ANALYSING FINTECH COMPANIES AGAINST MAJOR PARAMETERS

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ABSTRACT

FinTech - "Financial Technology", a term that is new but the concept is very old. The developments in the financial sector which has been induced with technological advancements can be considered as FinTech.

The timeline of FinTech can age back to ancient human civilization. Any new innovation in an already established environment can be considered as an upgrade. For example, gold nuggets in the age of bartering, paper money in the age of coins, ATMs in the age of bank tellers and online trading platforms in the age of stockbrokers.

The technological sector plays a significant role in the financial industry, but the financial industry is always leading the technological world. The financial industry relies on these advancements to improve quality and convenience of services. Technological innovations and advancements, as a whole, has also seen various changes in logic and implementation. The need and demand for smarter and well-designed interfaces have shot up in the last few decades.

Through this particular study, we would have adequate information regarding the various technologies adopted by FinTech companies in India.

Key Words: Fintech, Innovation, Technology, Financial sector

INTRODUCTION

FinTech, as one would expand it as financial technology, can be defined as the application of advanced technology to enhance products and services of the financial industry. FinTech can be considered as an industry on its own due to the fact that it revolves around various industries - it's got a much broader scope.

FinTech has proven to be extremely relevant and useful in the recent years. Multiple financial institutions, such as banks and brokerage sites, have begun to invest and adopt the FinTech. FinTech, as a concept, is the integration of financial systems or transactions with technology. With rapid increase in technological advancements over the last decade, financial systems became a vital aspect to be moving hand in hand with it.

Moreover, in the last couple of years, FinTech has become fairly common among the general public as well. Approximately one third of the consumers use at least one FinTech based application. The FinTech sector is slowly targeting the earning millennials and newer generations of the country which can prove to be fruitful when adopted with appropriate money making strategies.

Many aspects of the financial sector have undergone massive transformation due to the integration with various technologies – artificial intelligence (AI), Blockchain, Big Data and Data-science. Basic funds transfer, banking functions, automated clearing house functions as well as the stock markets rely on these newly developed and well fitted tech projects.

Initially, FinTech in the 21^{ST} century, was employed as a back-end server system of a few well-established financial systems for their daily operations and running. Over time, it has been adopted by various sectors such as agriculture, education, pharmaceuticals, investment banking and many more.

In the year 2016, FinTech start-ups alone received a funding of $17.4 billion. As of 2017, 26 of the global fintech firms have been valued at $83.8 billion and as of 2018, another 39 firms worth $147.37 billion.

Asia stands second in terms of number of fintech start-ups as compared to North America. The innovations in fintech include-

- Blockchain technology- storing financial data in a list of records called blocks
- Open banking- sharing customer financial data with authorised third parties to create a network with financial institutions
- Smart contracts- executing contracts between buyers and sellers
- Cryptocurrencies- making way for digital cash
- Regtech- helps the fintech firms to comply with industry rules and regulations
- Insurtech- helps to make the insurance industry more technology efficient
- Cyber security- aiming to eliminate decentralised cybercrime data

The benefit of FinTech is that it allows for much faster transaction processing time. FinTech creates a system of convenience which facilitates "Anytime Banking" which works all around the clock of twenty-four hours. Banking, now is at the touch of a finger from anywhere across the globe. It also provides various adjacent services along with core financial services. Due to reduction in cost after development, FinTech services are able to provide better rates and higher level and quality of services.

Review of Literature

Agus Made Krisnan Ferdiana et al (2019) [15] aims to explore the interest of young people in GO-PAY and what is their understanding of cashless transactions. Those who can keep up with Globalization and the flow of recent technologies are the ones who can survive. It is found that in terms of the understanding of young people, they only have a general understanding and do not know what type of technology they are actually using.

Daniel Belanche et al (2019) [7] proposes a framework to better understand the robo-advisor adoption by customers. The level of influence is high for people who are more familiar with robots and vice versa. Web surveys have been used to gather data to conduct multi-sample analyses. It is found that consumers' attitudes towards robo-advisors are the key determinants of adoption. The study also suggests a two-fold strategy suggesting marketing campaigns could focus on consumers who have more experience with robots following cross-selling practices.

Marco Gazel et al (2019) [17] studies the formations and dynamics of entrepreneurial clusters in the emerging FinTech industry. They examine these entrepreneurial exits of FinTech and find that forming large clusters help reduce the risk of failure. They also found that most FinTech firms are geographically clustered and the location of new start-ups are affected by their locations.

