

**EMERGENCE OF BIG TECH AND THE FUTURE OF BANKING INDUSTRY****N. Mandle and D. Ingale**

ASM's Institute of Business Management and Research, Pune, MS, India.

Associate Professor, Sinhgad Technical Education Society, Pune

nishitamandle@gmail.com, devyani\_ingale@rediffmail.com

**ABSTRACT**

*The main objective of this research paper is to study about the five Big Tech companies- Facebook, Apple, Amazon, Google and Microsoft and their emergence into finance through financial products and services offered by them. In this paper, we tried to identify how this Big Tech companies' financial facilities and their increasing involvement in finance sector is affecting the Indian banking system, financial institutes, and their future. Big Tech firms are introducing new innovative products and services related to finance using technology and making complicated processes simple to use, by the public and businesses. In India, millions of people are using Big Tech financial services and after a point of time, this is coming out as a concerning factor for the Indian banking and finance system. This situation of entry and spreading of such companies in Indian fintech market is understood and its impacts is analyzed in this paper to find out the opportunities and challenges that Big Tech companies and Indian banking sector will face from the emergence of Big Tech into finance and banking. This research paper is useful for the banking and finance sector of India.*

**Keywords:** Big Tech, Indian banking sector, technology.

**Introduction**

'Big Tech' is a term used for five largest and dominant Tech Giants in Information Technology industry in US which are – Amazon, Apple, Microsoft, Google, and Facebook, having the maximum market capitalization from \$1 trillion to around \$2 trillion USD. Big Tech are capable of influencing our economy and society 's progress because of their dominance in the market and their global presence. Around the globe, millions of people are using the products and services offered by these five big companies. These companies' innovative technology, unique products and services, correct understanding of their market and most importantly focusing on customers' needs and satisfaction have made them the Big Tech and put them in the highest position.

Big Tech affects a lot of other industries and sectors through their acts and one of the major influences it has is on Banking sector and its future. Banks are investing in emerging technologies to bridge the gaps between customers and banks and to provide them with various banking facilities and services online through E-banking. Electronic banking or E-banking enables the banking transactions to take place online through computers, smartphones, and internet without any physical interaction. E-banking provides a user having a personal computer, laptop, or a smartphone

with access to internet, to use the numerous banking services sitting at home or at any place easily without going to banks. Various facilities available through e-banking includes Automatic teller machines (ATMs), eFunds transfers, online bill payment, checking account statement online etc.

Big Tech with its new technologies and innovations brings new ways of banking and finance for the people, which can be a threat or opportunity for banks and its future. Big Tech has a strong consumer base and large amount of data on them which helps them to understand the current financial needs and requirements of the people. This gives them an edge of benefit to enter the financial sector and provide the users with various financial and banking services amalgamated with latest technology.

**Literature Review**

1. J. Frost, L.Gambacorta, Y. Huang, H. Song Shin and P.Zbinden, (October 2019), in their research paper they showed that how Big Tech is different from banks in two ways which are that big tech has a loyal customer base and second, they use advance technology which helps them to enter finance sector. The data Big Tech companies have in the form of customer information gives them an edge above all the advantages they have. Ultimately it says that the increasing growth of Big Tech will

bring both benefits and risks to the future banking system.

2. H. Shin (2019), in his research paper he stated that the entry of Big Tech firms in the finance sector will bring gains and enhance financial inclusion. Big Tech entry into finance will bring a mixture of new and complex trade-offs between financial stability, competition, and data protection. The regulatory bodies of financial sector should offer banks and Big Tech fair field considering the Big Tech wide customer base, access to information and broad-ranging business models.
3. C.Rikap and B. Lundvall (2020), in their research paper they stated that the five companies in Big Tech are data driven intellectual monopolies, each organizing and controlling a global corporate innovation system. The research paper shows through analysis that they continuously monopolize knowledge while outsourcing innovative steps to other firms. They use data and convert it into their intangible assets which proves to be a tool for their development and success.
4. U.Aneja and A.Chamuah (2020), in their research paper they observed that Big Tech companies influence our markets and society in four major areas which are market power, informational gateway, privacy and sovereign interests. Big Tech in India provides advantage to citizens, businesses and our government leading to fill the gaps in state, market, and R&D capacity but still certain features of Big Tech pose some harm and risks on India.
5. G.Cornelli, J. Frost, L.Gambacorta, Raghavendra Rau, Robert Wardrop and Tania Ziegler (2020), in their research paper they stated that for finance the major sources were banks, credit unions and other traditional lenders but from the past few years, big tech have entered the credit market providing 'Big Tech credit', it has a rapid growth in many countries while fintech credit volume declined in 2018-2019.

