



DIGITAL REVOLUTION – FINTECH EVOLUTION

Dr. Madhu Gaba

**Associate Professor of Commerce,
Arya P.G.College, Panipat**

ABSTRACT

Digitization is a journey to go from analog stage to digital stage. Digitalization has made everything faster, cheaper and better. In our developing country like India, digitalization is the need of the hour in order to accelerate the growth rate of our economy. After the introduction of digital India program by our Prime Minister, Digitalization is moving to every sector like manufacturing, service, banking, insurance, construction and research & development especially the financial sector. It has transformed the whole sector by changing the way of operation of financial, insurance, banking and investing services. The entry of technology in this sector has given birth to new form of companies called Fintech companies. The word Fintech is a combination of short forms of two words i.e., Financial and Technology. So, integration of technology with financial sector becomes Fintech. Fintech companies are the institutions offering financial products and services with digital platforms and modern technologies. It is a new technology that is helpful in improving and automating the delivery and use of financial services as Fintech firm N-26 and Monzo provide financial services through mobile phone apps. Financial operations and processes are better managed by using specialized software and algorithms on computers. India is the fastest growing Fintech Hotspot in recent years. Digital payments have become the way of life. RBI has also encouraged to form cashless economic structure in India through Fintech corporations. The fintech areas of this Industry are Digital Wallets, Cryptocurrency, Rotoadvisors, P2P lending, blockchain and cloud computing. The technology used in these major areas of Fintech industry facilitate the business terms in form of speed and efficiency. Digital wallets are helpful in quick and safe payments. Cryptocurrency is a digital currency using cryptography to secure transactions in cheaper and faster way and they are capable for online payments without any intervention of third party. Rotoadvisor is very useful in financial planning with lesser human effort. It is helpful in managing and rebalancing the investor's portfolios through automatic optimization of risk-return tradeoff mechanism. P2P (peer to peer) lending is a technology platform which allows borrowing and lending between the participants by using financial apps only and thus eliminates the role of traditional bank. Blockchain is intended for delivering immediate, transparent sharing of information stored in a digital ledger accessed by only permissioned network members. Cloud computing delivers the various services of data storage, data management and data access online through remote servers on the internet. In order to assist these Fintech companies, Bigtech, Insurtech and Reg-Tech are also gaining momentum these days. Bigtech is also known as tech giants working in the areas of sophisticated technology, artificial intelligence, e-commerce computer software , smart home, self-driving cars and social networking. Regtech assists



fintech firms to adhere to rules and regulations covering anti-money laundering and other related protocols regarding frauds. Insurtech performs the insurance functions by using technology. The emergence of all these Fintech assisting companies reveals the importance of Financial Digitalization. It provides a broad view of changes which are undergoing in financial sector and also how it might seem to be in coming future. In fact, fintech revolution has changed the financial sector in the best possible ways. It has led us to cost effectiveness and consequently the growth of business through high operational efficiency. Fintech industry is a key driver of digitalization in banking sector also. It is contributing a lot in boosting e-commerce development through discovering new digital methodologies and creating new employment opportunities. Fintech industry can develop innovative risk assessment models by introducing unique technology for developing credit scores for customers and also contribute in improving financial culture and capabilities but it has the biggest challenge also that a huge amount of data is available in digital format now. There are issues relating to data security, cyberattacks, installation of devices, multiple data interference leading to API exposure etc. Creating a robust and secure product by Fintech company is very much complex, expensive and time-consuming task. These challenges can be overcome with the usage of more sophisticated technologies and trusted software development partner. As far as the future of the fintech industry is concerned, it is very difficult to make prediction about more innovations in the future as this industry is continuously in an evolving stage and new developments are yet to come.

KEYWORDS: Analogue, Digitalization, Blockchain, Algorithm, Portfolio, Regtech, Insurtech, Cyber Attack, Cost Effectiveness

