

Impact of FinTech, Cryptocurrency and AI on Financial services

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Abstract- This paper analyses and breaks down the impact of FinTech, Cryptocurrency and AI on Financial services as a whole. It looks closely into the FinTech industry in India and the factors that influence it. The paper also offers insights into the future of the aforementioned factors and the recent developments in financial services.

Index Terms- FinTech, Financial Services, Technology, AI

I. INTRODUCTION

Financial services refer to the services provided by the finance industry. This sector is influential in deciding the economy of a country. It leads the world in terms of earnings and equity market capitalization. Financial services help with the making, investment and management of money for both people and organizations; for example, trading shares in the stock market, or helping people put money away for a rainy day.

According to the finance and development department of the International Monetary Fund (IMF), financial services are the processes by which consumers or businesses acquire financial goods.¹ For example, a payment system provider offers a financial service when it accepts and transfers funds between payers and recipients. This includes accounts settled through credit and debit cards, checks, and electronic funds transfers. [1]

Types of financial services: [2]

Banking	•Backbone of India's financial services industry
Professional Advisory	•These services include investment due diligence, M&A advisory, valuation, real-estate consulting, risk consulting, and taxation consulting.
Wealth Management	•Financial services offered in this include managing and investing customers' wealth across various financial instruments
Mutual Funds	•Offers professional investment services across funds that are composed of various assets, primarily debt and equity-linked assets
Insurance	•Services are offered across two categories: General and Life Insurance
Stock Market	•Includes investment solutions for customers in Indian stock markets across various equity-linked products.
Treasury/Debt Instruments	•Includes investments into government and private organization bonds (debt).
Tax/Audit Consulting	•Services offered are within the tax and auditing domain
Capital Restructuring	•The types of financial solutions in this segment typically include structured transactions, lender negotiations, accelerated M&A and capital raising
Portfolio Management	•Enables clients to reach their financial goals through portfolio managers who analyze and optimize investments across a wide range of assets

Cryptocurrency is a form of digital asset based on a network that is distributed across a large number of computers. This virtual currency is secured by cryptography, which makes it nearly impossible to counterfeit or double-spend. It facilitates secure online payments without the use of third-party intermediaries. Cryptocurrency runs on blockchain technology. A blockchain is a database for maintaining a secure and decentralized record of transactions of virtual currency.

Although there are many contenders in the market (known as altcoins), Bitcoin is the most well-known cryptocurrency.

FinTech refers to the integration of technology and financial services in order to provide better and improved services to the customers. It helps both customers and businesses to manage their financial processes in a more digitized manner.

AI or Artificial Intelligence is the intelligence exhibited by machines and computers. It aims to artificially mimic the human brain and think like it.

II. INDIA'S FINTECH MARKET

India's dynamic FinTech industry has over 2100 FinTech companies out of which 67 percent of them have been set up over the last 5 years alone. India's fintech market is currently valued at \$31 billion and is expected to grow to \$84 billion by 2025, a compounded annual growth rate of 22 per cent.

India has emerged as Asia's biggest destination for FinTech deals, leaving behind China. With around 33 deals valued at \$647.5

million, India has the highest investment in the FinTech segment compared to China's \$284.9 million during the quarter ended June 30, 2020, according to a research report released by RBSA Advisors. Total investments in India's FinTech sector crossed the \$10 billion mark over the last four-half years i.e. from CY2016 to H12020.

Why is India's FinTech market evolving?

India's evolution as a progressive FinTech nation is due to its ability to solve for identity in the form of Aadhaar for formalization, getting everyone a bank account or equivalents (PMJDY) to store money, building scalable platform(s) to move money (IMPS, UPI, BBPS) and allowing banks and FinTech companies and wealth/insurance/ lending players also to access platforms like UPI, GSTIN, and Digi locker to innovate.[3]

Factors supporting growth of fintech in India

- Fast developing digital pace

India has a high rate of adoption of technology. This can be seen through the high penetration of smartphones. Owing to cheap and affordable smartphones, the number of smartphone users have skyrocketed.

