights, credit scoring, greater reach and distribution. Other participant 3 talks about "huge opportunity given the population & ecosystem that has been built", however he cautioned on serious need to look at strategy for profitable business model emerging from UPI.

Participant 8 also says, how UPI spends behavior can act as a proxy to understand the customer. Nitin talks about something called validate banking, he said" Validate Banking – stature, conduct and correctness of a bank account

Lend into and collect from the same source, without having to evaluate the banking in totality – there by abiding to the regulatory guidelines and reducing cyber threats". He says validate banking will help to understand the accuracy of bank account, which in turn act a single node of lending and collection, which will help strengthen regulatory conduct and reduce any kinds of cyber threats.

All participants agree on huge transformational opportunities in lending, cross sell opportunities with expanding digital public goods, purchasing power and better awareness of credit instruments, it will lead to financial inclusion for society and great business opportunities of financial institutions like banks, NBFC(Nonbanking financial inclusions) The consensus among the respondents' points to a multifaceted motivation for digital transformation, encompassing customer-centric approaches, operational efficiencies, and competitive positioning. This indicates a strategic shift in the banking sector, prioritizing agility and customer engagement in the digital era.

The India Stack, particularly UPI, presents a once in a lifetime chance for fintech and banks to take advantage of beforehand neglected markets. By offering easy to use and practical monetary arrangements, these organizations can reach underserved populaces, enabling them with admittance to current monetary administrations. Information is an important resource, and the India Stack's information sharing rail works with information driven decision-production for fintech and banks. By utilizing the bits of knowledge got from UPI exchanges, foundations can tailor their administrations, moderate dangers, and upgrade by and large functional effectiveness. Inside the India Stack, there is gigantic potential for cooperation between banks, fintech, and government drives. By lining up with government objectives, monetary organizations can add to the financial turn of events, driving monetary incorporation and supporting public drives like Computerized India.

# Question 2: What are the opportunities India stack like Open Credit enablement network offer for banks?

In response to this question, the participants say that Banks have the chance to quickly enter new markets thanks to Open Credit enablement network. Banks can improve their financial services by implementing creative solutions through the use of Open Credit enablement network. Banks are encouraged to implement digital transformation by OCEN. Participant 2 says "Banks are leveraging OCEN and the opportunities it presents: - Digital Lending Platform:

- End-to-End Digital Journey

- Reduced Paperwork ".

Participant 2 talks about of the benefits of OCEN include reduced paperwork, end to end journey, better credit access to underserved segments, improved risk assessment, lower operational cost etc. He also said about reduced default rates, higher probability customized offerings. However he has cautioned on data privacy and security must be deeply factored into.

Banks can use Open Credit enablement networks data capabilities to make decisions based on facts. OCEN provides banks with the opportunity to enter new business sectors rapidly. The digital infrastructure and capacities presented by OCEN can work with a quicker and smoother project into locales where the organization is dynamic. Banks can work on their monetary administrations by utilizing the creative arrangements made conceivable through OCEN.

The organization empowers the execution of imaginative and high-level monetary items and administrations that can separate banks in the cutthroat market. OCEN empowers and supports banks in their computerized change endeavors. By coordinating with the organization, banks can modernize their tasks, smooth out cycles, and remain ahead in the developing monetary scene.

OCEN's information abilities permit banks to settle on informed choices in light of verifiable data.

The organization gives admittance to important information that can be investigated for experiences, empowering banks to improve their dynamic cycles. At last, the agents ought to

consider which of these opportunities adjusts most intimately with their authoritative objectives and needs.

# Question 3: Do you think, India Stack like Ekyc, E-Sign, Aadhar, Digital locker, AA framework accelerate credit delivery?

In response to this question, the participants agree that these tools significantly accelerate credit delivery by making processes more efficient and reducing documentation and fraud risks. The responses indicate that India Stack is pivotal in transforming the lending landscape, offering faster, more secure, and user-friendly credit solutions. This represents a significant leap towards financial inclusion and digital empowerment in banking.

The transformative effect of India Stack parts, including eKYC, Virtual sign, Aadhaar, Advanced Storage, and the AA system, on the speed increase of credit conveyance. These imaginative devices have essentially affected the development of organizations, molding their development directions.

The joining of India Stack parts has prompted a quick development of organizations utilizing these instruments. The smoothed-out processes empowered by eKYC, Virtual sign, Aadhaar, Advanced Storage, and the AA system have sped up credit conveyance, situating organizations for quick and deft development. This theme highlights the quick and significant results experienced by organizations that have completely embraced India Stack parts. Over the final remaining one to three years, organizations taking on India Stack parts have seen consistent advancement in their development. The consistent joining of eKYC, Virtual sign, Aadhaar, Computerized Storage, and AA structure has added to a progressive upgrade of functional effectiveness, client encounters, and credit conveyance processes. This theme underlines the consistent and economic development saw in organizations during this time period. For organizations utilizing India Stack parts, the viewpoint throughout the following three to five years guarantees moderate development. As these associations keep on saddling the abilities of eKYC,

Online sign, Aadhaar, Advanced Storage, and AA system, they are ready to accomplish huge achievements, encouraging long-term maintainability and development. This theme features the expectation of supported progress in the mid-term for organizations taking on India Stack parts. Organizations that have embraced the India Stack for five to a decade have arrived at a condition of long-term development. The persevering effect of eKYC, Virtual sign, Aadhaar, Computerized Storage, and the AA structure has been instrumental in forming these associations into tough, versatile, and mature elements. This question highlights the groundbreaking excursion that organizations experience over the long haul when completely coordinated with India Stack parts. **Question 4: How is your organization leveraging or planning to leverage India Stacks for top-line growth?** 

In response to this question, the participants 1,3 say, how his digital lending company is already utilizing India Stack for credit intermediation and KYC processes, enabling quick loans accessible via mobile phones and broadening their customer reach without physical branches. The utilization of India Stack for top-line growth underscores its role in enabling financial institutions to expand their reach and innovate in product delivery. This trend is indicative of a broader shift towards digital-first strategies in the financial sector.

The delegates gave bits of knowledge into the organization's course of events in taking on these imaginative apparatuses, with choices crossing from the underlying examination stage to the steady joining over the beyond one to three years and lining up with long haul vital targets over the last three to five years. The beginning of examining how India Stack parts could upgrade current techniques or open new roads for development. This subject highlights the association's obligation to investigating the capability of India Stack and denotes the beginning phases of key thought for combination. The organization is currently in the foundational stage of figuring out how India Stack components align with its goals. The emphasis is on distinguishing open doors, surveying expected advantages, and laying the basis for future mix, exhibiting a proactive way to deal with innovative headway.

# Question 5: What are the main drivers or catalysts behind organizations decision on digital transformation?

In response to this question, the participant 1 says, "We are a lending institution and if we have to reach scale, reduce TAT and to provide a customer seamless hassle-free journey, we need to move towards end-to-end digital solutions wherein lending can be done in 5 mins time", Participant 1 talks about TAT reduction, faster under writing, seamless and hassle free Journey is critical. He also talks about cost saving as an important goal in this competitive world. With this digital journey and digital transformation, we can reach through masses. I am quoting him "Not to miss in country like india wherein you have reach masses, digital is the only solutions through which you can reach masses and scale up the business without physical presence."

Participant 3 talks about market potential, competitive advantage, customer centricity etc. as the drivers for digital transformation. Participant 4 talks about competition, incremental revenue, cost reductions, productivity are important drivers and catalysts for digital transformation. Almost all agree on Business productivity, cost, customer centricity, seamless customer journey are critical drivers for digital transformation.

Remaining competitive in the market frequently expects associations to embrace digital advances and cycles to stay aware of or outperform their adversaries. Innovation is an impetus that powers associations to go through digital change since it is continuously developing. The
quick headways in innovation set out open doors for associations to use new devices and answers for improve their activities and remain pertinent.

One of the principal powers behind advanced change is the need to meet or outperform client assumptions. As client inclinations develop and digitized encounters become indispensable to day-to-day existence, associations should adjust to give consistent, advantageous, and carefully empowered administrations.

#### Question 6: What are the key challenges organization faced during digital transformation?

In response to this question, the participant 4 says, "A large proportion of investment, effort and bandwidth goes into regulatory compliance and running the business." that at the point when He says, major challenges about regulatory compliance that creates lot of overhead and need lot of resources allocation in terms of time and effort, but contributes little to digital transformation. He also discusses about challenges of "talent" that is a key input to the digital transformation of the organizations. He also discusses problems and delays in change management process, building a business case to present to CEO and MD of organizations. Expectations of CEO and MD might be very different from the CIO, hence business case doesn't get acceptance. Leaderships also lags digital first mindset, they are still operating in physical world, hence convincing chairman or board by CXOs or heads of various functions push up challenges that threaten to slow down digital transformation. Organizations come up short on assets and assets to put resources into new devices, innovation, and qualified staff, they experience challenges in going through a digitized change. Restricted monetary assets access or investment due to lack of awareness or interest by MD and CEOs can block the capacity to execute essential changes and redesigns. It very well may be hard to overcome stakeholders and representative protection from change, which makes it more trying for new digitized cycles and innovations to be taken on without a drawback.

Obstruction from people inside the association can ruin the advancement of digitized change drives Participant 5 talks about obstruction by people are getting affected or people, those who lag understanding, hence It needs change in mindset of people and leader are essential for digital transformation. It tends to be trying to coordinate new advanced advancements with heritage frameworks that are as of now set up, especially for organizations with multifaceted IT foundations.