### **Research Methodology**

This research paper is built on secondary data. The data is gathered from news articles, research papers, journals, official websites and

other informative blogs and secondary data sources. The main emphasis of this research paper is on the emergence of big tech in finance effecting the banking sector.

### **Research Objectives**

1. To study the scenario of Big Tech companies with special reference to Indian Banking sector.
2. To study the opportunities and challenges for Big Tech companies in Indian Banking.
3. To study the opportunities and challenges for Indian banks with the emergence of Big Tech companies.

### **1. Facebook**

#### **Company Information**

Facebook was founded by Mark Zuckerberg in the year 2004, headquarter in California, USA. It is a part of social media and network industry. The various products of Facebook are Facebook, Instagram, Facebook messenger, WhatsApp, Oculus, Workplace Portal and Novi. Facebook and its acquired social media apps have billions of users around the world who use all these apps daily. These apps offer numerous of features to the users like creating a profile, talking to people online, creating groups, and joining groups, uploading pictures, videos, creating your business profile, offer products to the users and advertise them on the apps etc. and access to these apps is free. Privacy was always a matter of concern while using these apps and Facebook is implementing different privacy control to solve these issues.

#### **Emergence as a Big Tech**

The company is a part of Big Tech firms in USA as its market value is \$1.21 trillion. Most of the part of Facebook's revenue comes from advertising online and its current revenue according to the year 2020 was \$86 billion. It emerged as a Big Tech firm because number of people around the world, trust and use Facebook apps every day. Facebook offer public with simplicity in its several apps. Its apps are easy to use, constantly upgraded and worldwide accessible which are the major reasons behind Facebook's success.

### **Emergence as a Big Tech in Banking Sector:**

Facebook has entered finance by allowing payment on its apps named 'Facebook pay' which are accessible through Instagram, WhatsApp, Facebook, and messenger. You can easily use Facebook pay for making payments, view payment history, manage payment methods and get customer support via live chats. Facebook pay is an initiative by Facebook to make commerce through its apps more convenient and safer for the users which intend to help number of businesses grow and flourish online by offering their products and services to the app users. This will lead to buy and sell of commodities on Facebook apps. It also made clear that Facebook will not store the biometric information of their customers in their apps or as customer database.

Facebook has launched Novi which is a digital wallet used for diem payment system. 'Diem' is a cryptocurrency introduced by Facebook and Novi is the app through which it made diem accessible to the people so that they can use it freely, securely, and affordably. Libra is a Facebook owned digital currency. Main attraction points about it were that the transactional cost will be low specially for international transactions. It also specified that it would secure the financial transactions in several ways to protect customers. Facebook has decided to launch an entire unit for the financial services and this 'Facebook financial' will be headed by David Marcus, the e-commerce veteran.

In India, the private sector banks are interested in adopting social media innovations and join Facebook to take advantage of the huge customer base Facebook has online. Medium and small-scale banks are keener and are easily ready to join Facebook. Banks having non-interest income, intermediation costs and return on assets are more motivated to accept social media and its new innovations and technologies. Public sector banks are still reluctant to join Facebook. India is one of the biggest markets for Facebook with millions of users. Facebook plans to tie up with Indian banks to extend its banking services in India and its rural sector for low-income individuals. WhatsApp has already tied up with banks like HDFC and ICICI bank. These banks use WhatsApp for communicating with their

consumers through text messages relating to bank's financial services. Facebook also plans to provide insurance and pension facilities through its projects.

## **2. Apple**

### **Company Information**

Apple is technology-based electronics, computer software and online services company founded in the year 1976 by Steve Jobs, Steve Wozniak, and Ronald Wayne. The company is headquartered in California, U.S. The products offered by Apple in the market are smartphones named iPhone, personal computers named Mac, tablets known as iPad, smartwatches, wearables, and accessories with a variety of related services like cloud services, AppleCare, digital content, and payment gateway. Apple is a trend setter and a company which is focused on making products which are user friendly and unbeatable in the market.

### **Emergence as a Big Tech:**

Apple is a part of Big Tech five largest IT firms in U.S. as it is world's largest IT firm in terms of revenue which currently counts to 274.5 billion in the year 2020. Market value of apple is around \$2.462 trillion. A major part of Apple's income comes from its three outstanding products- iPhone, iPad, and Mac. Apple's distinctive products are the reason of the brand's success. Consumers are attracted to apple's gadgets because of its products unique designs and features attached to them.

