
A QUANTITATIVE INVESTIGATION AND CRITICAL ANALYSIS OF FINTECH AS A CHANGE AGENT IN THE FINANCIAL MARKETS

Harikumar Pallathadka, Laxmi Kirana Pallathadka*

Manipur International University, Imphal, Manipur, India

*laxmikirana@miu.edu.in

Abstract

Monetary mediators emerge from monetary erosions such as data imbalances and financial powers, economies of scale, and extension. These gratings and forces also shape the market structure. While mechanical advancements are nothing new, computerized development has seen significant advancements in the network of frameworks, calculating power and cost, and newly created and useable data. These improvements have reduced trade costs while also introducing new strategies and competitors. The creation of money-related groups could be disaggregated as technology has improved information transmission and reduced trade costs. Money-related organizations have been unbundled by explicit participants, allowing consumers to select and assemble their preferred set-ups of items. Regardless, in a period of automated creation, admirable money-related abilities remain vital. In the many designs of money-related organizations, such as customer acquisition, finance, consistent activities, data, and capital, economies of scale and degree and association impacts are available (counting trust capital). Despite technological advancements, client appearances and party charges remain basic.

Keywords: Fintech, ICT, IT for business

Introduction

Mechanical advancement holds excellent assurance for the game plan of financial organizations, with the likelihood to fabricate market access, the extent of thing commitments, and solace while similarly bringing costs down to clients. New competitors into the financial organization's space, including FinTech firms and gigantic, set up development associations, could considerably change the universe of money-related organizations providers. It could subsequently impact financial organizations' degree of obsession and contestability, with both anticipated benefits and risks for money-related security (Hassan, Rabbani, and Ali, 2020).

More unmistakable contention and assortment in crediting, portions, insurance, trading, and various spaces of financial organizations can make a more valuable and solid money-related system. Regardless of these indisputable benefits to financial trustworthiness, elevated competition could similarly descend on money-related establishments' advantage. It could incite additional peril taking among inhabitants to stay aware of edges. Also, there could be further repercussions for financial robustness from BigTech in money and essential outsider. With worldwide advanced communication advances, different types of global collaboration have become astoundingly significant. They permit one to effectively take advantage of chances, sidestep impediments, and equilibrium the dangers emerging from contrasts between nations, principally in the legitimate field.

Sharing experience and dispersing more successful practices in the private and public areas distinguishes the best apparatuses for directing the worldwide monetary market, considering general points of interest while guaranteeing worldwide agreement. Nations' participation in economic innovation (Fintech) is effectively examined by the World Bank and the International Monetary Fund (IMF).

At the end of 2018, these associations proposed the Bali Fintech Agenda, which reflects the primary objectives of collaboration in important business sectors, advancing the Inclusion of people in general, promoting the improvement of monetary business sectors, observing changes in the financial frameworks, and building a supportable economic and data foundation to keep up with the advantages of utilizing fintech apparatuses.

Since the primary participation instruments in the field of advancement stay neighborhood, public, or territorial, a large portion of the pertinent examinations will quite often be viable, zeroed in on planning financial arrangement proposals for public and provincial specialists. Notwithstanding, a few creators go to reasonable parts of such collaboration or graphic elements of computerized monetary advancement in the regional and sectoral settings.

The mass reception of computerized monetary devices is because of advances in electronic installment frameworks, legislatures' new administrative approaches, and the rise of cutting-edge financial administrations accessible through cell phones with web access; that is, everything considered to be alluded to as Fintech.

The objective of these investigations of the present status of the fintech market is to distinguish a possible situation for its turn of events, survey the aftereffects of this current situation's execution, and assess the dangers and difficulties related to the expansion of fintech instruments. It will assist with distinguishing the most encouraging regions for nations' participation to reduce the risks of executing monetary advances on worldwide business sectors (**Al-Tawfiq and Memish, 2020**).

Literature Review

The organizations in the monetary administration's industry play out a scope of capacities to work with economic-financial movement in present-day economies. Give a legitimate meaning of what the term financial administrations firms imply, as follows: principally firms in retail banking, business loaning, protection (other than wellbeing), Mastercards, contract banking, speculation warning, and resource the executives (common assets, multifaceted investments, and others) In 2016, monetary administrations and protection represented 7.3% of (GDP) (US\$ 1.4 trillion) in the American economy and topped at 8.4% in 2011. Likewise, in 2016 in the European economies, monetary administrations and protection addressed around 5.1% of absolute GDP, with about 2.6 million individuals utilized in financial administrations and protection (**Alzubaidi and Abdullah, 2017**).

