

FINTECH ADVANCEMENTS IN BANKING SECTOR

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Abstract - Banking system is sort of a central nerve to a nation's economy as it caters to the financial needs of credit in all domains of society. Due to the arrival of digital technology, banking services have undergone a massive shift in their mode of operation. New trends are gaining momentum at a fast pace as customers find it convenient and flexible at the same time. The emergence of financial technology has resulted in the introduction of various technological advancements in the banking industry. FinTech, i.e. financial technology, is taken into account to be a contemporary movement, yet the use of technology to assist financial services is by no means a recent phenomenon. FinTech is reimagines the whole banking space, with banks moving to digitization. FinTech has taken this step forward making them paperless, present-less and cashless. The technology transformation journey of Indian banks spans over three decades, starting within the mid-1990s. The number of digital payments enhanced more than 7 times from 2015 to 2020, according to data from the RBI. This paper is a review of FinTech developments in the Banking Sector and the adoption of Financial Technology by banks for improve the performance.

Key Words: Banking Sector, Financial Technology, Economy, Development, Digitization, Customer Expectations

1. INTRODUCTION

The Indian banking sector has recently witnessed a hospitable historic transformation. The technology transformation journey of Indian banks spans over three decades, starting within the mid-1990s. For bank customers, it is the realization of their banking dream of 'Anywhere, Anytime, Anyway'. This has prompted banks to adopt and accept technology to fulfill the increasing current customer expectations and compete in the international market. In Banks, financial technology which one started with computerization evolved to the revolution in e-commerce, digital finance, Insuretech, wealth management and non-financial services.

In the banking sector, technology has emerged as a strategic resource for successfully achieving the target of higher efficiency, control of operations, productivity and profitability. With the acceptance of core banking solutions, the deployment of ATMs and the scaling of mobile app-based banking, technology adoption in Indian lenders have come an extended way, within the process, making banks more FinTechs in orientation.

Banks have embraced the latest technologies to survive and grow in a changing market environment. Thus, banks can deliver the provisions required for customers and offer the best solution from their product or service. Technological

advancement in banking sector such as online banking, mobile banking, telebanking, ATM/Debit cards and credit cards has led to advancements in payments and settlement systems.

Banks in India were the earliest to adopt technology by automating systems and streamlining their processes. The introduction of technological advancements has enabled banks to maintain a high level of security, check fraud, abuse or pilferage, and to minimize the risk and cost of handling cash. The introduction of non-cash payment modules like RTGS, NEFT, NECS, UPI and digital wallets also play an instrumental role in transforming banking services. The regulator forecasted that in 2021 the number of digital transactions will increase to 87 billion from about 40 billion in 2020. The number of digital payments was enhanced by more than 7 times from 2015 to 2020, according to the data from the RBI.

The banking sector in India is ready for a transformational space with the implementation of advanced technologies such as Artificial Intelligence (AI), Machine Learning (ML), Blockchain and Robotics.

2. WHAT IS FINTECH?

FinTech refers as a "financial technology". FinTech is the mixture of technology into offerings by financial services companies so on increase their use and delivery to consumers. Financial technology (FinTech) is used to elaborate new technology that seeks to reinforce and automate the delivery and mobilize of financial services.

Broadly, the concept of "financial technology" (FinTech) applies to any innovation in how people transact business, from the invention of digital money to double-entry. Since the online/internet revolution and thus the mobile internet/smartphone revolution, however, financial technology has developed explosively, and FinTech, which originally mentioned technology applied to the rear office of banks or trading firms, now explains a broad kind of technological interventions into personal and commercial finance.

"FinTech, financial technology, an economic industry composed of companies which adopt technology to make financial systems easier one and more efficient." (McAuley, D Wharton FinTech, Online 2014).

The concept "FinTech" or Financial Technology describes companies or representatives of companies that combine financial services with modern, innovative technologies (Dorfleitner et al., 2017).

The term Financial Technologies or "FinTech" is used to explain a various types of innovative business models and emerging technologies which have the potential to transform the financial services industry (IOSCO 2017).

