Open Banking: Digital Innovation in Banking Service in India

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Abstract

From the use of electronics to automation of many processes in the banking sector, people are now moving toward innovations. These innovations can be termed as disruptive technologies which are changing the whole structure of banking sector all over the world. The paper gives information about some of the technologies innovated and the future technologies that can be innovated for the banking sector. The Open Banking Platform Innovation will be discussed in detail in the research paper. Also its advantage and disadvantages will be discussed with the solutions and the road ahead for the banking sector.

Keywords: *Innovation, Bank, Technology change, IT Management.*

Introduction:

Henderson, 2017), Innovation is introduction of something new or different. The act of innovation leads to introduction of new ideas, device or model. (Australian Government) Innovation used to create effective process, product and idea. It catalyst for growth of business which leads to improve market share. Innovation is catalyst for business to grow, penetrate market. It provides better opportunity, visibility and connection in developing markets. According to (Baer) there are three general categories of innovation

1. Product: Product innovation is depending on customer insights. Product innovations are visible and create demand for product.
Development of new products e.g. Fit-Bit
2.Performance improvement of existing product- e.g. i-Phone
3.Adding new feature to an existing product- e.g. GPS to car system

2. Process innovation-
Process innovation is related with improving quality of product. It can be done by upgrading existing process, tools and techniques, technology. Process innovation helped in improving quality of product and reducing operation cycle.
e.g.: Henry Ford's invention of the world's first moving assembly line which reduces single car assembly time from 12hrs to 90 mins.

3. Business Model Innovation:
It is most challenging innovation since it required lot of organizational changes. It is most radical, risky and transformative innovation.
e.g Airbnb, Uber
Innovation is key driver of emerging economies. According to Pwc report (2013) on," Emerging Market", India have major challenges are (i) making the growth process more inclusive, (ii) improving physical infrastructure, (iii) developing the agriculture sector, and (iv) enhancing delivery of essential public services, such as education and health, to large parts of the population. Whereas India is strong in Technology factor since we are using improved quality and volume domestically produced high technology. N. Chandrasekaran, chairman, Tata Sons (2017|)," In the internet world, the technology was being embedded into the business. But in Today's digital age, Business is getting embedded into Technology". Technology is creating business of businesses. (Chetan Sehgal, 2018) Technology is widely used in banking, ecommerce, autonomous vehicles, health care, designing in emerging markets. (Rahmath Safeena, Hema Date and Abdullah Kammani, 2011) Internet banking (IB) is the latest and most innovative service and is the new trend among the consumers. The shift from the formal banking to e-banking has been a 'leap' change. (Sally Machhie,Heidi winklhofer, Chirstine Ennew, 2006) conducted study on technology acceptance model on the online retailing of financial services. Study concluded that consumer had developed positive emotions toward internet as distribution channel, consumer with computer access from home taking active interest in financial services. Consumers who have general online purchasing

experience find it is user friendly. According to (Rakesh Mohan, 2006) productivity of Indian banking was increased due to technology adaption and branch expansion/ Financial inclusion. In The business per employee of Indian banks increased over three-fold in real terms from Rs.5.4 million in 1992 to Rs.16.3 million in 2004, exhibiting an annual compound growth rate of nearly 9 per cent. At the same time, the profit per employee increased more than five-fold: from Rs.20,000 to Rs. 150,000 over the same period, implying a compound growth of around 17 per cent. (Jevtić Boris,Kovačević Vladan,Vučeković Miloš, 2014)Digital media tools- Social networks, online competitions, online advertising campaigns, mobile application, online market research to connect customer, location based services are helpful to achieve marketing goal and generate revenue at lower cost.

Data management and analytics is key driver of modern business. Data is analyzed and information is generated. This information helps organization/ business to grow and sustain. Whenever it is related to selling of product, customer data is widely used for up scaling and cross selling of product. Up scaling and cross selling concept of marketing analytics is based on," A bird in hand is worth two in bush". The best example of these concept used in financial services. Both methods enable increasing quantum business with existing products or additional products. These methods encourage customer to increase customer life time value and invest more so that it will help to boost sale, grow revenue and achieves goal.

