

RESEARCH ARTICLE

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Impact of COVID-19 on Fintech Industry of Kazakhstan: New Challenges

Amit
Dutta^{1*}

Raigul D.
Doszhan¹

Laura A.
Kuanova¹

Galymzhan Sh.
Beisembayev²

¹ al-Farabi Kazakh National university, Almaty, Kazakhstan

² Kazakh-British technical university

Corresponding author:

* **Amit Dutta** - PhD candidate, Al-Farabi Kazakh National University.
Email: amitdutta79@yahoo.co.uk

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Abstract

The aim of the research is to assess the spread of a new type of finance –Fintech in our country in the financial services sector, the potential impact of Fintech on market players and identify its challenges. Issues related to the impact of the pandemic and Fintech development are widespread worldwide and have significant global significance. Fintech is a potential solution to social, environmental and economic problems in general by transforming financial markets in such a way that they are more efficient, and their impact has increased many times with the onset of the pandemic. The problems of developing the concept of Fintech development in Kazakhstan are being discussed in scientific circles, but it is still at the initial stages. This study is part of our research project aimed at getting a brief idea of what changes and how the functioning of the Fintech industry has changed due to the impact of COVID-19 in Kazakhstan. The research paper describes the sectors of the Fintech industry and what reforms have been carried out so that COVID-19 will help the sector flourish after the pandemic in Kazakhstan. The analysis tool is a statistical study of the financial market. The central result is the identification of current global trends in the development of Fintech in the country during the pandemic. It is based on the general scientific method of systematization of theoretical data, as well as on the method of comparative and statistical analysis.

Keywords: Fintech, Economy, Finance, Financial Services, Astana International Financial Centre, COVID-19

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1. INTRODUCTION

Today, the international economy is at the beginning of its recovery from the impact of Covid-19. Coordinated actions between accounting and innovation caused accelerated progress in finance, venture business, trading and digital money. This is only the tip of the changes taking place in the economies of states. According to Alt and Puschmann (2016), the financial sphere has been developing for centuries: the creation of the first bank in 1472 gave rise to many enterprises, including brokerage firms, insurance companies and real estate agencies.

While financial resources are essential in developing countries, technological capabilities have become far more important in developed countries. This suggests that as firms move into deeper stages of e-business transformation, the critical determinant of e-business value shifts from monetary spending to higher dimensions of organizational capabilities (Zhu et al., 2004).

In recent years, thanks to technological innovations and their integration with finance, Fintech is rapidly changing how traditional financial services are provided, significantly impacting banks' activities. At the same time, Fintech is increasingly impacting the real economy (Luo et al., 2022). As an emerging form of business, Fintech is a significant innovation based on the progress of social science and technology and the development of a financial form of business that will stimulate the modernization of the financial business. Meanwhile, compared to traditional financial services, financial services based on Fintech have greater flexibility, security, efficiency and capabilities (Gomber et al., 2017).

Fintech not only stimulated the majority of researchers' innovation in the financial sector but also changed the format of financial services in industry, trade and agriculture to manage business processes at all levels (Nazarov et al., 2022).

Recently, the rapid growth of Internet-based services has profoundly impacted the traditional financial sector. Now, Fintech companies are expanding their business scope beyond online payment systems into advanced financial services, from money market funds (MMFs) to lending services, online funds, and Internet-based private banking services. Fintech is a portmanteau that combines the words «financial» and «technology» (Shim et al., 2016). As a rule, Fintech refers to innovators in the financial sector who use the availability of the Internet. Such companies have new business models that promise greater flexibility and efficiency. Leveraging the Internet, firms in this industry can operate in more markets and provide more services than before.

The offline industry increasingly integrates with online technologies, with Internet-based technology developing rapidly and dynamically. The financial sector has relied on technology to bring new services to market for some time now. For example, the introduction of the automated teller machine (ATM) in the 1960s changed how customers dealt with their financial assets (Barberis, 2014).

Diemers et al. (2015) suggested that entrepreneurs, government, and financial institutions are the participants in a Fintech ecosystem. Financial services sector, Fintech start-ups offer consumer-oriented banking, insurance, and other financial services (Alt & Puschmann, 2012).

Lending in the field of Fintech (P2P and marketplace lending), provided through technology and without the participation of banks, is a different financing key for both businesses and individuals (Claessens et al., 2018). Buchak et al. (2018) in their work discuss the cursory progress (from 10 to 25%) of a part of online fintech lenders. In a corresponding study, Fuster et al. (2019) revealed that the driving forces of fintech process mortgage loans faster than classical banks, and at the same time, they do not always have a high risk.