Saule T. Omarova (2019) [32] exposes the political significance of Fintech as a catalyst in the underlying roles of private and public roles in the financial system. It is found that FinTech is disrupting the nature of the financial industry and also changes the way people think about finance.

William Magnuson (2019) [28] argues that the risks associated with big financial institutions overlook the risks associated with the decentralised financial institutions. A variety of potential regulatory responses have been found that addresses the risks of FinTech but no proper solution has been found yet.

Chris Brummer et al (2018) [8] provides a framework for showing the supervision of financial innovations. They also state that regulators do not maintain/follow all the goals that are stated in order to make Fintech efficient. They have found that regulators are modifying current approaches as well as innovating new ones to adapt to all digital markets.

Christian Haddad et al (2018) [20] investigates the various factors that induce the entrepreneurs to establish FinTech ventures. They mention that countries witness more FinTech start-up formations when the venture capital is easily available. Through this study, it is found that financing is the most important segment of the emerging market and in 2015, the USA had the largest FinTech market in the world followed by the UK and India.

Cynthia Weiyi Cai (2018) [10] identifies the gap between Economics and Finance research regarding crowdfunding and blockchain. These are two contemporary applications that can disrupt the financial industry in different ways. Bibliographic mapping has been used to collect and analyse data. It discusses the opportunities for future research on FinTech in Economics and Finance areas.

Douglas J. Cumming et al (2018) [12] shows that the FinTech boom is more suitable for smaller private venture capitalists. They investigate whether the financial crisis has changed the behaviour of venture capital investments in the FinTech ventures. It is found that FinTech is a rapidly growing area because financial regulators are prone to focus on large financial institutions.

Keke Gai et al (2018) [16] studies five technical aspects of FinTech in guiding future researches. The main aim of this study was to produce a survey to collect and review the achievements within which FinTech is proposed. The main findings are of forming necessary FinTech solutions.

Leong K. et al (2018) [26] have presented different definitions of FinTech for different categories of people i.e. students and business professionals. They have also discussed how the emerging FinTech technologies can create business values. They have found that by providing different definitions, it could shed light of the future of FinTech development.

Muhammad Anshari et al (2018) [2] proposes a business model enabled with FinTech to support the agriculture's sustainability. This model creates a public so that everyone can connect with each other easily. Data was gathered from published refereed journals. It is found that this platform can expect to attract all players in the agricultural market and provide convenient services to them through AgroPay.

Nofie Iman (2018) [22] analyses how relevant is mobile banking in the FinTech era. She also argues that mobile banking is still competing in this industry to ensure value added services provided to the customers. This paper includes both qualitative and quantitative methods of data collection. It was found that even if all the mobile banking providers adopt all the modern strategies, their technological and organisation strategies would still differ.

Rainer Alt et al (2018) [1] introduces the topic of FinTech in the electronic markets. The FinTech movement has influenced not just the financial institutions and the "big banks" but has created an impact on the entire financial industry. The findings include that FinTech divided the three subdomain areas i.e. RegTech, BankTech and InsurTech into different transformational levels.

Robert Bartlett et al (2018) [6] speaks about the consumer lending discrimination in the FinTech world. Discrimination in rejection rates is more prominently seen for the people with low-credit scores mainly among the African-American applicants. Modern decomposition methods have been used for this purpose. Their findings suggest that Fintech could also serve to make mortgage lending markets accessible to African-Americans.

Artie W. Ng et al (2017) [29] aims to explore how the regulator of a global financial centre (GFC) articulates FinTech opportunities. They have included a literature review on the global regulatory environment for their research. This study suggests a pathway for the evolution of a pathway for mitigating the risks associated with FinTech.

Asli Demirguc et al (2017) [14] studies the broad picture of how people need to invest in their futures and how far we've come in terms of access to multiple financial services. A survey of 1,000 people was conducted in about 160 economies and various modes of interviews were conducted to analyse the various financial services used by different categories of people. It is found that digital technology by itself is not enough to increase financial inclusion around the world.

Bernardo Nicoletti (2017) [30] studies the future of FinTech by saying that a lot of customers are dependent on FinTech and will be the new shape of the financial industry in the future. The main aim is to highlight the important values of the FinTech initiatives. The main findings are the further evidence of the economic trends.

Christopher K. Odinet (2017) [31] surveys the current consumer protection landscape for FinTech learners. It also analyses the several complaints made to CFPB related to products offered by FinTech firms. Secondary source of data collection is used to gather data from

CFPB's complaints database. It is found that in order to reduce numerous complaints, a harmonized regulatory system would help. The paper also offers policy recommendations for how to operate bitcredit.