INTRODUCTION

To change as per the environment is the priority in the today's world. In this new era; heavy competition, enhancing expectation of customer & their knowledge and other related factors are the major drivers for this resuscitation or innovation we can say. Nowadays physical and paper system is replaced by the technological system. Digitalization is the one of the main reason for this newly transformative India. This transformation is taking place in every segment. The usage of digitized technologies is enhancing every day. Digitalization has put its feet in financial sector too. Financial sector comprises of financial institutions, financial markets, financial services. Digitalized financial sector in spite of providing traditional services provide financial services via technologies. This transformed

financial sector uses various advanced technologies such as cloud computing, peer to peer(P2P) lending, cryptocurrency, blockchain, robo-advisors, digital wallets etc. All of these provide ease to user's of financial services likely speedy transfer of funds, less risk of theft, reduced financial crimes, less operating costs etc. Not only this, disallocation also bring new form of companies i.e Fin tech. These are the companies which provides the financial services via digital technologies. Now these companies are able to offer its customers advanced products. Despite this, the transformation also comes with certain cons such as problem of money laundering, not proper IT(Information technology) skills, lack of proper infrastructure, issue of financial illiteracy, increasing the number of scams day by day. We have to consider all of above so that our country can take the advantage of

this newly phase of financial industry.

Technologies used by Fintech sector

❖ **Digital Wallet :-** Digital wallet also known as electronic wallet, is a technology rooted mechanism which allow its user's for online payment. This system banish the need of holding the physical wallet which is not secure. These electronic wallets works via wireless technologies i.e. magnetic signals, Wi-Fi etc. Also this system make use of QR codes (Quick response codes which store user's information.) It also use near field communication(NFC) which permit for connection of smart devices. These wallets also use magnetic secure transmission (MTS); which help in reading the card data. Google pay & apple pay are well known example of electronic wallets. So, one

can easily use this with full security, Quickly & without any additional charges.

- ❖ **Cryptocurrency** :- Cryptocurrency is a digital currency which uses cryptography for exchange. This technology is scattered to large no. Of computers. The system of this currency work on a distributed public ledger which record all transactions. It's units are generated via mining which uses computer to solve mathematical issues which generate coins. The users of cryptocurrency can also take it from brokers & then use it via cryptocurrency wallet. The users of this currency can easily transfer funds without any failure. Cryptocurrency can also useful for generation of returns on the other hand there is also high price volatility Bitcoin, Litecoin, Manes & etc. Are the main example of cryptocurrency.
- ❖ **Robo-advisors** :- Basically robo-advisors are the algorithm-driven financial planning platform. This mechanism work with very less human involvement. The first robo-advisor come in 2008 (Betterment) for rebalancing assets. This financial advisor after obtaining information from the investor suggest the best. They work using algorithms to predict for the investor. These financial advisors ask about investors psychographics & other required question and also track your financial behaviour & then they advice. Robo-advisor provides extended service in tax schemes, retirement planning, portfolio management. Well known advisors are Wealthfront, Betterment, MI finance, Bloom etc.
- ❖ **P2P leading** :- P2P here stands for Peer-to-Peer leading. As the name itself suggest it is a system which facilitates participates to borrow or lend money through an app or website. This is also known by the name crowd lending & social lending. What happen is investor who has surplus money deposit it funds on this platforms. Loan applicants also send their financial profile. Now, P2P technology Starts pairing all the potential borrowers & investors. Even both the parties get choice to select from many. It provides better rates to investor and provide money to person who are unable to take it from banks. They are student loans, business loan, real estate loan also provide fund for leasing & factoring. Loop, Prosper, upstart, Sofi are working as P2P Platforms.
- ❖ **Block chain** :- A block chain is a database which kept data in blocks which are connected as a whole in a chain. Conventional database system suffer from many challenges & block chain removes all these & thus providing consistent, valid data. Block chain starts its working by firstly recording the transactions from every aspect of (who, what, where, when) & it started linking the blocks to make it as a whole & finally share it ledger to all interested ones. The mechanism is full secure, advance, faster. Bitcoin, Food safety, Ethereum are the main examples.
- ❖ **Cloud Computing** :- This technology means transportation of no. Of computing services i.e. servers, storage, networking, software database. Here cloud means servers that are scattered over internet. There are mainly 3 services which this system is providing.
 - SaaS
 - PaaS
 - IaaS; SaaS (software as a service) is a software where application are hosted through vendors & provided to customers. Functions like planning, accounting, sales invoice etc. Can be done using SaaS. Next main one is PaaS stands for platform as a service, so simply put it facilitates with platform which let developers to make applications. IaaS; it is infrastructure as a service which makes available resources needed, i.e. server space, connection, IP addresses. Cloud computing is useful for education, government, data analytics, business, healthcare. Cloud computing works through hosting companies which makes applications & other services available. Amazon web services, Google cloud platform, Microsoft Azure are best known companies for could computing.