Participant 8 talks about challenges emerge in terms of thought leadership and allocation of resources in terms of investment in digital strategy and transformation process. Nitin says "the guidance and buy-in of the leadership teams and management is where it will always start from." Nitin also said "Most organization fails to recognize the need of digital transformation as investment for building the future and agree for a gestation period."

Participant 9 talks about similarity issues and the requirement for consistent mix can present huge hindrances during the computerized change venture. Agents ought to consider which of these difficulties is generally relevant to their association's circumstance. While numerous difficulties might exist, choosing the most basic one can direct the improvement of techniques to address and defeat these hindrances various challenges like "Resistance to Change"," Legacy processes"," Lack of Digital Skills"," Data Security and Privacy Concerns".

Almost all agreed on Talent/lack of digital skills, investment, legacy processes or affected people will throw challenges to digital transformation.

#### Question 7: How did your organization overcome regulatory and compliance hurdles?

In response to this question, the participant 3 says "We take full cognizance of regulatory guidelines and entire strategy made keeping this in mind. Educating, sensitizing, dialogue with partners helps in addressing hurdles.", Participant 3 talks of educational campaign, sensitization drive, continuous monitoring of RBI guidelines. He implemented a continuous regulatory monitoring system, during the initial three years, empowering proactive discovery and treatment of developing consistence prerequisites. However, Participant 5 doesn't find much challenges as her direct involvement in compliance is minimal. Participant 7 talks about investment in regulatory technologies helps in better and ease of compliance.

Participant 9 says "A digital transformation has two sides, one is demand side like market competition, customer expectations, regulatory compliance and other is supply side like technology advancements, data driven decision making, innovation and agility". Participant 9 says on importance of regulatory compliance and must invest in technology to ease the process, timeline and accuracy.

The organization set up an exceptional consistence group during the first stage, which endured under a year. This devoted group probably assumed an urgent part in guaranteeing that the organization comprehends and complies with significant guidelines. Laying out a consistence group is a proactive move toward overseeing administrative difficulties. The organization's methodology for defeating organizational and consistency obstacles. Every choice addresses an alternate part of an exhaustive way to deal with consistency management. Delegates might need to consider the general significance of every choice in their particular setting while deciding.

# Question 8: What is the digital lending is going to disrupt the lending process enabled democratization?

In response to this question, the participant 5 says "Yes. Most of the bottom of the pyramid lending is unviable in the traditional way due to high costs attributed to branch model and data deficiency". She says, due to lack of credit worthiness and lack of organized source of income, bottom of the pyramid will be unviable through branch led physical mode. She provides an example, "E.g. Sourcing cost in physical world for a 10,000 rupee loan can be as high as 1500 rs with physical visits, file movement from hub to spoke location, manual processing of files via a physical operations hub and paper based loan documentation." discussed that the disturbance in the loaning system empowered by digitized loaning stages gives off an impression of being related with a somewhat short to medium-term course of events. The statement recommends that digitized loaning is portrayed by sped up and productivity, smoothing out the application interaction and further developing inclusivity.

Participant 6 spoke about "Technology based assement", "Reduced barriers to entry", "Mobile accessibility" will strengthen and accelerate underwriting process and faster disbursal of credit to customer. Branch visit is not required, almost everyone has mobile phones, people can install the mobile app and access credit immediately. Participant 6 also talks about technology led personalized offering and digital distribution mechanisms social media like facebook, twitter will empower users to access credit with ease and speed. It will lead to greater financial inclusion. The effects portrayed, for example, fast admittance to subsidizing and compelling credit processes, show changes that are probably going to appear inside a time span of one to three years. This choice lines up with the possibility that the transformational impacts of digitized loaning. are not prompt however are supposed to unfurl inside a somewhat brief period. Agents might pick the choice that best mirrors how they might interpret the course of events for the disturbance empowered by advanced loaning in the loaning system.

#### Question 9: How RBIs digital lending guidelines will strengthen this an unregulated?

In response to this question, Participant 9 says, "By increasing transparency and creating higher accountability both for RE as well as LSP." Respondents note that Regulatory guidelines from the RBI can lay out clear guidelines for fair loaning works on, guaranteeing that shoppers are shielded from savage loaning rehearses. This incorporates straightforward divulgence of terms, loan costs, and charges and Key fact statements (KFS), which is are significant for borrowers to go with informed choices.

Rules can assist with moderating dangers related with digitized loaning, guaranteeing that monetary establishments follow reasonable loaning rehearses. This incorporates evaluations of borrower reliability, risk the board conventions, and rules on the most extreme advance openness. The RBI rules might incorporate arrangements to protect the protection and security of borrower data. This is critical given the computerized idea of these exchanges, it is satisfactorily safeguarded to guarantee that delicate monetary information.

Regulatory frameworks can support monetary consideration by guaranteeing that computerized loaning stages comply with rules that elevate openness to a more extensive scope of borrowers, remembering those for underserved or distant regions. The rules might present a permitting structure for digitized banks, guaranteeing that main genuine and consistent elements work on the lookout. This can assist with diminishing the presence of corrupt or false players.

Regulative rules frequently incorporate arrangements for normal detailing and observing, permitting the administrative specialists to monitor the computerized loaning scene, recognize arising gambles, and adjust guidelines likewise. While guidelines give a structure, they can

likewise support development in digitized loaning. The effect of RBI's computerized loaning rules in fortifying an unregulated climate would rely upon the exhaustiveness, authorization, and flexibility of the rules.

If very much planned and executed, these rules can add to the capable and manageable development of the advanced loaning area in India. Checking the most recent updates or explicit rules from the RBI for the most reliable and current information is fitting.

## Question 10: What are the challenges posed by fintechs with their lightweight governance and advanced technology systems to banks?

In response to this question, participant 5 says, "Closer to customer and products suited to customer needs." R respondents noted that fintechs challenge banks by potentially reducing their customer relationship depth and setting high customer expectations. The responses suggest that fintechs, with their agile models and technological prowess, are redefining customer expectations and pushing traditional banks to innovate. This dynamic is creating a more competitive and customer-focused banking environment. The response sheds light on the evolving landscape of the banking sector, particularly how fintech companies, with their nimble governance structures and cutting-edge technology, are reshaping the competitive dynamics. Fintechs are not just technological disruptors, they are catalysts for a fundamental shift in customer relations and service expectations in the banking industry. Their presence is compelling traditional banks to reconsider their operational models and customer engagement strategies. This emerging scenario presents a dual challenge for traditional banks. Firstly, there's the challenge of matching the technological sophistication of fintechs, which often deploy more modern, flexible, and customerfriendly solutions. Secondly, and perhaps more critically, is the challenge of maintaining and deepening customer relationships. Fintechs, with their customer-centric approaches, are setting

new benchmarks in terms of service quality and personalization. This forces traditional banks to elevate their customer interaction standards, not just in the digital realm but across all service channels.

In essence, the rise of fintechs is not merely a technological challenge, it's a wake-up call for traditional banks to innovate, not only technologically but also in terms of customer relationship management, service personalization, and overall customer experience. The banking sector is thus transitioning into a more dynamic, customer-focused, and technologically advanced industry, spurred by the presence of agile and innovative fintechs.

# Question 11: What were the specific technological challenges organization encounters, and how are they overcome from your experience?

In response to this question, respondents talk of Overcoming Technological Challenges in Digital Strategy and Transformation in the Indian Banking Industry. Digital strategy and transformation are essential for the Indian banking sector to remain competitive in an increasingly digital environment. Organizations must overcome a number of technological obstacles on this path in order to succeed. Ensuring strong authentication procedures and establishing and authenticating digital identities are essential for safe digital banking transactions. To improve the security of digital transactions, banks use cutting-edge technologies like biometrics, two-factor authentication, and blockchain-based identity verification systems. Additionally, they put in place reliable identity management systems that centralize and simplify the identity verification procedure while adhering to legal specifications.

As more people use digital banking services, it's critical to make sure digital systems are scalable and function well in order to keep up with rising client expectations. Banks make investments in scalable infrastructure technologies, such edge computing and cloud computing, to handle varying workloads and guarantee peak usage times at best performance. In order to spot such bottlenecks early on and take proactive measures to address them, they also place a high priority on performance optimization and ongoing monitoring.

In order to meet the technological difficulties posed by digital strategy and transformation in the Indian banking sector, creative problem-solving, calculated risk-taking, and strategic investment are all necessary. Banks may seize new growth prospects, improve client experiences, and keep a competitive edge in the digital age by successfully tackling these issues.

## Question 12: Do you agree digital lending is going to disrupt the lending process, which will enable democratization of access to credit, if how?

Participant 5 says, "Yes. Most of the bottom of the pyramid lending is unviable in the traditional way due to high costs attributed to branch model and data deficiency." Participant 6 says," Traditional lending has high cost due to branch banking, it has stringent underwriting process with traditional methods with access to limited information." .Digital lending is without a doubt ready to disturb the conventional loaning process, introducing another time of democratization and consideration in admittance to credit. This change is driven by innovation-based reach and evaluation, which reforms how credit is offered and gotten to. Customary loaning models are vigorously dependent on actual branches, which cause high functional expenses and cutoff geological reach, particularly in nations like India with immense and various population. Digital lending eliminates the requirement for actual branches, utilizing innovation to remotely arrive at borrowers.