For a long time and basically until the 2008 monetary emergency, the financial administration's industry and its organizations have customarily been a stronghold of corporate steadiness and safe work. Today, the business is being rocked by new powers of mechanical development, process interruption, and business change, bringing about a new economy playbook for the administrations created and the assembled operational abilities (**Bakar, Rosbi, and Uzaki, 2017**).

Financial firms' loans to business and family borrowers, give records and exchanges administrations, offer ventures, obligation, and value financing, and give the executives administrations like protection approaches and foreign trade (FX) forward agreements. The monetary business fabricated centralized server figuring in the business banking, protections, and protected areas that drove them to the most severe and creative clients of data innovation (IT) in practical ways during the 1970s and 1980s. By the 1990s, extending uses on IT was more the standard than the exemption, as the business moved into the Internet economy (**Haider et al., 2020**).

A model is the consolidated FleetBoston, which reported in 1999 that it would spend an overabundance of US\$100 million to dispatch Internet banking administrations to cover its primary business and retail banking administrations. Interestingly, by 2015, driving American banks, Bank of America and J.P. Morgan, recorded reports with the Securities Exchange Commission (SEC) that they would burn through US\$400 million+ and US\$500 million+, separately, to safeguard against cyberattacks, and guarantee secure bookkeeping (**Hasan, Hassan, and Aliyu, 2020**).

Automated unsettling influence in the money-related region is driven by factors both on the stock side, for the most part, creative new developments, and on the premium side, with changes in buyer suspicions for service.³ On the mechanical stock side, critical factors are web APIs, disseminated figuring, cells, and blockchain advancement. APIs have thought about organization

improvements especially offering extended promptness in portions, which helped for more unmistakable unbundling of organizations. They have transformed into the standard for data participating in open monetary applications. Those applications grant outcast permission to purchasers' bank data (with their consent) and transform it into a vital mechanical assembly of cutting-edge interference (**Olagbaju, Awosusi, and Shaib, 2020**).

They empower programming applications to share information and usefulness and address a solution for business sectors with high exchanging costs expanding contestability. They assist buyers with looking at item and administration offers (**Poon, Pollard, and Chow, 2018**).

Appropriated registering suggests the demonstration of using an association of remote servers, consistently got to over the web, for its course of action organizations, and the limit and sharing of data. It takes advantage of versatility in passing on organizations and cost practicality. The leaders, HR, and financial accounting have been used for customer relationships and underway for buyer portions, credit scoring, enunciations, and billings. If not securely supervised or properly checked, both APIs and circulated registering can prompt new perils risking market structure adequacy. In such a manner, the EU, the UK, Singapore, Japan, and Hong Kong, China have been making frameworks for the utilization of APIs (**Rabbani, 2020**).

Cell phones have become a critical part of buyers' regular routines in numerous wards by growing the accessibility of monetary administrations and turning into a stage for outsider engineers. They catch the customer interface with different capacities, including installments (wallet), cash moves, and web-based shopping. The joining is exceptionally cutting-edge in Asia, where installment applications now serve one billion clients and are essential for a group with the online business, visit, conveyances and food-requesting, and ride-hailing (**Rabbani, Khan, and Thalassinos, 2020**).

Even though conventional or high road banks, Visa and MasterCard are the market heads for exchange installments, nonbanks like PayPal, Apple, or Google and new contestants, Revolut, N26, or TransferWise, are frequently behind installment developments. For instance, versatile-based installment plans have an impressive impact inwards where the portion of the populace possessing a current record is low (**Rahim et al., 2018**).

It is frequently the situation in African nations, where just one-fourth of the populace has a financial balance. However, a lot more individuals approach a portable phone.⁸ New installment frameworks are just as advances designated to purchasers with short records regularly try in such geological regions. The innovative jump frogging is essential that addresses somebody not having a ledger to be given financial administrations through their cell phone (**Ready, 2018**).

Like similar compound terms, BioTech, FinTech is a relatively straightforward and clear blend of an application space (financial) and innovation. Throughout the last hundreds of years, the

monetary area has become the primary bank set up in 1472. A vast assortment of different organizations (e.g., protection firms, insurance agencies, realtors) have followed since. Monetary organizations are regularly alluded to as "specialist co-ops" since they support firms in an important market to direct their business and have, over the long haul, molded an auxiliary market wherein monetary specialist co-ops (e.g., contract intermediaries, business banks, and venture brokers) associate among one another (Schueffel, 2016).

