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A Review on the Role of Fintech in Financial Services Sector of India

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Abstract: ***Technology advancements in the area of financial services are oriented towards, delivering an enhanced user experience to the customers. This is one of the fundamental reasons for the evolution of financial technology. From the inception of such powerful field of study, its dynamics and growth are being tracked down all over the world. In India, financial sector is witnessing a faster digital transformation, particularly after the 2016 India banknote demonetization. As like any other businesses, Fintech players are also found to be opportunistic and are thoroughly assessing the underlying potential chances of wide growth in India. Various sub-techs and their role playing depicts that their rate of growth will be competitively more than the traditional ones in future. This work reviews and presents the recent trends of Indian economy, Financial services sector and the importance of Fintech.***

Keywords: Indian Economy, Financial technology (Fintech), Financial Services Sector, Digital transformation

1. Introduction

Indian economy's growth aspects are pressing for self-reliance in every possible area of its different sectors. But at this juncture we are witnessing the consequences of the impact of COVID-19 pandemic from the year 2020. India has been aiming for the 5 trillion dollars economy by 2025 [1]. The figure 1 shows the trends of economy from 2016 to 2021. The effect of pandemic resulted in decrease of GDP (Gross domestic product).

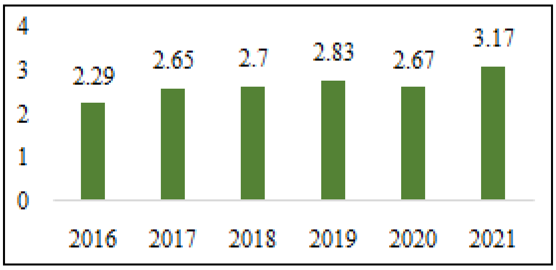

Figure 1: Trend of Indian Economy (GDP) in Trillion dollars
Source: World bank data

Similarly, the figure 2 shows us the rate of growth in terms annual GDP as percentage; it is clearly explaining an implication picture of the phenomenon.

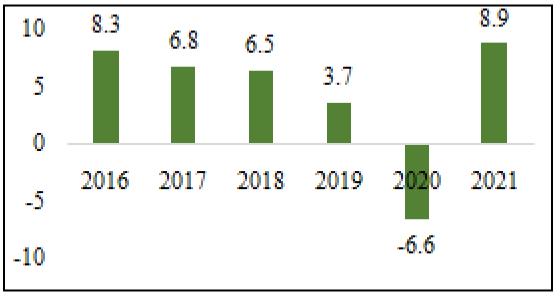

Figure 2: GDP Annual growth rate YoY in percentage
Source: World bank data

Hence, it can be inferred that the concept of self-reliance should be accompanied with strengthening the major sectors resistance besides the adaptive nature.

Financial services sector is one of such major sectors that are significantly contributing to the country's economic growth [2]. It channelizes the funds flow and plays a crucial role of intermediation. The increase in the number of citizens getting a formal access to its services makes the economy to be a more formally organized, which benefits the government and monetary authority to effectively implement their policies and counter the economic challenges. Figure 3 is representing the growth rate before and after pandemic, the trend is in correlation with the GDP growth.

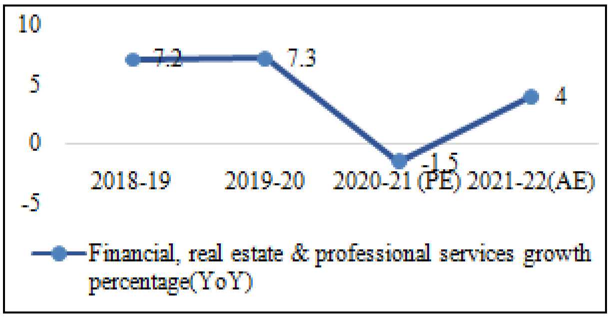

Figure 3: Financial Sector & allied growth rate in percentage (YoY)
Source: Economic Survey of India

Traditional services of financial sector took a turnaround with not just technology usage for operations but by a more specific one called financial technology. The development of software applications, platforms, and data processing techniques exclusively for offering financial services over internet to the customers is financial technology. Shortly, termed as 'Fintech' has been a flourishing popular area for startups [3]. Financial world has been experiencing the intense disruption due to FinTech's advent. It has forced the

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existing financial institutions like banks, broking firms, and insurance companies to dependent on third party tech-provider firms or sometimes even leading to a change in their business models.

