

INTERNATIONAL JOURNAL OF LAW MANAGEMENT & HUMANITIES

[ISSN 2581-5369]

Volume 6 | Issue 1

2023

© 2023 *International Journal of Law Management & Humanities*

Follow this and additional works at: <https://www.ijlmh.com/>

Under the aegis of VidhiAagaz – Inking Your Brain (<https://www.vidhiaagaz.com/>)

This article is brought to you for “free” and “open access” by the International Journal of Law Management & Humanities at VidhiAagaz. It has been accepted for inclusion in the International Journal of Law Management & Humanities after due review.

In case of **any suggestions or complaints**, kindly contact Gyan@vidhiaagaz.com.

To submit your Manuscript for Publication in the **International Journal of Law Management & Humanities**, kindly email your Manuscript to submission@ijlmh.com.

Fintech as a Driver of the Financial Market's Creative Growth

PATEL NILKANTH DARSHANBHAI¹

ABSTRACT

Businesses must respond quickly and precisely to the very volatile and dynamic market in which they operate. The progress of contemporary information and communication technology and the resulting demand for various creative financial solutions are directly related to the current and dynamic financial environment, which presents the company's operations with several obstacles. With the aforementioned technology, so-called Neobanks, or banks without physical locations, are unquestionably a novelty in the financial sector. A new sector called FinTech has emerged as a result of the quick development of technology, and it is now highly appealing to investors. This industry today offers a wide range of diverse concepts, including P2P lending, cryptocurrency, E-wallets, mPOS acquiring, M-wallets (mobile banking), and T-commerce. Numerous of these tools have already made significant inroads into daily life. Without the involvement of banks, people may get any type of credit through specialized online services from other users, utilize mobile devices to make credit card payments, and receive information about their spending and earnings as related to their cards from anywhere in the world. To maximize added value and get a competitive edge on the market, we might say that these types of new technologies are emerging with time, being welcomed, and being integrated into businesses' business operations. Users no longer need to visit banks and waste their time making credit agreements, exchanging currencies, or looking for ATMs to withdraw cash. Online purchases can be made using new digital currencies in addition to rupees. Although these gadgets make life simpler, they seriously endanger banks.

Keywords: Financial innovations, Fintech, Digitalization, Blockchain, Neobanks.

I. INTRODUCTION

One of the fastest-expanding sectors in the world today is the FinTech market or market for financial innovations. In the financial technology industry, businesses provide a variety of financial services by utilizing cutting-edge technology to increase both their efficiency and client convenience. There are already several trends in the fintech business. P2P lending, cryptocurrency, E-wallets, mPOS acquiring, M-wallets (mobile banking), T-commerce, etc. are

¹ Author is a student at Anand Law College, India.

the most well-liked among them [1]. At first glance, it appears that you have never encountered a common notion. However, it will become clear after a thorough analysis that many people have encountered some of these financial technologies in some capacity.

The introduction of information and communications technologies (ICTs) and the historically unprecedented dual growth of financial innovation in terms of product diversity have had a substantial impact on the global financial system, with consequences for cost-effectiveness and information asymmetries. The use of ICTs in the financial sector has increased international capital flows, decreased transaction costs, lessened information asymmetries, and created new local and worldwide investment possibilities for both inexperienced and seasoned investors [2].

Systems of finance, money, and credit are evolving so swiftly due to the rapid growth of technology. There will be numerous conversions from certain aspects to more contemporary ones in the future, such as from cash to electronic wallets or from bank credits to online user-to-user lending of funds. To maintain their clientele, banks must always develop new loan products. As a result, the FinTech industry presents conventional financial institutions like banks and credit bureaus with both new opportunities and perspectives as well as a danger.

How FinTech will change the financial environment in the future is a vital question. To preserve the security and stability of the global financial system, regulators and supervisors could pursue a clear route if we could provide an answer to that issue. That question is, however, quite hard to answer. For a better understanding of FinTech's development and the excitement around it, it may be helpful to comprehend some of its underlying principles.