According to (Dinesh Jebamani, August 31, 2015) benefits of both methods for financial institute are as follows:

1. Reduced operation cost and increased customer life time value
2. Assist in new development of product and enhance value proposition of customer
3. Encourage client to use multiple product and service and prevent switching to competitor banks.
4. Enhances customer experience with the organization.

These both methods are successfully implementing in financial service which helps financial institute to grow. Along with these financial technologies is evolving. Many more Fintech companies are tie-up with financial services to provide better quality services to intermediate and end users. (CII, 2015) Bank Model will emerge as business model for banking industry in 2020. According to Deloitte point of view Merger & Acquisitions a banking model in the form of payment banks and Innovation in banking technology oriented – cognitive technology, artificial intelligence, block chain technology, robotics process automation, Fintech & of course cyber security will be future of banking industry. Like Ecommerce business banking industry is coming up with virtual open platform which will provide transparency and quality services.

Open banking – virtual operation platform is going to be boon for new banking era. United Kingdom 13 January 2018 implemented open banking platform. Over 80 per cent of us bank - Barclays, HSBC, Lloyds, Santander or Royal Bank of Scotland are working on open banking platform. This paper is mainly focused on implementation of open banking, its advantages and disadvantage.

Research Methodology:

This paper is systematic review of the articles using content analysis. Researcher considered 20 articles, published over last 5years in journals, reports and website. With help of Interpretative and qualitative analysis was researcher have developed conceptual model of adoption of open banking.

Opening banking – New Era of Banking

Open banking platform is a collective model in which consumer data is shared through APIs (Application Programming Interface) between two or more unaffiliated parties to deliver enhanced capabilities to the marketplace.

In many developed market, open banking is useful as payment getaway where many financial instrument tie up with third-party which enable account holder to conduct financial transaction though personal financial management software. Open banking will give more emphasis on security, service and financial ecosystem so that using API customer can conduct real time data transaction, borrowing, lending and investment.