Digital literacy is about having knowledge on the application of consumer digital devices in day- day life, the number of customers who are having knowledge on computers, smart phones and with an ability of using them over internet is a key determinant for further growth of fintech industry.

After the Demonetization exercise in 2016, the opportunity for digital transformation was created. From then the transformation process is going at a good pace. Since, it is critical for the development of fintech industry in India figure 4 gives us the visual representation of the positive trends of digitization [4].

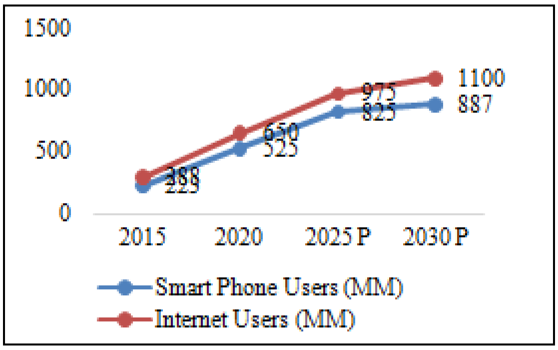

Figure 4: Trends of Digitization in India
Source: Invest India

2. Position of Fintech

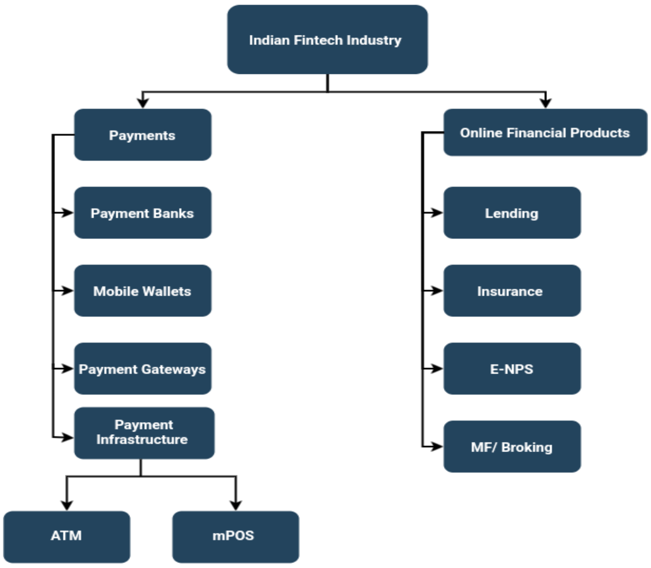

Figure 5: Structure of Fintech Industry
Source: RBI

From the late 20th century, financial services are being empowered by integrating technology. In India, credit card was launched by central bank in 1980 and following it in 1987, the year in which the first ATM was introduced by HSBC, customers were able to experience the usage of banking services by being away from their bank.

These cards are secured by relying on providers like Visa; Master card and became popular for purchase transactions and settlements at point of sale. The initiation of internet banking for transactions was followed by the debit/ credit card-based payments through online. The payment gateways, started to act as the reliable middlemen between settlements.

Figure 5 indicates the structure of fintech industry, where the mobile wallets, retail payment apps have followed the above evolution, which are based on the UPI (unified payments interface) developed by the NPCI (National payments corporation of India). They had shot up with exercise of demonetization in 2016 [5].

Fintech has gained popularity by offering online financial products like insurance, lending, clearing house, broking etc.
To delineate the fintech industry in India, it can be stated that we have been witnessing an exponential pattern of growth and funding. Popular companies like Paytm have also entered the equity market for raising capital [6].

India is showing a leading number at recorded real time transactions. And, it also went beyond 48 billion and thereby beating the combined volume of the largest economies in 2021[7]. The below table 1 shows the contrast between USA China and India 2021.