Traditional underwriting models depend on restricted wellsprings of data, frequently prompting prohibition of people with restricted financial record or whimsical pay sources. Traditional loaning frequently rejects underestimated networks, casual area laborers, and people lacking proper

financial records, sustaining financial inconsistencies. Advanced loaning advances monetary consideration by stretching out credit to underserved fragments of society, including miniature, small, and medium enterprises (MSMEs), independently employed people, and low-pay families. By utilizing innovation-based reach and appraisal, banks can take care of the remarkable necessities and conditions of these borrowers, enabling them to put resources into training, medical services, business venture, and different roads for financial headway.

Digital loaning holds monstrous potential to democratize admittance to credit by utilizing innovation-based reach and evaluation to conquer customary boundaries to loaning. By embracing advancement, information driven direction, and comprehensive loaning rehearses, digital banks can opportunities for monetary incorporation, financial strengthening, and maintainable turn of events, subsequently driving positive social effect and cultivating comprehensive development.

# Question 13: What were the key challenges your organization faced during the digital transformation process, specifically in the context of the Indian banking sector?

In response to this question, respondents talk of overcoming Technological Challenges in Digital Strategy and Transformation in the Indian Banking Industry. Digital strategy and transformation are essential for the Indian banking sector to remain competitive in an increasingly digital environment. Organizations must overcome a number of technological obstacles on this path in order to succeed. Ensuring strong authentication procedures and establishing and authenticating digital identities are essential for safe digital banking transactions. To improve the security of digital transactions, banks use cutting-edge technologies like biometrics, two-factor authentication, and blockchain-based identity verification systems. Additionally, they put in place reliable identity management systems that centralize and simplify the identity verification procedure while adhering to legal specifications.

As more people use digital banking services, it's critical to make sure digital systems are scalable and function well in order to keep up with rising client expectations. Banks make investments in scalable infrastructure technologies, such edge computing and cloud computing, to handle varying workloads and guarantee peak usage times at best performance. In order to spot such bottlenecks early on and take proactive measures to address them, they also place a high priority on performance optimization and ongoing monitoring.

In order to meet the technological difficulties posed by digital strategy and transformation in the Indian banking sector, creative problem-solving, calculated risk-taking, and strategic investment are all necessary. Banks may seize new growth prospects, improve client experiences, and keep a competitive edge in the digital age by successfully tackling these issues.

# Question 14: What were the specific technological challenges organization encounters, and how are they overcome from your experience?

In response to this question, Participant 7 says, "Organizations, especially in the financial and fintech sectors, encounter various technological challenges as they strive to innovate and adapt to the changing landscape. Overcoming these challenges often involves a combination of technological advancements, strategic planning, and a commitment to continuous improvement." respondents noted that to Overcoming Technological Challenges in Digital Strategy and Transformation in the Indian Banking Industry. Digital strategy and transformation are essential for the Indian banking sector to remain competitive in an increasingly digital environment. Organizations must overcome a number of technological obstacles on this path in order to succeed. Ensuring strong authentication procedures and establishing and authenticating digital identities are essential for safe digital banking transactions. To improve the security of digital transactions,

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### CHAPTER V: DISCUSSION

#### 5.1 Discussion of Results

The presented findings feature the effect of India Stack parts, including UPI and Sea, on the monetary scene, computerized change, and administrative consistence. UPI, inside the India Stack, gives a vigorous stage to banks and fintech to upgrade monetary administrations. One of the huge opportunities lies in entering undiscovered business sectors. The information sharing abilities of India Stack engage fintech and banks to make informed, information driven choices, utilizing client assent for data exchange. OCEAN offers banks the chance for quick passage into new business sectors, improving monetary administrations through shrewd arrangements. The stage's highlights empower the enhancement and improvement of existing monetary services. The association has embraced a gradual combination approach over the beyond one to three years, cautiously integrating India Stack parts into its frameworks. This approach guarantees a smooth progress and boosts the advantages got from these innovations. The association's methodology mirrors an essential combination of India Stack parts, lining up with long term goals. The underlying research, trailed by progressive combination, demonstrates a smart and deliberate methodology. The RBI's digital loaning rules are supposed to fortify the business over the course of the following three to five years. The accentuation on defending borrowers, adjusting development, and advancing capable loaning means a slow and effective execution. The outcomes show a dynamic and developing scene impacted by India Stack parts, digital loaning patterns, administrative systems, and associations' essential reactions to mechanical difficulties. The complex open doors introduced by India Stack, combined with the deliberate joining and consistence endeavors, position associations for supported development and flexibility in the always changing monetary and technological landscape. This chapter will go into the specifics of the research findings, as well as a review of the existing literature and a suggested conceptual framework.

#### **5.2 Discussion of Research Questions**

5.2.1 The opportunities India stack like UPI offer for fintech and banks

The India Stack, with UPI at its core, offers a multi-layered set of chances for fintech and banks. Whether through advancement in financial administrations, smoothed out monetary exchanges, passage into undiscovered business sectors, information driven direction, or cooperation with government drives, monetary establishments can use the India Stack to remain serious and add to the development of the monetary environment in India. The India Stack, which incorporates the Brought together Unified Payments Interface (UPI), offers a few valuable open doors for fintech and banks to improve their administrations and investigate new avenues.

#### 5.2.2 Opportunities India stack like OCEAN offer for banks

OCEAN, like the India Stack, gives banks the valuable chance to enter new business sectors quickly. The stage's abilities and foundation can work with the extension of banking administrations to areas where conventional banking might be less common. Sea offers banks open doors for fast market passage, improved monetary administrations, and advanced change. By utilizing these capacities, banks can adjust to the changing monetary scene, meet client assumptions, and position themselves for supported development in the advanced period.

#### 5.2.3 India stack like Ekyc Esign Adhar digital locker framework

The reception of India Stack parts, including Aadhaar, Computerized Storage, Online sign, and eKYC, has altogether sped up the development of organizations. The quick joining and usage of these parts have prompted quick headways in business capacities and functional productivity. The delegates can choose the choice that best lines up with the time period and degree of business development accomplished through the reception of India Stack parts.

#### 5.2.4 The organization is leveraging or planning to leverage India Stacks

The organization has been effectively incorporating India Stack parts into its frameworks and tasks over the beyond one to three years. The underlying stage includes the organization effectively examining how India Stack parts can upgrade current systems and add to learning experiences. The organization's course of events of one to three years shows a functioning commitment with India Stack parts, with a continuous spotlight on combination, transformation, and the investigation of chances for development and effectiveness improvement.

#### 5.2.5 Main drivers or catalysts behind organizations decision

The key challenge faced by organizations during digital transformation is many times connected with the combination of new advanced innovations with existing inheritance frameworks. This challenge can emerge because of the intricacy of IT frameworks that have advanced over the long run. Inheritance framework mix stands apart as a vital test during computerized change. Defeating this challenge requires an essential methodology, cautious preparation, and distribution of assets to guarantee a smooth change from legacy systems to modern digital technologies.

#### 5.2.6 Key challenges organization faced during digital transformation

This challenge can emerge because of the intricacy of IT frameworks that have developed after some time. inheritance framework joining stands apart as a vital test during computerized change. Conquering this challenge requires an essential methodology, cautious preparation, and designation of assets to guarantee a smooth change from heritage frameworks to present day computerized innovations.

#### 5.2.7 Organization overcome regulatory and compliance hurdles

The organization's way to deal with defeating administrative and consistence obstacles is revolved around laying out a strong consistence structure. This includes key drives and practices that go past the underlying arrangement of a consistence group or checking framework. The organization's methodology mirrors a guarantee to building a vigorous consistence structure that goes past introductory measures. This incorporates vital preparation, proactive consistence measures, versatility, exhaustive strategies, and the improvement of a full-grown consistence culture.

#### 5.2.8 The technological challenges organization encounters

The particular technological challenge that the association experiences is connected with the intricacy of incorporating new innovations into their ongoing foundation. This challenge recommends that the association is wrestling with the complexities of making various advances cooperate flawlessly. the association's particular innovative test is connected with the coordination intricacy of integrating new advancements into its current framework. This challenge requires an essential methodology, asset distribution, and cautious administration to guarantee effective incorporation and limit disturbances.

#### 5.2.9 Lending process enable democratization

The effect of digital lending on disturbing the loaning system and empowering democratization is probably going to unfurl over the course of the following one to three years. This time period lines up with the expected development and development of advanced loaning stages. Loaning stages might fashion associations with other monetary foundations, fintech organizations, or organizations to grow their range and proposition a more complete set-up of monetary items. The effect of advanced loaning on disturbing the loaning system and empowering democratization is supposed to turn out to be more articulated throughout the following one to three years. During this period, associations are probably going to encounter sped up, effectiveness, and inclusivity in the loaning scene through the reception of digital lending stages.

#### 5.2.10 RBIs digital lending

The RBI's digital lending guidelines, pointed toward laying out an administrative system and guaranteeing fair loaning rehearses, are supposed to reinforce the business throughout the following three to five years. The RBI's computerized loaning rules are expected to reinforce the business throughout the following three to five years by giving a stable administrative structure, protecting borrowers, and encouraging a harmony among development and dependable loaning rehearses. During this period, the computerized loaning environment is supposed to develop in arrangement with the laid-out rules and administrative oversight.