Flow of open banking platform

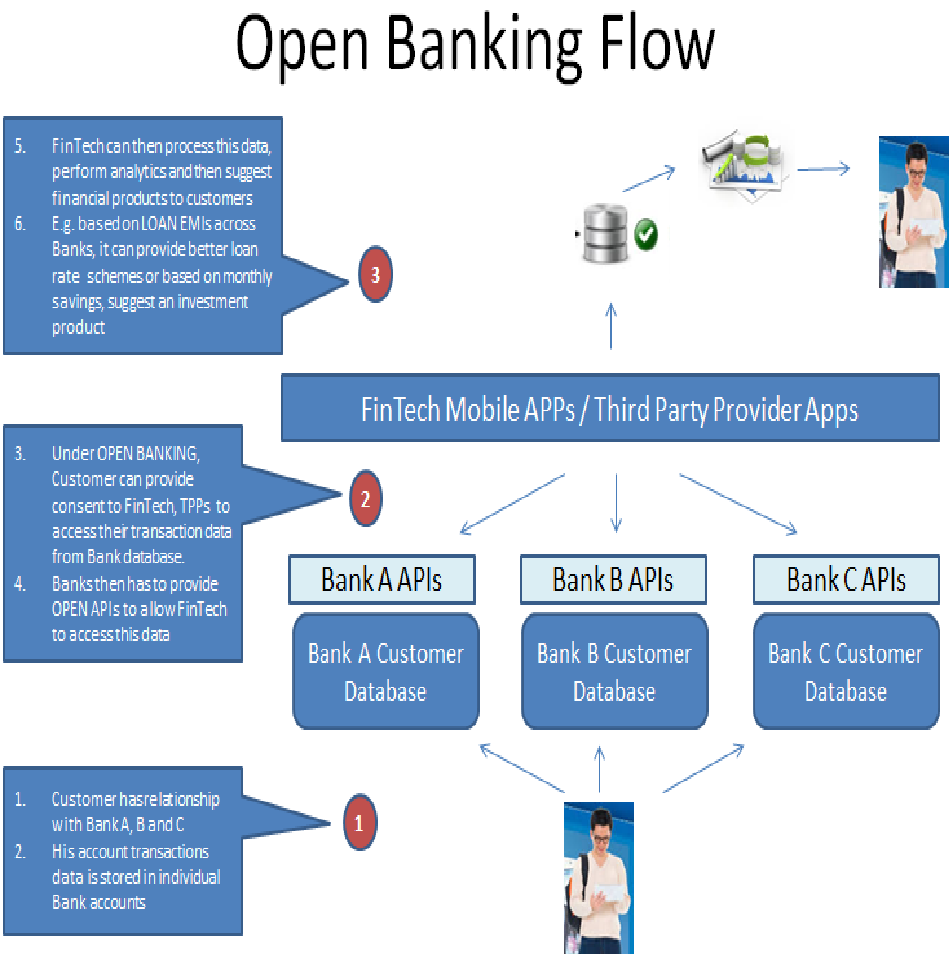


Fig1-Open Banking Flow diagram

The flow of the open banking platform in the following ways:

Customers have his accounts in 1 or 3 banks and his data and account transactions are stored in his individual bank accounts. Now under Open banking platform, customer would be asked to provide consent to Fintech, Third Party Provider Apps (TPPs) to access his/ her data from the bank database. When the customer gives his/her consent for this data transfer then banks then have to provide Open APIs to allow Fintech to access this data. Now Fintech will analyse this data and then provide personalized products to the customer.

Global scenario open banking:

Fig2-Open banking global Scenario

Implementation of open banking platform in India

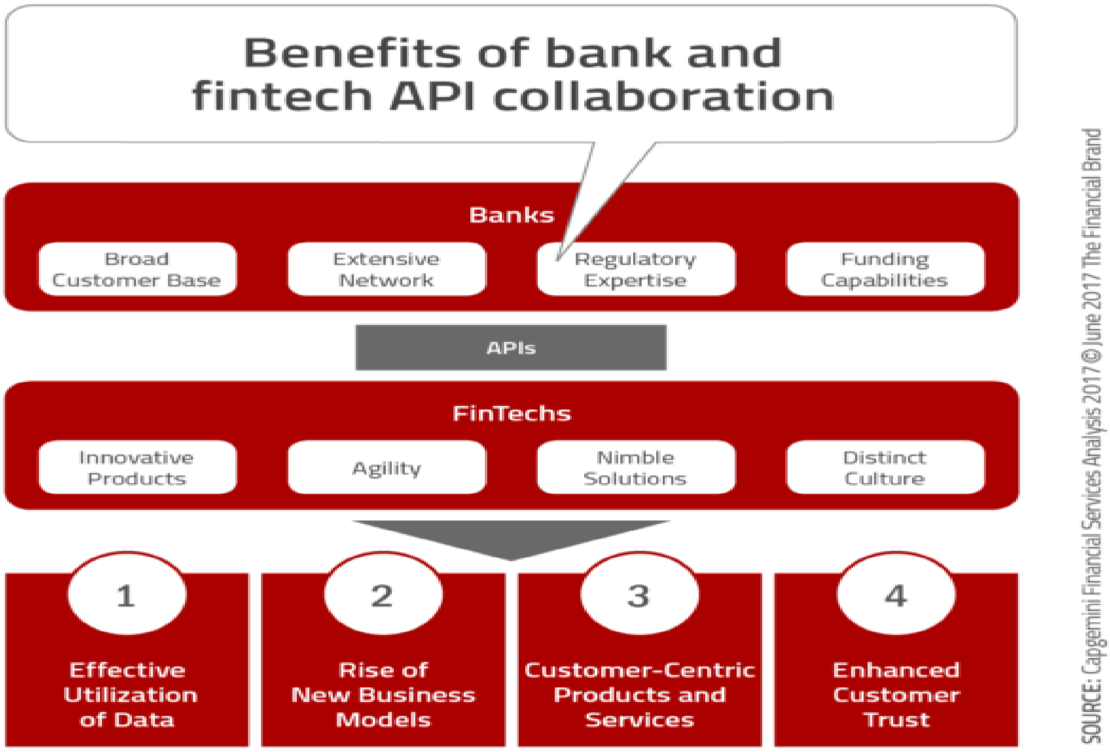
In India, open banking platform have been implemented by banks like Yes Bank, State Bank of India. Also, recently i.e. on 7th November, 2016 Wipro launched its own open banking platform. In Indian Banking Industry, Yes Bank was the 1st one to launch APIs banking in India to digitize the B2B supply chain. This APIs banking allows their banks system to seamlessly and securely integrate with their corporate client's ERP system. Wipro's open banking platform will accelerate bank's journey towards the establishment of an API enabled value ecosystem and will simplify the on boarding and integration of Fintech services.