Table 1: Fintech Landscape

Country	Funding in $ (Bn)	Deals	Listed FinTech's	Unicorns
USA	129	5843	174	172
China	37	794	60	36
India	29	2084	37	23

Source: BCG report

Figure 6 and 7 tells us the investors funding trends and number of deals from 2014-21 respectively. These figures indicate that investors are sensing that the fintech startups are having large market capturing ability and they can gain them huge profits. Though the investment size is growing in positive fashion, so as the risk associated is increasing.

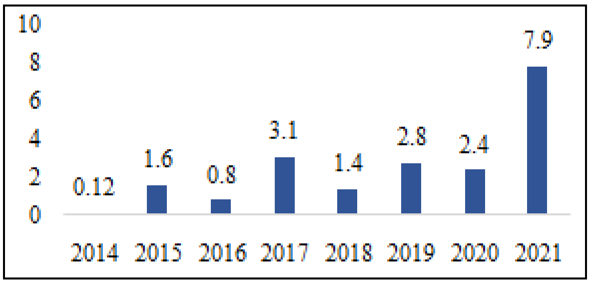

Figure 6: Fintech Funding Trend in Bn. ($)
Source: inc42

If, majority of these investments turns out to be successful, they will strengthen the financial sector and multiplies the growth rate.

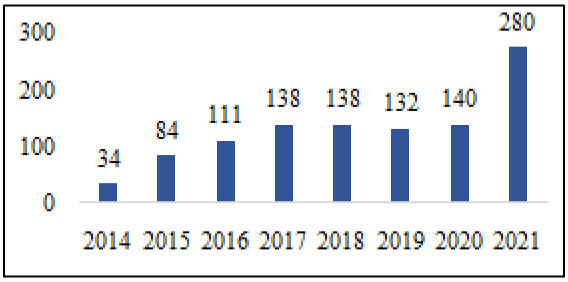

Figure 7: Fintech Deal Count Trend
Source: inc42

In 2022, these investments are being prone to the global situations, like the Russian- Ukraine war, inflation and increased market uncertainties which can result in slow down. So, this is expected to be for about a year or less.

Regulations of the controlling authority over fintech companies are slightly behind the pace of unfolding multi-faceted fintech [2]. Some serious challenges are being posted by some companies operating through unlawful practices and exploiting customers to gain profits. RBI (Reserve Bank of India) is now proactively moving in curbing illegal activities by lending fintech applications and is trying to bring them under strict supervision. It has also planned the official launch of Indian rupee in the form of digital currency.

3. Apprehension of Major Fintech Segments

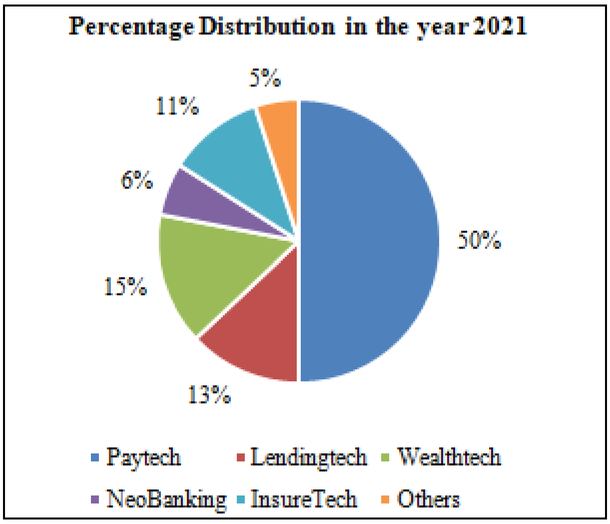

Figure 8: Fintech Split Valuation in the year 2021 [8]
Source: BCG report

3.1 ATM's & POS

Automated teller machines are enabling the customers to access the basic services of banking 24x 7. There are certain disadvantages like restrictions on cash withdrawals over a fixed limit from accounts, limited number of transactions and lack of tech- support at the location. But the advantage of remote access to banking services have overruled the drawbacks and encouraged its firm growth over years.

National Financial Switch (NFS) network is an Indian largest network of ATMs. It has around 2.5 lac ATMS under its network and performed more than 300 million transactions by January 2022 [9]. Figure 9 is presenting the recent growth trend of number of ATMs in India.