### **Emergence as a Big Tech in Banking Sector**

Apple entered personal finance and banking by introducing its payment app known as 'Apple Pay'. It is an app for mobile and digital wallet payments. This app is supported only on apple devices such as Mac, iPhone, Apple watch and iPad. This app was launched by Apple in the year 2014. One of the major selling points here about this app was the privacy it offers. In today's scenario where every customer is trying to protect themselves from various payment frauds, security provided by Apple in its payment app is something which makes it more reliable. Apple Pay do not use customer's banking details or transfer it to anyone. Apple Pay is an app which can be used by easily

accessing it through Apple devices which leads to convenience.

Apple launches its credit cards in collaboration with Mastercard and Goldman Sachs known as 'Apple cards'. It is offered to iPhone users on a limited basis. Apple card is using Mastercard's network for following payments. Apple card is combined with iOS wallet app and hence it is somewhat an addition to apple Pay. This card will help in easy payments, clear display of details of different transactions of consumers, provide rewards, cashbacks, low interest rates, no extra fees and all in all a disturbance-free card. It provides a high level of privacy and security features with its card which is one of the major attractions for all the Apple company's products.

Apple also offer a service known as 'Apple financial services' through which it persuades users to use company's various products in their business, workplace or in educational institutes and in return Apple will offer high residual value of those Apple devices. This financial service includes partial buyout or return policy, monthly extensions, easy return, device allowance option, early refresh option, upfront payment, guaranteed buyback, and customized enhancements.

In India, Apple Pay is not available because apple pay works on face and touch ID whereas in Indian banks confirmation pin is required for proceeding a transaction. Indian banks will not accept biometrics for making payments and this leads to a barrier for Apple pay to start in India. Currently Apple decided to accept UPI, net banking and Rupay for app store and iTunes payment in India.

### 3. Amazon

#### Company Information

Amazon is a US based multinational e-commerce company which is also providing cloud computing options, digital streaming channel named as 'Amazon prime' and is into artificial intelligence. It is headquartered in Seattle, US. It was founded in the year 1994 by Jeff Bezos. Amazon.com is a website used by people to buy products online and this website has numerous kinds of products with different ranges, different sections, and heads like baby products, home appliances, beauty products, health related products etc. apart from the

above, Amazon has 40 subsidiaries which includes twitch, Imdb, Audible, shoptop etc.

#### Emergence as a Big Tech

Amazon is a one of the five Big Tech firms as it has current market value of Amazon is 1756.92 billion and it is the world's largest online commerce firm in terms of revenue and market value. most of the Amazon's revenue comes from the sale of products on its website and recent revenue for year 2020 was \$113.08 billion. The reason behind Amazon success and becoming a part of Big Tech companies, is its low pricing for the products, better consumer experience through time delivery, customer care, easy return policy and reliable services.

#### Emergence as a Big Tech In Banking Sector

Amazon entered finance with its payment app known as 'Amazon Pay'. It was introduced as an online payment method and a digital wallet which can be used by the consumers for making payment of their various bills, purchases, transactions by going cashless. This app offered Amazon users easy and hassle-free payment way which they can use anywhere any for any payment whether it is to a local shop vendor or an online store. Later Amazon launched a payment option in its website 'Pay with Amazon' to expand the payment network of itself. Amazon Pay is still a niche payment option because of lack in influencing consumer behavior.

'Amazon cash' is another Amazon initiative which focuses on creating an online account under amazon cash and depositing your cash into it and later you can use this app for payment anywhere without cash. It is a type of payment app but here you don't need a bank account to be linked or created. Amazon has future plans to extend Amazon cash by partnering with malls, grocers, schools etc. and wherever QR codes are used as payment tool.

Amazon lending was launched to help small and medium size businesses and firms in financing their operations so that they can sell their products on Amazon website. For this purpose, Amazon collaborated with Goldman Sachs, Bank of America, and ING in Germany. These financial institutions took the work of inviting merchants and allowing them credit up to \$1 million. It issued corporate cards to

attract other new businesses. Amazon introduced 'Amazon prime cards' for both prime and non-prime consumers to encourage spending. Amazon cards includes amazon prime store cards, amazon prime reward visa signature card, amazon store card amazon reload, amazon pay ICICI bank credit card, and amazon rewards visa signature card. These cards provide users with cashbacks and rewards on each spend.

Amazon has launched a separate new 'Amazon Business' for selective small and medium business customers which offers them advantages like free shipping, quantity discount, approval workflows, tax-exempt purchasing, purchasing systems and analytics and much more. This is another subset of Amazon financial services offered into the market.

Amazon protect is an insurance line launched by Amazon which provides accidental and theft insurance services on goods. This Amazon initiative was first introduced in UK and then expanded to other European countries as well.