Daniel Gozman et al (2017) [19] analyses the start-ups who participated in SWIFT'S Innotribe competition over a three-year period. They address empirical questions about the dynamics of technological innovation across the FinTech industry. They use cluster analysis to study a particular technology or sector of the financial services industry. They have developed a model to classify various characteristics of the FinTech industry and furthermore, they have found that is it too early to review the Innotribe dataset- the establish which FinTech start-ups have achieved success.

David Varga (2017) [38] introduces the positive effects of FinTech by saying that it could benefit the people at the bottom of the pyramid. It is found that no particular research has been carried out to show the effect of potential defaults for the FinTech start-ups but the new business models and approaches are coordinating with the ecosystems to offer various opportunities.

Dirk A. Zetzsche et al (2017) [40] considers the impact of new entrants into the financial industry with their pre-existing non-financial services customer bases. This paper focuses on the legal and regulatory challenges that are already increasing. They have concluded by saying that Fintech is the most important development for the financial industry as digitisation is the key to datafication.

Dong He et al (2017) [21] reviews the development of FinTech and its impact on the financial services. The paper explains that FinTech might provide solutions that cater to the various needs of the consumers. The findings of this paper include the evolution of FinTech in serving its consumers as well its cost structure.

Douglas W. Arner et al (2017) [4] speaks about how the rapidly changing financial systems require an increase in the use of FinTech. They argue that the nature of technology used today provides efficiency in regulating the FinTech companies digitally. The findings include proposing sequential reforms that would benefit the regulators and entrepreneurs in the financial industries.

Douglas W. Arner et al (2017) [3] argues that certain RegTech developments are highlighting a path towards another paradigm shift. The new regulatory approach RegTech 3.0 will be data centric as the markets it monitors. This paper has dealt with three stages of the FinTech evolution and two stages of the RegTech evolution.

Greg Buchak et al (2017) [9] studies how regulatory differences and technological changes have contributed towards the growth of shadow banking market share. Since shadow banks offer high interest rates, there's always an increase in demand for FinTech services by the consumers. The finding of this paper is that 30% of the growth of shadow banks is due to the disruption caused by their online origination.

Henner Gimpel et al (2017) [18] analyses the consumer-oriented Fintech start-ups. The provide a taxonomy of different Fintech start-ups by classifying them through cluster analysis. They've conducted descriptive research. Their findings suggest that if we re-assess the taxonomy dimensions, it would provide a longer insight to the FinTech phenomenon.

In Lee et al (2017) [25] introduces the historical view of FinTech and it's various ecosystems. The study speaks about the various challenges faced by FinTech start-ups and financial institutions. The main findings are the high-level architectural views and the main important challenges faced by this sector.

Julapa Jagtiani et al (2017) [23] speaks about the advantages/disadvantages of loans made by the large FinTech firms as well traditional banks. Advancement in FinTech technology has changed the way customers look at securing their finances. Banks can benefit from "big data" through partnership with FinTech lenders. They have found that consumers with poor rating scores have access to credit and also these consumers are low-risk borrowers.

Svetlana Saksonova et al (2017) [34] evaluates FinTech's development in Latvia compared to Europe. It states that several Latvians prefer using banking services rather than Fintech. Various theoretical and historical aspects were used in conducting the research. It is found that the Latvian society isn't properly informed about the various FinTech services that are offered.

Yinqiao Li et al (2017) [27] clarifies the role of FinTech banking start-ups in the financial industry. They examine the funding of these start-ups on the stock returns of US retail banks. It is found that even though FinTech start-ups are growing, they're not capable of affecting incumbent retail banks. It is very difficult for consumers to adapt to new changes or to trust such financial services with a period of 5 years.

John Schindler (2016) [35] answers questions that help us analyse FinTech's growth and its potential impact on the financial industry. He speaks about why FinTech has gained a lot of attention and how the demand and supply factors for financial innovation has changed due to FinTech innovations.

Li-Min Chuang et al (2016) [11] uses the TAM perspective to understand the consumer behaviour. The main aim is to study how positive is the consumer's intention to use FinTech services. Convenience sampling was used to gather information. It is found that by being able to understand their behaviour, enterprise managers can improve customer's experience in order to improve their attitude towards FinTech services.