- Government policies

The government of India is also fiercely promoting a digital revolution in the country by proposing schemes such as 'Digital India' and promoting financial inclusion through schemes such as 'Jan Dhan Yojana'. This scheme aims at providing a bank account to every citizen. By encouraging digitization and promoting uniform and widespread identification (Aadhaar Card) and through bank account schemes, the government has taken several initiatives to boost the FinTech ecosystem.

- Interested investors

According to a report published by KPMG, FinTech investment in India surged from \$245 million in 2014 to over \$1.5

Table I: Year and Valuation of FinTech market

Year	Valuation(in Billions)
2021	31
2025	84

billion in 2015. Although India has over 6000 angel investors, a surge was witnessed in start-up investments- a rise of 24 percent to hit a new record of 341 in 2020 from 275 a year earlier.

III. EFFECT OF FINTECH OF FINANCIAL SERVICES

Fintech or financial technology is definitely a disrupting force in the financial sector. It has allowed banking to be more accessible and rapid. It is changing the way people view financial services. Owing to the rapid technological changes, customers have become more demanding and expect more. For instance, they expect that anything can be done online through mobile devices and are seeking personalized products in though simple and quick applications (such as a “one-click” loan). This empowers the customers to gain control of their finances. [4]

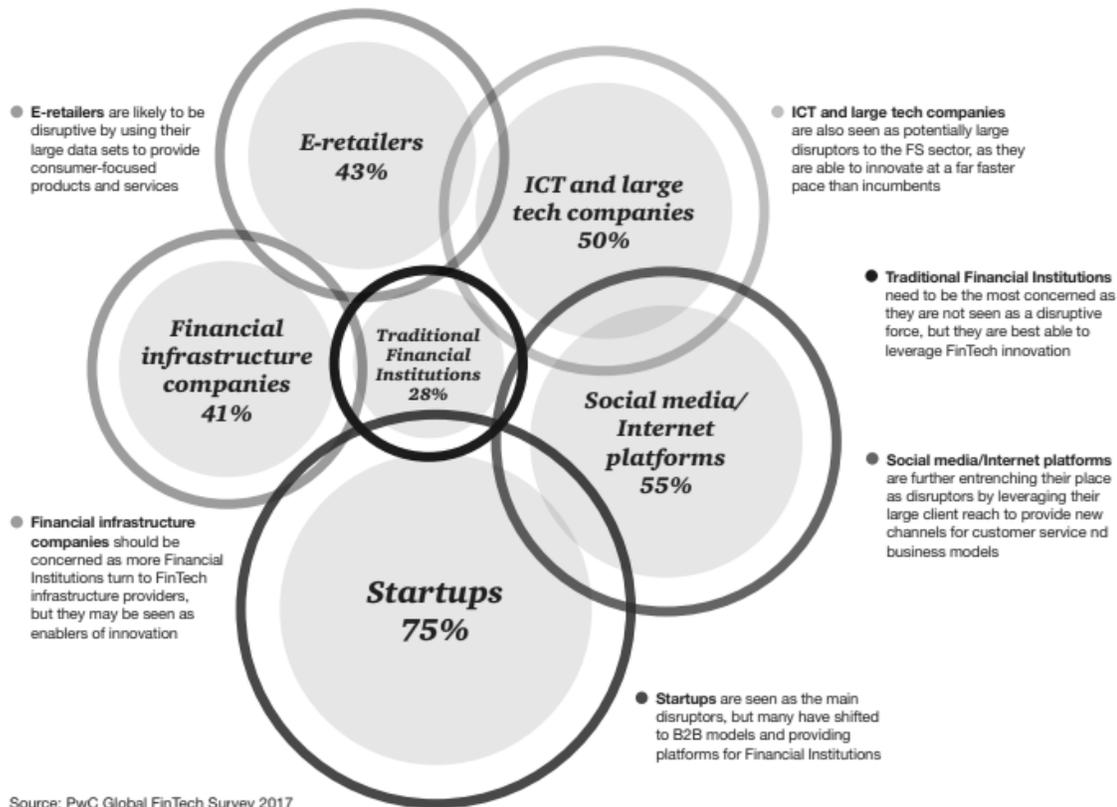


Figure I: Venn Diagram illustrating the impact of FinTech on different Financial Services

IV. CRYPTOCURRENCY AND FINTECH- HOW IS BLOCKCHAIN REVOLUTIONIZING THE FINTECH MARKET?

The financial services industry is moving towards adopting blockchain. It is an innovation that has revolutionized the global financial system and has made it more secure and efficient. The biggest benefit of blockchain is cross-borders settlements, an idea of creating a global network that is both cost-efficient and transparent.