Many of the technology that underpins FinTech developments are not brand-new, but financial institutions and businesspeople are only now using them in connection with financial goods and services. Why now? The answer to this is not straightforward, but it can be helpful to look at some of the supply and demand dynamics that underpin "conventional" financial innovation. This essay also explains why FinTech is receiving so much more attention than conventional innovation. Financial innovation is a continuous process, although there are now several technologically-enabled developments in the financial sector that have been given unique names.

Since the fintech sector is still in its infancy, new products and services are constantly being developed. As a result, there was an explosion of FinTech start-ups in important technological areas like Silicon Valley and London. Global investment in FinTech startups increased by 201% in 2014, compared to a 63% increase in overall venture capital funding over the same year [3]. But not every sponsored startup is successful. Several aspects would contribute to the success

of a FinTech firm in this fast-paced market where rules are continuously changing and network externalities play a significant influence.

With the launch of Apple Pay and Google Pay, tech giants like Apple and Google are also hopping on the mobile payment bandwagon. To have the Google Wallet payments software pre-installed on Android phones supplied by these carriers, Google has entered the payments industry and has started to collaborate closely with Verizon, AT&T, and T-Mobile. It is also acquiring technology and intellectual property from the carriers' joint venture, Softcard (previously Isis Mobile Wallet) payments, as was disclosed on February 23, 2015. This is similar to other payment businesses. Without each other's cooperation, neither Google nor the telcos were able to completely take off, and they have now realized the benefits of collaboration. The Near Field Communications (NFC)-capable terminals and chip-and-PIN payment solutions that improve user experience have been made available by Apple Pay.

(A) Literature Review

FinTech, in general, is described as "financial innovation facilitated by technology that may lead to new business models, applications, processes, or products having a major impact on financial markets and institutions and the supply of financial services" [18]. The process of integrating or leveraging technology with banking goods and services is known as fintech. It's important to explain how Silicon Valley created the FinTech industry. It is a location where the majority of IT initiatives were developed and afterward used as a form of "accelerator" for contemporary financial technology.

The origins of fintech were frequently attributed to the 17th century when telegraphs, railways, and steamships were used as means of transnational financial operations [19]. In the 1950s, credit cards were introduced, and in the 1960s, automated teller machines (ATMs) took the role of bank branches and teller services, according to a Forbes study. The introduction of computerized bank branches in the 1980s, automated electronic trading platforms in the 1970s, and Internet banking in the 1990s all began to transform the banking industry. The banking industry has recently begun to shift toward more complex digital technologies like artificial intelligence (AI), blockchain, and similar ones in addition to straightforward FinTech offerings like internet banking, mobile banking, social media, and networking.

To provide their consumers with improved digital banking experiences, banks are collaborating with FinTech companies to create and/or market novel financial products and services. On the other hand, banking clients are impatiently awaiting information on how FinTech products will address their demands, have an impact on them, or influence how they view them. Vasiljeva

and Lukanova (2016) claim that three categories may be used to categorize FinTech activity [20]. First, there are the service-oriented products that financial institutions have historically offered, such as cash transfers, card payments, lending and investing, peer-to-peer lending, crowdsourcing, or foreign exchange. The second category is data-oriented, which includes technology for information gathering, processing, and analysis. The third is process-oriented, which emphasizes effective and affordable operational methods.

London is increasingly regarded as the FinTech capital due to the volume of fintech breakthroughs and its investment activity. FinTech development in Great Britain is supported by four essential elements: a robust infrastructure, a clear legislative framework, a verifiable tax system, and domestic investment assistance. Fintech, or financial technology, is the use of technology to offer cutting-edge goods and services in the financial industry. Fusing finance and contemporary technology, it is an emerging market disruption that affects traditional company models and financial structures [4].

