FINTECH: A NEW REVOLUTION IN INDIA

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ABSTRACT

Fin-tech is the latest buzzword in the area of banking and financial services. Simply put, Financial Technology or fin-tech is a term used to describe the growing technological innovations in the financial sector aimed at improving the activities in the sector. There is continuous increase in digital transactions both in number and in value and has created opportunities for Fin-tech Startups to penetrate in the digital payment users in India. Fin-tech is progressively becoming a foremost center of attraction for all the key stakeholders in India's financial Services industry-regulators, banks, NBFCs, payment banks, investors, payment service providers, broking and pure play Fin-tech players. Fin-tech companies are also focusing on deployment of Technology for streamlining most of the population towards promoting digital payments and deepening financial inclusion. In this article, we examine a new technology application which is coming into its own around the world, in association with the revolution in wireless connectivity: mobile payments. This paper aims to study Impacts and trends of fin-tech on banks, factors driving startups, role in funding MSME, regulatory support, challenges and recent problems in Fin-tech Startups in India.

Literature review

A research study titled "Fin-tech: A new revolution in India" was conducted with the focus on learning about digitization of payment in India and its importance in the current economic scenario. Financial Technology (Fin-tech) is the new technology that aims to compete with the traditional financial methods in the delivery of financial services. Fin-Tech has developed as a new financial services industry in India. This industry consists of companies that use technology to provide financial services. These companies operate in various sectors like wealth management, insurance, payments sector etc. This study is undertaken to understand the growth of fin-tech industry and the challenges faced by Fin-tech industry. This article offers the conceptual understanding and groundwork to understand the rapid and successful growth of newly emerging financial technologies. Fin-tech helps to boost up the business in MSME sectors, banks transformation, digitally cashless economy, startups on India. This paper relates with the challenges faced by fin-tech industry in India.

Keywords- fin-tech, financial technology, fin-tech industry, fin-tech challenges, fin-tech revolution

INTRODUCTION

India is continuously upgrading its ecosystem which is necessary for sustainable digital payments. UPI, QR code, Bharat QR, E-wallets, card payments etc are driving digital payment in India. Point of sale terminal has increased from 4.59 in the year 2019 to nearly 6 million in q1, 2020. In q1, 2020 Unified Payment Interface saw an increase of more than 200% in the total volume and value of transaction as compared to same period in previous year. E-wallet transaction (volume) grew at 8% in q1, 2020 and in terms of value 3% compared to same period last year. As per the report of KPMG, digital payment in India is growing at a rate of 15% nearly. Fin-tech is an umbrella term coined in the recent past to denote technological innovation having a bearing on financial services.

Proceedings of Online National Level Conference on Innovative Business Strategies to cope with the present era of Globalisation Organized by Indira Global Business School, Pune, Maharashtra, India JournalNX- A Multidisciplinary Peer Reviewed Journal ISSN: 2581-4230, Website: journalnx.com, May 30th, 2020

Fin-tech is a broad term that requires definition and currently regulators are working on bringing out a common definition. With the progress of the Indian economy, especially when the focus is on the achievement of sustainable development, there must be an attempt to include the maximum number of participants from all the sections of the society. The lack of awareness and financial literacy among the rural population of the country is hindering the growth of the economy; a majority of the population does not have access to formal credit. This is a serious issue for the economic progress of the country. In order to overcome such barriers, the banking sector emerged with some technological innovations such as automated teller machines (ATM), credit and debit cards, internet banking, etc. Though the introduction of such banking technologies brought a change in the urban society, a majority of the rural population is still unaware of these changes and is excluded from formal banking. Fin-tech is a new term and has been gaining popularity since early 2015. This term is usually confused for being a strictly technological and tech-savvy term. When in reality this term is the merger of financial services provided by various clients with the developments and advancements in the technological arena. The basic point is that fin-tech developed more as a necessity out of the developments in the areas of financing services and the rapid growth of the technology that due to the need of such services. The merger of technology with financial service here means that various applications and platforms are being built and developed to provide you with an ease of using financial services including applying for business loans, online personal loans, etc. easily. This is because of continuous innovation to improve service quality while transacting digitally and favorable regulatory support from government and central bank. Although consumer demand is low in Indian economy, capital infusion in startups saw an increase from \$1.25 billion in 2018 to \$2.6 billion in 2019 an increase of more than 100% in 2019 with total investment \$7.4 billion in this decade. There is a total number of 2200 fin-tech startups in India out of which 1600 startups is from 2015 to mid 2020. Digital payment is expected to grow at the rate of 20% from 2019 to 2023 and the value of transaction from \$65 billion to \$140 billion.