The widespread promotion of the word “Fintech”, a temporary structure for denoting financial technologies, was caused by this growth. Fintech is much more than just a reference to innovations related to finance. It is also referred to as a creative invention used to improve methods combined with customer money and create effective response measures for budget

administration that correspond to new mechanical trends that are normal. Banking programming and portable financial applications are excellent examples of progress in monetary creativity. Currently, a structure has been built in Kazakhstan that allows newly minted enterprises to grow significantly into huge organizations. New Fintech firms are promoting progress that was considered difficult to achieve, directly from exploring many unexplored parts to external market sectors. COVID-19 also caused disruptions, affected every sector and disrupted its functioning, and the Fintech industry was no exception. While most Fintech companies are struggling with the upheaval caused by the COVID-19 pandemic, many firms are introducing new methods to solve problems and save their businesses. This has led to a change in payment habits in the context of the pandemic and has opened the way for artificial intelligence to recreate the human touch for interaction regarding payments. While the sector conjures up images of startups and technologies that are developing in the market, ordinary businesses and banks still actively use Fintech services for their purposes.

It should be emphasized that the influence of restrictions that stop the normal life activity of Kazakhstanis has been promoting the purchase of essential products via the Internet since March 2020. Severe isolation due to the increase in the number of deaths and the spread of the virus has led to the closure of retail facilities in almost all areas of the country. Summarizing all of the above, this article raises the main research question: How did Fintech develop under the influence of the COVID-19 pandemic?

The authors of this article assess the spread of new type of finance –Fintech in our country in the financial services sector, the potential impact of the Fintech on market players and identify its challenges. In addition, the authors highlight the Fintech development under Covid-19 impact in Kazakhstan.

2. MATERIALS AND METHODS

This research methodology is based on the laws of dialectical logic, system and situational approaches. The use of a systematic approach allows a comprehensive assessment of the ongoing processes in the analysis of the development of Fintech. The need conditions the situational approach for a timely assessment of the development of the Fintech sector in the Republic of Kazakhstan and the study of new challenges arising in the economy. During the study, preliminary information is collected through desk research, including the collection and analysis of official reports of the Astana International Financial Center, which is the main engine of progress on the part of the state. Conducting a critical analysis of scientific literature on the topic under study involves using of classification and systematization methods, analogies and comparisons. The main methods of cognition used are synthesis, structuring, analysis, expert-analytical and others. The analysis method allows us to study various aspects of the perception of Fintech and its features. In accordance with the purpose, as well as the available initial data, preference is given to the use of qualitative methods, namely methods of expert opinion, which allows processing information, applying the results to develop and adopt correct conclusions. The systematization of the data obtained during the study is carried out based on the method of tables. The graphical method is used to visualize the source data, the results obtained and their interpretation.

The primary purpose of this study is to examine the Fintech sectors in the Republic of Kazakhstan and see growth or decline due to the impact of Covid-19. Based on this goal, we have identified the following tasks in our study:

- Analyze Fintech sectors in Kazakhstan.
- Evaluate and analyze the impact of COVID-19 on the Fintech industry in Kazakhstan.

The structure of the study includes an investigation that was conducted on the basis of a

pandemic study from the beginning of COVID-19 and covers the changes taking place in the Kazakh Fintech Sector to this day in the post-COVID period.

The research paper was developed using secondary data sources from articles on Fintech and other scientific data from the world and Kazakhstan.

In recent years, the abundance of academic research on the impact of the COVID-19 pandemic on various sectors of the economy has increased significantly, especially in the Republic of Kazakhstan. Individual studies are focused on studying the digital environment, digital tools and online platforms. The remaining studies focus on digital skills and digital technologies, including public networks and platform design. Thus, the digital divide is the discrepancy in access to resources, as well as limited possibilities of application and methods of interaction with ICT (information and communication technologies). It is necessary to consider the formation of Fintech.

The main result of the research work is the identification of modern global drivers of Fintech development in the country. While some studies have focused only on species descriptions, other works have focused on how modern technology has evolved. After thoroughly analysing various academic sources, a list of the most valuable for a particular study was compiled. The reports of the National Bank of the Republic of Kazakhstan (NBK) and the Astana International Financial Centre (AIFC), the international studies of the Big Four companies, have practical meaning, interest and relevance for research. The results of the study can be used in perfect combination with other studies to coordinate or even contrast modern views on the management and economics of green finance. This publication is devoted to key issues. Based on the fact that the data of the AIFC study and government programs, where the impact of Fintech on the economy was clearly reflected, we can talk about a sufficient impact and significant changes in the financial market using Fintech in a pandemic.

