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Fintech Revolution in the Financial Industry

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Abstract

Today, businesses operate in a highly dynamic and highly volatile market that requires timely and accurate responses. It is precisely the modern and dynamic financial environment that puts many challenges in front of the business of the company, confronts them with the advancement of modern information and communication technologies, which also raises the need for many innovative financial solutions. Financial market creates the new term "FinTeh" that includes some of the significant areas such as Bitcoin and Blockchain technology that have been evaluated in the last 5 years. With mentioned technologies, novelty in the financial market are definitely so-called „Neobanks“, banks without physical locations. It is for this reason that we can argue that these forms of new technologies are evolving over time, being embraced and incorporated into companies business processes to maximize the added-value and gain a competitive advantage on the market.

Keywords: financial innovations, financial market, digitalization, Fintech, Bitcoin, Blockchain, Neobank

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Introduction

Today's global market poses many challenges to the financial industry and its businesses, as well as a number of obstacles where financial industry needs to react timely in order to achieve but also secure a competitive advantage on the market. Globalization and with it the emergence of digitalization and new technologies have led to the so-called „digital revolution“. Digital transformation of business is inevitable today, that is, companies include and incorporate new technologies into their business processes, all with the aim of creating added value, securing and achieving competitive advantage. Digitalization and digital transformation drastically affect and change the way financial institutions operate. Various financial institutions have realized that the old way of doing business is no longer efficient and does not meet the requirements of its clients. All of this leads to changes in the financial environment, making it easier for financial institutions to seek and pursue innovations that are more favorable to them and their clients. Almost all changes in the financial market today are the result of the digital transformation of a business that is rapidly expanding in the financial market and is embedding into financial business processes. Digital transformation in the financial industry creates the new term "FinTech", which is a component of the two words "finance" and "technology", that is, FinTech is a combination of digital technology and financial services. Digital transformation is forcing the financial industry to create innovations that will satisfy their customers because without the financial services users, there is no financial industry. One of the problems facing the financial industry is that with every new innovation, there is an increasing number of competitors with new innovations and how to satisfy all the desires of future clients, which is why for this reason the concept of traditional banking is not really suited to the new market demands today. Through this research, some key areas of FinTech have been explored, such as Blockchain technology, Bitcoin, Cryptocurrencies, Neobanks and their impact on the financial industry but also on the social environment. The aim of this paper is to explore the process of digital transformation in the field of development and application of new technology and the development of new innovations in the financial industry that are rapidly evolving on a daily basis and pose a great challenge in front of the financial industry.

FinTech

FinTech is a combination of two words, finance and technology, and is beginning to emerge in the 21st century. It is a term to describe new technologies that seek to improve and automate the delivery and use of financial services. According to Arner et al. (2015) 'FinTech' refers to the technological or digitalization process of financial solutions, and it is growing globally very fast. In comparison to traditional financial services, "FinTech" is a new practice in the financial industry that requires new innovative solutions, new business processes, new regulation and protection. FinTech presents a number of applications and tools in the financial market, of which the most attractive today are definitely Bitcoin, Blockchain, Cryptocurrency, Artificial intelligence. FinTech assists and ensures the creation of sustainable competitive advantage, reduces costs, manages risks in a much more efficient way, but influences the creation of long-term and quality customer relationships. The goal of FinTech is to help companies improve their businesses, and to help consumers to gain more insight into finance and manage their finances more easily. Generally, the term FinTech can be used for any innovation in the financial sector. Companies that are developing financial technology are developing globally and at a very high

speed and especially in the area of the payments market (Dietz et al., 2016). In addition, the development of Fintech capabilities and related technologies makes it easier for starting startup companies that also offer some of the alternative sources of financial services (Fenwick et al., 2017). Fintech is not a new industry, it is just one of the fastest growing industries. Technology has always been a part of the financial world, such as credit cards or ATMs, personal finance applications and a range of tools that enable and support the work of the financial industry. The digital transformation of business and the technologies that are changing the financial industry are major challenges and business ventures for traditional businesses and banks, that must embrace new technology in business processes and operations, and all with the aim of gaining and achieving a sustainable competitive advantage. FinTech is making full use of all the technological advancements available, so there are problems with traditional banks' operations that are not at the level of using new FinTech technologies. Some of FinTech's most popular applications in 2019. are: Venmo, Western Union, WorldRemit, Azimo, PayPal. The interesting thing about the FinTech world is that as innovations grow, so do trends. It is especially interesting because innovations are beginning to spread in the banking sector, making it easier for traditional banks to keep up with other innovations.