Challenges that will be faced for implementing open banking platform

- The open banking platform concept is still new, so we cannot come up with the exact challenges that the countries will face because of implementing this technology. But the few which could be possible are
- Friction between data providers, third party providers, customers, regulators and government agencies are possible because information asymmetry
- Development of new regulations on global scale for exchange of data. Each country will need to come up with new governance system.
- Threat of cyber-crime. This threat is still present in most of the economies and would be a hurdle for customers to trust upon the open banking platform
- Trust problem between commercial banks and |Fintech companies. Though there is a possibility in future of their collaboration, but at present there are serious trust problems between them. The banks maintain a foe attitude towards Fintech companies because they think that these companies are taking their business. And with the open banking platform technology, the banks might lose the primary touch point.
- As Bill Gates said "Banking will always be necessary, but banks may not", open banking may make this true.
- After sometime the banks might lose their differentiating factor from other banks in terms of their innovative and unique services.
- IT costs for banks and Fintech companies will increase
- Once open banking platform is implemented PISPs (Payment Initiation Service Provider) will be lost.

Way Ahead- SOLUTIONS

- Collaboration is the key to solve the problems that the banks and Fintech companies will face because of open banking platform. With this collaborative approach, there will be effective utilisation of consumer data. When this consumer data will be analysed more customer centric products and services will be evolved. And to support these customer centric activities new business models would be evolved. And this all will result in enhanced customer trust.



- New secure system needs to be innovated to gain customers confidence. That will be quite difficult in wake of cross selling controversies in the US and the misleading of Payment Protection Insurances. But to be alive in this competitive world the organisations will need to gain customer confidence

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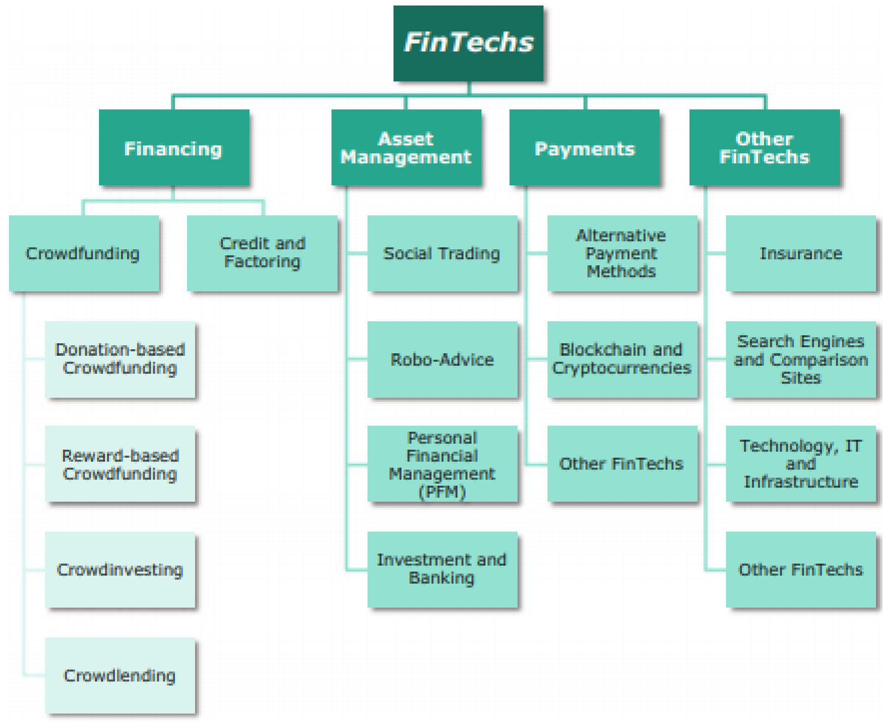
Conceptual Frame work of open banking:

- **Financial technology:**

(International Association of Insurance Supervisors- Newsletter, 2016) **Given working definition of Financial Technology as follow,** Fintech can be described as technologically enabled financial innovation. It is giving rise to new business models, applications, processes and products. These could have a material effect on financial markets and institutions and the provision of financial services.