3. RESULTS AND DISCUSSION

Technology is changing the landscape of the financial sector, significantly expanding access to financial services. These changes have occurred for several years and affect almost all countries. During the COVID-19 pandemic, technology has created new opportunities for digital financial services to accelerate and expand access to financial services amid social distancing and containment measures. At the same time, the risks that arose before COVID-19, with the development of digital financial services, become even more relevant.

Fintech mainly started in 1990, when the importance of the Internet and e-commerce increased. Due to customer expectations, Fintech companies are forced to provide services that can be implemented in the long term. Fintech companies have launched crowdfunding to maintain direct relationships with customers. Fintech companies also play an essential role in the insurance industry (Insure Tech), which includes everything related to policies, data processing policies, etc. Robo-consulting helps in asset management, which provides recommendations to clients that do not require human control (Fintechweekly, 2020).

According to Matthew Blake, Peter Vanham and Dustin Hughes, this broader concept that uses technology to plan and deliver financial products to customers according to their choice and convenience. Financial companies and old-style startups have started using Fintech technologies. To regulate and protect the interests of clients' investors, they have many SEBI (Securities and Exchange Board of India), Consumer Financial Protection Bureau, Office of the Comptroller of the Currency, Financial Industry Regulatory Authority, Federal Depository Insurance Corporation, etc. (Blake et al., 2016).

In his paper on the evolution of Fintech (Arner et al., 2016). Hong cop presents the genesis of term "Fintech" as a continuous process during which finance and technology have evolved

together. Similarly, this term is considered in the work of Chishti and Barberis (2016). The authors cite several examples of how the collinearity of the development of the financial sector and information technology has led to innovations in the financial services sector at the level of business, government and banking. Such innovations were primarily associated with Internet banking, mobile payments, crowdfunding, peer-to-peer lending, online identification, etc.

According to the World Bank glossary, Fintech is defined as encompassing advances in technology and changes in business models that have the potential to transform the provision of financial services through the development of innovative tools, channels and systems. For this study, Fintech refers to a set of activities (which can be both regulated and unregulated, depending on each jurisdiction) that contribute to the provision of financial services, which are mainly facilitated by organizations that arise outside the traditional financial system (such as the banking industry or capital markets) (World Bank, 2020).

According to the article by authors Doszhan and Sabidullina (Doszhan et al., 2022), the COVID-19 pandemic has significantly impacted countries' economies. On the one hand, quarantine measures and related restrictive measures made it possible to contain the spread of COVID-19, but at the same time, significantly limited economic activity. In this regard, to mitigate the effects of the COVID pandemic and ensure post-crisis recovery, many Governments are reviewing national development plans and strategies.

According to a study conducted jointly by the AIFC team and regional expert partners PwC, Deloitte and KPMG, over the past few years, Fintech has significantly impacted the transformation of the global financial sector. The study identified four of the most promising segments in the region: payments and lending, digital banking and trading platforms. Developing the segments mentioned above in the region depends on creating and effectively functioning in the Fintech ecosystem. This can be achieved by developing technologies and increasing demand for Fintech services and products by taking measures to provide capital to Fintech companies and improving the regulatory framework and personnel reserve. According to this study:

- Kazakhstan creates conditions for direct investments and venture funds;
- Recently emerged local venture capital firms (Aztech ventures, Ventech, BTS, Global Venture Alliance I2BF) and funds, increasing the activity of angel investors (KazAngels);
- Kazakhstan provides access to traditional and innovative ways of financing and raising capital through regulatory support for crowdfunding and ICO;
- Tax incentives for effective capital raising;
- Acceleration/incubation programs;

What is FINTECH in Kazakhstan before Covid-19?

In 2018, the audit company Deloitte conducted a comprehensive independent study on trends in the financial technology (Fintech) market in Russia and Kazakhstan. According to the research, the development of the Fintech market is stimulated by three fundamental factors:

- growing demand — the growing demand for financial services received by both the population and businesses via the Internet or mobile communication;
- the activity of the regulator — the activity of the authorities, as a result of which a single national Fintech space and infrastructure is formed;
- dynamic supply — high sensitivity of Fintech companies to growing demand (regular entry into the market of new products and services).