Table 1

Overview of some FinTech's new products

FinTech innovations	Description
Hybrid cloud	With this technology, banks gain the flexibility and advantage of private and public clouds while dealing with data management, security and compliance. There are other many benefits, including improved operational efficiency, improved innovation and reduced costs.
API (Application Programming Interface) platform	Open banking is a valuable asset for organizations as it enables them to improve their service offerings, build new digital revenue channels and improve customer engagement.
Automation of robotic processes	It refers to the use of a software robot designed to perform strenuous tasks. Ideal for numerous banking applications, it can reduce manual workload so employees can focus on banking and decision-making.
Artificial Intelligence	It can help organizations overcome traditional challenges (customer service) and bring the power of data analytics to combat fraudulent transactions and improve compliance.
Blockchain	Lately, cryptocurrencies have been taking over the banking world. Applying Blockchain technology could potentially save billions of banks by drastically reducing processing costs.
Quantum computing	Quantum computers use the basics of quantum mechanics to speed up solving complex calculations. Significantly, quantum computing could open up new opportunities for banks, most concerned with risk assessment and trading.
VR (virtual reality) and AR (augmented reality)	Many banks use virtual reality to enhance their customer experience. Both AR and VR offer customers and employees a rich visualization of data and services through projection.

Source: author, according to Editorial team, 2019.

FinTech facilitates access to new financial services, that is, through FinTech is facilitated faster and cheaper access to capital, especially through mobile financial applications. The adoption, acceptance and ultimately use of this type of new technology and innovation is higher at the younger population, who are more

inclined to accept and use the novelty than the older population. FinTech reflects on the users of the service, the service providers but also on the regulation and the need to capture and regulate the implementation of FinTech. The younger generations prefer FinTech technologies and are more inclined to innovations and to do business through financial applications, while less preferring to contact and do business with traditional banks. The FinTech revolution has encompassed the global market, and its mostly affecting the financial and banking sectors, which is a very big challenge for the survival of traditional banking. With all of the above "FinTech has led to greater systemic and systematic risk due to shadow banking and greater interlocking within the financial industry. For the solvency focused regulators, there will be a constant challenge of monitoring and improving the existing regulations" (Sangwan et al., 2020). „Implementation of technological innovations can improve business through the possibility of applying advanced information and communication technologies as well as process automation, which as a consequence can increase the efficiency and effectiveness of organizational processes" (Buntak et al., 2019).

Blockchain Technology and Bitcoin

Blockchain is a new technological innovation, new technology that works through a platform that enables multiple applications in economic transactions. The most common definition is that it is an accessible decentralized database in which transactions are performed anonymously. To put it simply, blockchain means an automated system of shared data. Blockchain technology actually covers the role of the ledger in which each transaction is recorded. Every system that uses blockchain technology is built according to a peer-to-peer system (Cunjak Mataković & Mataković, 2018). There are many authors and definitions about Blockchain technology. Chen et al. (2019) defined blockchain as "distributed ledger technology, including cryptocurrency technology (e.g. Bitcoin), as well as other blockchain technology with a primary application to financial services.". Also Chen et al. (2019) argued that blockchain was "the fastest-growing area of FinTech innovation" and "held large future potential in financial services." Chuen (2017) believed blockchain to be "the main game changer" in the fourth industrial revolution. Bitcoin is the most widespread type of cryptocurrency and after 2013. it is gaining popularity after the fall of some banks and problems with trust in financial institutions. Cryptocurrency is actually a trusted digital currency (equivalent of digital money). Trust is important here because of the distrust of traditional financial institutions after the great crisis in 2008. Cryptocurrency trust is gained by solving a particular cryptographic problem. The crudest sounds are that trust is value, and value brings money (Sajter, 2018). Cryptocurrencies are cryptographic mechanisms that generate and mark transactions using private and public keys. Each transaction contains security in the form of a digital signature that generates from a combination of message and private key transactions, which means that signatures are different and breaking the code is impossible without the original private key. What sets this money transfer method apart is its simplicity because everything is done online. Also, the simplicity is that transactions are not executed through third parties such as banks and other institutions (Cunjak Mataković & Mataković, 2018). Cryptocurrencies have become more widespread in recent years and are one of the most significant financial innovations in the first half of the 21st century while first cryptocurrency is Bitcoin.