A vast association of interrelationships that is seriously bewildering, relative, and less straight than traditional gathering and retailing undertakings came to fruition. In the second part of the FinTech articulation, signs of progress have become vital in managing money-related cycles. Development is a method of straightening things, putting together processes, and performing endeavors with practically no issue. This general definition is similar to modernized developments, which have spread in the money-related region. Past work on the headway of FinTech at this point suggests that financial advances have a lengthier legacy than the term FinTech itself. For example, experts interface the establishment of FinTech to the scattering of the web since the 1990s. They paint a broader picture and see financial progressions during the nineteenth century. A genuine perspective may, in any event, start earlier with the advancement of money-related establishments (**Zandifar and Badrfam, 2020**).

The essential usages of progressions used by banks and trading associations relied upon genuine media containing the information/regard (e.g., paper, coins). Since getting these chronicles and characteristics across distances was only achievable through real techniques for transportation, markets were essentially limited to a neighborhood expansion. It changed with information and correspondence advancement (**Jakšič and Marinč, 2019**).

In particular, the visual and, later, the electrical message separated information from its accurate depiction and sent it faster over greater distances. The financial consequences were focal, and the message was seen as a part of industrialization in present-day societies. These short headways may be seen as the second time of financial advances and continued until the mid-twentieth century (**Agarwal, Ben-David, and Yao, 2015**).

Monetary Inclusion suggests a situation where people have a relationship with the formal financial establishments through holding savings, subsidizing bank accounts, credit accounts, and insurance game plans when in doubt. It may help the person with having moderate admittance to monetary administrations like conventional speculation reserves, credit, installments, insurance, repayment. It revitalizes the course of cash and, as such, forms the GDP. Like this, Financial Inclusion is essential for speedier Inclusive Growth (**Boot, 2017**).

The term Financial Inclusion has transformed into an expression in the Indian monetary circles; especially later, RBI revealed a movement of measures in its credit approach to consolidate countless get-togethers, which were up to this point disallowed denied of the benefits. Monetary

Inclusion is an express strategy for the revived financial turn of events and is believed to be fundamental for achieving Inclusive Growth (**Boot and Ratnovski, 2016**).

The monetary combination has been described as a financial help bunch checking out more than one of the significant areas of the monetary assistance industry (e.g., business banking, protection endorsing, and speculation banking) either in-house or autonomously advanced auxiliary of the gathering. Economic incorporation may similarly outfit firms with market control in cost assessment. Monetary responsiveness and free access are not satisfactory for combination (**Currie and Lagoarde-Segot, 2017**).

Two business sectors can be faultlessly open to one another and simultaneously deficiently organized because, for example, they keep outstandingly unquestionable market structures. In their significance of a joined monetary market, fuse the component that market individuals go up against a single course of action of rules when they decide to oversee economic instruments just as administrations. As per this subsequent premise, a singular (typical and arranged) market is a conclusive monetary mix (**Darolles, 2016**).

Regardless of its poor start, financial innovation is acquiring many advantages, particularly in the Middle East and North Africa nations. The accompanying focuses can be summed up among the benefits of financial innovation. Advancing monetary incorporation, comprehensive development, and broadening economic movement through advancements that offer monetary assistance to the individuals who do not connect with the financial framework (**Drummer, Feuerriegel, and Neumann, 2017**).

Work with the accessibility of elective wellsprings of financing for little and medium endeavors. They are accomplishing monetary steadiness using innovation to guarantee administrative consistency and hazard the executives and working with foreign exchange and settlements by laborers abroad by giving proficient and financially savvy instruments for cross-line installments. Electronic installment techniques build the productivity of government tasks, which calls for additional changes to connect the holes in the systems identified with guidelines, buyer assurance, and data security. Worldwide interests in financial innovation have accomplished fast development beyond five years, and assumptions are that they will keep developing firmly (**Gilje, Loutskina, and Strahan, 2016**).

The worth of interest in financial innovation has expanded more than ten times between 2012-2015, despite the coordination of establishments working in the financial innovation area in The United States prompting a decrease in worldwide interests in 2016. Development proceeded in different locales, including the Middle East and North Africa, and speculations recorded a solid positive bounce back in the primary portion of 2017 (**Hasan and Marinč, 2016**).