By improving the customer experience in the delivery of a variety of effective financial services, the growth of the Fintech business has offered customers creative options [5]. The 2008 global financial crisis gave rise to a new paradigm for fintech, along with the utilization of modern technological advancements like social media, artificial intelligence (AI), and data analytics [6]. Start-ups, technology companies, governments, customers, and conventional financial institutions like banks are the five components that make up the Fintech ecosystem (FE), and they all work in concert to boost the economy, improve customer experience, and encourage social inclusion [6].

One of the most important trends in the growth of Fintech profoundly disrupts the way traditional organizations function [5]. Every financial company needs to improve its capabilities to stay competitive in the market as a result of Fintech companies having a significant impact on the financial sector. 83 percent of traditional players believe that various aspects of their businesses are at risk from emerging Fintech start-ups (PwC 2016). With the usage of digital traces, those with fewer service records may be able to rely on revealed or trusted data, among other types of digital trace data. In actuality, this means that one's "digital footprint" (i.e., the digital traces left behind) can turn into a database from which FinTech actors can draw to evaluate risks, verify identities, and ultimately offer services to those who lack the extensive financial histories or formal identification currently relied upon.

According to Priya and Anusha (2019), the sizable unbanked population in developing nations like India offers significant opportunities for flourishing fintech businesses [16]. Despite having

a 52 percent acceptance rate for fintech, the survey showed that the Indian market still has issues with infrastructure, financial literacy, and other factors. Lin (2019) describes how Singapore reduced new Fintech risks through institutional upgrades and legislative changes, with practical ramifications for other nations looking to strengthen their regulatory frameworks for the effective adoption of Fintech [17].

The World Bank estimates that 2 billion adults worldwide were unbanked in 2015 [13]. This access to the unbanked has both social and financial advantages. By providing these people with access to conventional financial services, rather than the small-scale moneylenders who sometimes demand outrageous rates, they will be able to get credit [14]. Consider the Aadhaar digital identity system in India, which is used by 1.2 billion of the nation's 1.3 billion citizens. This identity system has reduced fraud concerning social assistance payments and allowed many people to obtain bank accounts for the first time [15]. Although the Aadhaar system itself does not depend on digital traces, the digital identification system might be used in conjunction with digital trace data to offer new and more easily available financial services to previously underserved areas. In reality, according to a 2016 story in *The Economist*, both the government and commercial companies have significantly increased their interest in doing just this.

The research claims that India is developing into a vibrant ecosystem that provides fintech start-ups with a platform to possibly become unicorn companies worth billions of dollars [7]. Fintech start-ups in India are aiming for a variety of goals, from tapping into new markets to investigating overseas ones. According to NASSCOM, the Indian fintech software industry would grow from its current USD 1.2 billion to USD 2.4 billion by 2020. The historically cash-based Indian economy has reacted favourably to the fintech possibility, which was largely brought on by an increase in e-commerce and widespread smartphone use. A five-year CAGR of 22% is expected to increase the transaction value for the Indian fintech sector from an anticipated USD 33 billion in 2016 to USD 73 billion in 2020.

Investor focus in 2015 has been on high-tech hubs, with eleven VC-backed investment agreements totalling USD 57 million in Bengaluru, followed by nine and six investments in Mumbai and Gurgaon, respectively. The Indian start-up capital of Bengaluru, which is now rated 15 among the world's main start-up cities, has benefited from this. India's growth surge may not yet be on pace with its international equivalents, but it is well-positioned, in large part because of a solid talent pipeline of readily available and reasonably priced IT workers. The services of fintech have completely changed how businesses and individuals conduct everyday transactions, from wallets to loans to insurance. These trends are being adopted more widely, making India a more appealing market internationally.

According to EY's FinTech Adoption Index 2017, India has advanced to become the market with the second-highest FinTech adoption rate (52 percent) among 20 economies globally. FinTech adoption in India has expanded dramatically over the previous two years. This is true for each of the five service categories, with digitally active Indian customers showing adoption rates that are 50–100% higher than averages worldwide [8].