In India, Amazon partnered with an insurance startup named 'Acko' and invested \$12 million into it for providing Indian people insurance policies related to trips, cars, and bikes. Acko currently also started offering general, life and health insurance too in the Indian market. Amazon has made huge investment in Indian market to widen its market strategy. To lend money to small and medium businesses in India, amazon invested in Capital Float to offer them finance. Amazon partnered with Bank of Baroda, Aditya Birla Finance, Yes bank and Capital First to deliver credit to Amazon sellers. Amazon partnered with ICICI bank to offer credit cards in India which provides Indian members cashbacks and other exciting benefits.

#### 4. Google

##### Company Information

Google is a limited liability multinational company which is specialized in internet and IT technology. It was founded by Larry Page and Sergey Brin in the year 1998. Google is headquartered in California, U.S. The company has over 271 products with google chrome, android, google translate, google productivity

tools and many more being very successful ones. Google focuses on continuous improvement of its products specially search engine to make it most powerful and fastest among all the other browsers.

##### Emergence as a Big Tech

The reason of Google being one of the Big Tech companies with huge success in the market is because of its better search engine experience offered to the users along with various wide range products and services like google maps, YouTube, google docs, google drive etc. In the year 2020, total revenue earned by Google was around \$181.69 billion. Google's market capitalization currently is \$1886.08 billion. Major part of its revenue comes from advertising on its search engine and various Google apps.

##### Emergence as a Big Tech In Banking Sector

'Google pay' is an online payment service provided by Google. It has combined features of Google wallet and android pay attached in it offer its users with the cashless convenience will making payment for any transaction. People can transfer money through google pay, pay bills, make purchases, book tickets etc. you can use your several debit cards, credit cards and gift cards through this app.

Google entered insurance with offering car insurance at first by collaborating with different insurers. In 2018, Google invested in many insurance startups to start offering life, health, and other types of insurance too. People are speculating that soon Google can start offering insurance as its product under the umbrella of its own name soon.

Google's currently announced to introducing consumer saving and checking digital accounts for users of google pay in partnership with CITI bank in USA. There are eight other banks like coastal community bank, first independence bank etc. which are also approached for the same purpose. This initiative is named as 'Cache' for now. Like the other mobile banking apps, Cache will also provide users with online banking services. This project is considered as one of the biggest steps taken by Google to move forward into banking sector as compared to the other financial services offered by it.

Apart from all the above financial services offered by Google, it also provides credit and debit cards to bring ease in purchase made by the users. Google has taken a step to provide financial advisory services through its new section/website in the google chrome or google browser named as 'Google Finance' which allows you to get access to latest business news, financial information, currency information, data on stock trends and other corporate related information. It was designed to help users to make better financial decisions by getting proper and accurate information.

In India, Google is working with several banks to launch or progress with its various finance related services and products. Millions of people use Google pay for making transactions for various things like paying for restaurants bills, facility bills etc. on daily basis. Google pay launched debit and credit cards by partnering with SBI, IndusInd bank, Federal bank, and HSBC India. Google partnered with HDFC bank, ICICI bank, Kotak Mahindra bank and Federal bank to give customers digital loans within its Google Pay app.

## 5. Microsoft

### Company information

Microsoft was founded by Bill Gates in the year 1975. It is specialized in IT with products and services related to computers which are cloud computing, electronics, software, video games, personal computer, etc. Microsoft is famous for its various personal computer products like Windows, Microsoft Office, Xbox and many more. Microsoft software are mainly the highlight and come under the most popular products category. Microsoft has acquired in total 12 major companies which includes LinkedIn, Skype, Nokia devices, Zenimax media etc since 2000. The software is highly functioned and full of several outstanding features which helps in making creative and productive outputs or contents.

### Emergence as a Big Tech

Microsoft's various products and services are used by billions of people and businesses around the world because of its amazing and easy to use applications and software which can be used by any age group person which makes it a Big Tech company out of the top

five Big Tech giants. Presently the market capitalisation of Microsoft is 1966.6 billion dollars. The company is a part of five Big Tech firms in USA and it earned revenue of \$61.27 billion in the year 2020.

### Emergence as A Big Tech In Banking Sector

For financial institutes and financial service providing businesses, Microsoft launched a cloud-based platform which they can use as a cloud computing model for reducing their costs, store data, improve performance by using several outstanding functions, manage risks, better employee productivity, and improve systems, known as 'Microsoft Cloud', this year 2021. Through this cloud, financial businesses can provide solutions to their consumers, and it helps in better interaction with customers and other partners through maintaining virtual connections and leads to attract new consumers. This cloud consists of a combination of Microsoft 365, Azure, Dynamics 365, and Microsoft power platform. This cloud is designed with complete security to protect the data and information of the organisations.