CHALLENGES IN THE WAY OF DIGITIZATION OF FINANCIAL INDUSTRY-

- ❖ **Issues Regarding Security** :- The foremost challenge in the way of financial digitalization is that of security. The personal information entered by the users are subject to high risk. For example while using digital wallet one has to enter his PIN to execute the transaction which breaks secrecy of the user.

- ❖ **Costly Process:** - Transformation in financial industry through technology is not at all; one step activity. This require proper infrastructure such as computers, servers, Software, software developers which cost huge. Moreover the human source required for this transformation cost too high. So, our country has to invest huge.
- ❖ **Risk Prone Products:** - Financial technologies discussed above is risky for its user's. P2P lending one of most popular technology is having credit risk. People who apply for borrowing money are mostly wasn't able get the same from bank. Here the role of investor is super challenging to select a particular borrower.
- ❖ **Volatility:** - Cryptocurrencies such as Litecoin, Monero etc. Tends to change; as their value fluctuate. So less people are interesting due to the fear of amount of real money.
- ❖ **Fear of frauds:** - Today, biggest challenge we right now we people are facing in our country is scams or financial fraud. People hesitate to enter; because continuously they exposing to this concern. There are so many credit & debit card fraud, insurance fraud, mobile app fraud.
- ❖ **Not Proper Regulation:**-Due to the absence of proper regulation oversight, there are too many scams & frauds we are facing. Scammers have able to exploit the users such as Bitcoin, hacking chances are always there due to less regulators.
- ❖ **Transaction Failure Issue:** - Sometimes, these technologies are useless proven especially in the case of transaction failure. For example while using Google Pay for sending receiving money, server or not available at the moment. In that case we have to go for alternate solution.
- ❖ **Issue of Vendor Lock-in:** - This is a challenge in case of cloud computing. Suppose a company wants shift from one vendor of another but it is not at all easy because of data migration, shifting cost. Basically; Vendor lock-in means where one organisation uses the services of a vendor want to shift another.
- ❖ **Money Laundering:** - This is a major financial crime. It is illegal activity from for making money by a criminal act. Example of this is terrorist funding. Although the main point of concern is that these fraudsters cannot do this until something Come from legitimate source. This leakage of information is a one main challenge to deal.
- ❖ **Financial illiteracy:** - Nothing can be successful if citizens are fully aware of it. Absence of knowledge regarding financial components, financial service, and financial management is called financial illiteracy. In India, there are still so many people are there who do not have knowledge about financial products available right now.
- ❖ **Lack of Proper IT Skills:** - As we are taking about digitalization, to drive this there must be person with IT (Information technology) skills. But again this is a challenge; as of now we lack over here. And without proper IT skills we cannot reach to our goal.
- ❖ **Poor Infrastructure:** - Lack of communication technologies, poor connections are the hindrances in the way of this dislocation in new financial world.

SUGGESTIONS

- ❖ To make our country financially digital, citizens of India should go through the various financial products and services i.e. they must have knowledge of all available products.
- ❖ Vendor lock-in, in which there is very less flexibility. Its cost should be less so that customers can easily migrate from one another.
- ❖ There is need of proper regulation only then our dream of financial digitalization comes true. Otherwise number of frauds or scams will increased day by day. So we urgently in need of regulators.
- ❖ People dealing with this sector must be provided with proper information technology (IT) Skills, so that they can apply the same to get the results.
- ❖ As we all know we are also lacking in infrastructure but a well-managed infrastructure should be there i.e. proper network, routers, software etc.

- ❖ Rules in the P2P lending should be strengthened for giving the loans to avoid the situation of bad debts. Detail analysis of borrowers should be done like why they need money, where it is going to be used, why they are not able to get the money from banks, their credit rating score.
- ❖ There should be full efforts to reduce transactions failure i.e. borrowers and recipients bank's server should be available.
- ❖ There should be proper security control policies so that more and more customers can reap the benefits of financial digitalization.

CONCLUSION

Digitalization in financial industry is the new phase which our country is welcoming. This new phase is conceptualised with the help of IT (Information technology) sector. With these advanced technologies; everything become flexible, faster, and cheaper. This transformation contributed a lot to make digital economy from the stage of conventional economy. Now financial services are provided through financial technologies as P2P lending, digital wallet etc. discussed above. Although there is a need for proper regulatory framework so that we can go away with all the hindrances and make it more fruitful. After taking everything into account we can confidently say digitalization in financial segment will be conducive to our economy.

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