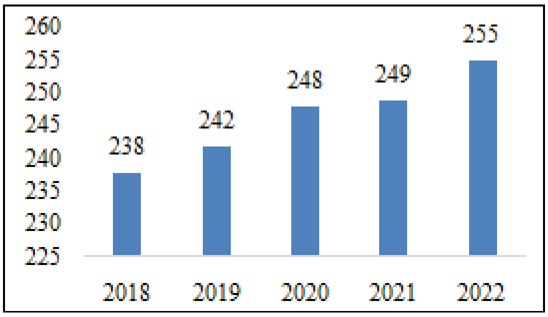

Figure 9: Growth of number of ATMs in thousands
Source: Statista

A point-of-sale (POS) machine is an electronic gadget that can read debit or credit cards and can process scan code-UPI based transactions. POS machine comprises of a POS hardware and POS software components, such as, card machine, card drawer, barcode scanner, epos machine (electronic point of sale) software, receipt printer, cash drawer, etc. Thus, offering retail merchants a handy equipment for transactions, giving the benefits of mobility and application specific software that are remarkably fast in getting connected to the network.

3.2 Neo Banks &Payment Banks

Fully online based banking business models are said to be Neo banks. These banks generally enter into partnership with traditional businesses for their growth. It offers credit services, and has lower operation costs than traditional banks due to online mode of operation.

Payment banks are similar to Neo banks, but the primary difference is with their regulation. RBI in India is regulating the operations of payment banks. Payments banks can provide ATM service by issuing debit card; it also offers online and mobile banking. Cross selling of products, joint service offerings with other commerce entities makes them money.

Airtel Payments Bank was established by Bharti Airtel as India's first payments bank. The other active payments' banks in India are Post Payments Bank, Fino Payments Bank, Jio Payments Bank, Paytm Payments Bank and NSDL Payments Bank. Payment banks strive to promote financial inclusion by providing banking and financial services and assisting smaller entities such as low-income households, migrant labor workers, small business organizations, and unorganized sectors.

3.3 Settlements & Transactions

A payment and settlement system is an infrastructure allowing the movement of funds based on the financial obligations [10]. The requirement for a payment system is an essential component of business [11]. Thus, digital payment system finds it place in every area of financial transactions like using a debit or credit card for fund transfer, for the purchase of stocks, retail purchases etc.

Payment obligations can also be met without the involvement of a financial intermediary (peer-to-peer). The role of clearing house is further fastened and simplified by the introduction of NACH (National Automated clearing house). CORE banking solutions made the integration of payment paradigms. Payment transactions here are not solely about money transferring; they also refer to settlements in securities, commodities, or any other obligation as determined by payment system participants. The key players today in Paymentech are Paytm, Phonepe, Bharatpe, and Razor Pay.

Figure 10 is explaining the level of growth in the digital retail payments. Observing the trends, we can consider that the ease in using them is responsible for such response from the customers.

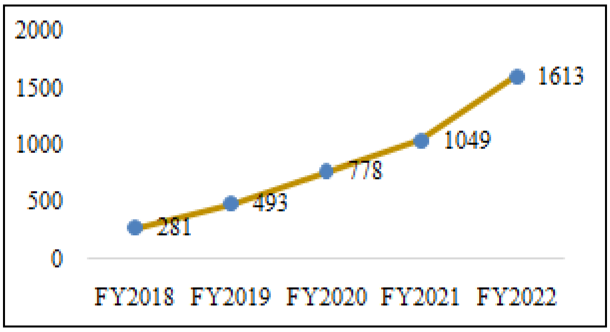

Figure 10: Growth of retail payments in trillion ($)
Source: Invest India

Detailed insight into the fintech company Phonepe is illustrated through the figure 11, between 2018- 2021, the data is giving a segmented view of its services. Being, one of the leading and popular fintech in India, below trend is an indirect expression of customer behavior.