THE FINTECH REVOLUTION IN INDIA

The "digital India" is the Indian government flagship programmed with a vision to convert India into a digitally empowered country. "Faceless, paperless, cashless" is one of supposed function of digital India. As part of government reforms Prime Minister Mr. Narendra Modi demonetized the high value currency of Rs 500 and 1000 in November 2016 and also launched the "digital India" initiative in 2015.these initiatives have provided extensive boost up to the digital payment system in the country. Governments other initiatives like BHIM and UPI are supporting in transition and faster adoption of digital payments. Electronics consumer transaction made at point of sale (pos) for services and products either through internet banking or mobile banking using smart phone or card payment are called as digital payment. India is transitioning into a dynamic ecosystem offering fin-tech start-ups a platform to potentially grow into billion dollar unicorns. From tapping new segments to exploring foreign markets, fin-tech start-ups in India are pursuing multiple aspirations. The Indian fin-tech software market is forecasted to touch USD 2.4 billion

by 2020 from a current USD 1.2 billion, as per NASSCOM. The traditionally cash-driven Indian economy has responded well to the fin-tech opportunity, primarily triggered by a surge in e-commerce, and smart phone penetration. The transaction value for the Indian fin-tech sector is estimated to be approximately USD 33 billion in 2016 and is forecasted to reach USD 73 billion in 2020 growing at a 5 year CAGR of 22 percent. The investor attention has been concentrated towards hi tech cities in 2015, with Bangalore witnessing eleven VC-backed investment deals of USD 57 million, followed by Mumbai and Gurgaon with 9 and 6 deals, respectively.

Bangalore, the start-up capital of India has benefitted from the same and is ranked 15 among the world's major start-up cities like various other countries, India too is going through a wave of fin-tech revolution, experiencing the marvel it holds. India primarily being a cash-driven country is benefitting with a range of fin-tech services and fin-tech software at its disposal. Fin-tech adoption in India has increased significantly over the last two years and according to EY's fin-tech adoption index 2019, India has progressed to become the market with the second-highest fin-tech adoption rate (52%) across 20 markets globally. This holds true for each of the five categories of services with digitally active Indian consumers displaying 50%— 100% higher adoption rates than global averages.



FinTech Investment In India by Sub-Sector

With the availability of all these services, it has transformed the way people carry out their daily transactions and handle their money. The association of technology and financial sector has unlocked new doors for the fin-tech ecosystem in India due to its dynamic transformation. Within five years, it has become the sector which holds high potential in India with investors buzzing in to fund it alongside big names like GOOGLE and WHATSUP app. Furthermore, domestic firms like PAYTM, PHONEPE, MOBIWIK, and FREECHARGE. For India, the first notable shift towards electronic means of managing money was witnessed in the early 1990s with the introduction of EFTS. Over the years, people have adapted to fin-tech services. Mobile phones and the internet brought another wave of change and replaced the conventional financial transactions



The Indian fin-tech market has been on an upward growth trajectory over the last five years. This is evidenced by an increase in both the number of fin-tech companies founded and the investment they have attracted. From January 2013 to October 2018, approximately 2,000 fin-tech companies have been founded, turning India into a hotbed of entrepreneurial activity. This has also translated into increased consumer adoption of fin-tech solutions. In 2018, India ranked second globally in the fin-tech adoption rate. The average percentage of fin-tech users in the country is 57.9%, behind china's 83.5%, and much higher than developed countries 34.2% with a strong technological ecosystem as its backbone and a huge market base with a low penetration of financial services (FS), the Indian fin-tech market holds immense potential.

IMPACT OF FINTECH ON BANKS AND FINANCIAL SECTOR



The rise of fin-tech has changed every aspect of financial services and banking.