One of the fundamental assignments of banks is changing the development qualities of financial resources and liabilities. As indicated by an article in 2017, through development change, banks utilize transient stores and award long-haul advances. It is fundamental in giving liquidity administrations to customers. The real benefit of Fintech in this sector is the possibility of lowering intermediation costs and expanding access to financial administrations for underserved populations and less developed nations. The most significant benefit of these organizations lies in how they can defeat data deviations, which are one of the principal stones of the financial business. As per the PWC overview, when working with conventional financial organizations, the fundamental difficulties that clients are looking for are the distinction in administration and culture and administrative vulnerability (**Jakšič and Marinč,2015**).

They have no heritage innovation to manage; fintech organizations have a bigger advancement limit than customary financial establishments like banks.

Online option financing stages are one of the ways that fintech organizations

approach this piece of the financial business. These arrangements are considered one of the quickest developing ventures improvements lately known as Crowd subsidizing. (**Li and Marinč, 2018**).

OBJECTIVES OF THE STUDY:

1. To find the role of Fintech as a change agent in the financial markets
2. To ascertain the role of Fintech as a change agent in the financial markets

RESEARCH METHODOLOGY:

The present study is descriptive wherein the role of Fintech as a change agent in the financial markets was analyzed. One hundred forty samples were taken for the study. The information was gathered with the assistance of an organized poll on a five-point scale. It was investigated with the aid of the mean qualities and t-test.

Table1 Demographic profile of the respondents

Variables	Number of respondents	% age
Gender		
Males	77	55%
Females	63	45%
Total	140	100%

Profession		
Businessman	51	36%
Banker	32	23%
Housewife	35	25%
Student	22	16%
Total	140	100%
Age		
20-35	49	35%
35-50	52	37%
50-65	39	28%
Total	140	100%

Table 1 presents the demographic profile of the respondents on the role of Fintech as a change agent in the financial markets. There are 55% males and 45% females in the study. Among the respondents, 36% are business, 23% are bankers, 25% are homemakers, and 16% are students. 35% of the respondents are 20-35 years of age, 37% are 35-50 years of age, and 28% are 50-65.

Table 2 Mean Value of the role of Fintech as a change agent in the financial markets

Sr. No.	Role of Fintech as a change agent in the financial markets	Mean Score
1.	Fintech has wholly revolutionized the payments system	4.12
2.	Due to Fintech, the funds' management system has been streamlined	4.10
3.	Since Fintech causes cost reduction, insurance companies are adopting it regularly	4.08
4.	Lending and payment systems are have developed the most due to Fintech	4.15
5.	Fintech has helped the banking services reach even the remotest locations	4.11
6.	Fintech companies offer a good return on investments	4.02

7.	Fintech companies have a positive contribution to the economy	4.04
8.	Fintech services improve the business development services	4.06
9.	Fintech companies help in retaining the customers	4.07
10.	Fintech services reduce the processing time of payments	4.09

Table 2 shows the opinions of the respondents. It is observed that lending and payment systems have developed the most due to Fintech, with a mean value of 4.15. Fintech follows it has completely revolutionized the payments system (4.12), Fintech has helped banking services reach even the remotest locations (4.11), and due to Fintech, the fund's management system has been streamlined (4.10). Fintech services reduce the processing time of payments (4.09). Fintech causes cost reduction, insurance companies are adopting it regularly (4.08), Fintech companies help in retaining customers (4.07), Fintech services improve business development services (4.06), and Fintech companies have a positive contribution to the economy (4.04) were also considered necessary. Reasons like Fintech companies offer a good return on investments (4.02) were also viewed as essential.

Table 3

Sr. No.	Role of Fintech as a change agent in the financial markets	Mean Score	t-Value	Sig
1.	Fintech has wholly revolutionized the payments system	4.12	7.675	0.000
2.	Due to Fintech, the funds' management system has been streamlined	4.10	6.986	0.000
3.	Since Fintech causes cost reduction, insurance companies are adopting it regularly	4.08	6.586	0.000
4.	Lending and payment systems are have developed the most due to Fintech	4.15	6.304	0.000
5.	Fintech has helped the banking services reach even the remotest locations	4.11	6.208	0.000
6.	Fintech companies offer a good return on investments	4.02	5.969	0.000
7.	Fintech companies have a positive contribution to the economy	4.04	6.440	0.000
8.	Fintech services improve the business development services	4.06	7.386	0.000
9.	Fintech companies help in retaining the customers	4.07	6.833	0.000
10.	Fintech services reduce the processing time of payments	4.09	7.118	0.000

Table 3 shows the results of the t-test. It is found from the table that the significance value for all the statements is below 0.05; hence all the statements regarding the role of Fintech as a change agent in the financial markets are significant.