(B) Data and Methods

In general, any invention in the financial industry may be referred to as fintech. Companies that are creating financial technology are expanding rapidly and worldwide, particularly in the payments industry [9]. Furthermore, start-up businesses that provide some alternative sources of financial services are now simpler to launch because of the growth of Fintech skills and related technology [10]. Fintech is one of the fastest-growing sectors, although it is not a new one. Credit cards, ATMs, personal finance software, and a variety of other technologies that support and allow the functioning of the financial sector have long been a part of the financial world.

Fintech has carefully but helpfully transformed the whole financial services and payments landscape with tailored solutions, fundamental support, and remarkable breakthroughs in all-encompassing industries including education, insurance, and credit management. India is developing into a digital economy with over one billion cell phones, 330 million internet users (about 94 percent on cellular devices), and 240 million smartphones, according to a study. India is developing into a thriving ecosystem that offers a platform for financial start-ups to grow into billion-dollar unicorns. Indian fintech firms have a variety of objectives, from breaking into new industries to pursuing global business. The expansion of Indian fintech over the past several years has been exponential.

Traditional businesses and banks face significant challenges and business opportunities as a result of the digital transformation of business and the technologies that are reshaping the financial industry. These businesses and banks must adopt new technology in their business operations and processes to gain and maintain a sustainable competitive advantage [23]. There are issues with conventional banks' operations that are not at the level of utilizing modern FinTech technology since FinTech is making full use of all the technological developments available. Venmo, Western Union, WorldRemit, Azimo, PayPal, and UPI are a few of the FinTech applications that are most widely used in 2019. The FinTech industry is unique in that trends develop with breakthroughs. The banking industry is starting to adopt innovations, which makes it particularly fascinating as mentioned below.

Automation of robotic processes: It alludes to the application of a software robot created to carry out demanding duties. It may minimize manual labour for a variety of financial applications, allowing staff to concentrate on banking and decision-making.

API (Application Programming Interface) platform: Organizations may enhance their service offerings, create new digital income channels, and increase consumer engagement thanks to open banking, which is a significant asset.

Artificial Intelligence: By using the power of data analytics to fight fraud and enhance compliance, it may help firms get past their current customer service difficulties.

Hybrid cloud: With this technology, banks can manage data management, security, and compliance while benefiting from the flexibility and advantages of private and public clouds. Other advantages include increased operational effectiveness, increased innovation, and cost savings.

Quantum computing: Quantum computers accelerate the completion of difficult calculations by applying the fundamentals of quantum physics. Significantly, banks, who are primarily concerned with risk assessment and trading, may now have new chances.

Blockchain: In recent times, cryptocurrencies have taken over the financial industry. By substantially lowering processing costs, the use of Blockchain technology may potentially save banks billions of dollars.

VR (virtual reality) and AR (augmented reality): Virtual reality is being used by banks to improve customer service. Customers and staff may both benefit from AR and VR's rich projections of data and services.

FinTech makes it easier to access new financial services, enabling quicker and less expensive access to funds, particularly through mobile banking applications. This sort of new technology and innovation is more likely to be adopted, accepted, and eventually used by the younger generation, which is more likely than the older population to do so. FinTech has an impact on both service providers and customers, as well as on legislation and the need to monitor and control how FinTech is used. Younger generations favour FinTech advances and are more likely to do business using financial applications than they do with traditional banks, who they find less appealing.

The worldwide market has been swept up in the FinTech revolution, which is primarily affecting the banking and finance industries. This poses a very serious threat to the continued existence of traditional banking. With all of the aforementioned factors together, "FinTech has increased

systemic and systematic risk owing to shadow banking and higher sector interdependence. Monitoring and enhancing the current restrictions will be a continuing struggle for solvency-focused regulators [11]. Through the potential use of cutting-edge information and communication technologies as well as process automation, the implementation of technology innovations may enhance business [12]. This will therefore raise the efficiency and effectiveness of organizational operations.