1. Loans: It's remodeled the approach the banks operate and has opened an enormous new marketplace for market-based loaning. With the entry of fin-tech firms, loans and connected services are often simply availed by customers. Different models square measure being created to supply customers with capital, whether or not it's a business or a person. These firms square measure dedicated to rising client expertise, monetary product, and speedy approval of loans.

2. Payment services: Fin-tech services have wedged however the payments square measure created. Now, payments square measure created on-line exploitation web or through good phones, assuaging the necessity for bourgeois accounts. Cash is often transferred on to the checking account, which reduces the possibilities of frauds and dealings fees.

3. Wealth management: With the increase of fin-tech, the approach individuals save cash, manage assets, and invest their capital is dynamical. The exploitation of the new monetary technology, these firms aim to supply customized solutions for managing their own wealth and investments. Fin-tech software system additionally helps in scrutiny choices so as to make the simplest investment plans for private finance

4. Remittal transfers: For years, banks and other people have struggled with ancient remittal services that may be pricy and sophisticated. Over the years, fin-tech firms have strived to form these incoming and departing transactions easy and cheap.

5. Insurance services: Feat insurance has currently become a less advanced procedure. With customized plans, all are often done on the net. From the application method to the payment of premiums sporadically, this paper-extensive service has evolved with fin-tech innovations massively.

FACTORS DRIVING FINTECH STARTUPS

1. Cashless transaction: Digital payments made through various modes had shown tremendous increase in number and value of transaction. Payment made through UPI in the third quarter in 2019 shown around

180% in the increase in cashless payments both in terms of value and number of transaction. Imps showed 50% increase in same period. Increasing cashless transaction persistently are driving fin-tech startups.

2. Smartphone proliferation coupled with internet intensification: India is the biggest market because of its population size of 1.38 billion. Day by day the technology is penetrating in India resulted in availability of Smartphone's and internet at low cost. This resulted in a remarkable increase in cashless transaction. Still majority of India's population resides in rural area which creates an opportunity for startups to penetrate in rural market by providing customized technology with smart interface to rural population.

3. Improved technology: Consumer spending habits can be analyzed through technological interventions like data analytics/artificial intelligence. This will help consumers to take financial decision through automatic process resulting in saving decisions and decrease in unconscious spending.

4. Ease Of Use: Persistent innovations done by fin-tech players provide user friendly interface to consumers. This helps in using and transacting digital payment easily. Consumers can make payment while sitting in distant places at any point of time.

5.Adoption rate: Continuous efforts made by Indian government to promote digital made results in increase in fin-tech adoption rate from 52% in 2017 to 87% in 2019 which is highest globally. Adoption rate signifies the total number of fin-tech user in the country amongst the total population who are connecting through using digital means or digital active users.

ROLE OF FINTECH IN FUNDING MSME SECTOR

In India, it is difficult to raise capital without providing sufficient security especially for MSME borrowings. The scale of business being small, it creates an unfair assumption of credit risk. The importance of fin-tech funding models emerges here. It helps in transparent business information on real time basis which neutralizes the disadvantage of scale being small. Fin-tech companies help MSME by providing loans themselves, becoming financial product aggregators or connecting MSME to banks and financial institutions. The fin-tech companies integrated growing technological advances and pervasiveness of smart phones for giving MSME deserved access to credit. They bridge the funding gap for small businesses with flexible and innovative credit products. The study tries to give a general idea about fin-tech and its importance in the present economic scenario. This study shows that in order to provide MSME the benefits of formal lending, it is essential that fin-techs and banks work jointly and provide innovative and customized digital offerings focuses on examining the role of fin-tech companies in funding MSME in India MSME sector is playing a very significant role in the nation building with its contribution to GDP, exports and employment. According to a report published by RBI, MSME contributes around 6.11 per cent of the manufacturing GDP and 24.63 per cent of the GDP from service activities as well as 33.4 per cent of India's manufacturing output.