Neobanks

Mobile banking is a big part of the financial industry. In the world of personal finance, consumers have increasingly demanded easy digital access to their bank accounts, especially on a mobile device. Most major banks now offer some sort of mobile banking feature, especially with the rise of Neobanks. Neobanks are, in fact, banks with no physical branch locations, serving customers with checking, savings, payment services and loans on fully mobile and digital infrastructure. Neobank is also known as online bank, internet-only bank, or digital bank. The term Neobank first became prominent in 2017. to describe Fintech based financial providers that were challenging traditional banks. Examples of Neobanks in America are Chime and Simple, while the largest neobanks in Europe are N26 and Revolute. Throughout the text, the Chime and N26 are explained. NeoBank Chime was founded in 2013, with headquarters in San Francisco (California, USA). The founders are Ryan King and Chris Britt. The vision of this Neobank is that each individual has their own kind of financial peace, that is, to manage the money as they want, simply and quickly, without any difficulties. Chime operates with Visa debit cards. Each use of a Visa card Neobank generates a certain income by paying from the merchant, without being charged from the user (main phrase; "We do not make a profit from you, we make money with you.") Joining a bank is easy. The first step is filling in the form, then a video call with the operator regarding more detailed information and filling in other information. This is followed by the delivery of the bank card. In this case, a Visa debit card arrives at the home address, with which transactions can be made in all places. The biggest advantage of this Neobank (and most of the Neobanks in the world) is that it does not pay monthly maintenance fees or fees for international transactions. Also, no transaction fees are charged between the two diversified banks, which greatly facilitates a customer without paying unnecessary fees. Their top priority is the security of information and money in the system. For security, the 128-bit AES (Advanced Encryption Standard) encryption, access control and secure processes are used. The Neobank N26 was also founded in 2013., with offices in Berlin, Barcelona, Vienna, New York and São Paulo. The founders are Valentin Staf and Maximilian Tayenthal. The idea with which Neobank N26 is created was the idea of creating pre-paid cards (called Papaya) for teenagers who purchased various applications on the Apple store (so called store that comes with an Apple computer company and their products). Preipad cards have made it much more easier for parents to keep track of costs through an online database. The vision of the Neobank N26 is to transform the way users manage their money with the latest technology and with the help of best individuals in the profession, working to improve the operations of Neobank. The first product launches was in 2015, when they first opened free bank accounts and cooperated with Mastercard in Germany and Austria. In 2016, they secured a full European banking license from the European Central Bank. In 2020., they reach 5 million users in 25 markets around the world, placing them among the leading Neobank in the world. With their market positioning they have spread all over the world. The Neobank N26 is a mobile-operated that manages a moving bank account where money is spent in real time. The account is opened via a mobile device on the website of Neobank N26. When opening an account, one of the three offered options is selected. The first option is free, while the other two charge monthly fees for maintaining the account. After selecting one of the options, each user receives a Mastercard debit card, accepted worldwide, at their home address. Transactions are easily made through the same mobile application, and all transactions (despite different banks) are immediately visible. For Card security, Mastercard SecureCode's 3D Secure is used to help prevent online

payment fraud. An additional protection for an application on a mobile device is by setting a fingerprint where only the actual user of that account can log in to the Neobank mobile application. Neobank is under the supervision of financial market regulators and meets all European regulatory requirements. Each user is guaranteed protection up to 100,000 € by the Deposit Protection Fund.

Research overview

The aim of this paper was (1) to analyze and investigate the importance of digitalization and digital transformation and the impact on Fintech (2) to analyze and explore Fintech's innovation and novelty areas in the financial sector, (3) to provide an overview of the research literature in these areas. In order to achieve the set goals, numerous world literature was analyzed, which explores the field of digital transformation and Fintech. A number of international researches have recently dealt with and studied FinTech's topic and area of digital transformation and the degree of development of innovations in the financial sector. Today, FinTech is a field of numerous research and topics by numerous authors across various fields. Numerous studies that have touched upon this topic have proven the impact of digital transformation on the so-called. FinTech's level and the degree of development of numerous novelties and innovations.