Patrick Schueffel (2016) [36] explores how complex the term Fintech is and makes an attempt to define it. The objective of this paper is to provide a definition that is well understood by the people. A systematic research and a semantic analysis of data relating to Management Studies as well as Economics was conducted. The findings are that there is no set definition for Fintech although it has a wide scope for growth in the upcoming years.

Thomas Phillipon (2016) [33] assessed the impact and importance of FinTech on the stability of the financial industry. The study shows that FinTech can create a lot of regulatory challenges. The finance industry is associated with excessive costs and inefficient regulations that focus less on the welfare of the people. It is found that there is a scope for improvement but the current regulatory approach is not likely to bring in the improvements.

Zavolokina et al (2016) [39] expresses how the popular media and press understand the conceptual framework of FinTech. The objective is to highlight what FinTech means to the press so that it could be used in scientific literature. Exploratory and descriptive research has been used. The findings are that FinTech is not much mentioned in the scientific industry and should not only be limited to technological aspects.

David Kuo Chuen Lee et al (2015) [24] discusses various factors and principles that have helped successful FinTech firms like Alibaba and M-PESA. They do so by laying down LASIC principles. The paper is concluded by highlighting the benefits of investing for financial inclusion.

Douglas W Arner et al (2015) [5] analyses the evolution of and outlook for the FinTech industry. The study shows how Fintech has evolved from the first period of globalisation to the latest regulations that they maintain and follow. It is found that FinTech brings both opportunities and risks and in order to seek standardisation, the FinTech start-ups need to bring in more innovation into their regulatory approaches.

Yongwoon Shim et al (2015) [37] explores the interaction between FinTech and the yet unfolding social and political context. It focuses on China's FinTech Industry policies fostering their growth within and outside the country. ANT research, historical analysis and descriptive research has been used. It is found that the Chinese government makes use of techno-globalist strategy for improving it's global competitiveness in the FinTech industry.

Thomas F. Dapp (2014) [13] speaks about the digital revolution in the financial sector and highlights its importance towards modern banking. Digitisation is becoming relevant for all sectors of the economy. It is found that within the banking sector there are numerous opportunities and also scope for boosting competition.

Research Methodology

The purpose of this study is to identify and analyse the impact of the booming FinTech industry in India. For the analysis- a group of 50 well established and performing FinTech companies have been chosen. The main basis for selection of the companies was the technology utilised and the common products offered and services rendered.

Data Collection

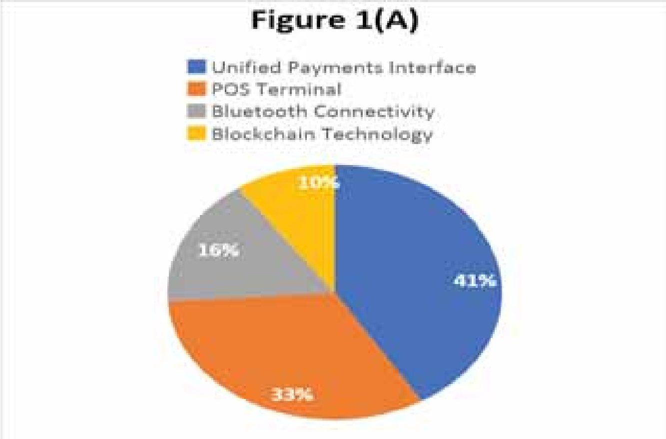
This study and research paper is based on secondary data. Data regarding the companies has been collected from the companies' official websites as well as supporting websites for data to be thoroughly interpreted.

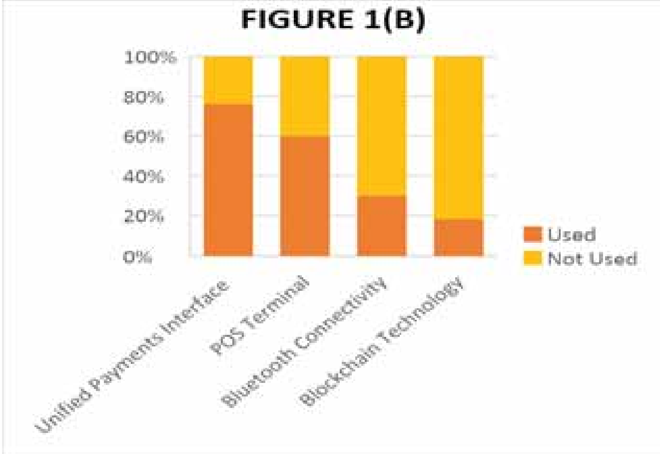
Data Analysis and Interpretation

Information available for Financial and/or FinTech companies to be used by the general public is quite limited and their websites have not reflected information adequately. The main parameters have been chosen keeping the availability of data in mind.