(Definition of FinTech and Description of Fin Tech Industry- Springer) Financial Technology industry is categorized in following segments.



(kevin zhu, 2014) Studied Technology-Organization-Environment (TOE) framework. Researchers have studied 612 financial services firms' forms across 10 countries. Empirical analysis of study stated several key findings was as follows

1. Within TOE framework technology readiness emerges as the strongest factor for e- business value.
2. Firm sixe negatively relates to e- business value
3. Adoption of business by company because of competitive pressure but technology readiness within internal organization creates value.
4. Financial resources and technology capabilities becomes far more important parameter in developed countries

- **Trust:**

(Katherine Tyler, 2007) Study investigated trust in financial services business market. Researcher conducted qualitative research based on 147 in depth interviews with corporate banker and their clients. Study found that small companies were more trusting than large corporates.

Bankers used calculative and operational trust and were cynical about their counterparts' trustworthiness. Bankers were quick to eliminate clients from their portfolio who did not, in their view, provide full disclosure of pertinent facts.

(Cheminguie, 2013) empirically applies conceptual model and tested the hypothesis with help of questionnaire involving 300 Tunisian non-user of mobile financial services.

Researcher developed structural equation model – resistance, motivation, trust and intention to use financial mobile services. Study concluded that system quality has significant and positive impact on trust.

(Hansen, 2012) developed conceptual framework, explain how consumer financial healthiness, broad scope trust, financial knowledge, consumer relationship and affect consumers' trust in their financial service provider

- **Operation cost Efficiency:**

(Pooja Malhotra, 2007) studied factor affecting internet banking adoption with help of Indian bank. Study concluded that the larger banks, banks with younger age, private ownership, and higher expenses for fixed assets, higher deposits and lower branch intensity evidence a higher probability of adoption of this new technology. Banks with lower market share also see the Internet banking technology as a means to increase the market share by attracting more and more customers through this new channel of delivery.

(Balwinder Singh, 2005) Researcher had studied 93 Indian banks' internet banking adoption. Study concluded that internet adoption of bank lead to improve the cost efficiency as a result improves the company profitability.

- **Role of intermediary and Regulation:**

(rotchanakitumnuai, 2003) studied factors which were barriers to internet banking adoption. Study concluded that legal support is also a major barrier to Internet banking adoption for corporate customers.

According to (Aiman Faraz, 2017) Extensive regulatory requirements for the formation of new companies in the BFSI sector have historically posed a barrier to entry for budding companies. More recently, however, regulatory hurdles such as extensive KYC/AML protocols as well as digital identity authentication and data storage requirements have been some of the major hindrances faced by incumbents, often slowing down the adoption of newer technologies. However, with the current government's strong focus on FinTech, we expect to see more clarity in regulations in the coming years. While FinTech innovation in corporates and institutions has been negatively impacted by extensive regulatory requirements, young Fintech companies in India suffer from a lack of regulations making for a very ambiguous situation overall. It is clear that as the Indian regulatory environment is not as developed as our global counterparts; improvements in this regard would go a long way to facilitate innovation and the adoption of emergent technologies going forward.

- **Profitability and Customer life time value:**

According to (Margaret Doyle, 2019) Current banking operating models are largely closed, whereby banks own the customer interface, through which they offer their own products. These interfaces are highly integrated with the services offered, which range from current accounts to savings accounts, borrowing and protection products. With help of open banking may entail a shift from the current net interest margin model to one based on fees or profit share.

(Anonymous, 2016) Open Banking transformation paves way for the adoption of open APIs, which in turn presents strategic opportunities where external service providers build on top of banks' data and architecture. Open banking help banks bring engaging services to market faster and cheaper than they would be able to themselves. Moreover, Open Banking enables banks to bundle stand-alone services under their own roof, and helps banks their role and relevance in the future.

Conclusion:

Open banking is innovation in digital technology which build user friendly ecosystem. But implementation will be a critical in terms of use and creating awareness among customers. For any success of technology innovation, infrasture plays major role which is concern areas of emerging economies. So, there will huge capital expenditure for financial institutes but revenue creation will be high since it will help in reducing operation cost.

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