What is FINTECH in Kazakhstan during COVID-19 period?

The current situation with COVID-19 will likely lead to the beginning of one of the most profound crises in Kazakhstan since the collapse of the USSR because COVID-19 caused a global economic crisis, the scale of which is still difficult to assess fully. In today's market, the most vulnerable industries are small and medium-sized enterprises, retail trade in non-food products,

aviation, oil and gas industry, mining, transport, energy and utilities. Financial organizations have switched their attention to the accelerated creation and development of digital products.

Local customers are actively entering the Internet: statistics from 2014 to 2018:

- the volume of non-cash payments increased by 726%
- the number of Internet transactions increased by 2365%
- the volume of Internet payments increased by 7513% (from 5.3 billion tenge to 405.5 billion tenge)
- the number of transactions in POS terminals increased by 1021%, while volumes increased by only 352% (AIFC 2019).

Figure 1 shows government support as a result of COVID-19 in Kazakhstan and others countries.

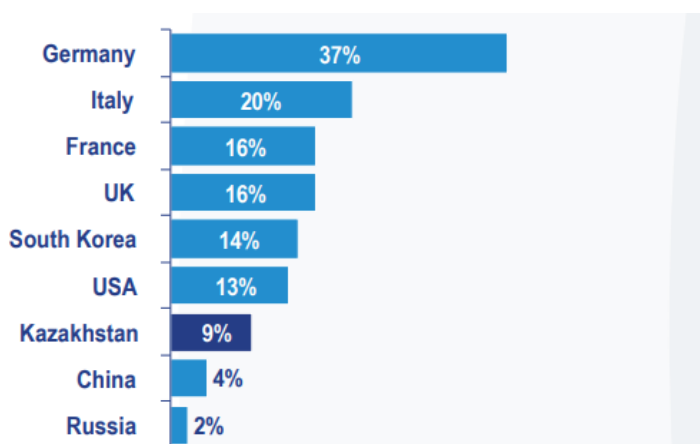


FIGURE 1. Government support as a result of COVID-19 as a share of 2019 GDP

Note: Compiled by authors according to the data of KPMG (2020)

What is FINTECH in Kazakhstan during post COVID-19 period?

In recent years, there has been significant progress in the development of the financial technology market, and the COVID-19 pandemic has accelerated this process. Now Kazakhstan is leading in the development of the financial technology market among the countries of Central Asia. Over the past five years, the number of payment cards in circulation has increased by 46.7% to 46.8 million. Thus, every working citizen of Kazakhstan has an average of 5 payment cards.

In addition, with the development of electronic commerce and online lending, non-cash transactions have grown significantly in the country. So, for eleven months of 2020, the volume of non—cash payments has already amounted to 30 trillion tenge - more than 2.5 times more than in 2019. At the same time, 81.5% of non-cash payments were made online. Today, almost all banks in Kazakhstan have remote service systems, and the number of users of online banking services increased by 51.6% over the year to 27 million (a year earlier — 18 million).

Next, Table 1 provides an overview of the fintech sector, strategies and barriers.

TABLE 1. Fintech sector overview, strategies and barriers

| Top development strategies | Top barriers |
|--------------------------------------|--|
| Implementation of new technology | Low appeal for foreign investors |
| Launch of new products in the market | Low purchasing power of the population |

| | |
|--|---|
| Entry into new markets | Deficiencies of government regulation of the industry |
| Organic growth | Geopolitical risks |
| Higher promotion and marketing expenses | Lack of flexibility in the tax system |
| Cost cutting | Cyber threats |
| Short-term capital optimization and operating model revision | Currency risks |
| | Weak protection of the personal data |
| <i>Note:</i> Compiled by the authors on the basis of AIFC (2020) | |

Digitalization directly benefits consumers of financial services associated with increased inclusion, increased access to services, reduced costs and reduced time spent on transactions. The introduction of digital interfaces makes it possible to expand the possibilities of interaction between suppliers and consumers of financial services and increase competition in the financial market.

Thus, the leading fintech industries of Kazakhstan are presented in Figure 2.