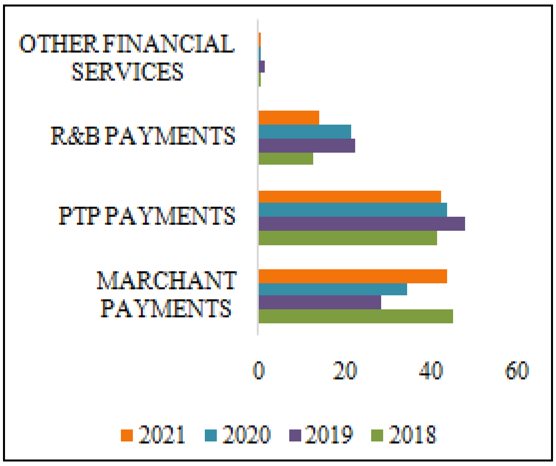

Figure 11: Percentage of type of online transaction among various segments on Phonepe
Source: Phonepe

3.4 Insurance & Lending

In India, the insurance sector plays a vital role in economic well-being. It significantly boosts individuals' savings options, protects their future, and assists by forming a large pool of assets. After the early 2000's the market gates were opened to private players. Increased competition made insurance products more tailor made to attract the customers. In recent years with the arrival of fintech in insurance industry, perception on buying & claiming process of the products has changed. Verification, purchases and settlements are simplified. Top players in insuretech are acko and policy bazaar, they are successful in creating awareness over the products by giving the knowledge on decision making. Figure 12 is a comparative illustration of digital and other insurance companies. There will be a potential rise in online insurance products in future.

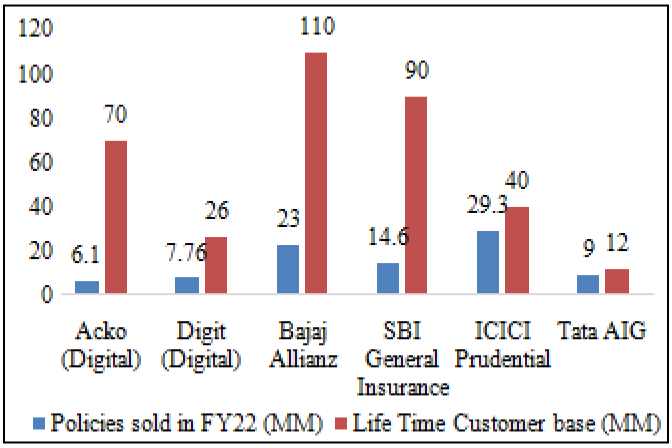

Figure 12: Digital Insurance Vs Others
Source: inc42

Financial institutions generally offer credit services to fulfill the needs of customers. Lending financial technologies are the same services by directly connecting to customers through software applications. These are gaining popularity because of easy loan processing, less documentation and meticulously accessible services. Many online lending businesses are unregulated and highly risky for customers. RBI is now taking steps to mitigate it. Figure 13 explains the consumer's interest through growing lending tech deals.

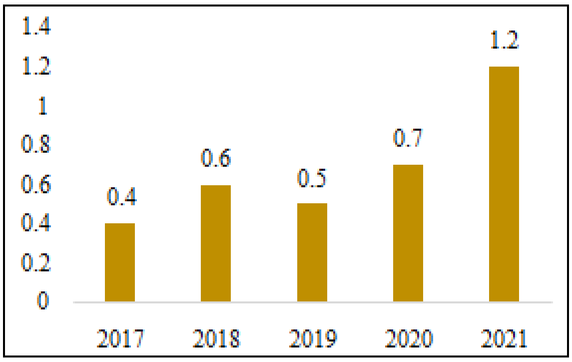

Figure 13: Growth of digital lending deals in Bn. ($)
Source: inc42

3.5 Wealth Management & Personal Financial Management

Decision making is a regular aspect of our life. Investment decision making is a challenging process. Wealth management is concerned with such process of organizing information setting objectives, making decisions on set criteria and tracking them accordingly. Conventionally, financial experts are the ones who do the above job for customers. Similarly, Personal Financial Management is effectively managing the individuals' earnings and expenditures, enabling them in prioritizing their finances according to the needs and aspirations on timely basis.