Financial technology are often utilized in in the subsequent ways:

- It is an innovative technique which used for the invention of digital money.
- It can also be used for double-entry
- FinTech originally mentioned as technology, is now widely used at the back offices of banks or trading firms.
- FinTech now getting used for various financial activities like bank transfers, a deposit of check via smartphones, apply for credit, raising funds for business start-ups, etc.
- Implementation of advanced technologies like Artificial Intelligence (AI), Machine Learning (ML), BlockChain and Robotics.

Evolution of Modern Fintech

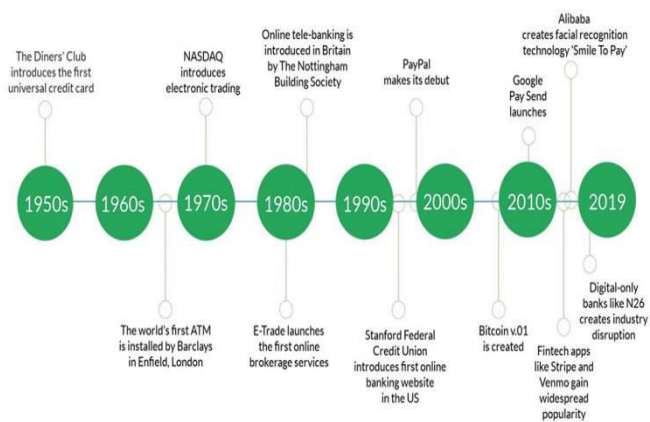


Fig -1: FinTech Evolution

3. FINTECH IN EMERGING MARKETS

The way mobile phones have changed behavior of consumer and how people use the internet is also one of the reason why they differentiate between the developed and developing countries. As of today, the countries with the highest financial technology usage are China (69%) and India (52%). China, India and other emerging markets never had time to develop Western levels of physical banking infrastructure, which has left them more hospitable to new solutions. In China, the FinTech penetration is well above the average global adoption (33%) also that of the average adoption across emerging markets (46%).

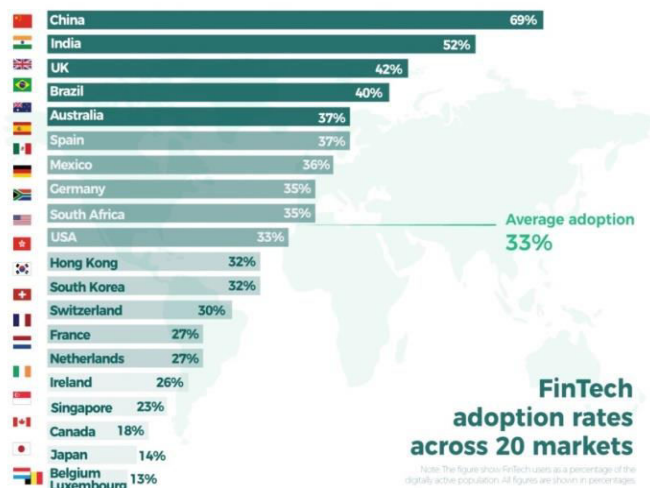


Fig -2: FinTech adoption rates

4. FINTECH ADVANCEMENTS IN BANKING SECTOR

Technology is rapidly changing the way how banks operate and how they satisfy their customers, and becoming a role model in competitive edge.

Cloud computing

Cloud is an important tool of today's service delivery model, and enables banks to penetrate new business opportunities and handle new delivery channels. By leveraging cloud-based services, banks are able to minimize data storage costs through saving on capital expenditure (CAPEX) and operating expenditure (OPEX), while ensuring that customer data is protected.

Cloud platforms benefits are:

- Drive costs down as banks not required to make huge investments in software and hardware infrastructure
- Make developing and launching new products much easier, and help banks fulfill client demand and technological trends faster
- Allow banks to store their big data, while using powerful data analytics and machine learning to get valuable insights into behavior of customer.

Big Data and Advanced Analytics

With millions of customers, banks are probably the most data-intensive organization in the global economy. The next winners in the digital banking race will be the banks who manage to continuously generate tailored offers and personalized experiences for their own customers. The answer to understanding what customers exactly want and requirement lies within the amounts of data across different banking channels.