Given current technical advancements, there is also a compelling financial justification for providing services to India's underserved groups of the population. The Consultative Group to Assist the Poor (CGAP) asserts that FinTechs are innovating at every stage of the financial services value chain and providing new value propositions, such as flexible solutions and improved methods of resolving the financial issues encountered by low-income consumers. As a result, India's adoption of fintech has increased dramatically over the past two years as a result of efforts by the government and regulatory bodies to promote financial inclusion and a digitalized economy. India and China are leading developing economies in terms of FinTech adoption in 2019, according to Ernst & Young's Worldwide FinTech Adoption Index (see Table 1 below), whereas the global average adoption rate was just 64%.

Table 1 top countries in Fintech Adoption [8]

Sr.	Percentage of adoption (%)	Country
1.	87	India, China
2.	82	Russia, South Africa
3.	76	Colombia
4.	75	Peru
5.	73	The Netherlands
	Average adoption: 64	

India's FinTech adoption rate was 52 percent in 2017, the year the aforementioned Index was initially produced, which is still higher than the 33 percent global average. Locally, a 96 percent increase in money transfers and payments usage is driving the adoption of fintech (see Table 2 below). In comparison to the worldwide average, all other categories likewise have greater adoption rates. The main drivers of increasing FinTech adoption rates in 2019 include more enticing rates or fees, simpler account setup procedures, access to a wider range of cutting-edge

goods and services, and improved user experiences, product features, and service quality.

Table 2 Consumer Awareness of FinTech Services in India [8]

Sr.	Percentage of Awareness in India (%)	Purpose
1.	96	Money transfer and payment
2.	86	Insurance
3.	78	Savings and Investments
4.	76	Borrowing
5.	71	Budgeting and Financial Planning

India's FinTech revolution, however, has had the greatest influence on the MSME financing market. Smaller businesses without a track record of financial stability or credit history are suddenly receiving the much-needed access to the financing they have been waiting for thanks to the introduction of creative alternative lending platforms. A further example is the Goods and Services Tax Network (GSTN), which now has more than 9.2 million MSMEs registered and consistently filing monthly filings. The GSTN data is validated using the notion of matching and offers a deeper and wider understanding of the nature of the firm, therefore completing the traditional financial data. The effectiveness and coverage of innovative FinTech lending models like flow-based lending, vertical-based lending, and ecosystem-based lending will increase as a result of tighter underwriting processes made possible by more precise verification and validation of transactional information [21].

The use of FinTech to increase financial platform accessibility is crucial in the Indian setting. Therefore, creating appropriate financial products that address the unique requirements of the population that is financially excluded is essential to accomplishing the goal of financial inclusion [22]. In India, the great majority of retailers are still not using digital platforms. Only a tiny part of the seven crore merchants and traders have started accepting digital payments, therefore there is a significant opportunity to speed up merchant acceptance using mobile payments, smart point of sale (PoS) terminals, and quick response (QR) codes. This would be achievable if merchants also received services like loans, reconciliation, working capital, etc. in addition to payments. Enhancing connection and payment acceptance infrastructure in regions with low digital transaction volumes would also significantly boost financial inclusion in India.

II. BLOCKCHAIN TECHNOLOGY

In the white paper on Bitcoin published in October 2008 by Satoshi Nakamoto, the term "blockchain" was first used individually [28]. Blockchain is a brand-new technical advancement that operates on a platform that makes it possible for several uses in financial transactions. According to the most typical description, it is an accessible decentralized database where transactions are carried out anonymously. Simply described, a blockchain is a shared data automation system. The role of the ledger where each transaction is recorded is covered by blockchain technology. Every blockchain-based system is created using a peer-to-peer architecture [24].