In India, Microsoft is planning to have a huge cloud business from various banking, insurance, and financial institutions. All these financial organisations provide its customers with several online facilities like net banking, mobile banking, online payment options etc. which are all cloud built and for these purposes and for the improvement in these services of financial institutes, a lot of data needs to be kept and stored. Microsoft Cloud Azure is solely created to meet these requirements, so that these organisations can save and cut their cost of arranging and maintaining their own data centres. Microsoft had discussions with Indian financial regulatory bodies of banking, insurances for creating awareness about cloud technologies in India. It will encourage number of Indian financial institutes to opt for cloud. The regulatory framework of India has granted permission for using cloud services in our country. Financial institutions of India must comply with the rules and regulations regarding with cloud computing and report to respective authorities about their outsourcing activities.

## Opportunities and Challenges for Big Tech Companies in Indian Banking Sector

### Opportunities

Big Tech firms have started using the opportunities they have being Tech giants, to offer public with several banking facilities like use of cloud computing for finance and banking sector, creative new innovative products and services which are easy to use alternatives or modern era solution to old banking and financial products. They have a huge market to target in India because millions of people are using Big Tech facilities and these companies have large amount of data on Indian customers which will help them in creating exact products required by Indian public.

### Challenges

To be a financial institute, Big Tech firms must abide with the rules and regulations of financial regulatory bodies of India which is a challenge for them but from the statements and interviews of these firm's official members, they cleared that they have no intention to emerge as a traditional bank or financial institute. They don't have any interest to become a future bank either. Their sole intentions for the time being are to provide public and various businesses with several banking and financial products and services by using new and innovative technologies.

### Findings

1. Facebook has stepped into finance industry with its payment platform 'Facebook Pay', digital wallet by Novi and created its own cryptocurrency. This company's apps are used in Indian banks to attract new customers by advertising on their social media platforms/apps and to maintain customer relations with existing users by using call and text features through these apps.
2. Apple's entry into finance begins with launch of its payment app known as 'Apple Pay' which works only in Apple devices. 'Apple cards' were introduced by the company for payment purposes. Apple also offer businesses and institutions with 'Apple financial services' which gives them highest resale value of Apple

products used in their workplace. Unfortunately, all these Apple financial products are either not used by Indian public or are not permitted by the Indian regulatory bodies because of their methods used in their product.

3. Amazon started its financial services for people by introducing 'Amazon Pay' and 'Amazon Cash' which is widely used in India by people for various payment related transactions and purchases online. 'Acko' an Amazon insurance initiative is providing several insurances to Indian public. Amazon is also lending money to businesses in India by collaborating with various Indian banks. It is also offering credit cards to Indian users by partnering with ICICI bank.
4. Google proceeded into finance sector with 'Google Pay' which is a digital payment app. It is used by millions of people in India and around the world on regular basis for making several online transactions. 'Cache' project of Google is prepared to offer customers bank accounts linked with google pay. The 'Finance' section in google search engine is very useful for various finance related people. It also launched debit and credit cards and digital loans partnering with Indian banks for public.
5. Microsoft recently stepped into providing financial services through creating 'Microsoft Cloud' which is used by financial businesses and institutes as data centres. In India, Microsoft is planning to target Indian cloud market and persuade Indian financial organisations to use their cloud computing platform.
6. From the individual analysis of Big Tech companies, it was found that these companies have a huge Indian market to target, to launch their new innovative banking related products. On the other hand, to enter the Indian market these companies must follow the policies and rules laid by the Indian banking regulatory bodies.
7. Indian banks are being offered several partnerships and deal with these big tech companies which are opportunities for our banking system to move ahead, grow with

the latest technology and become more efficient. While from the emergence of Big Tech in providing financial products and services in Indian market, they are possessing several challenges to Indian banking system like reducing public interaction and usage of our own bank's facilities and shifting to Big Tech banking related products.

### Conclusion

Big Tech firms have emerged in finance sector by providing their own types of financial services specially into digital payments and lending. They are coming forward with new ways of innovative products and methods which can ease and modernize the old system

of carrying out financial services and working of financial institutes. In India, a lot of people and organisations are using Big Tech companies' financial products and services but as these facilities get into deep finance and will enter other aspects of providing core finance activities then it can hold several threats and challenges for Indian banking and other financial organisations which already the Indian regulatory bodies are worried about and raising alarms. Indian financial system must start creating or improvising their financial methods and services which can help them in retaining their power in future and prevent them from depending on Big Tech processes and services much.

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