Conclusion

The current circumstance can be portrayed as the rise of Fintech 4.0 (like Industry 4.0). New businesses and innovation organizations give administrations to monetary specialists (people and organizations the same), bypassing the traditional economic delegates. Computerized technology fundamentally does not work with admittance to financial administrations. It requires setting up a settlement ahead of time framework and actual foundation, a productive administrative structure, and a successful purchaser security framework. The decreased expenses of offering monetary assistance should prompt their in-wrinkled accessibility.

The investigation shows that the most probable primary situations for fintech advancement include the discontinuity of the current market into various limited fragments and specialties, which could advance into a business opportunity for global computerized monetary partnerships fit for pushing back tiny firms and setting up regular monsters the same. Simultaneously, the situation where essential part vanquishes the financial market, notwithstanding being less liable to carry out, might have a tremendous effect upon the worldwide business sectors.

References

1. Hassan M.K., Rabbani M.R. and Mohd. Ali MA, (2020), Challenges for the Islamic Finance and banking in post COVID era and the role of Fintech, *Journal of Economic Cooperation and Development*, 41, 3, 93-116.
2. Al-Tawfiq, J. A., and Memish, Z. A., (2020), COVID-19 in the Eastern Mediterranean Region and Saudi Arabia: prevention and therapeutic strategies. *International Journal of Antimicrobial Agents*, 55(5), 105968.
3. Alzubaidi, I. B., and Abdullah, A., (2017), Developing a Digital Currency from an Islamic Perspective: Case of Blockchain Technology, *International Business Research*, 10(11), 79-87.
4. Bakar, N. A., Rosbi, S., and Uzaki, K. (2017), Cryptocurrency Framework Diagnostics from Islamic Finance Perspective: A New Insight of Bitcoin System Transaction, *International Journal of Management Science and Business Administration*, 4(1), 19-28.
5. Haider, M., Khan, S., Rabbani, M. R. and Thallasinos, Y.E., (2020), An Artificial Intelligence and NLP based Islamic FinTech Model Combining Zakat and Qardh-Al-

- Hasan for Countering the Adverse Impact of COVID 19 on SMEs and Individuals, *International Journal of Economics and Business Administration*, 8(2), 348-361.
6. Hasan, R., Hassan, M. K., and Aliyu, S., (2020), Fintech and Islamic Finance: Literature Review and Research Agenda, *International Journal of Islamic Economics and Finance (IJIEF)*, 3(1), 75-94.
 7. Olagbaju, O. O., Awosusi, O. E., and Shaib, O. E., (2020), COVID19 Induced Changes on Lifestyles Education and Socio-Economic Activities in West African States: Recovery Strategies for Pos Pandemic Era, *International Journal of World Policy and Development Studies*, 6(4), 38-43.
 8. Poon, J. P., Pollard, J., and Chow, Y. W., (2018), Resetting neoliberal values: lawmaking in Malaysia's Islamic finance, *Annals of the American Association of Geographers*, 108(5), 1442-1456.
 9. Rabbani, M. R., (2020), The competitive structure and strategic positioning of commercial banks in Saudi Arabia, *International Journal on Emerging Technologies* 11(3), 43-46.
 10. Rabbani, M.R., Khan, S., Thalassinos, I.E. (2020), FinTech, Blockchain, and Islamic Finance: An Extensive Literature Review, *International Journal of Economics and Business Administration*, 8(2), 65-86.
 11. Rahim, S. R. M., Mohamad, Z. Z., Bakar, J. A., Mohsin, F. H., and Isa, N. M. (2018), Artificial intelligence, smart contract and Islamic finance, *Asian Soc Sci*, 14(2), 145.
 12. Ready, R. C. (2018), Oil prices and the stock market, *Review of Finance*, 22(1), 155-176.
 13. Schueffel, P. (2016), Taming the beast: a scientific definition of Fintech, *Journal of Innovation Management*, 4(4), 32-54.
 14. Zandifar, A., and Badrfam, R. (2020), Fighting COVID-19 in Iran; economic challenges ahead, *Archives of Iranian medicine*, 23(4), 284.
 15. Jakšič, M., Marinč, M., (2019), Relationship banking and information technology: the role of artificial intelligence and FinTech. *Risk Manag* 21, 1–18.
 16. Agarwal, S., I. Ben-David, and Yao V., (2015), Collateral Valuation and Borrower Financial Constraints: Evidence from the Residential Real Estate Market. *Management Science* 61 (9): 2220–2240.
 17. Boot, A.W.A. (2017), The Future of Banking: From Scale and Scope Economies to Fintech. *European Economy - Banks, Regulation and The Real Sector*, 2, 77–95.
 18. Boot, A.W.A., and Ratnovski L., (2016), Banking and Trading. *Review of Finance* 20 (6): 2219–2246.