Blockchain is described as "distributed ledger technology having a major application to financial services, including cryptocurrency technology (like Bitcoin), as well as other blockchain technologies." and claimed that blockchain "had huge future promise in financial services" and was "the fastest-growing area of FinTech innovation." [25]. Blockchain was "the key game changer" in the fourth industrial revolution, according to Chuen (2017) [26]. The most widely used cryptocurrency is bitcoin, which has gained popularity since 2013 as a result of the failure of several banks and issues with public confidence in financial institutions. Cryptocurrency is a reliable kind of digital money (the equivalent of digital money). Due to the mistrust of conventional financial institutions following the 2008 financial crisis, trust is crucial in this situation. The first blockchain-based application that has been created is Bitcoin. The technology, rather than the money itself, is the focus of the original white paper, Bitcoin: A Peer-to-Peer Electronic Cash System [28]. However, the distinction between Bitcoin and the blockchain enables business owners to seek finance while highlighting the benefits of the technology without bringing up the bad reputation of Bitcoin.

To build confidence in a cryptocurrency, a certain cryptographic challenge must be solved. The most obscure claims are that value delivers money and that trust equals value [27]. Using secret and public keys, cryptographic processes called cryptocurrencies to create and record transactions. Since each transaction includes security in the form of a digital signature that is generated from a mix of message and private key transactions, it is difficult to crack the code without the original private key. As a result, each transaction is secured. Because everything is done online, this money transfer method stands out for its ease of use. The ease of transactions also comes from the absence of intermediaries like banks and other entities [24]. One of the most important financial breakthroughs of the first half of the twenty-first century, cryptocurrencies have grown in popularity in recent years. Bitcoin was the first cryptocurrency.

III. NEOBANKS

A significant segment of the financial sector is mobile banking. Consumers are increasingly demanding quick digital access to their bank accounts in the field of personal finance, particularly on mobile devices. Given the development of neobanks, the majority of large banks now provide some type of mobile banking functionality. Neobanks are banks without actual branch offices that provide checking, savings, payment, and loan services to consumers via a wholly mobile and digital infrastructure. Neobank is sometimes referred to as an internet-only bank, online bank, or digital bank. To identify Fintech-based financial service providers that were competing with traditional banks, the term "Neobank" initially gained use in 2017. Neobanks in America includes Chime and Simple, while N26 and Revolute are the two biggest in Europe. The goal of this Neobank is for every person to be able to handle their money as they see fit, fast and easily without encountering any obstacles.

The fundamental benefit of this Neobank (and the majority of Neobanks worldwide) is that there are no transaction fees or monthly maintenance costs. Additionally, there are no transaction costs between the two diverse banks, which makes it much easier for customers to avoid paying extra expenses. The safety of the system's data and funds is their top priority. Access control, secure procedures, and 128-bit AES (Advanced Encryption Standard) encryption are all employed for security. With the government preparing to adopt more open banking standards, banks and payment service providers may create next-generation consumer apps in collaboration with Neobanks and banking-as-a-service (BaaS) networks. Established businesses like Kotak Mahindra Bank, Paytm, Bharti Airtel, and DBS have already taken the initiative to provide digital-only banking services to the Indian market.

The goal of the Neobank N26 is to alter how people manage their finances by utilizing cutting-edge technology and the greatest experts in the field who work to enhance Neobank's operations. When they initially offered free bank accounts and started working with Mastercard in Germany and Austria, the first product releases took place in 2015. The European Central Bank granted them a full European banking license in 2016. By 2020, they will have 5 million subscribers across 25 regions, making them one of the top Neobanks globally. They have spread over the entire world because of their market placement. The Neobank N26 is a mobile-operated moving bank account manager that tracks financial transactions in real-time.