The companies chosen are well performing, hence have the access to a variety of resources and opportunities, and modern companies whose approach towards establishing a well fit tech environment is examined on the basis of technologies adopted.

FIGURE 1- Various Technologies Offered by FinTech Companies



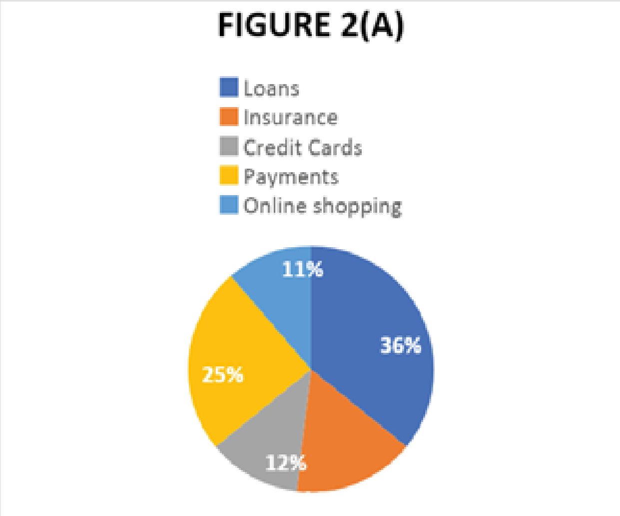


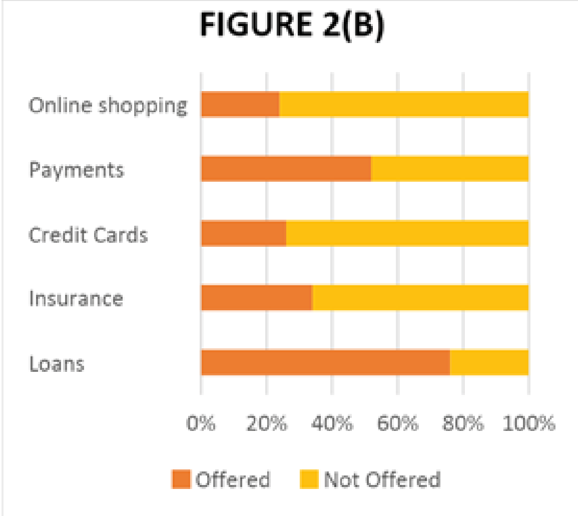
As per data collected, UPI- Unified Payments Interface, has been adopted and utilised by 41%, i.e., around 38 FinTech companies. It has been opted for its efficiency and convenience that it provides for instant funds transfer. The POS terminal is offered by 33% of the FinTech companies and is the second most common technology as per our study. As seen in Figure 1(A) the UPI and POS terminal take up majority over Bluetooth connectivity and Blockchain Technology.

UPI was only introduced in the year 2016 but our Indian financial market has adopted this throughout ever since and hence, created a more connected financial system. UPI is highly relied on and almost all sectors of the Indian market utilise this technology. FinTech companies utilising UPI as their main technology/feature further proves that it's highly reliable and effective.

As seen in Figure 1(B) approximately 80% of FinTech companies do not incorporate blockchain technology and 70% does not utilise the Bluetooth connectivity feature. Blockchain, being a new and decentralised form of financial transactions, has not completely been accepted by markets all around the world. Many companies may not be comfortable and confident in utilising this new technology.

FIGURE 2- Various Services and Products Offered by Fintech Companies





Loans are the most common products offered by the chosen 50 FinTech companies as per the study. 38 companies out of the total 50 companies offer this to their customers. The next demanded service is digital payments with 25% of the companies offering It. As seen in Figure 2(A), credit cards, online shopping and insurance have been offered by only 12%, 11% and 16% of the companies respectively.

76% of the companies offer loans as their primary product as it could account for a majority of their revenue.

Insurance though, being a big part of the financial sector, only companies such as Coverfox, Policybazaar, Toffee Insurance and Fisdom offer this as their primary product. 66% of the companies do not offer insurance- refer to Figure 2(B). Though online shopping is a growing trend and a great opportunity to provide convenience to the customers, only 12 FinTech companies support it.

Apart from the above parameters i.e technologies and products of FinTech companies, there are several other parameters and trends seen in this industry.