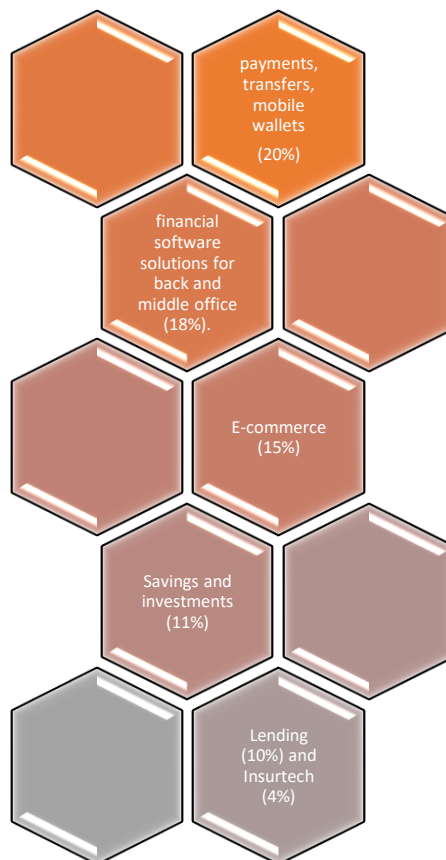


FIGURE 2. Leading sectors in Fintech Kazakhstan

Note: Compiled by authors according to the data Tech Hub (2021)

Essential and valuable works used in writing the article were also “Digital Kazakhstan” and the Astana International Financial Center, where the impact of financial technologies on the economy was fully reflected in digital format, due to which there is relatively large impact and changes in the financial sphere. However, the legal status of Fintech services in Kazakhstan's lending field is still uncertain. This situation is risky for companies providing credit services via the Internet since, at any moment, the state can unilaterally change the game's rules. In order to minimize risks, the Kazakhstan FINTECH Association has started a dialogue with the authorized body represented by the National Bank of Kazakhstan in order to cooperate in making appropriate changes to the legislation (Doszhan, 2020).

Groups of incentives from the state in the direction of Fintech ecosystem presents in Figure 3.



FIGURE 3. Fintech ecosystem in Kazakhstan

Note: Compiled by authors according to the data from AIFC (2021)

As the Fintech field matures, well-defined tools appear with which Fintech players can achieve success. First of all, it focuses on the client's needs. Thanks to their customer focus, companies can revolutionize the market by making services cheaper, creating new business models and working with (or against) established market players to expand existing solutions. Financial

services are being “reborn” to meet the needs of users who can no longer imagine their lives without the Internet. This is a global trend that will continue.

The adoption rate for the six markets from our first survey – Australia, Canada, Hong Kong, Singapore, the UK and the US – has surged from 16% in 2015 to 31% in 2017, to 60% in 2019. Over five years, these six markets have become excellent case studies in the maturation and globalization of the industry (Doszhan, 2020).

The Fintech landscape in Kazakhstan has changed dramatically with lightning speed over the past couple of years and has become one of the largest Fintech markets in Central Asia. Since COVID-19 seriously disrupts various work processes in various sectors of the country, the Fintech sector continues to be one of the areas in the structure and work of which there is a huge instability due to the significant shift in online technologies caused by the pandemic. Due to the pandemic, many companies have focused on product and process innovation to become more customer-centric and build capacity to overcome major disruptions.

The coronavirus has brought visible adjustments to the development plans of firms worldwide. The measures implemented by the Governments of the countries have led to the selective or absolute closure of companies. Against this background, new opportunities have emerged for companies in the fintech sector. So, according to a report by Tech Nation and Dealroom, Fintech showed reliability during the development of the coronavirus. In 2020, London technology firms accounted for 39% of all venture capital investments. Another study conducted by the consulting firm deVere Group reports that against the background of the pandemic, the population of Europe has become 72% more likely to use Fintech applications. There is a similar picture in Kazakhstan and Central Asia. Thus, in Kazakhstan, financial institutions have stepped up the development of digital services due to the temporary closure of branches of banks and other credit institutions. For example, against the background of quarantine, the service of remote opening of card accounts appeared for the first time. By the end of April, more than 1 million people opened card accounts online, and about 700 thousand received cards with home delivery. The nature of the development of Fintech and the emergence of new services that can be obtained without visiting banks will continue to develop, experts believe. So, the final study "The State of Fintech in Central Asia: how Kazakhstan manages the regional Fintech industry", which was prepared by AIFC professionals, indicates an opportunity to develop mobile and Internet banking. About half of the residents of Central Asian states are still not covered by financial services, but the development of Internet networks can fix this situation. For example, in 2019, Central Asia's average Internet penetration rate was 49%, which already gives banks new opportunities to develop their digital systems. This is especially possible in Kazakhstan, with 79% penetration and Kyrgyzstan, with Uzbekistan, where the figure is about 50%.