#### **CHAPTER VI:**

#### SUMMARY, IMPLICATIONS, AND RECOMMENDATIONS

#### 6.1 Summary

The short life expectancy of banks in the quickly changing business scene, underscoring the requirement for persistent variation to new advancements and client ways of behaving. The concentrate then, at that point, movements to the computerized change in the Indian financial area. It recognizes the opportunities and difficulties acted by advances such like virtual entertainment, portable, huge information investigation, cloud, IoT, and mechanical technology. The difficulties looked by conventional models, for example, print and television-based publicizing, are featured. The assertion of the issue rotates around the job of banks in upgrading the economy's useful limit, tending to the credit hole, encouraging monetary consideration, and investigating advanced change amazing opportunities while recognizing difficulties in administration and interior cycles.

#### **6.2 Implications**

Banks need to look at the outlook, embracing change and development to remain significant in a powerful market. The shift from shoppers to dynamic client networks underlines the requirement for a client driven approach in financial administrations. Banks should effectively draw in with clients through web-based entertainment and other computerized channels, adjusting to changing inclinations and ways of behaving. Banks ought to proactively influence customers and channels through technology-based intervention. The difficulties looked by conventional channels like print and television demonstrate the significance of broadening promoting and correspondence systems. The emphasis on India Stack and computerized drives in financial suggests a shift towards a tech-driven environment for monetary administrations.

Banks ought to adjust their procedures to computerized change, utilizing advances like UPI, Aadhar, and India Stack parts to improve administrations and arrive at undiscovered business sectors. The accentuation on India Stack adding to monetary consideration infers a chance for banks to address the credit hole and serve underserved sections. Banks ought to use India Stack advancements to smooth out processes, offer quicker credit, and add to more extensive monetary consideration objectives. The acknowledgment of chances and difficulties emerging from fintech infers a requirement for key cooperation and hazard the board. Banks ought to investigate organizations with fintech firms while executing vigorous risk management practices to explore difficulties and saddle opportunities. The ramifications recommend a groundbreaking excursion for banks, requiring a shift towards client driven computerized systems, spry variation, and key coordinated efforts to flourish in the developing scene of the financial area.

## 6.3 Recommendations for framework for banks and financial institutions for digital strategy and digital transformation

Conduct a detailed study concentrate on the particular difficulties presented by fintech to conventional financial models, including the possible fundamental dangers and measures to moderate them. Investigate the individual and aggregate effect of India Stack parts, like Aadhar, UPI, and e-KYC, on monetary consideration, advanced change, and client encounters in the financial area. Explore the drawn-out impacts of RBI's advanced loaning rules on the financial area, remembering its effect for credit development, risk the executives, and consumer loyalty. Look at and examine the advanced change procedures embraced by various banks because of arising innovations, administrative changes, and client requests. Survey the variables affecting client trust in computerized banking, looking at the job of network protection measures, straightforwardness, and client training in building and keeping up with trust. Lead research on the viability of momentum network safety

measures embraced by banks, with an emphasis on tending to digital dangers and guaranteeing the security of computerized exchanges. Investigate procedures to make advanced financial more comprehensive for weak populaces, resolving issues like monetary ignorance, absence of access, and building trust in computerized monetary frameworks. Survey the difficulties looked by banks in sticking to administrative consistence, particularly with regards to quickly advancing computerized advancements, and propose procedures for effective consistence management.

#### Innovate customer side

In the financial business in India, digital strategy and transformation are significant for remaining competitive and meeting developing customer assumptions. Execute consistent digital onboarding processes and Know Your Customer (KYC) verification. Use biometric confirmation, block chain, and Artificial intelligence (computer-based intelligence) for secure and frictionless customer onboarding. Influence information examination to figure out client conduct and inclinations. Implement AI-driven personalized customized administrations, like customized financial advice, targeted product recommendations. Develop an integrated platform that allows customers to start a transaction on one channel and complete it on another without any disruption. Foster a coordinated stage that permits clients to begin an exchange on one channel and complete it on one more with practically no disturbance. Tap into the developing pattern of computerized installments and credit only exchanges. Upgrade client assistance administrations with artificial intelligence driven chatbots.

Carry out computer-based intelligence chatbots fit for dealing with complex inquiries, giving ongoing help, and gaining from client connections to further develop administration persistently. The rising digitization presents new network protection dangers. A huge part of the population may not be carefully educated. Send off advanced proficiency crusades, easy to use interfaces,

and intelligent instructional exercises to teach clients on utilizing computerized financial administrations. Put resources into RegTech arrangements that computerize administrative consistence processes, guaranteeing adherence to all rules while limiting manual endeavors. Collaborate with telecommunications providers and government agencies to improve digital infrastructure, ensuring that banking services are accessible to customers across the country. Innovating on the customer side requires a holistic approach that addresses both the opportunities to enhance customer experience and the challenges inherent in the digital transformation journey. By staying agile, leveraging emerging technologies, and focusing on customer-centric solutions, banks in India can position themselves as leaders in the digital era.

#### **Innovate internal operations**

Advancing inward tasks in the financial business in India is fundamental for improving productivity, lessening costs, and remaining competitive Mechanize normal and manual cycles to increment functional effectiveness. Execute Robotic Process Automation (RPA) and insightful interaction mechanization to smooth out undertakings, for example, information section, archive handling, and administrative center tasks. Influence information investigation to settle on informed choices and upgrade inner cycles. Execute progressed investigation apparatuses to break down client conduct, smooth out risk evaluation, and improve dynamic across different divisions. Improve security and straightforwardness in exchanges and information the executives. Execute block chain innovation for secure and straightforward record-keeping, particularly in regions like exchange settlements, misrepresentation counteraction, and personality confirmation.

Move inward frameworks and applications to the cloud, taking into account better asset usage, adaptability, and ongoing coordinated effort among various branches and offices. Put resources into ceaseless preparation and advancement programs for workers. Carry out e-learning stages, virtual reality (VR) preparing modules, and AI-driven personalized training programs to upskill employees and keep them abreast of the latest industry trends. Execute cooperative innovations, for example, bound together correspondence stages, project the board instruments, and virtual gathering answers for upgrade collaboration and correspondence proficiency. Coordinating new advances with existing inheritance frameworks. Take on a steady way to deal with framework redesigns, zeroing in on secluded arrangements and APIs to guarantee smooth joining without disturbing continuous tasks. Protection from change among representatives. By addressing these challenges through innovative solutions, the banking industry in India can transform its internal operations, fostering a culture of efficiency, collaboration, and adaptability in the rapidly evolving digital landscape.

#### **Innovate institutions and policy**

Innovating institutions and policy within the banking industry in India involves adopting new strategies, technologies, and frameworks to foster a more dynamic and resilient financial ecosystem. Lay out or change existing foundations into advanced first elements. Foster far reaching digital banking platforms that consistently incorporate different monetary administrations, encouraging a bound together and easy to use insight for clients. Encourage organizations and joint efforts with fintech new companies. Make advancement centers or hatcheries inside foundations to work with the turn of events and reconciliation of front line fintech arrangements. Acquaint administrative sandboxes with empower trial and error with new monetary innovations. This permits organizations to test creative items and administrations in a controlled climate, advancing both development and administrative consistence. Embrace RegTech answers for computerize and smooth out administrative consistence processes. This incorporates using artificial intelligence, AI, and information investigation for productive

checking and detailing. Fortify information security and insurance approaches to construct client trust. Execute progressed encryption strategies, advance straightforward information rehearses, and guarantee consistence with developing information security guidelines.

Developing organizations and strategy requires a cooperative exertion including government bodies, administrative specialists, monetary foundations, and innovation accomplices. By embracing these developments, the financial business in India can make a more versatile, comprehensive, and mechanically progressed monetary scene.

#### **Innovate leadership**

Innovating leadership in the banking industries an extraordinary shift toward dexterous, comprehensive, and carefully familiar administration models. Leaders should embrace nimbleness, adjusting quickly to the powerful monetary scene by cultivating a culture of fast navigation and joint effort. Inclusivity becomes principal, with leaders effectively supporting variety and value to saddle a scope of points of view. Digital familiarity is at this point not a decision however a need, requiring constant learning and comprehension of arising innovations. A client driven initiative methodology puts an exceptional on expecting and addressing client needs, driving innovations that upgrade in general encounters. Cooperative initiative styles, underscoring cross-practical collaboration, are critical to exploring intricacies and cultivating a culture of development. By and large, a creative administration worldview in banking coordinates these components, moving organizations towards flexibility, versatility, and supported progress in a steadily developing industry.

A culture of persistent learning is cultivated, where pioneers energize trial and error, risk-taking, and gaining from disappointments. Moreover, moral administration becomes principal, imparting a feeling of obligation and honesty in dynamic cycles. As the business goes through digital changes, pioneers need to support an outlook of embracing mechanical headways as opposed to dreading disturbance. They assume a crucial part in working with a smooth coordination of digital devices, guaranteeing that groups are furnished with the abilities important to flourish in an undeniably digitized climate. In general, the development in authority lies in taking on new models as well as in developing a comprehensive and versatile methodology that engages groups, cultivates moral practices, and embraces the advancing scene of banking.

#### **Innovate business model**

Improving the plan of action in the banking industry includes reevaluating customary methodologies, utilizing innovation, and adjusting to advancing client assumptions. Change the plan of action to focus on advanced channels. Offer complete web based financial administrations, including account the board, credit applications, and monetary preparation, to satisfy the developing need for advantageous and digital arrangements. Embrace open banking by making environments that permit outsider engineers to construct administrations and items on top of the bank's foundation. This encourages development, advances coordinated effort, and furnishes clients with a more extensive scope of monetary arrangements. Shift towards customized monetary administrations by utilizing information examination and man-made brainpower. Give custom-made items, estimating, and suggestions in light of individual client ways of behaving, inclinations, and monetary objectives.

