

continue to improve. For Kazakhstan, Islamic Sukuk securities and Islamic financial products are still considered a topical issue.

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УДК 336.711

INFORMATION TECHNOLOGY AS A FOUNDATION OF INNOVATIONS IN THE BANKING SERVICES IN THE KAZAKHSTAN

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Abstract. The article describes the main role of information technology and its foundation in the banking services of the Republic of Kazakhstan. In a modern world banking sector, where the final product is becoming less tangible, none of the participants can succeed without innovative development, following the needs of customers and creating value based on trust. The information technology of the innovations in the banking service is analyzed.

Keywords: technology, innovation, banking service, commercial banks.

Research methods. in the process of research statistical methods and analysis were used.

Purpose of the study: The purpose is to explore the foundation of information technology of innovations in the modern time of banking services in the Kazakhstan

Introduction. Kazakhstan's banking sphere is entering a new era of their development. And in this case we are not talking about a new wave of associations or the allocation of the next tranche from the state budget to maintain the stability of the

sector. New technologies, which are already actively used by financial institutions abroad, are now increasing interest to Kazakhstani players.

Results of the research. The innovations in the banking services in Kazakhstan are just started to take shape. In order to be at a high level of innovation development, Kazakhstani banking sphere need to determine the priority areas of the development of banking technology, based on information technologies.

Conclusion. Information technology in the banking services in our country are beginning to spread recent years. Therefore banking sphere needs to develop a strategy for development of information technology in the innovations. The main goal should be to focus on the constant creation of new, more advanced information technologies of innovation in it.

Introduction. The modern stage of the development of the banking sector is characterized by three main trends: the increasing role and share of innovative technologies, the increase in the volume and diversity of banking services, the creation of new segments of the public service market. As we had seen for example one of the leading bank in our country ForteBank last year hosted a roundtable "Fintech Talks" with the participation of the best technical minds of the republic. Bankers and It-specialists were discussing new trends in the banking sector.

To ignore the emergence of innovations and breakthrough projects today is to ensure the loss of market positions tomorrow. In this regard, ForteBank actively develops innovative areas, including Internet and mobile banking, data collection and processing, providing innovative new services and services to customers. We do not see fintech as a threat, but on the contrary, we are ready to actively cooperate with interesting projects.

In the market, for example, every year grows the number of bonuses that please the banks of their cardholders: the owner of the "plastic" is guaranteed a certain amount of cash return through the mechanism of cashback (the term meaning return of funds on the card), the owner is offered a significant number of discounts in partner companies [1]. Sometimes, the client even runs a percentage on the balance of funds on the card at the end of the month, as if it is not a card account, and a deposit.

Nowadays the innovative complex of the banking services should be considered an integral element of the entire bank as a system along with such elements as the investment development subsystem, the risk management subsystem, the asset and liability management subsystem, etc. The innovation complex includes planning and budgeting for innovative development, stimulating and motivating personnel, monitoring the implementation of innovations, information support of the innovation process. (Table 1)

To date, 17 million cards have been issued in Kazakhstan. Only 9 million are regularly used. However, the main card service in the country is cash withdrawals, and in the sales sector most buyers prefer to pay in cash. In other words, we have not developed a developed card culture yet.

Table 1 - Classification of innovations in the banking sector

Aspects	Meaning
Technological parameters:	Product innovations – new types of banking services: passive and credit operations, financial services, settlement (with clients) and interbank operations. Process innovations – new methods of organizing calculations and performing operations. For example, information technologies (automation systems for data processing and communication facilities); new organizational structures (long-term planning, analytical, etc.)
Type of novelty for the market:	New in the country and for this bank (group of banks)
Place in the system:	Input: passive operations. Output: settlement and credit (active operations). In the organizational structure: creation of autonomous divisions reporting directly to the bank's top management; divisions created in functional services (marketing, research, strategic planning, etc.)
Depth of changes made:	Radical (basic), related to institutional restructuring. Improving, for example, in the field of customer service. Modification (private), for example, in the document flow.

