

A Study of impact of Innovation in Technology on Financial Services Sector

CA Dr. Savita A Desai

Vice Principal & Associate Professor, HOD-Department of Accountancy, N M College of Com. and Eco.(Autonomous),
Parle West, Mumbai

Abstract:

The effects of technological advancements on the Financial Services Sector and insurance industries are the subject of this research. The Financial Services Sector has experienced profound change as a result of the fast development of technology, especially in the domains of AI, blockchain, and big data analytics. Customer experience, operational efficiency, regulatory compliance, and risk management are some of the areas that financial services have been affected by these technology advancements. This study examines the possibilities and threats posed by technology advancements in the Financial Services Sector through an exhaustive literature review and practical investigation. According to the results Financial institutions, regulators, and customers can all benefit from a deeper comprehension of the consequences of technology-driven developments.

Keywords: Innovation, Technology, Impact, Financial Services Sector

1.1 Introduction

The advent of new financial technologies has had a huge effect on trade and investment around the world. Many businesses have begun the digital transformation process as a result of the fast advancements in Internet, mobile device, and big data analytic technologies. Online payment, P2P, AI, and blockchain are some examples of emerging fintech that are driving innovation in today's market trade. In the long run, these cutting-edge technological items have the potential to revolutionize the way financial market traders operate by automating and diversifying their strategies. Regardless of the numbers, the Web3 sector saw the largest increase in venture capital deals (approximately 370% from Q1 2019 to Q1 2022) among all IT sectors.

From 2020 to 2022, the percentage of fintech businesses will grow by 66%, according to Fintech and the Future of Finance. As a result, with a lot of room for growth and investment, fintech is seen as the leading innovation trend for the future of the business system. Fintech is a growing industry in Australia, and the government has publicly stated its support for this trend. It would be irresponsible to disregard the risks and difficulties associated with the widespread use of financial technology. There has been a lot of talk recently on the potential downsides and risks of using fintech in commercial settings.

Cases from the past few years form the basis for the analysis of some of them. Nonetheless, there are no benefits to development and no possible threats. Most financial technologies are still in their early stages of development, and some are only in theory at this point. Internet and self-media reviews of financial technologies provide the basis of most people's assessments of these technologies. Rather than providing an unbiased view grounded in facts, the most of them are utopian fantasies. When it comes to financial technology, where does the globe stand right now? Investigating its potential benefits and drawbacks is crucial to the advancement and implementation of financial technology in commercial endeavors (Medeiros, & Chau, 2016).

This research looks at how the financial services industry has been affected by technological advancements.

Importance of Technology in Firms:

In the last half-century, IT has come a long way. Without technology, it is impossible to conceive of and plan for a project, business, or other endeavor. Consequently, businesses in today's global market need to master the art of technology leveraging fast if they want to survive. By laying the groundwork for a worldwide economy based on technology, globalization has reshaped numerous sectors in the past decade. According to Bruton et al. (2015), technology has emerged as a key factor in how businesses formulate their strategies.

The corporate community has been radically transformed by technological innovation. The proliferation of online resources has not only opened up many new avenues for entrepreneurs to pursue, but it has also given rise to a whole new field of study: electronic business. "Electronic business" has grown in importance in the modern corporate world, allowing for more efficient transactions in the purchase and sale of goods and services, the handling of payments, the dissemination of information, the hiring of new employees, and the establishment of partnerships with other companies (Cumming, & Zhang, 2016). The rise of e-commerce has revolutionized numerous industries' supply chains and paved the way for international trade by establishing a worldwide interconnected supply chain. The result is a globalised economy made possible by technological advancements, which have also greatly expanded the opportunities for businesses to conduct transactions and provide services (Fandl, 2019).

While there have been many technological developments in the corporate world, electronic commerce is just one of the most prominent. Because they can now see trends and act swiftly on them, businesses have been able to expand efficiently thanks to the proliferation of technology tools. Proactive data analysis helps businesses prepare for potential shifts in consumer tastes, habits, and social issues. In addition to foreseeing future developments, technology may also scan the firm's competitive environment through data collection and visualization. Thus, technology is a boon for businesses because it gives them the adaptability they need to react and act swiftly to changes in the market.

In addition, businesses now use technology as a tool to gain a competitive edge. From a strategic perspective, technology has the potential to improve company performance and aid in the optimization of resource allocation within the corporation. In addition, businesses can now meet client expectations more efficiently because to technological advancements that have increased production capacities and service quality. Thanks to technological advancements, more and more corporate operations may now be automated, freeing up valuable resources for strategy development and reducing labor costs. As a result, cost savings and improved customer service are outcomes of technological advancements (Minto, et al., 2017). At last, technological advancements have broken down barriers to communication between businesses and their clients, enabling two-way dialogue. Thanks to technological advancements, businesses now have a better chance of establishing meaningful relationships with their clientele. The most noteworthy development in technology is the proliferation of social media marketing platforms, which have helped businesses understand more about their target audience, cultivate stronger relationships with existing customers, and raise brand recognition. Also, many new opportunities have arisen because businesses may now take use of virtual communication. Some of these possibilities include the usage of e-mail and online payment services, the creation of mobile apps that allow users to see account updates and make transactions in real-time, and so on (Boreiko, & Vidusso, 2019).

