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TECHNOLOGICAL DEVELOPMENTS IN BANKING INDUSTRY AND THEIR IMPACT

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Banking Industry: Genesis

The beginnings of banking transactions were found in ancient times, starting with simple money lending and barter practices of agricultural and other commodities among traders in early period. But banking gained momentum mostly after the European industrial revolutioninthe17thcentury, when Europeans started establishing colonies around the world, which extended trade to far off geographical locations, and thus the need for trade credit was felt like never before. Since the initiation of operations of banks, be it commercial or state owned, their modus operandi remained near about the same, up to the end of 20th century.
But the onset of Internet revolution and explosive growth of the World Wide Web in the 1990s changed all that. Numerous possibilities emerged for worldwide commerce, which impacted the functioning of banks as well. Even now, the evolution of technology structures the nature and extent of global economic activity and continues to affect the global banking landscape as a whole.

Indian Banking Industry: A Timeline

From mahajans and chettis to banks set up in the British era, from nationalization of large banks to licenses being given to payments exclusive banks, the Indian banking system has undergone fundamental shift since its initiation. It can be further depicted as follows:
1784: Bank of Bengal introduced Cheque system in India
1786: General Bank of India & Bank of Hindustan were set up
1806-1809: Three Presidency Banks (Bank of Calcutta, Bombay and Madras) were set up
1865: Allahabad Bank was established

1895: Punjab National Bank established in Lahore

1906-1911: Swadeshi movement resulted in creation of local banks

1925: Presidency banks merged to establish Imperial Bank of India

1935: Reserve Bank of India Act passed, resulting in creation of RBI.

1949: Banking Regulation Act passed and RBI made Central Bank of the country

1955: SBI Act passed and Imperial Bank of India became State Bank of India

1959: State Bank of India (subsidiary banks) Act passed to create subsidiaries of SBI

1969: Government nationalized 14 major commercial banks

1975: The idea of Regional Rural Bank was conceptualized to serve the rural population

1980: Another 6 commercial banks were nationalized

1987: HSBC first introduced ATM kiosk in Mumbai

1996: Local Area Banks were set up in the Union Budget to mobilize rural savings

1991: Licenses given to 11 Private Sector Banks

1994: ICICI bank introduced net banking for retail customers in India

2000: Introduction of ATMs in India through countrywide BANCS network

2006: Cash Deposit Machines first introduced in India by ICICI bank, starting from western India

2008: Mobile banking through Mobile Apps introduced, pioneered by ICICI bank

2010: Cheque Truncation System (CTS) introduced, it eliminated a lot of paper and reduced cheque clearing time to a minimum

2014: Automatic Passbook Printing machines introduced in India

2015: Payments banks given license to operate in India

2016: Prime Minister announced demonetization of Rs. 1,000/- and Rs. 500/- currency notes, it led to a forced yet phenomenal increase in use of non-cash i.e. electronic payments

2017: EMV chip cards made mandatory in ATM-cum-Debit cards to enhance security

2017: Tap and pay cards introduced

2018: ICICI Bank launches India's first digital application form for opening current accounts; enables account opening in a few hours

As is evident from above, banking as an institution originated in the late 18th century and primarily catered to the needs of the British. Post-independence, the nationalization of major private sector banks was done in 1969 and then in 1980 to make banking accessible to the unbanked population of India.

The economic liberalization in the early 1990s shepherded privatization wherein many new private 'new generation tech-savvy' banks were launched. A few foreign banks commenced their India operations as well. All these banks were quick to leverage on the emerging technology, which got them a good customer base by providing professional services. As a result of this, a sense of urgency was felt in public sector banks and older private sector banks to become technologically enabled, which in turn completely revitalized banking operations in India, the evidence of which was felt by retail banking customers in the country.

How Technology had a bearing on banking industry?

The worldwide Internet revolution came alongside the economic rejuvenation of Indian economy through the new economic policy. Concurrently, the IT industry also started booming and this led to a technological shift in banking industry. Banks, wholeheartedly started to accept business process automation, which enhanced customer service, reduced manpower costs and increased profitability. Coupled with the conventional banking products, banks in India, being equipped with a huge customer base, went for market penetration strategy by starting to sell non-conventional third party products such as mutual funds, life and general insurance etc. This single window selling saved the customer's time and enabled the bank to enrich customer relationship.

The Apex Bank i.e. RBI also played an important role in this transformational journey. It issued regulations and recommendations on banking mechanization and computerization. Factors like establishment of computerized inter-connectivity across bank branches, introduction of MICR- based cheque clearing, modernization of payment services and settlements through Electronic Clearing Services (ECS), Real Time Gross Settlement System (RTGS), National Electronic Funds Transfer (NEFT), were all significant landmarks in the banking technology revolution. The Indian banking sector is being shaped into a customer centric, technology driven, and financial supermarket catering to the varied needs of its customers. This is due to continuing advances in technology, rise in middle class income levels, and increase in demand from a consumer-oriented financial market.

Noteworthy Milestones in technological evolution/revolution

Technological Evolution vs. Technological Revolution. The afore mentioned two nouns both refer to a change. However, there is a distinctive difference between the changes implied by these two words. Evolution refers to a slow and gradual change whereas revolution refers to a sudden, dramatic and complete change. The Indian banking industry witnessed evolution in initial years, while in last decade and a half, the change was revolutionary since it was characterized by vivid modification to the in-house practices as well as the delivery channel and/of the products offered by banks.