19. Currie, W.L., and Lagoarde-Segot T., (2017), Financialization and Information Technology: Themes, Issues, and Critical Debates—Part I, *Journal of Information Technology*, 32 (3), 211–217.
20. Darolles, S., (2016), The Rise of Fintechs and Their Regulation. *Financial Stability Review* 20, 85–92.
21. Drummer, D., S. Feuerriegel, and Neumann D. (2017), Crossing the Next Frontier: The Role of ICT in Driving the Financialization of Credit. *Journal of Information Technology* 32, 218–233.
22. Gilje, E.P., E. Loutschina, and P.E. Strahan, (2016), Exporting Liquidity: Branch Banking and Financial Integration. *Journal of Finance*, 71, 1159–1184.
23. Hasan, I., and M. Marinč, (2016), Should Competition Policy in Banking Be Amended during Crises? Lessons from the EU. *European Journal of Law and Economics*, 42 (2), 295–324.
24. Jakšič, M., and Marinč M., (2015), The Future of Banking: The Role of Information Technology. *Bančni vestnik: revija za denarništvo in bančništvo*, 64 (11) 68–73.
25. Li, S., and Marinč M., (2018), Economies of Scale and Scope in Financial Market Infrastructures. *Journal of International Financial Markets, Institutions and Money* 53, 17–49.
26. Pallathadka, A., & Pallathadka, H. (2021). Human and Environment Relationship in Geographical Research. *PalArch's Journal of Archaeology of Egypt/ Egyptology*, 18(4), 6666–6679.
27. Pallathadka, H., Ramirez-Asis, E. H., Loli-Poma, T. P., Kaliyaperumal, K., Ventayen, R. J. M., & Naved, M. (2021). Applications of artificial intelligence in business management, e-commerce and finance. *Materials Today: Proceedings*, xxxx. <https://doi.org/10.1016/j.matpr.2021.06.419>
28. Pallathadka, H. (2020). Impact Of Fundamental Factors On The Share Price Movement Of Indian It Stocks. *European Journal of Molecular & Clinical Medicine*, 07(06), 3213–3221.
29. Setiawan, R., Cavaliere, L. P. L., Halder, S., Koti, K., Sarsengaliy, B., Ashok, K., Pallathadka, H., & Rajan, R. (2021). The Concept of the Cryptocurrency and the Downfall of the Banking Sector in Reflecting on the Financial Market. *RentgenologiyaiRadiologiya*, 60(S1), 17–33.
30. Sriram, V. P., Raj, K. B., Srinivas, K., Pallathadka, H., Sajja, G. S., & Gulati, K. (2021). An Extensive Systematic Review of RFID Technology Role in Supply Chain

Management. *2021 IEEE 6th International Conference on Signal Processing, Computing and Control (ISPCC)*, 789–794. <https://doi.org/10.1109/ISPCC53510.2021.9609414>

31. Pallathadka, H. (2021). Mining Restaurant Data to Assess Contributions and Margins Data. *International Journal of New Practices in Management and Engineering*, 10(3), 6–11. <https://doi.org/https://doi.org/10.17762/ijnpme.v10i03.128>
32. Pallathadka, H., & Pallathadka, L. K. (2022). Critical Analysis of Fintech as a Change Agent in the Financial Markets : A Quantitative Investigation. *Journal of Applied Science and Research*, 10(1), 72–81.
33. Kumar Tiwari, B., Pallathadka, H., Kumari, D., & Agrawal, O. P. (2021). “COVID-19 Pandemic leads Stock Market Volatility”: Empirical Evidence Using GARCH Model. *Empirical Economics Letters*, Oct 2021 (2 Special Issue), 422–439.