One other perk is that the company's communication tools have made it easier for workers to talk to one other and share information while on the job. Information can be more easily shared across departments with the use of virtual communication platforms such as Skype. In addition, in today's more globalized economy, the ease and speed with which knowledge may be shared across national boundaries has been substantially enhanced by technological advancements (Arner, et al., 2016). This has led to the proliferation of online training and E-learning platforms.

Recent Developments In Financial Service Industry:

Although there have been some little problems brought about by technical progress, the financial services industry has benefited greatly from technological adoption and has seen significant improvements as a result (Durkalic, & Curcic, 2019). Technological advancement is one of the three main forces propelling the financial services sector forward, according to the report. There are a handful of services that financial service organizations offer, among others, and these have not changed much over the years or from country to country, despite innovation in related technologies:

- clearing and settling financial transactions;
- credit transactions; and
- financial consultation.
- managing risks;
- offering financial aid;
- providing investment options;
- transferring economic resources over time, across borders and industries;

While the services themselves have not changed, the methods by which they are carried out, the tools that make them possible, and the very nature of the organizations that supply them have evolved. The past ten years have seen the establishment of digital technology, the proliferation of automated teller machines (ATMs) in banking, and a tremendous expansion in the capabilities of these machines. Customers have grown accustomed to banking online, and mobile devices are making it even easier to access financial services. Mobile banking apps, websites for managing one's own finances, and interactive online financial plans are only a few examples of the technological innovations provided by financial institutions in recent years (Demertzis, et al., 2017).

1.2 Review of Literature

Sanga, & Aziakpono, (2022) paper examines how strengthening of financial services in 43 African countries was impacted by technical advancements such as ICT infrastructure, mobile phone subscriptions, secure internet servers, and the number of ATMs and bank branches between 2010 and 2019. Quantile regressions, fixed effects, and panel corrected standard errors are the empirical methods used in the study. The findings demonstrate that technical advancements significantly and positively impact the financial deepening in Africa, as measured by the amount of deposits mobilized by banks and the amount of credit extended to businesses. Moreover, there is a positive and robust relationship between the technical indicators and higher levels of private sector bank lending than lower ones. In terms of bank deposits, the only variable shown to have a statistically significant beneficial influence at high levels compared to low levels was the number of branches. The findings suggest that African governments and development partners can take use of advances in information and communication technology to boost debt financing, the principal means by which small and medium-sized businesses are able to raise capital, and promote financial deepening.

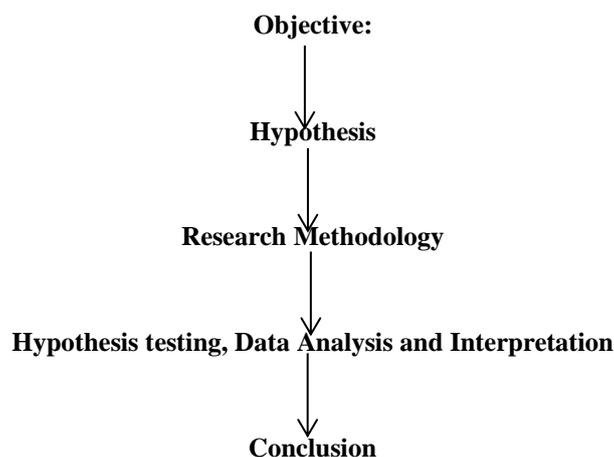
Klein et al., (2020) demonstrated that strategic assimilation of technology and human capital contributes to the possibility of funding and venture quality characteristics.

Golubi'c (2019) Many companies had trouble obtaining loans due to the shortage of capital generated by the financial crisis. In response to inequalities in the market, fintech companies devised a novel approach of subsidizing and crediting. Fintech has reduced credit shortages worldwide by introducing new creative ways for financing projects.

According to **Leong and Sung (2018)**, Conventional practices are not followed by most alternative finance outlets. The two most popular and effective types of fintech fundraising now in use are crowdfunding and P2P lending. Startups supply the aforementioned financial services by building their own web-based platforms.

According to **Kong (2018)**, Many modern financial transactions now necessitate the use of a smartphone. Alternative Payment Methods—BlockchainBlockchain is a decentralised digital ledger that guarantees the safety of financial transactions no matter who is involved. Consequently, certain companies' involvement in this industry is greatly affected by elements like IT solutions and organizational pressure.