As mentioned above, there has been a noticeable shift from traditional to channel-based banking. ATMs (Automated Teller Machines) were introduced by banks which provided customers with “any time and real time” access to their accounts. A revolution was unleashed in the banking world by introduction of credit card which enabled cashless transactions at various point of sales including online retailers. Affordable technology infrastructure like economic but powerful computers, penetration of handheld gadgets like smartphones and higher Internet bandwidth at low cost all contributed to easy access to banking products and effortless banking transactions. Call-centre and phone banking services further added to customer convenience and thus became a part of the technological revolution in banking industry. By directing banking transactions through various electronic channels and by providing customers direct access to their bank accounts, banks can now provide quick service and transparency as well. They even started offering incentives to customers for using electronic channels for their various services with the bank. All this reduced the number of walk-in customers and improved the quality of customer service in branches.

The next significant milestone was the introduction of mobile banking through SMS. The launch of smartphones created a revolution of sorts in the banking world and smartphones are now a widely accepted delivery channel in developed countries. As the number of mobile phone users in India rapidly increases, banks are exploring the feasibility of using the smartphone devices as an alternative channel for delivery of full- fledged banking services.

Current Trends

Recently, virtual banking or direct banking is a concept gaining momentum. In this model, banks offer products, services and financial transactions only through electronic delivery channels, generally without any physical branch, has already been tested out in advanced countries such as the United States and Europe. In India, this concept is being materialized in a rather miniscule format known as “payments bank”.

Due to nearly zero or much lower branch maintenance and manpower costs, such banks are able to offer competitive pricing for their products and services vis-à-vis traditional banks. Since more and more customers are already moving to branchless banking and payments banks surely have caught up in the market, the direct banking trend will gear up in India as new players and existing technology-savvy banks adopt this model.

No matter how alluring it sounds, the concept of customer never needing to visit a branch, brings a lot of challenges along with it. Leveraging on technology makes various activities and interactions happen seamlessly and virtually, but customer satisfaction calls for a human touch. For all their technological sophistication, virtual/branchless/direct banking should be hassle free and a congenial user experience. A virtual banker needs to be aware of this fact in letter and spirit and always ensure that the quality of user experience is most important and leveraging on technology is the most important aid to enrich user experience. Also, with all customer data getting digitized, banks following the digital channel can improve productivity, optimize costs, provide agile and better customer service and it even complements with the environmental angle of using less paper. From the customers’ point of view, paperless banking translates to easy handling, storage and retrieval of financial documents and account statements. Retail banking customers can now create and liquidate their fixed deposits sitting in their office cabin, check their portfolio status online while sipping a cup of coffee and check out other traditional as well as new products being offered by banks while they chat on spilt screen on their smartphone. This has now become a threshold competence rather than competitive edge. With customers demanding ‘anytime and anywhere’ access to their money and financial information, banks have no option but to implement wireless solutions. On the user front, rapid advancement of mobile technologies means banks must increasingly adapt their own infrastructure to the client side needs.

Talking of the bane side, unlike PCs, mobile phones are small and are easily lost or stolen, making them more vulnerable to fraudulent transactions. This calls for greater security measures combined with powerful regulatory measures which need to be put in place well in time, also the privacy issues related to digital banking also needs to be pondered upon.

What is the way forward?

Now, the banks need to take a holistic approach to fulfill the demand for increased variety in deposit and investment products (also conforming to regulations) so as to enhance their market share of investments via banks. Today, in this highly competitive global marketplace, development of sophisticated, targeted products with low-cost technology is a key. An example of such innovative product is *i-Wish Flexi Deposit by ICICI bank* for its saving account holders; in which it provides the option of saving little amount, without any monthly commitment as well as providing attractive interest rates on such deposit. In order to generate products like this, it calls for an in-depth analysis of customer needs, their habits, their earning patterns, the market and even competitor trends. Now, since the markets are very dynamic and customer needs are changing rapidly, banks need to invest in advanced analytical tools for timely introduction of new products, which will give them an early mover advantage. Hence the significant technological developments in banking industry have had a huge impact in recent times. If banks need to succeed in this competitive scenario, they obviously have to leverage on technology and even join hands with advanced analytical tools like big data analysis.

Webliography

https://law.unimelb.edu.au/__data/assets/pdf_file/0011/1978256/D-Arner-FinTech-Evolution-Melbourne-June-2016.pdf
https://www.bankexamstoday.com/2014/12/guidelines-for-payment-and-small.html
https://gulfnews.com/business/sectors/banking/evolution-of-technology-in-the-banking-sector-1.1905437
http://independentbanker.org/2017/10/timeline-180-years-of-banking-technology/

https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=2&ved=2ahUKEwiSyL2BlqneAhVQSX0KHbpCAsMQFjABegQIAxAC&url=https%3A%2F%2Fwww.edgeverve.com%2Fwp-content%2Fuploads%2F2017%2F03%2Fbanking-in-India-evolution-in-technology.pdf&usg=AOvVaw1t_W-2H86IWvgRpyxcX2F_

https://www.slideshare.net/KumarAnilChaurasiya/evolution-of-banking-technology

http://shodhganga.inflibnet.ac.in/bitstream/10603/5600/11/11_chapter%203.pdf

https://www.federalreserve.gov/pubs/feds/2002/200250/200250pap.pdf