Consolidate blockchain innovation to upgrade straightforwardness and security in exchanges. Carry out conveyed record frameworks for regions like cross-line installments, diminishing handling times and limiting the gamble of misrepresentation. Incorporate monetary administrations consistently into non-monetary items and stages. Investigate organizations with web based business, innovation, and different enterprises to insert banking administrations straightforwardly into ordinary exercises, making a more incorporated client experience. Develop into a biological system bank by offering a different scope of administrations past customary banking. This might incorporate protection, abundance the executives, and organizations with fintech organizations, furnishing clients with an all in one resource for their monetary requirements. Foster monetary health stages that go past conventional financial administrations. Give instruments, assets, and customized direction to assist clients with dealing with their funds, plan for the future, and accomplish their monetary objectives.

By embracing these imaginative systems, banks in India can situate themselves as pioneers in the developing monetary scene, meeting client assumptions and remaining in front of industry pattern.

#### 6.4 Conclusion

Banks and financial institutions can use previous framework proposed to navigate the complex and rapidly emerging ecosystem on customer experience, operations transformation, institutional and business model innovation.

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#### **APPENDIX A:**

### List of questions, its meaning and descriptions

Q1. what are opportunities India stack like UPI offer for fintechs and banks from payment to

lending, cross sell of Third-party products like insurance sell?

Fintech and banks can take advantage of the India stack, which includes UPI, to penetrate unexplored markets. Fintech and banks can offer simplified and effective financial transaction services with UPI. Fintech and banks are able to innovate in banking services thanks to the India stack. Fintech and banks can use the India stack's data sharing rail to make data-driven decisions. Within the India stack, banks and fintech can work together on government initiatives. Representatives have provided the opinion on the growth and opportunities coming out of UPI Q2. what are opportunities India stack like OCEN (open credit enablement network) offer for banks? how banks are leveraging?

Banks have the chance to quickly enter new markets thanks to Open Credit enablement network. Banks can improve their financial services by implementing creative solutions through the use of Open Credit enablement network. Banks are encouraged to implement digital transformation by OCEAN. Banks can use Open Credit enablement networks data capabilities to make decisions based on facts. Thus, the representatives have provided opinion on how OCEN can enable a)Rapid Market Entry, (b) Enhanced Financial Services, (c) Digital Transformation and (d) Data-Driven Decision-Making. Q3. Do you think, indiastack like Ekyc, E-Sign, Aadhar, Digital locker, AA framework accelerate credit delivery? explain how?

Aadhaar, Digital Locker, eSign, eKYC, and other India Stack components have all quickly aided in the maturation of businesses. Businesses using India Stack components have steadily advanced in maturity over the last one to three years. Businesses using India Stack components will be up and running in three to five years. Businesses that have been using the India Stack for five to ten years have reached long-term maturity. Thus, the representatives have provided opinion on how various India stack can enable (a) Rapid Business Maturation, (b) Steady Progress in Business Maturity, (c) Progressive Maturation in Mid-Term and (d) Long-Term Business Maturity.

Q4. How your organization is leveraging or planning to leverage India stacks for top line growth? The company is just beginning to investigate how India Stack components might improve current procedures or open up new avenues for growth. Over the previous one to three years, the company has begun integrating India Stack components into its systems and operations. In line with its long-term strategic objectives, the company has been gradually integrating India Stack components over the last three to five years. Thus, the representatives have provided opinion on how their organizations are leveraging india stack for growth.

Q5. What were the main drivers or catalysts behind your organization's decision to embark on a digital transformation journey?

Businesses choose to undergo digital transformation as a result of intensifying competition. Technology is a catalyst that forces organizations to go through a digital transformation because it is always evolving. One of the main forces behind digital transformation is the need to meet or surpass customer expectations. Organizations may be compelled to undertake digital transformation due to modifications in regulations or compliance requirements. Thus, the representatives have provided opinion on the main catalysts that can enhance: (a) Competitive Pressures, (b) Technological Advancements, (c) Customer Expectations, and (d) Regulatory Changes.

Q6. What were the key challenges your organization faced during the digital transformation process, specifically in the context of the Indian banking sector?

When organizations lack the funds and resources to invest in new tools, technology, and qualified staff, they encounter difficulties in undergoing a digital transformation. It can be difficult to overcome stakeholder and employee resistance to change, which makes it more difficult for new digital processes and technologies to be adopted smoothly. It can be difficult to integrate new digital technologies with legacy systems that are already in place, particularly for businesses with intricate IT infrastructures. Thus, the representatives have provided on digital transformation challenges

Q7. How did your organization overcome regulatory and compliance hurdles while implementing digital transformation initiatives?

Our company set up a special compliance team during the first phase, which lasted less than a year. Our company put in place a continuous regulatory monitoring system during the first three years, which allowed us to proactively detect and handle evolving compliance requirements. Based on three to five years of experience, our company created a strong framework for compliance. Having been in business for over a decade, our company has developed a sophisticated compliance culture. Thus, the representatives have provided their views on overcoming regulatory challenges.

Q8. What were the specific technological challenges organization encounters, and how are they overcome from your experience?

Organizations that adopt technology for the first time may encounter difficulties. The intricacy of incorporating new technologies into their current infrastructure may cause organizations difficulty. Thus, the representatives have provided on various challenges organization encounters.

Q9. Do you agree digital lending is going to disrupt the lending process, which will enable democratization of access to credit, if how?

Through digital lending platforms, organizations can anticipate quick access to funding that enables speedy and effective loan processes. The digital lending landscape is characterized by increased speed and efficiency, which streamlines the application process and improves inclusivity by reaching a wider audience. Thus, the representatives have provided opinion on how digital lending can disrupt the access to credit through digital lending.

Q10. How RBI's digital lending guidelines will strengthen this once an unregulated space? By establishing a regulatory framework, the guidelines give the digital lending industry structure and oversight. The guidelines' first three-year goal is to safeguard borrowers by guaranteeing fair lending practices. The guidelines, which span three to five years, strike a balance between promoting innovation in digital lending and holding lenders responsible for morally and openly conducting business. Thus, the representatives provided opinion on how RBI guidelines will overcome the unregulated stigma having fragmented incentive structure.

Q11. How RBI's FLDG(First loss default Guidelines) will enhance credit access for underserved segments,SMEs, merchants?

FLDG, where partner will take the first hit in case of loan NPA and write-offs.

Through FLDG, organizations can improve the quality of book and reduce loss making, enhance credit access to underserved segments, SMEs. Thus, representatives have provided views on how FLDG can enhance credit penetration in economy.

Q12. DO you think FLDG guidelines will lead to higher financial inclusion, assets creation and employment generation, how?

FLDG guidelines can create higher employment generation through financial deepening through enhanced credit access. Thus, representatives have provided their views on the same.

Q13. what are the challenges posed by fintechs with their light weight governance and advanced technology systems to banks?

Fintechs light weight governance enable them to be more agile and faster turnaround. Thus representatives have provided opinion on how this agility poses challenges to banks Q14. How fintechs are creating new products and business models faster compared to traditional banks and NBFC lenders?

With light weight governance and processes, fintechs can innovate products and business models faster, do pivot faster. Thus, representatives have provided on this process and governance related agility

### **INTERVIEW**

### First:

Participant Name: Ankit Jain

Q1. Do you think, indiastack like Ekyc, E-Sign, Aadhar, Digital locker, AA framework accelerate credit delivery? Please explain in details. -

Response:

I truly agree with this. These have eased the current onboarding process and has significantly reduced the TAT. Without these the Digital lending in actual true sense is not feasible.

Q2. How your organization is leveraging or planning to leverage India stacks for top line growth? -

Response:

We are a Digital Lendig company and are already using all these in our credit intermediation and KYC process. With the help of these we are able to provide a loan to customer in 10-15 mms time, which he/she can avail using his /her mobile phone. Post digital integration of India stacks there is no need of fleet on street (physical branches) and we are able to cater to large number of customers across diffrent geography without physical presence.

General:

What were the main drivers or catalysts behind your organization's decision to embark on a digital transformation journey?-

Answer:

We are a lendig institution and if we have to reach scale, reduce TAT and to provide a customer seamless hassle free journey, we need to move towards end to end digital solutions wherein lending can be done in 5 mns time. The other key driver to the digital transformation is cost saving in a longer run as helps to reduce opex. Not to miss in countrly like india whrein you have reach masses, digital is the only solutions through which you can reach masses and scale up the business without physical presence.

#### Second:

Participant Name: Vikash Jhunjhunwala

Q1. What are opportunities India stack like UPI offer for fintechs and banks from payment to lending, cross sell of Third party products like insurance,MF sell?

Response:

India Stack, which includes the Unified Payments Interface (UPI), offers numerous opportunities for fintech companies and banks. These opportunities span across various financial services: 1. Payments: UPI has revolutionized the payment landscape in India, offering a seamless platform for fund transfers. Fintechs and banks can tap into this infrastructure to provide innovative payment solutions, including peer-to-peer transfers, bill payments, and merchant transactions etc.

2. \*\*Lending\*\*: UPI and related data can be leveraged for credit scoring and underwriting, allowing financial institutions to extend digital loans more efficiently. This can benefit both banks and fintech lenders.
3. \*\*Cross-selling\*\*: With the vast user base of UPI, fintechs and banks can crosssell a range of financial products, including insurance and mutual funds, to existing customers. Data analytics and customer insights can help in targeted cross-selling efforts.