These segments are now being covered by FinTech. Data analysis techniques adopted are tracking the activities in real time process. Applications like INDMoney, Speeny, are using AI and Machine learning in assisting the clients for organizing their financial needs. Some specific applications like LXME are targeting social issues like women empowerment through providing knowledge on wealth management. Stock broking firms like Zerodha, Upstox, Groww are also feeding customers with the abundant data analysis and theories [13].

Personal financial management apps like MoneyView are helpful in providing the financial behavior analysis by reading the messages on the user's smart phone. Budget planning and tracking are possible through applications like Money Manager.

3.6 Regulation Technology

The overlapping scenario of financial institutions and fintech is covering numerous aspects of integrated industry. Though above segments are proportionately significant, regulations guiding all of them should be given a primary focus in all customer areas for proper functioning. These regulations are seen emerging lately after fintech seeding in the market. Now, there is a building pressure on businesses, those trying to attain these compliance standards. This necessity has set a platform for prominent sub technology under fintech which takes the responsibility of monitoring.

Regtech is shortly known for regulation technology, playing an implicit role within the industry. It had drawn the notable attention of the world after the global crisis 2008. The main aim of these technologies is to monitor the firm's standards under practice, thus verifying them with globally set benchmarks, and ensuring the data protection [14]. They rely on powerful techniques which can effectively handle real time environments.

Enforcd, a platform having the globally enforced data base, checks for the compliance standards of the firms. Another regtech like Amareos is processing numerous related articles for giving various financial indicators. Finchat, Kyo labs are used for company- client relationship.

4. Advancing into new dimensions

Key technologies from information technology and computer science are responsible for the rapid changes in financial service models and products [2]. Companies are adopting them to enhance the user experience, and to create a secure environment for operations. Block chain technology, emerged as a safest technology, where the ledger keeping of transactions became highly secure. Crypto currency like Bitcoin, whose usage is surpassing the control of monetary authority, is also based on the block chain technology. Robust data processing techniques are being used to analyze the different patterns of financial data. Online brokerage firms are using them to create user friendly applications. The concept of peer- peer lending, biometric based Aadhar enabled service for e-signing, instant robotic response services are adding new scope to financial sector.

API's (Application programming interface) are integrating the existing platforms with new technologies thus reducing stress for immediate changes in financial technologies. Internets of things (IoT) made the users over internet to access their digital devices and perform activities from any place. Big data is helping in analyzing the complex heterogeneous financial data and for extraction of the useful information. AI (Artificial Intelligence) machine technology has also crept into financial services. Future competitive edge of the businesses will be decided by the level of integration with AI [14].

New banking business models will emerge to withstand the disruptions, money markets and capital markets shall have a wide range of deal executions. There might be a significant decrease in operating costs which in turn makes the fintech integrated business models more profitable for both the customers and service providers. Financial strategic decision making at organizational level and individual level becomes more accurate with AI machines intervention. Better analysis of data in financial environment could result in better product design that can perform dynamically adjusting to the market fluctuations.

5. Conclusions

Information discussed in the above sections has given the impactful assessment of fintech on the financial service sector. Financial inclusion is the principal advantage created by the fintechs in India. This is to be emphasized more due to challenges posed by informal nature of the economy. Accessing the services offered by fintechs of financial institutions like banks for retail transactions, showed a surge in accountability of the system. It is also fact that the more we rely on these technologies will increase the risk factor.

One dimension of risk factor may be associated with security of the customers data, and the other is about the unfortunate events that might collapse any such large fintech player which can potentially damage the economy. Hence, the enabling policies are to be framed with much detailed insights into technology and its pros and cons. Decentralization is the byproduct of these developing technologies, and the best example to it is the introduction of crypto currency like Bitcoin which have alarmed the central banks realizing the potential of it in trading beyond their control.

So, for RBI to regulate fintech is always challenging and burdensome. Special wings like SEBI for financial markets with more specific intentions and sound mind are needed for financial technology industry. And, to ensure the financial stability, disruptive technologies have to be tested, verified and standardized by global platforms, where the financial experts from across the world meet the technical ones. By all, to arrive at a conclusion, it is a must aspect for traditional businesses to blend with fintech firms as the investment for self-innovations will incur huge costs. The future financial world landscape is in the hands of swiftly shaping fintech industry.

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