1.3 Theoretical Framework



1.4 Objectives

- To analyze the impact of innovation in technology on Financial Services Sector.
- To study the innovation in Indian financial sector
- To emphasize the new financial innovations in the Financial Services sector.
- To study the challenges faced by sector in the changing scenario.

1.5 Hypothesis

- Innovation introduces new risks that can impact various aspects of operations and security.
- Innovation is associated with risk incidence rather than the other way around.

1.6 Research Methodology

An assessment of the state of the financial services industry is the primary goal of the research. The data used to write the paper came entirely from secondary sources, such as scholarly journals, websites, etc.

1.6.1 Research Design

A mixed-methods strategy integrating qualitative and quantitative techniques is used in the research. The theoretical foundations and industrial viewpoints can be better understood through qualitative methods like literature reviews and expert interviews, and the results can be statistically validated and supported by empirical evidence through quantitative analysis. The links between technical innovation and financial performance indicators are investigated by analyzing quantitative data using statistical approaches like descriptive statistics, regression analysis, and correlation analysis.

1.6.2 Sampling design

All parties participating in the financial services industry, including traditional sectors, fintech startups, and regulatory agencies, make up the study's population. Included in this category are financial institutions, as well as insurance and investment organizations, payment processors, and appropriate government entities. A complete inventory of every possible member of the specified population makes up the sampling frame. Financial institution databases, trade group databases, government agency directories, and public records are all examples of what may fall into this category. Size, institution type, geographic location, and technical maturity are some of the important criteria used to classify the people into different strata. As a result, the financial services industry as a whole will be well-represented. Several factors are taken into account while deciding on the sample size, including the necessary degree of accuracy, the population's inherent variability, and the available means for gathering and analyzing the data. For the purpose of detecting significant effects or correlations, it is possible to use power analysis or sample size calculation techniques to guarantee that the sample size is adequate.

Presentation of statistical methods used for data analysis from questionnaires:

- Percentage Analysis
- Chi-Square Analysis.

1.6.3 Limitations

- Data availability and quality may be two of the study's main drawbacks.
- Not every financial institution or market may benefit from this study's conclusions.
- Time restrictions may have restricted the breadth of this investigation.
- The results and interpretations of the study are susceptible to external influences including economic situations, geopolitical events, and unexpected interruptions (e.g., pandemics).
- Cybersecurity, data privacy, and technological malfunctions are potential risks that could affect the study because it depends on technology for data collecting, analysis, and distribution.

- The study could be impacted by researcher bias or subjectivity, even though efforts were made to ensure objectivity.

1.7 Hypothesis testing, Data Analysis and Interpretation

Table 1: Risk occurred due to innovation

Risk occurred	Frauds and Scams	Liquidity risk	Systematic risk	Total
No Of Respondents	30	14	6	50
Percentage (%)	60	28	12	100

The table illustrates the distribution of reported risks among respondents. Among the identified risks, "Frauds and Scams" emerge as the most prevalent, with 30 out of 50 respondents, constituting 60% of the total, reporting experiencing such incidents. Following closely is "Liquidity risk," reported by 14 respondents, representing 28% of the total. "Systematic risk" is reported by the fewest respondents, with 6 individuals, making up 12% of the surveyed population. These findings suggest that frauds and scams are the most commonly encountered risk among the respondents, while liquidity and systematic risks are less frequently reported. The table's insights could serve as valuable input for risk management strategies and measures to mitigate the identified risks effectively.

Table 2: Test statistics

	Chi-Square Df	Asymp. Sig.	
Risks occurred due to innovation	.000 ^a	2	1

The table shows that risks and innovation are significantly related, with a p-value of .000 indicating that it is statistically significant. As a result, it's safe to assume that innovation is associated with risk incidence rather than the other way around.

4 cells (100.0%) have expected frequencies less than 5. The minimum expected cell frequency is 1.0.

Challenges faced by sector in the changing scenario

The Financial Services Sector in India encounter difficulties in surviving in both local and global markets. The RBI has loosened its stance on the nation's Financial Services Sector during the last few years. Without requesting prior permission, banks that satisfy the RBI's capital adequacy standards can open branches. The private banks are not governed by the government, but rather by the market. Present-day Financial Services Sector, however, function similarly to governments. Better customer service is the secret to success, according to a Financial Services Sector tagline. However, a sizable workforce and a high percentage of non-performing assets stress Financial Services Sector. A tiny number of Indian Financial Services Sector maintain branches abroad. In general, these branches don't work very well. Their extremely low capital base and noncompliance with international requirements are among the factors contributing to the decline in the overseas activities of Indian banks. The Financial Services Sector does not keep its operating profits in order to increase its capital base.