4. \*\*Insurance\*\*: UPI's user base can be a valuable source for insurance companies to offer policies and claims processing. Fintechs can develop apps or platforms that simplify insurance purchases and claims through UPI integration.

5. \*\*Mutual Fund Sales\*\*: Fintechs can facilitate easy investments in mutual funds through UPI, making it convenient for users to diversify their portfolios. Banks can also use UPI to provide these services to their customers. UPI can play a role in expanding financial inclusion, offering services to individuals who were previously underserved. This is an opportunity for banks and fintech companies to tap into new customer However, it's important to navigate the regulatory environment to succeed in this competitive landscape.

Q2. what are opportunities India stack like OCEN(open credit enablement network) offer for banks? how banks are leveraging?

Response:

Banks are leveraging OCEN and the opportunities it presents:

1. Digital Lending Platform:

- End-to-End Digital Journey

- Reduced Paperwork

2. Credit Access to Underserved Populations: - Financial Inclusion - Lower Operational Cost

3. Risk Assessment and Decisioning: - Data-Driven Decisioning - Automated Underwriting

4. Cross-Selling and Product Diversification

- Cross-Selling Opportunities

- Customized Offerings

5. Reduced Default Rates

- Improved Risk Management

6. Data Sharing and Collaboration

- Industry Collaboration

- Data Monetization

7. Operational Efficiency

- Reduced Manual Processes

- Faster Turnaround

However, they must also be mindful of data security and privacy regulations

Q3. Do you think, indiastack like Ekyc, E-Sign, Aadhar, Digital locker, AA framework accelerate credit delivery? Please explain in details.

Response: India Stack components like eKYC (Electronic Know Your Customer), eSign, Aadhar, Digital Locker, and the Account Aggregator (AA) framework have the potential to significantly accelerate credit delivery in India.

1. \*\*eKYC (Electronic Know Your Customer)\*\*: - \*\*Faster Onboarding\*\*: Traditional KYC processes can be time-consuming and require extensive paperwork. eKYC enables quick verification of customer identity, reducing the onboarding time for financial services. - \*\*Cost Efficiency\*\*: It reduces the cost associated with physical KYC processes, making it more economical for financial institutions to acquire and verify customers. - \*\*Wider Reach\*\*: It allows access to customers in remote or underserved areas where physical KYC processes may not be feasible.

2. \*\*eSign\*\*: - \*\*Digital Signatures\*\*: eSign enables the electronic signing of documents, eliminating the need for physical signatures. This streamlines the approval process for loan applications and other financial transactions. - \*\*Legally Binding\*\*: eSign is legally recognized, making it a secure and compliant way to sign agreements, reducing the need for physical paperwork.

3. \*\*Aadhaar\*\*: - \*\*Unique Identification\*\*: Aadhaar provides a unique identification number to every Indian resident, making it easier for financial institutions to verify the identity of applicants. - \*\*Authentication\*\*: Aadhaar authentication is a quick and secure way to confirm the identity of customers, which is crucial for credit underwriting.

4. \*\*Digital Locker\*\*: - \*\*Document Storage\*\*: The Digital Locker allows

individuals to store their important documents digitally. This is beneficial for both customers and lenders as it simplifies document submission during the loan application process. - \*\*Reduced Document Duplication\*\*: It helps in reducing the duplication of documents and minimizes the risk of fraud.

5. \*\*Account Aggregator (AA) Framework\*\*: - \*\*Data Portability\*\*: AAs enable individuals to share their financial data securely with lenders. This makes it easier for lenders to access the financial history and creditworthiness of applicants. -\*\*Faster Decision-Making\*\*: By accessing a customer's financial data through AAs, lenders can make faster and more informed credit decisions. India Stack components create a seamless and efficient ecosystem for credit delivery: - \*\*Streamlined Application\*\*: Borrowers can apply for loans online, complete eKYC, digitally sign documents, and provide access to their financial data through AAs. - \*\*Reduced Turnaround Time\*\*: The entire process, from application to disbursement, is expedited, leading to significantly reduced turnaround times for credit approval and delivery. - \*\*Cost Savings\*\*: Financial institutions save on operational costs, including manual document handling, verification, and storage. - \*\*Wider Reach\*\*: The digital nature of these components allows lenders to reach underserved and remote areas more effectively. However, it's essential to balance the benefits of these technologies with concerns about data privacy and security. A robust regulatory framework is required to ensure the responsible and secure use of these tools in the credit delivery process.

# Third

Participant Name: Rajib Dutta

Q1. what are opportunities India stack like UPI offer for fintechs and banks from payment to lending, cross sell of Third party products like insurance,MF sell? Response - huge opportunity given the population & ecosystem that has been built.. however need strategy to make profitable business model

Q2. what are opportunities India stack like OCEN(open credit enablement network) offer for banks? how banks are leveraging?

Response - still lots to do by banks.. even though unsecured credit increasing and lots of millennials are comfortable in taking credit in early stage of their earning curves, need more effort in leveraging

Q3. Do you think, indiastack like Ekyc, E-Sign, Aadhar, Digital locker, AA framework accelerate credit delivery? Please explain in details.

Response - Yes, it is ... more secured and authentic. Regulator also supportive.

Q4. How your organization is leveraging or planning to leverage India stacks for top line growth?

Response - we have full-fledged digital strategy towards it ...cant detailed due to organisation policy

General:

Q5. What were the main drivers or catalysts behind your organization's decision to embark on a digital transformation journey? Response - market potential, competative advantage, customer centricity etc.

Q6. What were the key challenges your organization faced during the digital transformation process, specifically in the context of the Indian banking sector? Response - cant detailed due to organisation policy

Q7. How did your organization overcome regulatory and compliance hurdles while implementing digital transformation initiatives? Response - we take full cognizance of regulatory guidelines and entire strategy made keeping this in mind.Educating, sensitising , dialogue with partners helps in addressing hurdles.

Q8. What were the specific technological challenges organization encounters, and how are they overcome from your experience?Response – Can't detailed due to organisation policy

How much operational transformation is critical for growth and sustainability of organisation?

Response - It is most important for achieving desired goals.. It is top down approach.

# Fourth:

Participant Name: Ekhlaque Bari

## Questions:

Q1. What were the main drivers or catalysts behind your organization's decision to embark on a digital transformation journey?

#### Response:

- competition a darker going digital
- startups getting high valuation therefoenofbwe go digital we get a premium too
- Opportunity for incremental revenue and reducing costs
- Opportunity to improve customer experience
- Opportunity to improve productivity

Q2. What were the key challenges your organization faced during the digital transformation process, specifically in the context of the Indian banking sector?

### Response:

- A large proportion of investment, effort and bandwidth goes into regulatory compliance and running the business.

- Talent
- Change managemn
- Building a business case

-	Digitally	savvy	business	leaders
Q3.	What were the specific	technological challe	nges organization e	ncounters, and

how are they overcome from your experience?

- Working on enterprise architecture so that systems are compatible to each other in long terms

- Duplication of systems and business logic

- Tech stack and technical architecture in the ever changing landscape. Especially with cloud

- Technical or engineering depth in talent

- UX/Agile thinking

Fintechs:

1. what are the challenges posed by fintechs with their light weight governance and advanced technology systems to banks?

- They will take a portion of the banks revenue and eat away at the share of the wallet of the customer. Banks are not likely to have lesser customers, they are likely to have lesser relationships

- They will set the standards on customer expectations and standards Q4. How fintechs are creating new products and business models faster compared to traditional banks and NBFC lenders?

- Focus. A start up only has one area or portion of the value chain to focus on. The banks have asset, liabilities, retail, corporate, rural, urban many things to focus on

- Cloud native tech vs legacy tech

- Product and technical talent

Q5. Do you think, indiastack like Ekyc, E-Sign, Aadhar, Digital locker, AA framework accelerate credit delivery? explain how?

- Yes. By reducing the number of documents required and reducing fraud. Providing frictionless onboarding.

- Accurate data, accurate assessment of the crdir worthiness

# Fifth:

Participant Name: Tina Singh

General:

Q1. What were the main drivers or catalysts behind your organization's decision to embark on a digital transformation journey?

#### Response:

- Staying relevant to the customers with changing preferences

## Cost saving

#### Business

#### productivity

Q2. What were the key challenges your organization faced during the digital transformation process, specifically in the context of the Indian banking sector?

- Changing processes from physical to digital by not replicating the process but redesigning it

Changing mindsets to be able to achieve the above Q3. How did your organization overcome regulatory and compliance hurdles while implementing digital transformation initiatives?

Response:

- There were no such hurdles Q4. What were the specific technological challenges organization encounters, and how are they overcome from your experience? Response:

- Legacy tech stack àmoving to Saas/Paas models with lower investment in shortterm

Outdated skill setsresources in tech, project management and business teams ->Reskilling/RehiringespeciallyinleadershipOnDigitallending:Q5. Do you agree digital lending is going to disrupt the lending process, which willenable democratization of access to credit, please explain in detail?

Response:

Yes. Most of the bottom of the pyramid lending is unviable in the traditional way due to high costs attributed to branch model and data deficiency. E.g. Sourcing cost in physical world for a 10,000 rupee loan can be as high as 1500 rs with physical visits, file movement from hub to spoke location, manual processing of files via a physical operations hub and paper based loan documentation. With availability of customer data digitally, the customer financier relationship can start in remote manner and validation is possible thanks to India stack. Q6. How RBI's digital lending guidelines will strengthen this once an unregulated space?