Only through analyzing data, banks can truly focused towards customers and create personalized financial services which will benefit customers. Banks can leverage data from different sources, like online and mobile payments, withdrawals at ATMs, digital banking channels (mobile banking app, internet banking, e-wallet), IoT devices, customer data collected for KYC, biometric authentication, etc.

AI and Cognitive Technologies

Artificial Intelligence (AI) is now becoming a very important part of the business environment and is reinventing the whole ecosystem of the banking sector. By enhancing the level of automation and using dynamic systems, AI supports decision-making, enhances the customer experience, and improves operational efficiency. It also provides a strategic oversight for getting value out of data, which is now needed more than ever due to the data influx from a wide range of sources.

The Internet of Things (IoT)

Internet of Things is a new technology which connects devices/sensors in a network with the objective of giving better data-driven insights. The banking sector started utilizing IoT technique relatively late compared to other sectors like energy and automotive. However, it has been gaining importance in financial services lately, especially in retail banks, which are showing huge investments in it to be used in their internal infrastructure and consumer-facing capabilities.

Robotic Process Automation (RPA)

The banking sector is mandating the use of intelligent automation to drive efficiency, eliminate repetition, and increase customer satisfaction by providing very fast and efficient services. The technology behind this automation is known as robotic process automation (RPA). RPA is transforming how banks operate.

Blockchain and Distributed Ledger Technology (DLT)

Blockchain technology and its associated distributed ledgers were devised as an easy yet smart solution to stay track of the Bitcoin cryptocurrency in circulation. The answer leveraged a 'distributed ledger' architecture under which all users who participated as 'nodes' within the network had a copy of the whole ledger.

Open Banking

Open Banking is the movement that banks work together within an ecosystem of (technology) partners. Banks broadly have four broad strategic options i.e. full-service provider; utility; supplier; and marketplace interface. These four options aren't mutually exclusive. Two of these i.e. utility and supplier involve less control of the customer interface because products and distribution become unbundled. However, organizations pursuing quite one option are likely to wish to sharpen their own proposition for every option they pursue to stay competitive.

E-Wallets

The immense development of E-wallets is one more indicator of the rise of FinTech financial services. Samsung Pay, PayPal, Android Pay, and Apple Pay and are a variety of the most e-wallet companies within the world. These E-wallets are used for a plethora of purposes such as P2P payments, top-up and utility bills, international remittances, booking tickets, and many more.

There are also other standalone wallets like Starbucks and Walmart Pay. E-wallet has managed to pull users because of their tempting offerings which include exciting offers, lucrative cashbacks, reward points, and many more. Due to

this success, most of the banks are now realizing its importance and are recognizing e-wallets as a collaborative measure to embrace the technological advancements.

Customer Service chatbots

FinTech service providers have also introduced customer service chatbots which have really become popular within the recent past. Chatbots are nothing but bits of software that use machine learning and natural language processing that permits them to continuously learn from human interaction.

Chatbots are highly benefited as they streamline customer interactions like handling the query and directing customers to the specified departments. It became an important part of all the banks since it not only minimize costs and increase the customer satisfaction but also allows agents within the call centers to focus on value addition.

Biometric Sensors

FinTech in banking sector has born to several innovations and a biometric sensor is one among them. Biometric sensors alongside Iris scanners are two advancements in technological that ATMs are witnessing. Moreover, these advancements in banking sector are path breaking since it might simply eliminate the need to carry your plastic card with you. Furthermore, you won't need to keep remembering your pin.

5. CONCLUSIONS

The cut throat competition and increasing expectation of customers had resulted in increased awareness on technology among the commercial banks in India. The beauty of these banking innovations puts both banker and customer in a win-win situation. Effective use of technology has a multiplier effect on growth and development of banking sector. The reason for adoption and integration of technology into banking industry is to ensure enhancement of overall performance. Similar with FinTech, we see more and more technology integrating with the sector which is changing the way the Banking industry functioned. There is lot of future scope for developing and introducing new financial technology to resolve the problems of society.

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