Indian Financial Services Sector future offers a rare combination of limitless prospects and overwhelming obstacles. On the one hand, the rapidly evolving globalisation process that is currently bringing the world's nations together, overcoming geographic barriers in the areas of trade and commerce and even job prospects, is a representation of the scenario. These all point to recently created banking prospects in India. However, the shadowy side of things is the accumulated chaos that has been exposed by the previous three decades of tightly managed and regulated bank management. It has reduced the government-owned banks' profitability, piled up a huge NPA, and put the banks' sufficiency and stability in jeopardy. Nationalised banks have far too many employees.

1.8 Conclusion

People nowadays rely on technological advancements and innovations to help them get their jobs done more efficiently and effectively. Nowadays, Financial Services Sector is done entirely differently due to innovation. The pursuit of profit drives innovation. Thanks to advancements in computing and the internet, paying bills electronically is now more cost-effective than using paper checks or cash. Finally, technological innovation has far-reaching and complex effects on the financial services industry. Financial Services Sector as we know it now was re-engineered and re-defined by information technology. With the help of these reforms, the Financial Services Sector is poised for even greater sophistication in the future, with customers enjoying ever-improving service standards thanks to constant product and process innovations.

1.9 Future Scope and Recommendation

- New technologies like quantum computing, the Internet of Things (IoT), and decentralized finance (DeFi) could be the subject of future studies that investigate how these fields could change the financial services industry.
- Platform-based Financial Services Sector and peer-to-peer lending are two examples of innovative business models made possible by technology. By studying these models, we may learn about potential trends and disruptions in the sector in the future.
- Data protection, cybersecurity, and consumer protection are three areas where regulatory frameworks controlling technological innovation in finance need to be closely examined. This assessment will become even more important as technology evolves.
- The impact and acceptance of technology innovation in financial services can be better understood by comparing studies across different areas and economies. This is because varied regulatory contexts and market conditions affect these factors.

Recommendations:

Push for digital self-service. Develop targeted products and services, and put your energy into earning your clients' confidence and loyalty. Get clients to define their digital experiences based on value.

1.10 Reference

- 1 Arner, D. W., Barberis, J., & Buckley, R. P. (2016). FinTech, RegTech, and the reconceptualization of financial regulation. *Nw. J. Int'l L. & Bus.*, 37, 371.
- 2 Boreiko, D., & Vidusso, G. (2019). New blockchain intermediaries: do ICO rating websites do their job well?.
- 3 Bruton, G., Khavul, S., Siegel, D., & Wright, M. (2015). New financial alternatives in seeding entrepreneurship: Microfinance, crowdfunding, and peer-to-peer innovations. *Entrepreneurship theory and practice*, 39(1), 9-26.
- 4 Cumming, D., & Zhang, Y. (2016). Alternative investments in emerging markets: A review and new trends. *Emerging Markets Review*, 29, 1-23.
- 5 Demertzis, M., Mombelli, G., & Wolff, G. B. (2017). Capital Markets Union and the fintech opportunity. Bruegel Policy Contribution Issue n° 22| September 2017.
- 6 Durkalic, D., & Curcic, M. (2019). Mutual influence of the international investment position and the net government position with the banking sector of the Republic of Serbia. *Ekonomika, Journal for Economic Theory and Practice and Social Issues*, 65(1), 95-106.
- 7 Fandl, K. J. (2019). Can smart contracts enhance firm efficiency in emerging markets?. *Nw. J. Int'l L. & Bus.*, 40, 333.
- 8 Fintech and the Future of Finance. World Bank. <https://www.worldbank.org/en/publication/fintech-and-the-futureof-finance>, last accessed 2023/03/13.
- 9 Golubić, G. (2019). Do digital technologies have the power to disrupt commercial banking?. *InterEULawEast: journal for the international and european law, economics and market integrations*, 6(1), 83-110.
- 10 Klein, E. M., Müller, K. W., Wölfling, K., Dreier, M., Ernst, M., & Beutel, M. E. (2020). The relationship between acculturation and mental health of 1st generation immigrant youth in a representative school survey: does gender matter?. *Child and adolescent psychiatry and mental health*, 14, 1-10.
- 11 Kong, A., Thorleifsson, G., Frigge, M. L., Vilhjalmsón, B. J., Young, A. I., Thorgeirsson, T. E., ... & Stefansson, K. (2018). The nature of nurture: Effects of parental genotypes. *Science*, 359(6374), 424-428.

- 12 Medeiros, M., & Chau, B. (2016). Fintech-stake a patent claim?. *Intellectual Property Journal*, 28(3), 303.
- 13 Minto, A., Voelkerling, M., & Wulff, M. (2017). Separating apples from oranges: Identifying threats to financial stability originating from FinTech. *Capital markets law journal*, 12(4), 428-465.
- 14 Sanga, B., & Aziakpono, M. (2022). The impact of technological innovations on financial deepening: Implications for SME financing in Africa. *African Development Review*, 34(4), 429-442.