CONTRIBUTION OF MSME IN INDIA'S ECONOMY



Proceedings of Online National Level Conference on Innovative Business Strategies to cope with the present era of Globalisation Organized by Indira Global Business School, Pune, Maharashtra, India JournalNX- A Multidisciplinary Peer Reviewed Journal ISSN: 2581-4230, Website: journalnx.com, May 30th, 2020

Limited access to credit is the biggest obstacle met by MSME in developing countries like India to grow and create jobs. Lending needs to grow by 80 per cent to create the jobs required. The current financial infrastructure which is based on physical branches and relationship managers and only works well in cities and its cost is very high. To overcome this, fin-tech is offering a promising solution. Fin-tech focuses on offering the MSME sector convenient and fast banking services, anytime and anywhere. Fingerprints and iris scans allow lenders to establish the identity of the business owner more reliably. This is especially needed in countries where there are no identification registers and addresses and where millions of people could have the same surname. Psychological testing or analyzing data on the business operator's mobile phone allows lenders to establish an individual's creditworthiness more quickly. Fin-tech is also changing the face of lending itself. Mobile banking and crowd funding mean that loans no longer have to be arranged at a bank branch. And bit coin allows international payments to be settled in just a couple of minutes. If businesses owners can keep their accounts or manage their finances using simple apps, it is much easier for lenders to keep a finger on the pulse, for example, by sending texts or advising the business automatically. These developments mean that MSME have easier access to credit at a lower cost.



FINANCIAL TECHNOLOGY TRENDS

1. **Digitized bank:** Conversion of banks has replaced the brick-and-mortar branches. It's junction rectifier to the increase of the utilization of net or mobile applications to hold out monetary transactions. With the rising trend, the necessity to go to your bank for numerous functions has diminished. With the alliance of the fintech and banking sector, the bank visits area unit expected to drop any as folks can still use mobile and net for banking procedures.

2. **Mobile Banking**: As mentioned, monetary technology has given rise to the new trend of mobile banking. Numerous apps developed exploitation new monetary technology for good phones permit North American country to perform numerous banking transactions even on the go. The convenience and transparency it offers are commendable. Fin-tech firm's area unit committed to creating this expertise even a lot of easy and easy.

3. **Artificial intelligence**: The collaboration of AI with fin-tech is anticipated to be quite revolutionary. Employing a voice-operated assistant or next-generation chat box is forecasted to vary the client's expertise. The use of AI can alleviate the possibilities of human error and build correct answers. it also can facilitate acknowledge deceitful behavior simply

4. **Biometrics**: Because the technology advances, therefore do the possibilities of cyber-attacks, hacks, and frauds. However, to reverse these side-effects of the technology, fin-tech firm's area unit exploring biometric technology biometric identification may be a powerful tool to make sure top-class security of customers' accounts and capital.

GROWTH OF FINTECH INDUSTRY IN INDIA

Before 2006, 97% transactions in India were done in cash basis whereas only three percent of the payments were made only digitally. Credit cards were only the one choice for digital payment as debit cards were not prevalent at the time. With the commencement of national payment corporation of India in 2009, the initial signs of changes in Indian payment system were seen. It had witnessed a growing popularity in utilizing digital payment instruments in 2015. Fin-tech gained immense prominence among general public after demonetization drive in 2016. In order to develop and support innovative business models continued government supports has encouraged the banking and finance industry a lot. India overtakes china in fintech funding in q1 2019 and ties up with china in fintech deal count in q1, 2019: VC-backed fintech deal count in India and china (USD million), q1 2019



India overtook china as Asia's top fin-tech funding target market with investments of around USD 286 million across 29 deals, as compared to china's USD 192.1 million across 29 deals in q1 2019. The massive slump witnessed by china in this quarter could partly be attributed to its government's concerted efforts to rein in the risks associated with the mushrooming of its peer- to-peer (p2p) lenders.

INNOVATION STRATEGIES OF FINTECH BUSINESS MODELS

The following are the three current innovative strategies which might be apparent at fin-techs:-

1. Data monetization: It pertains to the ability to develop a business model through enabling the value of data.

2. Customer centric focus: It is an innovative strategy that keeps focus on their customers and adopts changes as per the changing customer values.

3. Ecosystem: It pertains the strategic alliance among the companies which lead in value creation, proposing and capturing.

LATEST STEPS TO PROMOTE DIGITAL PAYMENT

RBI is currently working to push digital payment through establishing digital payment on pilot basis for 100% digital enable district. This will be done by consulting various stakeholders including banks. Every individual of 100% digital enable district will have the facility to make payment and to receive money. The payment ecosystem will ensure safety and security in which instant money will be transferred between individuals of that district in convenient way. The task of implementing will be done by the bank that has significant footprint in that district.