The top trends as seen in this industry recently are-

1. Big data
   Big data and artificial intelligence have made the process of personalization grow so much that now every single customer has become a loyal one. Fintech companies now have access to customers' browsing history and with the help of artificial intelligence, they are able to deliver personalized experience.

2. Robotic Process Automation (RPA)
   The idea of this is to observe what humans are able to do and just suggest improvements. They do not have any complex tasks and simply make the entire process very effective and efficient.

3. Conversational Interfaces
   Such interfaces have been established to provide customer service 24/7 in a very economical way. This trend is booming as it tends to improve productivity and speed and has proven to save four minutes on every interaction being made.

Mentioned above are the top trends for the year 2020 but several other aspects can be brought out with relevance to this topic, such as- invisible payments, localisation and regulations, communication and consumer education.

Conclusion

As per the study, FinTech has had a major effect on various aspects of the financial system. There are many advantages for a company to adopt a financial technological application or system into their working or operations and FinTech has proven to be fruitful in most scenarios. A lot of people assume that FinTech has replaced the Banking and Financial sector which is a misconception. FinTech merely started with an aim to bring about evolution in the banking sector by providing them with added ease of utilising technology. The FinTech sector merely includes artificial intelligence, big data, data science, algorithms and machine learning which are slowly starting to replace the traditional financial services and practices.

It is important to understand the working and need for FinTech companies as well to understand the different products offered and services rendered by them. The objective of this study is to identify and analyse the different technologies used by top 50 companies in India and also how useful and important these technologies are.

This industry has seen a rapid growth in India over the past few years which has helped the financial sector grow which in turn, provides a positive boost to the economy. The overall impact has been so powerful in India that many improvements have taken place- (i) financial inclusion opportunities (ii) impactful banking models (iii) blockchain and data science (iv) a better and efficient insurance market by reducing complexity (iv) faster and secure transfer of funds (v) better wealth management services (vi) combined culture of innovation and entrepreneurship. With companies having adapted to advanced technology they are now starting to specialise in more than just one area to make sure they leave their customers happy and satisfied by providing adequate convenience. Since FinTech has a powerful effect, it has been changing the way companies look at finance these days. It has helped increase productivity and is providing more and more reach to customers.

With increasing reliance on quick transactions, mobile phone payments have become an important factor. To support this factor the UPI system has been adopted by the majority of the companies which allows easy and safe transfer of funds. With various events starting from demonetisation to Covid-19 lockdown, peoples' usage of these applications which utilise UPI systems (Paytm, Google pay, PhonePe, Amazon Pay etc) has increased to a drastic level. Almost all age grouped people rely solely on this mode of money payment for various utilities. The fact that most of the 50 companies have adopted this system implies the importance of this financial technology. Fintech has enabled all possible payment options for its users to make online- this being the main motive of every FinTech firm. A customer can just sit at home and make any payment, open a bank account, shop online, buy insurance or conduct any possible financial transaction with the help of this powerful and enhanced form of technology. A very important and upcoming invention is the blockchain technology which many companies haven't adopted yet. Blockchain innovation is so advanced in its ways yet companies are taking time to utilise it and become more comfortable with how it works.

The second part of the analysis was based on the various products offered and services rendered by the companies. Various parameters have been identified as common or likely to be common within these 50 chosen companies. Cards/Credit cards offered by these companies are considerably low. This is understandable as many people rarely use cards. Most people don't believe in investing in these because they do not find it beneficial. Another aspect identified and analysed is the insurance service. Most companies have not adopted this but it tends to be adopted since it reduces the hindrance in various transactions.

A few other aspects that have been considered are online shopping, which has seen to be extremely common. Loans, which are again a crucial and important product being offered to the customers. It can almost be considered as a company's main focal point.

Apart from being very tech-savvy and impactful, people tend to miss out on the downfalls of FinTech. A very important aspect when it comes to analysing this particular industry is that every single firm is required to provide up-to-date and accurate information which it fails to do. A lot of the companies' websites have very brief and inadequate information which makes it hard for us users to trust that particular company or not leading us to make faulty or incorrect assumptions. Another important limitation. is that despite a lot of regulatory compliances and security measures that are required to be mandatory followed, because of the rise in cybercrimes the customers lack a feeling of security. There is no guarantee given by the company that their data stored is 100% safe or not.

In order to make improvements in this sector, companies need to make sure that they provide their recruiters/employees with adequate skill development and training programs in order to make them familiar with how this industry works. By doing so, they are motivated to learn more and in turn, helps them individually grow and work more effectively and efficiently.

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