IV. CONCLUSION

The global adoption of FinTech poses a significant threat to the whole system, particularly to the banking and financial sectors. A variety of FinTech inventions and tools produce procedures

that are intended to offer value and guarantee long-term competitive advantage. Given that most Indians spend more time using their smartphones than any other digital device, fintech companies will need to focus on developing products with a mobile-first strategy. The cost of mobile data would be lower. Future improvements in pace and ease would be brought about by the switch from 4 G to 5 G, the most recent corporate tax cut, governmental support for start-ups, and reasonably priced handheld apps in this area. In India, the cost of a gigabyte of data is the lowest in the world, therefore implementing a mobile-first approach would be easier. Another step for a country with many official languages is if the fintech companies can still manage the language barrier.

Recent worldwide studies on FinTech have focused on the subject of digital transformation and the level of innovative development in the financial sector. Today, FinTech is a topic covered in a wide range of studies and articles by many writers from many professions. The influence of digital transformation on the level of so-called FinTech and the degree of development of different novelties and inventions has been demonstrated by several studies that have addressed this issue. FinTech offers the industry a huge challenge, and significant rewards, but also a lot of concerns.

This article gives an overview of FinTech innovations like Bitcoin and Blockchain technology, which have been studied in the literature, as well as novelties and new inventions like Neobanks, which are among FinTech's innovations and areas that haven't been well studied up to this point. The study of the research reveals that the Neobanks sector of FinTech lacks specialized studies that provide an overview of their significance to the financial sector. Since there is a clear paucity of study in this field, it is suggested that more be done. Neobanks compete with regular banks and provide the foundation for added value and sustained competitive advantage.

V. REFERENCE

1. FinTech Market Development Perspectives Ekaterina Kalmykova, Anna Ryabova SHS Web of Conferences 28 01051 (2016) DOI: 10.1051/shsconf/20162801051
2. Lechman, E.; Marszk, A. ICT technologies and financial innovations: The case of exchange-traded funds in Brazil, Japan, Mexico, South Korea, and the United States. *Technol. Forecast. Soc. Chang.* 2015, 99, 355–376. [CrossRef]
3. Accenture (2015), “The Future of Fintech and Banking: Digitally disrupted or reimaged?”, <http://www.fintechinnovationlablondon.net/media/730274/Accenture-The-Future-of-Fintech-andBanking-digitallydisrupted-or-reima-.pdf>
4. Smith, S. 2015. "What is Fintech?: A Simple Explanation," in Ashburnham Insurance.
5. Gozman, D., Liebenau, J., and Mangan, J. 2018. "The Innovation Mechanisms of Fintech Start-Ups: Insights from SWIFT's Innotribe Competition," *Journal of Management Information Systems* (35:1 2018/01/02), pp 145-179.
6. Lee, I., and Shin, Y. J. 2018. "Fintech: Ecosystem, business models, investment decisions, and challenges," *Business Horizons* (61:1), pp 35-46
7. The Pulse of fintech survey, KPMG, February 2016.
8. EY FinTech Adoption Index 2017.
9. Dietz, M., Khanna, S., Olanrewaju, T., Rajgopal, K. (2016), *FinTechnicolor: The New Picture in Finance*, Mckinsey & Company, New York
10. Fenwick, M., McCahery, J. A., Vermeulen, E. P. M. (2017), “Fintech and the financing of entrepreneurs: from crowdfunding to marketplace lending”, ECGI Working Paper (369/2017), European Corporate Governance Institute, Brussels, September 2017.
11. Sangwan, V. H., Prakash, P., Singh, S. (2019), “Financial technology: a review of extant literature, *Studies in Economics and Finance*”, Vol. 37, No. 1, pp. 71-88.
12. Buntak, K., Kovačić, M., Mutavdžija, M. (2019), “Utjecaj industrije 4.0 na sustav upravljanja kvalitetom” (The impact of Industry 4.0 on the quality management system), 19th Croatian Conference on Quality and the 10th Scientific Conference of the Croatian Society for Quality, 15-18 May, HDK, Vodice, Croatia, pp. 10-16.
13. World Bank, 2015. Massive drop in number of unbanked, says new report. Press Release No. 2015/364/DEC, [online] pp.13–16. Available at: www.worldbank.org/en/news/press-release/2015/04/15/massive-drop-in-number-of-unbanked-says-new-report

[Accessed August 25, 2017].