Table 2
Literature review

Source	Paper title	Main results
Corbet et al. (2020)	KODAKCoin: a blockchain revolution or exploiting a potential cryptocurrency bubble?	The authors analyze the relationship between the company Kodak, the crisis and the value of the stock market index. Through the research, the authors demonstrated a significant, continued rise in share price and Kodak price volatility following the announcement of KODAKCoin, with an increased correlation between Kodak and Bitcoin stock prices.
Boratyńska (2019)	Impact of Digital Transformation on Value Creation in Fintech Services: An Innovative Approach	The author explores the economic and financial characteristics of Fintech, which contribute to the added value of the financial services industry. Through the research, digital transformation theory and ecosystem theory have been presented and their connection to Fintech problems.
Wang et al. (2019)	What determines customers' continuance intention of FinTech? Evidence from YuEbao	Using FinTech technology, YuEbao (China) explores the effects of trust in a Fintech service as well as social factors when developing trust in a service
Hua et al. (2019)	Current practices, new insights, and emerging trends of financial technologies	The authors provide an overview of research and some key areas of FinTech, such as artificial intelligence, blockchain, crowdfunding, and present key contributions from the research areas
Caton (2019)	Cryptoliquidity: the blockchain and monetary stability	The author examines cryptocurrencies and states that cryptocurrencies represent the ability to implement rules through them that can affect macroeconomic stability

Sung et al. (2019)	An exploratory study of the FinTech (Financial Technology) education and retraining in UK	The authors explore two key areas: online search trends related to FinTech technology from a UK business and education perspective, and the current strength of FinTech related job distribution
Sangwan et al. (2019)	Financial technology :a review of extant literature	The authors provide an overview of existing research in the field of Fintech and summarize the research and conclusions.
Salah et al. (2019)	Blockchain for AI: Review and Open Research Challenges	The authors present an in-depth study on blockchain applications for AI (Artificial intelligence)
Panos and Wilson (2019)	Financial literacy and responsible finance in the FinTech era: capabilities and challenges	The authors explore financial literacy and the importance of understanding it at the level of individual
Dolan et al. (2019)	Off the Chain: Blockchain Technology—An Information Organization System	The authors explore the possibility and benefits of blockchain technology
Bai and Sarkis (2020)	A supply chain transparency and sustainability technology appraisal model for blockchain technology	The authors explore the successes of blockchain technology, which they include through sustainable supply chain transparency, and presents a new method for selecting blockchain technology
Zheng et al. (2018)	Blockchain challenges and opportunities: a survey	The authors conduct research on blockchain technology, that is, provide a taxonomy of blockchain, review blockchain applications, and observe recent developments
Chiu (2017)	A new era in Fintech payment innovations? A perspective from the institutions and regulation of payment systems	The author analyzes the existing payment institutions and infrastructure, that is, how existing institutions support today's payment infrastructure in many parts of the world
Gabor and Brooks (2017)	The digital revolution in financial inclusion: international development in the Fintech era	The authors explore in their importance the financial inclusion at the digital level as a form of organizing development interventions
Chen (2016)	From Fintech to Finlife: the case of Fintech Development in China	The author explores development and financial innovation in China

Source: Authors' research, 2020.

Conclusion

The use of FinTech in the global market is a very big challenge for the whole system and especially for the financial industry and the banking system. A number of FinTech tools and innovations create mechanisms that are designed to create added value and ensure sustainable competitive advantage. There are studies that deal with the FinTech revolution and its development, but there is still insufficient number of research and insight into how it will affect the existing financial industry as well as the business management models in the financial sector. For the market, FinTech presents a very big challenge and great benefits but also a number of threats. This paper provides an overview of FinTech innovations such as Bitcoin, Blockchain technology that have been researched through the literature, but also provides an overview of new innovations and novelties such as Neobanks, which are

among FinTech's innovations and areas which have so far not much been explored. As can be seen through the review of the research, the FinTech area, and that are Neobanks, do not have specific research that gives an overview of the importance of Neobanks for the financial industry. Neobanks compete with traditional banks and are the basis for added value and sustainable competitive advantage, and with a visible lack of research in this area it is a recommendation and goal for further research in the area.

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