- It creates a digital ledger and Digital Identity Verification
The use of digital currencies and distributed ledger technologies make payment faster, cheaper, and more convenient.
- It protects against frauds
Blockchain can improve payment transparency, efficiency, trust, and security as well as reduce the cost for financial services firms and users.
- It removes third parties from transactions
Blockchain facilitates borderless payment and removes the need for third parties to transfer funds. It is also possible to use P2P transfers to leverage transactions. This allows banks to compete with fintech start-ups to generate their own fintech services.
- Faster Cross-Border Payments

Earlier, the payments from one bank to another bank sometimes took up to a week but it can be done almost instantly using blockchain. [5]

- Secure Data Storage for Auditing [6]

Currently, the process of auditing and paperwork in the financial sector is manual and extremely time-consuming. Blockchain technology only allows the addition of new blocks without hampering old ones. This means that anyone from the finance sector can upload and access previous data for quick and seamless auditing.

V. HOW IS AI SHIFTING THE PARADIGM FOR FINANCIAL SERVICES?

Artificial Intelligence (AI) is a paradigm-shifting technology that is seamlessly changing the way we live, move, interact with each other, and shop. Finance is no exception. The industry is just starting to peak at the tip of the iceberg.

Fintech is an industry aiming to disrupt financial services and with Artificial Intelligence as a partner, it just might change society's perspective. Every application of AI on the consumer level will require some level of payment and that's where Fintech comes in. Such a relationship between the two trends will become key for the success of digitalization in the future. In addition, AI has the potential to eliminate human error in banking procedures, allow banks to truly understand customer demands, make credit cards extinct, and influence the attraction of the unbanked to financial services. It will bring upon a digital revolution to banking that will transform the processes into ones that fit consumers' lives.[7][8]

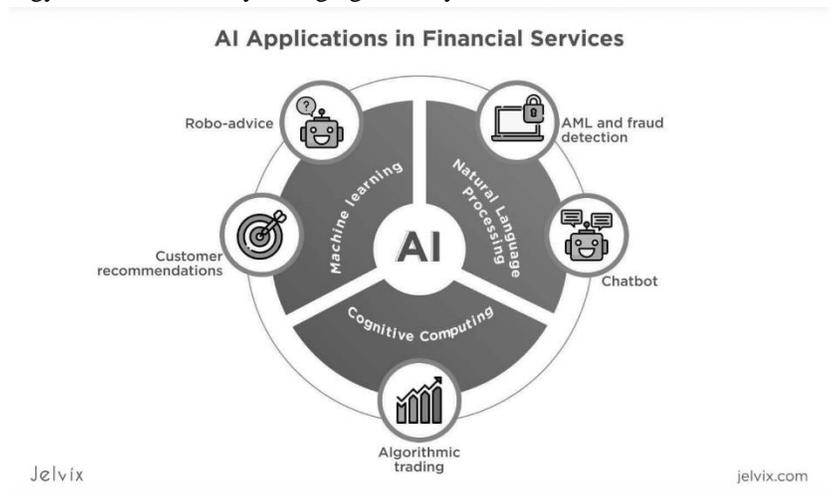


Figure II: Applications of AI in Financial Services

VI. HOW IS ARTIFICIAL INTELLIGENCE HELPING FINTECH?

Machine learning and artificial intelligence rely on large data sets. Banks have transactional data of customers over years enabling them to offer hyper-targeted financial services using A.I powered recommendation engines. Customer behavioral data can be used to predict the future needs of customers and be able to offer them tailored services in real time including advice on how to spend and save their money.