Mobile banking will help financial institutions present their services to the populations of rural areas and rural areas without branches. Due to the good indicators of mobile Internet access – more than 60% on average in Central Asia – this is a plausible scenario.

Strategies to Overcome COVID-19 Challenges

Digital financial services can thrive where customers are forced to accept or use online platforms to digitize health risks. Fintech tactics will be at the level where the value of providing such services directly to end users or considering opportunities for cooperation with larger groups of people. Also, for Fintech business models, the transition to non-physical platforms, such as contactless payments, digital connections, credit assessment and payment processing, can be a significant help.

Fintech has digitized historically underserved catering markets. In the current situation, this is important, especially when the government is trying to distribute benefits in the most vulnerable areas, Fintech can explore such places to diversify its business model and services.

At this time, business models that can offer or disseminate information about safe and healthy products may have an advantage over others. Fintech companies can get a hint from the market leaders of food delivery channels, those focused on customer safety reasons to keep users active.

Fintech will need to look at its working methods from the inside while having the opportunity to simplify and digitize the customer experience.

Remote work will require joint investments, data transmission infrastructure and business promotion security. Technology players will find potential buyers to increase internal efficiency. Fintech responds quickly to economic challenges and develops creative consumer goods and services. It was reborn after the global financial crisis of 2008, and provides financial services with the consumption of critical services. It could also expand the portfolio's access to core services, which include lending, wealth management portfolios, or enterprise partnerships.

Strategic recommendations:

1. Asset management

- Considering the obstacles associated with COVID-19, promote more work on home culture and maintain social distance.

- Important decisions should be made after considering every aspect, whether hiring labor or paying them wages

- Implement innovative ideas and train staff to ensure smooth operation and increase productivity.

2. Reassess business models

- The point of view of consumers plays an important role in creating a new business model in accordance with what the new normal culture will look like.

- Strategic planning of launching new products in diversified channels.

5. CONCLUSIONS

Fintech is a trend in the development of socio-economic development around the world. The regulation of the Fintech sector in Kazakhstan, as in most emerging market economies, lags behind developed countries in this regard, such as the countries of the European Union, the United States, and China.

In total, the following points can be distinguished:

1. The current situation with COVID-19 is likely to cause one of the most profound crises in Kazakhstan since the collapse of the USSR since COVID-19 caused a global economic crisis, the scale of which is still difficult to assess fully.

• Participants of such segments and sectors of Kazakhstan's economy as SMEs feel the most vulnerable in the current market environment.

2. Companies in all sectors of the economy (except the telecom sector) have put the implementation of capital-intensive investment projects on pause or are revising towards more "budget" solutions for implementing these projects.

3. The state needs to rethink approaches to ensuring security in the health sector. In addition, the crisis will also significantly change the business landscape and adjust the setting of strategic goals on the part of both the state and the business. The global economic crisis and the decline in consumer opportunities are the main cause of concern for companies in the field of Fintech.

At the same time, awareness of the new challenges of Fintech is growing both at the level of the Government of Kazakhstan and regulatory authorities, as well as at the level of individual companies and financial institutions. The key structure on the Fintech agenda of Kazakhstan is the AIFC, and enjoys huge state support. Summing up, in order to stimulate the development of "green" financing in Kazakhstan, in our opinion, it is necessary to implement a set of measures:

1. Development of the regulatory framework governing the introduction of Fintech financing;

2. Further study of the best practices of leading countries on introducing Fintech tools in the economy of the USA and Singapore.

3. State stimulation of small and medium-sized businesses within the framework of Fintech.

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AUTHOR BIOGRAPHIES

***Amit Dutta** - PhD candidate, Al-Farabi Kazakh National University, Almaty, Kazakhstan. Email: amitdutta79@yahoo.co.uk, ORCID ID: <https://orcid.org/0000-0002-9744-4104>

Raigul D.Doszhan – PhD, associate professor, Al-Farabi Kazakh National University, Almaty, Kazakhstan. Email: raiguldos2011@gmail.com, ORCID ID: <https://orcid.org/0000-0001-7480-3568>

Laura A. Kuanova – PhD, Al-Farabi Kazakh National University, Almaty, Kazakhstan, Email: kuanova.laura@kaznu.kz, ORCID ID: <https://orcid.org/0000-0002-7354-4506>

Galymzhan Sh. Beisembayev - Phd candidate, Kazakh-British technical university, Almaty, Kazakhstan. Email: galymzhan.beisembayev@mail.ru, ORCID ID: <https://orcid.org/0000-0003-2108-3258>