14. Chaia, A., Dalal, A., Goland, T., Gonzalez, M.J., Morduch, J., and Schiff, R., 2009. Half the World Is Unbanked. [online] McKinsey & Company Report.
15. The Economist, 2016. The digit era: Indian business prepares to tap into Aadhaar, a stateowned fingerprint-identification system. [online] Available at: www.economist.com/news/business/21712160-nearly-all-indias-13bn-citizens-are-now-enrolled-indian-business-prepares-tap [Accessed August 25, 2017]
16. Priya, P. K., & Anusha, K. (2019). Fintech Issues and Challenges in India. *International Journal of Recent Technology and Engineering*, 8(3), 904–908. doi:10.35940/ijrte.C4087.098319.
17. Lin, L. (2019). Regulating FinTech: The Case of Singapore. NUS Law Working Paper Series 2019/028, Nov 2019, http://law.nus.edu.sg/wps/pdfs/028_2019_Lin%20Lin.pdf
18. Navaretti, G. B., Calzolari, G., Mansilla-Fernandez, J. M., & Pozzolo, A. F. (2017). Fintech and Banking. Friends or Foes? Retrieved January 26, 2019, from http://european-economy.eu/wp-content/uploads/2018/01/EE_2.2017-2.pdf
19. Thakor, A. V. (in press). Fintech and banking: What do we know? *Journal of Financial Intermediation*
<https://www.sciencedirect.com/science/article/abs/pii/S104295731930049X>
20. Vasiljeva, T., & Lukanova, K. (2016). Commercial Banks and Fintech Companies in the Digital Transformation: Challenges for the Future. *Journal of Business and Management*, 11, 25–33
21. Mittal, Alok; From small to big: The evolution of MSME lending in 2020 and the role of fintech, January 2020.
22. Opportunities and Challenges of FinTech (Shri. Shaktikanta Das, Governor, Reserve Bank of India, Keynote Address delivered at the NITI Aayog's FinTech Conclave on March 25, 2019.
23. Martinčević, I., Črnjević, S., & Klopotan, I. (2020). Fintech Revolution in the Financial Industry. *ENTRENOVA - ENTERPRISE RESEARCH INNOVATION*, 6(1), 563–571. Retrieved from <https://hrcak.srce.hr/ojs/index.php/entrenova/article/view/13510>
24. Cunjak Mataković, I., Mataković, H. (2018), “Kriptovalute - sofisticirani kodovi manipulacije” (Cryptocurrencies - sophisticated manipulation codes), *International Journal of Digital Technology & Economy*, Vol. 3, No. 1, pp. 23-37.

25. Chen, M. A., Wu, Q., Yang, B. (2019), "How valuable is FinTech innovation?", *The Review of Financial Studies*, Vol. 32, No. 5, pp. 2062-2106.
26. Chuen, D. L. K. (2017), "Fintech tsunami: blockchain as the driver of the fourth industrial", available at: <https://ssrn.com/abstract=2998093> (5 May 2020).
27. Sajter, D. (2018), "Financijska analiza kriptovaluta u odnosu na standardne financijske instrumente" (Financial analysis of cryptocurrencies in relation to standard financial instruments), in Koški, D., Karačić, D., Sajter, D. (Eds.), *Financije - teorija i suvremena pitanja* (Finance - theory and contemporary issues), Faculty of Economics in Osijek, Osijek, pp. 277-301.
28. Nakamoto, S., 2008. Bitcoin: A peer-to-peer electronic cash system. [online] Available at: <https://bitcoin.org/bitcoin.pdf> [Accessed December 2, 2017].