1. NEFT 24*7: In a move to boost digital transfer of money, RBI on 16th December 2019, it changed the time to 24*7. The customer will be able to transfer money from one account to another account at any time,

day and month. Earlier NEFT has restricted time and funds cannot be done on banking holiday. From January 1, 2020 it has also waived transaction charges a move which will boost NEFT transaction.

2. MDR: Government on 1st January 2019 announced that no merchant discount rate charges will be levied if digital payment in made through RUPAY card and UPI and for the business with more than 50CR revenue.

3. Acceptance development fund: Proposed framework made by RBI for acceptance development fund which will be used to promote digital payment through the use of cards and pos terminals. Necessary infrastructure will be made available such as card swipe machines. This step will help digital payment top penetrate small towns through cards payments



CHALLENGES FACED BY FINTECH INDUSTRY

1. **Regulatory landscape**: Most of the fin-tech sectors are looking for a clear set of regulations from their regulators whether it's RBI or SEBI or IRDA or any other. RBI granted payment bank licenses to 11 fin-tech startups that provide deposit, savings and remittance services. RBI has issued few regulations in mobile Wallet & P2P lending space but there is a lot more clarity required. P2P lending and payments need to be clarified on a priority basis as public money is involved over there. Regulatory uncertainty in this space making it very risky to operate.

2. Financial ecosystem: The relationship between fin-tech startups and traditional financial institutions has changed from competition to collaboration. Financial institutions are working with start-up in many ways like partnership, acquisition, incubation etc. However, there are a lot of hurdles in collaboration. Both have their own set of rules in terms of efficiency, size, acceptance etc. Traditionally can't afford to be left out else it's a matter of time before they become NOKIA of Finland industry. It's time both fin-techs & conventionally open their arms and explore synergies. All parties of financial ecosystem i.e. Banks, financial institution, regulatory body like RBI,SEBI,TRAI etc need to respond with the pace of technology innovation.

3. Data security & privacy risk: As we know, data is the new oil. In this space, huge data will be gathered by companies. To avoid Cambridge analytical like situation which can lead to closure of companies and prosecution of founders, it's important that data security & privacy is taken seriously.

4. Consumer's confidence: Indian customers are known to be conservative and price sensitive, especially in making a financial decision. A long way to go by fin-tech startups to gain confidence among Indian customers.

5. Lack of awareness: More than 70% population of India live in the villages and use of these digital payment platforms are done by most of the urban people. This sector needs to make its way through awareness in rural India.

6. Cash market: Despite demonetization, India remains a highly cash intensive country. It becomes difficult for fin-tech companies to get data about customer and transactions which are off the book and involve cash.

PROBLEM FACED BY FINTECH INDUSTRY RECENTLY IN INDIA

1. PHONEPE app collapse

RBI moratorium on yes bank has triggered a panic among financial technology startups that used yes bank's services. Yes bank was one of the few banks with an online platform for the developers and was most aggressive among banks to build relationships with fin-techs. Non-banking payments firms need a banking partner to access UPI. For PHONEPE, it chose only yes bank, which issued all its UPI handles to make or receive payments. PHONEPE QR-codes are issued by yes bank too and they are failing in offline merchant locations. Replacing all QR codes would be a tough challenge for PHONEPE.

2. How the Other Startups Affected

If a startup is using the current account service to pay salaries, make disbursals to suppliers or merchants, all of those are affected due to RBI restrictions. The payments, usually of large size, are stuck in the accounts and recipients can't withdraw it. Startups like SWIGGY, FLIPKART, MYNTRA, MAKEMYTRIP and REDBUS use yes bank to receive UPI payments. They can still accept payments via cards or net banking, but UPI has become a popular tool. Many lending startups also relied on yes bank for user account verification via debiting a small amount of money from a consumer's account. (TOI 8th march 2020).