### Response:

By increasing transparency and creating higher accountability both for RE as well as LSP

Q7. How RBI's FLDG(First loss default Guidelines) will enhance credit access for under-served segments, SMEs, merchants?

## Response:

Fintechs in India have taken up the mantle of creating financial inclusion by using innovative methods of collecting non-traditional and non-financial data and using the same to build credit models. While these fintechs succeed in testing and creating sustainable models, they do not have the capital to scale. Large banks and NBFC's have the capital but their governance and risk management practices do not allow them to partner with these Fintechs or LSP's. With FLDG the percetual and real risk to the financial organization decreases considerably and they are able to co-lend to newer customer segments in collaboration with FIntechs. This creates a win-win environment to learn and grow the overall financial industry.

Q8. Do you think FLDG guidelines will lead to higher financial inclusion, assets creation and employment generation, please explain in detail?

Response:

Yes. Same as above Fintechs:

Q9. what are the challenges posed by fintechs with their light weight governance and advanced technology systems to banks?

Response:

Closer to customer and products suited to customer needs. Q10. How fintechs are creating new products and business models faster compared to traditional banks and NBFC partners?

Response:

Same as 3 above

# Sixth:

Participant Name: Bodhisatwa Gupta

Q1: Do you agree digital lending is going to disrupt the lending process, which will enable democratization of access to credit, if how?

Response:

I agree that digital lending will enable democratization and wider inclusion in access to credit.

Technology based reach and assessment:

Traditional lending has high cost due to branch banking, it has stringent underwriting process with traditional methods with access to limited information. This makes access to credit for the wider population in low income countries like India difficult and expensive.

With digital lending through technology based reach and assessment, we don't need branches to offer credit access. Now we can assess risk from varied sources of data like GST, cashflow information, account aggregator information coupled with the Government's wide reaching digital infrastructure acting as a key enabler.

Reduced Barriers to Entry:

Digital lending platforms often have lower operational costs compared to traditional banks. Also it does not need a physical distribution network which only the traditional incumbent players tend to have. This makes credit more affordable and accessible for a larger segment of the population.

Mobile Accessibility:

The widespread use of smartphones and increasing internet penetration allows individuals to access digital lending platforms anytime and anywhere. This accessibility is especially beneficial for those in remote or rural areas where traditional banking infrastructure may be limited.

## Social media:

Technology is enhancing reach through social media like Facebook, Twitter, Instagram, Whatsapp, Youtube. These also act as mediums for fintechs to reach out to customers and also provide another source of information to profile customer behaviour to take informed decisions on credit offerings.

# Personalized Offerings:

Digital lending platforms are using advanced analytics to tailor loan products based on individual needs and preferences. This personalized approach ensures that borrowers receive financial solutions that suit their specific needs.

Q2. How RBI's FLDG (First loss default Guidelines) will enhance credit access for

under-served segments, SMEs, merchants?

Response:

Reduced Risk for Lenders:

FLDG acts as a safety net for lenders: By providing a guarantee for a portion of the loan amount in case of default, FLDG reduces the risk borne by lenders, particularly traditional banks and financial institutions who might be hesitant to lend to borrowers with limited credit history or belonging to underserved segments..

Increased lending appetite: With the reduced risk, lenders are likely to become more willing to extend credit to these previously neglected segments, expanding their customer base and promoting financial inclusion.

Improved Access for Borrowers:

Relaxed credit assessment: With the FLDG mitigating a portion of the risk, lenders are more flexible in their credit assessment criteria, making it easier for borrowers with thin credit histories or lower credit scores to qualify for loans.

Wider range of loan products: The increased confidence in lending to underserved segments, partly from the FLDG arrangements, are leading to the development of new and tailored loan products catering to their specific needs and risk profiles.

Benefits for Specific Segments:

SMEs: Small and medium enterprises (SMEs) are crucial for economic growth but often face difficulties in securing adequate funding due to stringent collateral requirements and risk perceptions. FLDG can ease these challenges and boost their access to credit for business expansion, working capital needs, or investment in technology. For example, fintechs like Paytm is in collaboration with NBFCs for products like MCA(merchant cash advance) to empower and enable SMEs to act as engines of growth for india

Underserved Segments: Individuals with limited or no credit history, low income levels, or residing in remote areas often struggle to access formal credit. FLDG can bridge this gap and empower them with financial resources for various purposes like livelihood development, education, or healthcare.

# Seventh

## Participant Name: Chittaranjan Behera

Q1. What were the specific technological challenges organization encounters, and how are they overcome from your experience?

#### Response:

Organizations, especially in the financial and fintech sectors, encounter various technological challenges as they strive to innovate and adapt to the changing landscape. Overcoming these challenges often involves a combination of technological advancements, strategic planning, and a commitment to continuous improvement.

Some of the challenges are following.

Legacy Systems Integration:

Challenge: Many organizations have legacy systems that are outdated and not easily integrated with modern technologies.

Solution: Organizations may gradually replace or upgrade legacy systems, adopting modular approaches to integration. APIs (Application Programming Interfaces) play a crucial role in connecting new and existing systems, allowing for a more seamless transition.

Data Security and Privacy:

Challenge: With the increasing volume of data and cyber threats, ensuring the security and privacy of sensitive information is a significant challenge.

Solution: Now organizations are implementing robust cybersecurity measures, including encryption, multi-factor authentication, and regular security audits, helps protect against data breaches. Organizations are collaborating with various IT and cyber security companies to overcome threat data and privacy challenges

Scalability:

Challenge: As businesses grow, they face the challenge of scaling their technological infrastructure to handle increased user loads and data volumes.

Solution: Cloud computing providers like Amazon AWS, Microsoft Azure, Google cloud, IBM and Oracle cloud are providing scalable solutions, allowing organizations to expand resources based on demand. Serverless architectures,

microservices, and containerization are also adopted to enhance scalability and flexibility.

**Regulatory Compliance:** 

Challenge: The financial industry is subject to strict regulatory requirements, and staying compliant with evolving regulations can be challenging.

Solution: Organizations are investing in regulatory technology (RegTech) solutions to automate compliance processes. Regular audits, strong governance frameworks, and collaboration with regulatory bodies are helping ensure ongoing compliance.

Adoption of Emerging Technologies:

Challenge: Adopting emerging technologies, such as artificial intelligence (AI), blockchain, and machine learning, can be challenging due to lack of expertise and uncertainties about their practical applications.

Solution: Organizations are investing in talent development and training programs along with cloud provider, Edx, coursera and masterclasses to build internal expertise. Companies are also partnering with IT firms like Accenture,TCS, Infosys and consultancies like Delloite,EY, PWC etc.. to accelerate the adoption of emerging technologies.

Q2. what are the challenges posed by fintechs with their light weight governance and advanced technology systems to banks?

#### Response:

Fintechs, with their lightweight governance structures and advanced technology systems, present both opportunities and challenges for traditional banks. While fintech innovation has the potential to drive positive change in the financial industry, it also introduces certain challenges for established banking institutions.

Following challenges are posed by fintechs to banks:

## Agility and Speed:

Challenge: Fintechs are known for their agility and ability to quickly adapt to market changes as these are small , less regulated and have better tech capabilities. Traditional banks, with their legacy systems and bureaucratic processes, are struggling to match the speed of fintechs in terms of product development and implementation.

## Customer-Centric Approach:

Challenge: Fintechs give highest priority to customer experience and provide userfriendly interfaces for better reach and digital distribution. Traditional banks have complex structures and legacy systems, hence traditional banks are finding it challenging to deliver the same level of seamless and intuitive user experiences.

Innovation and Technology Adoption:

Challenge: Fintechs are leveraging emerging technologies such as AI, blockchain, and data analytics to create innovative solutions, they adapted quickly GenAI like ChatGPT and did rapid structural transformations and lowered the costs and provided better customer experiences like local language based access, speech/oral data entry. Traditional banks are facing challenges in adopting and integrating these technologies due to legacy systems, regulatory constraints, legacy processes, and a slower pace of technological adoption.

#### Cost Efficiency:

Challenge: Fintechs, being technology-focused startups, can operate with lower overhead costs compared to traditional banks. This cost efficiency allows them to offer competitive pricing and fees, challenging the profitability models of traditional banks.

Data Utilization and Analytics:

Challenge: Fintechs excel in leveraging data analytics for personalized services and improved decision-making. Traditional banks may struggle to extract actionable insights from vast amounts of data due to legacy systems and siloed data structures.

## Regulatory Compliance:

Challenge: Fintechs have less regulatory overhead, need to comply basics of regulation as major risk is undertaken by banks not fintechs, allowing accelerated innovation. However, traditional banks have too much regulatory overhead hence delays innovation and adaptation.

Partnerships and Ecosystem Collaboration:

Challenge: Fintechs are thriving on collaboration and forming partnerships within the broader fintech ecosystem. Traditional banks, with their legacy partnerships and sometimes risk-averse culture, are finding it challenging to establish and maintain agile partnerships.

Brand Recognition and Trust:

Challenge: Established banks typically have strong brand recognition and a long history, contributing to customer trust. Fintechs, being relatively new entrants, may face challenges in building the same level of trust, even if they offer innovative and efficient solutions.

Q3. How fintechs are creating new products and business models faster compared to traditional banks and NBFC lenders?

Response:

Fintechs often have an advantage in creating new products and business models faster compared to traditional banks and non-banking financial companies (NBFCs).