Currently, AI technology holds a global market value of \$10.1 billion and is used to solve various business challenges. [9]

FinTech apps are developing new and interesting ways in which users can process information. Thanks to the power of data science and data visualization tools, apps can transform complicated data into easy to digest insights. As a result, users can make use of complex information to improve their financial decision making. [10][11]

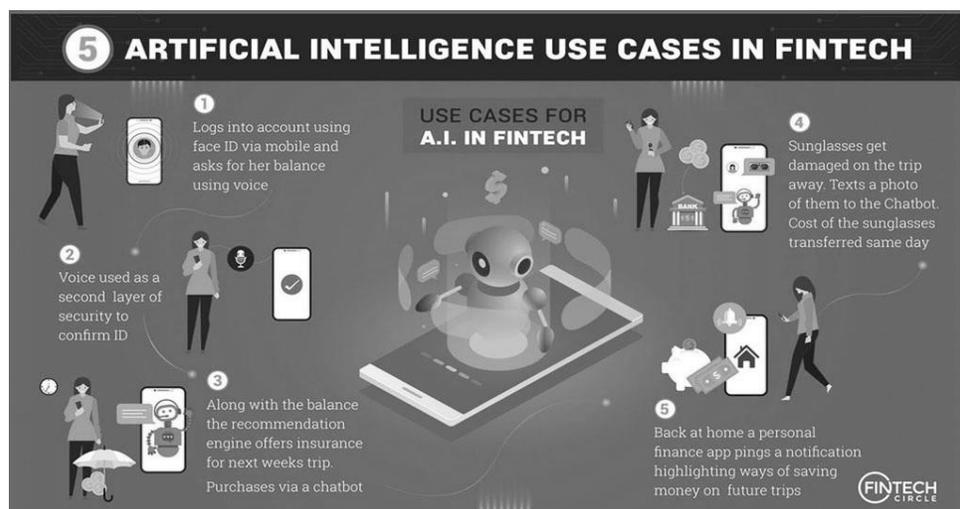


Figure III: Uses of Artificial Intelligence in FinTech

VII. FUTURE OF AI, CRYPTOCURRENCY AND FINTECH IN FINANCIAL SERVICES

Artificial Intelligence is the future of the finance industry. The pace at which AI is advancing and making it easier for customers, it will

soon replace humans to provide more efficient and faster solutions.

The high jumps in the prices of cryptocurrencies at the start of 2021 yield a positive prediction for the year.

FinTech companies are leading and are creating a wide range of new financial products and services, with the purpose of making money management easier and more effective. The future of the fintech industry is far from gloomy- it is allowing the financial services providers to explore new markets and allowing consumers where options were few to access services previously unavailable, through the use of mobile devices. Fintech is changing the future by making it easy to trade, bank and exchange money- all digitally.

FinTech has bright growth prospects. One of the factors that could propel the growth further would be partnerships between this dynamic sector and the experienced traditional banking sector. Collaborations between the two can bring together the best of both worlds and offer unique products to a larger number of people in India.

VIII. TECHNOLOGICAL TRENDS/ADVANCEMENTS IN FINANCIAL SERVICES

Banking services and the financial sector play an integral role in helping the economy of the country grow. Understanding the role of AI and other aspects, there have been numerous advancements and trends which have aided in evolving and advancing the financial sector.

With the aim of delivering seamless transactions and payments for the customers, Unified Payment Method, better known as UPI, was introduced. Transactions can be done within seconds using this interface.

Security is a major factor as far as digital services are concerned. Despite technical advances, fraud practices are still a challenge in the digital domain. Blockchain is the answer to these challenges.

Many private and nationalized banks have started to use chatbots to assist in customer support. This road has just begun but will definitely evolve to make a grand entrance to the general public in the near future. Chatbot is one of the emerging trends that is expected to grow over the years.

All these trends will reshape the financial sector by bringing new changes in the pre-existing traditional model. [12]

CONCLUSION

Today, the way in which technology adapts and updates has contributed in helping various sectors advance and incorporate new changes that make the lives of people easier. Technology has given us a sense of instant gratification, either in business or in leisure. Banking sector has indeed seen a boost in recent years. Moreover, blockchain is a revolutionary technology, irrespective of the industry. The aforementioned trends and advancements prove that fintech and cryptocurrency have the potential to forever change the course of financial services and transform the way these services are delivered to the customers.

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