3. Losses facing by UPI applications after removing MDR charges

The number of debit cards has stagnated at 900 million, while the number of UPI transactions nearly doubling every month until 2018 has also stabilized at single digit monthly growth rates. "The debate on how zero MDR will help in expansion of payment networks is for another day. There is no doubt, however, that operating a payment company without any fee income would eat into revenues, at least in the short run. Pay tm is the largest payments gateway in the country by far, with over 40% market share in terms of the number of transactions processed. In fy19, just its cost of acquiring new customers and merchants exceeded its revenue. The soft bank-backed payments major had spent almost half its total expenditure on customer acquisition, at Rs 3,508cr, which is Rs 275.88cr more than its total operational revenue of Rs 3,232cr. Net loss came at Rs 4,217cr. Similarly, Google pay spent Rs 1,028cr just for cash back on daily transactions in fy19. PHONEPE loss of Rs 1,905cr was nearly five times its revenue, whereas Amazon pay had Rs 1,161cr loss. MDR is the collective transaction fee levied from merchants processing the digital transactions by payments companies, banks and network providers such as VISA and MASTERCARD. Until 2019, this was capped at 0.3% of the transaction amount on payments made through UPI above Rs 1,000 and 0.6% for debit card transactions above Rs 2,000.

OBSERVATION

Fin-Tech or financial technology is the new technology and innovation that is gaining prominence and replacing conventional financial services in various sectors such as payments, E-Commerce, banks, social trading, wealth management, and others.

The outcome of this study is to create awareness on how fin-tech is changing the traditional financial institutions and its disruptive impact on the future of the startup and MSME in India

In this paper we can observe how the fin-tech industries has emerged their businesses in India. Comparing how the fin-tech has transformed the way of dealing transactions, moving forward to cashless economy and digital India campaign. This paper shows the impact of financial technologies in banking and financial sector by keeping ease in the loan facility, payment services and insurance.

Fin-tech is gaining the advantage in driving the startups and maintains the transparency in funding the MSME sector in India and also analyzing the financial trends by seeing the growth in fin-tech industries. Explaining the promotional strategies and the steps taken by the Government of India related to fin-tech sectors.

SUGGESTIONS

1. This recent problem is faced by PHONEPE UPI app because of the regulation in Yes bank, all the online transactions were only regulated and powered by Yes Bank but now the problem has been resolved as there is an option to choose the PHONEPE online transaction regulated and powered by ICICI bank also. As PAYTM has its own bank facility, all UPI apps have to assure this situation will not arise in future because of failure of any network and irregularities in any particular bank.

2. All the startups like SWIGGY, ZOMATO, OYO, MAKEMYTRIP, UBER, OLA etc are stuck for some time because of online transaction failure due to the moratorium in yes bank. The whole business in India gets affected as one the bank faces any of the irregularities. Government has to maintain balance in the failure of online transactions if any such types of discrepancies are faced in near future. Even UPI has to give access to customers to which bank they want to power by their online transactions.

3. The government in India removed the MDR charges which were levied on the online transactions through UPI and card payment. This step is taken by the government to promote the digital payment in India. Removing MDR charges helps to increase the number of users of digital payment which also results in the overcoming of corruption in India. Because of this all UPI startups in India are facing huge losses as the competition is also there to get more users. All UPI are facing five times loss in comparison to their revenues this quarter. There can be an increase in the number of users but these startups will not survive for long as they are already having losses. Government should have to find a way where they can promote digital payment as well as the survival of UPI startups. Even the government can give benefits to these startups in tax rebates or if possible to give those financial support as well.

4. Regulations in Balancing Act to foster innovation in the financial technologies.

- 5. Gain trust and improve perceptions through literacy among the people related to the fin tech industries.
- 6. Improving financial structures and utilities for the sector.
- 7. Awareness and updating in cyber and data security

CONCLUSION

Indian Fin-tech companies have the potential to reshape the financial services. The Fin-tech startups are likely to reduce costs and improve quality of financial services. Not being burdened with legacy operations, IT systems, and data to underwrite credit and develop credit scores for customers with limited credit history, will improve the penetration of financial services in India. Fin-tech will expensive physical networks, benefits of leaner operating models can be passed on to customers. The Fin-tech industry will develop unique and innovative models of assessing risks. Fin-tech companies are less homogenous than incumbent banks, and offer great learning templates to improve, both, capabilities and culture. Just as incumbents have a lot to learn from emerging Fin-tech companies. Fin-tech companies can also learn and adopt best practices around risk and internal controls, operational excellence, compliance culture, and employee engagement, that has stood the test of time for most the banks, and financial services providers in India.

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