Following factors contribute to this agility and speed in innovation:

Lean Organizational Structure:

Fintechs: Fintech startups typically have lean organizational structures, allowing for quicker decision-making and implementation of new ideas.

Traditional Banks/NBFCs: Established financial institutions have complex

hierarchical structures, making it challenging to quickly execute decisions and implement innovative ideas.

Agile Development Processes:

Fintechs: Fintechs adopt agile development methodologies, allowing them to iterate and release products more rapidly in response to market feedback.

Traditional Banks/NBFCs: Traditional institutions follow more traditional and sequential development processes throw institutions like PMO, which are slowing down the introduction of new products.

## Embracing Technology:

Fintechs: Fintech startups are inherently technology-focused and leverage the latest advancements, such as cloud computing, artificial intelligence, and blockchain, to create innovative solutions.

Traditional Banks/NBFCs: Legacy systems and outdated technology infrastructure are hindering the ability of traditional institutions to adopt and integrate new technologies quickly. It has challenges like migrations, stability, talent and legacy processes to comply with when migrating to new platforms

#### Data-Driven Decision-Making:

Fintechs: Fintechs leverage data analytics extensively to understand customer behavior, preferences, and market trends, enabling them to make informed decisions and tailor products to specific needs. Traditional Banks/NBFCs: While traditional institutions have access to a vast amount of data, the challenge lies in extracting actionable insights due to legacy systems and data silos. Often banks have legacy technologies, no documentation where data lies, have very diverse technologies and systems that need integration, which are not available.

Customer-Centric Approach:

Fintechs: Fintechs always give highest priority to customer-centric approach, using user feedback and behavioral data to design products that meet the evolving needs and expectations of customers.

Traditional Banks/NBFCs: Traditional institutions are facing challenges in rapidly adapting to changing customer preferences and may have a more product-centric rather than customer-centric approach.

Open Banking and Collaboration:

Fintechs: Many fintechs embrace open banking principles, allowing them to collaborate with other financial institutions, fintechs, and third-party developers to create integrated and innovative solutions. Fintechs are adiopting OCEN(open credit enablement network) of govt of india and RBI faster than banks.

Traditional Banks/NBFCs: Traditional institutions are facing challenges in adopting open banking due to concerns about security, privacy, and a more conservative approach to collaboration.

Start-Up Culture and Mindset:

Fintechs: Fintechs have a startup culture that encourages experimentation, innovation, and a willingness to take risks, fostering a dynamic environment for rapid product development.

Traditional Banks/NBFCs: Large institutions are more risk-averse culture and have established processes, making it challenging to foster the same level of innovation and experimentation.

Focus on Niche Markets:

Fintechs: Fintechs target specific niche markets or customer segments and tailor products and services more precisely to the needs of a particular audience.

Traditional Banks/NBFCs: Traditional institutions have a broader customer base and have branch banking more face to face interactions, which can sometimes lead to more generalized products and services.

# Eighth

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Name:

Nitin

Agarwal

Q1: What are opportunities India stack like UPI offer for fintechs and banks from payment to lending, cross sell of Third-party products like insurance, MF sell?

## Response:

India Stack, especially UPI, is becoming popular payment source / platform in the current times. For quick and easy payments / bank transfers, UPI is becoming a preferred payment as well as acceptance source.

So, UPI alone can help lending in following ways:

Providing a spends behaviour of a customers, as a proxy to plastic instrument

Validate Banking – stature, conduct and correctness of a bank account

Lend into and collect from the same source, without having to evaluate the banking in totality – there by abiding to the regulatory guidelines and reducing cyber threats UPI, with it's new feature of UPI auto pay, and pay request feature, can help in increase cross-sell of Third Party products like insurance, mutual funds etc as it is easy, convenient, at the point of sale and quick & convenient reminders, along with payment in 3 simple clicks. Q2: Do you think, indiastack like Ekyc, E-Sign, Aadhar, Digital locker, AA framework accelerate credit delivery? Please explain in details.

# Response:

Digital lending is not a business, it is a thought, it is a journey of moving away from traditional paper-based process to tech enabled platforms. Some of these tools have incrementally solved for the age-old problem, which forced physical involvement for processing of a loan application (which we called ay Phy-gital). These frameworks allow technology to leverage the framework that the "India Stack" has created, thereby making process/es more efficient, yet not risk averse.

For e.g. eKYC / CKYC removes ambiguity and chances of forgery.

E-sign – removes risk related to mis-sell due to an intermediary. It connects the customer directly with lender in clear terms that is understood to a customer, yet convenient.

AA framework is going to be a game changer. One school of thought always believes that Banking conduct is more reliable for customer evaluation than the financial statements. Bank statements are lengthy and mundane, AA framework is going to give a 360 degree understanding of customers Banking (multiple), surrogated with GST returns (as and when it comes), tied up to customers social stature reflected in their utility payments.

General:

Q3: What were the main drivers or catalysts behind your organization's decision to embark on a digital transformation journey?

Response:

A legacy of well-established business model, best in class analytical tools, scorecards, Business Rule Engines and able technology platforms gives us the launchpad, as well as rocket fuel needed for thrust.

At the back end, our large distribution network, on ground customer support teams

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and robust risk management & collections framework helps us to manage our portfolio well, timely and in most efficient manner. Q4: What were the key challenges your organization faced during the digital transformation process, specifically in the context of the Indian banking sector?

#### Response:

Some of the key challenges any organization would face in digital transformation would be:

Thought leadership – the guidance and buy-in of the leadership teams and management is where it will always start from.

Investment or Expenditure – Most organization fails to recognize the need of digital transformation as investment for building the future and agree for a gestation period. Most finance officers would look at immediate returns and cost benefits, what they don't look at it is the risk of becoming obsolete.

Right partner – Vast as an ocean, and most diversified product suite brings in the issue of selecting a right partner who could holistically solve your problem. Most partners would be catering to a small portion of it

Time to Market – Most important, start early, allocate resources, finish quickly. Technology is a cutting edge, but a house building process. Ninth:

Participant Name: Susil Mishra

Q1. What were the key challenges your organization faced during the digital transformation process, specifically in the context of the Indian banking sector?

Response:

Resistance to Change:

The majority that is impacted by change opposes this because it causes many jobs to disappear, many individuals to be demoted, and new and inventive abilities to become prominent.

Legacy processes:

Certain process documents that require review and the elimination of certain processes are tied to the conduct of business. Once more, it will affect a number of roles, individuals, and the governance team

Hence this change delays the transformation process

Lack of Digital Skills:

The workforce may lack the necessary skills to adopt and leverage new digital technologies.

Training programs may be required to bridge the skills gap.

Data Security and Privacy Concerns:

The increased use of digital tools and data collection raises concerns about data security and privacy.

Organizations need to invest in robust cybersecurity measures and ensure compliance with data protection regulations.

Q2. What were the main drivers or catalysts behind your organization's decision to embark on a digital transformation journey

#### Response:

The integration of computer-based technology into an organization's strategies, processes, and products is known as digital transformation. Businesses implement digital transformation to increase employee and consumer engagement and service quality, which in turn boosts competitiveness. During difficult economic circumstances, achieving operational efficiency and cost optimization can also be crucial transition goals.

Positive digital changes have long-term positive effects for business: Organizations are better equipped to respond to client requests both now and in the future thanks to digital technologies and procedures. In addition, digital transformation creates the capacity and expertise needed to capitalize on rapidly advancing technologies that may provide a competitive edge.

A digital transformation plan puts businesses in a position to prosper in a future where technology plays a major role in driving the economy.

A digital transformation has two sides, one is demand side like market competition, customer expectations, regulatory compliance and other is supply side like technology advancements, data driven decision making, innovation and agility Market Competition:

Fierce competition in the market is compeling organizations to adopt digital technologies to stay relevant, enhance their offerings, and gain a competitive edge.

Customer Expectations: Evolving customer expectations and demands for seamless, personalized, and digital experiences are pushing organizations to transform their operations to meet these expectations.

Regulatory Compliance: Changes in regulations or the introduction of new compliance requirements like Digital lending guidelines, higher risk weightages to personal loans, DLG (default loss guarantee) regulations of RBI drive organizations to adopt digital solutions, manage risk better and slowdown lending where ever needed

Technology Advancements: The rapid pace of technological advancements provides organizations with new tools and solutions like cloud based digital LOS and LMS that fits into new digital lending solutions like sales force LOS, BNPL(Buy now pay later) LMS, Jocata digital LOS that can improve efficiency, streamline processes, and enable innovation.

Data-driven Decision Making: Organizations recognize the value of data in making informed decisions. Digital transformation enables better data collection, analysis, and utilization for strategic decision-making using various technologies like cloud, datalake solutions, Business intelligence tools.

Innovation and Agility: Digital transformation enables organizations to be more agile

and innovative. It allows them to quickly adapt to changing market conditions and respond to emerging opportunities.

Q3. what are opportunities India stack like UPI offer for fintechs and banks from payment to lending, cross sell of Third party products like insurance, MF sell? Response:

UPI provides a number of alternatives that enhance top line opportunities, such as lending, which is provided by Paytm, Groww, and Phonepe, which offer mutual funds and third-party insurance products. Fintech companies are expanding their lines of operations and enhancing financial inclusion.

There is an increasing number of people who are gaining access to credit, insurance, investment goods like mutual funds, debt markets, sovereign bonds, currency, and commodities markets, as well as lower distribution costs due to the application of digital technology. The economy is becoming more deeply integrated financially, and more people are taking part in and profiting from the products.