Kazakhstan's CardPro, for example, has been offering cloud service for several years to create bonus loyalty systems for retailers and financial companies. This means that the bank will see more than just a complete picture of its client's spending. The Financial Institute will receive already processed data on where the customer pays by card, how often he does it, what he prefers to buy. This data, if you apply the analysis, can allow, for example, time to offer the cardholder to buy something on credit at the very moment when he does not have the necessary amount on his balance sheet.

Another area where new technologies cannot be done is security. Financial institutions' databases are hacked regularly. The world media constantly report that millions of cardholders in the U.S. or EU countries were robbed. Security services of the world's leading banks spend fabulous money on digital billboards.

Kazakhstan's financial institutions, fortunately, rarely break into. It is even less common to know the public about it. Kazakhstan's financial institutions have recently acquired their own smartphone applications and online banking resources.

Those who use online banking services do not need to explain what 3D Secure technology is. This is a protocol that is an additional level of security for making payments on the Internet. There is also One Time Password, a one-time password that is only used once. And the resources of the "Electronic Government", for exam-

ple, can not be imagined at all today without the use of electronic and digital signature. It's also a defense mechanism.

However, now the world's leading banks are seriously considering the use of biometric customer recognition technologies. Many Android models already recognize their owner with biometrics.

The term "digital footprint" appeared not so long ago [2]. It means that somehow each of us in the modern world leaves traces: it can be the history of browsing in the Internet browser, the activity of accounts in social networks, the presence of data about you in numerous databases, and so on.

Moreover, most of us, not knowing about the rules of the game, regularly agree to collect personal data. Remember how, by installing a new app on your smartphone through the App Store or Play Market, you often agree to access your data: contact list, geolocation, and so on. Proponents of conspiracy theory note that such requirements exist even when installing the famous "Lantern" application. This data is then analyzed and sold, helping advertisers and manufacturers to increase sales and profits.

On-line surveillance continued online all these years in the World Wide Web. For example, Google Analytics offers website owners a huge list of statistics. The service does not collect personal data, and therefore does not violate any laws. However, the owners of Internet resources have a complete picture and an auditory sample.

In Google Chrome browser settings, you can disable the tracking/photo site Google Analytics data helps you work with advertisers. The same Youtube, recommending you a specific video, relies on the history of previous requests. And banner ads and pop-up messages are also targeted for you. After all, artificial intelligence also analyzes your digital footprint.

In addition to advertisers, your digital footprint is interesting today and banks. Kazakhstan, by the way, in the credit issue is a huge blind zone. Millions of Kazakhstani do not have a credit history simply because they have not borrowed before. But by studying our digital footprint, the bank can get information on the basis of which it will decide to lend you or not. And he will even be able to calculate the limit on the amount of the loan issued.

It is also likely that the decision will be made not by a live employee in the person of a bank manager, but by artificial intelligence in contactless mode. This technology is already working in some countries of the world.

Some services even offer to apply for a loan in game mode. And while you smile and click on the beautiful pictures, there is a real psychometric test. That is, the bank and from this point of view assesses your payment ability. What if you have a penchant for spontaneous solutions.

For the bank it is a risk of non-repayment of the loan. This approach allows you to analyze a client without a credit history, who may be taking out a loan for the first time in his life. This is good for small and medium-sized businesses and for the economy as a whole. This allows customers without a credit history not to automatically fall into the high-risk category for a financial institution.

But the game application form helps not only to collect additional information about the possible loaner, but also increases the competitiveness of the resource. No one is interested in sitting and filling out numerous fields of questionnaires for a long time. If the client does not like it, he will go to another, more comfortable page.

Taking into account the experience of foreign banks, we can assume that new technologies on Kazakhstan's soil will take root quickly enough. The test of the new technical chip in the client environment takes place only a year. And the next - innovation becomes a mass product.

The main and most effective factor in the successful functioning of the banking system is the policy of introducing and developing innovative financial products and technologies.

They should be understood as innovative technologies operating in the financial and banking spheres and catalyzing the effective performance of their functions by commercial banks.

As part of the improvement of the country's economy as a whole, the banking sector serves as the main base for building a financing system for the modernization process, as it takes the largest share in the financing of innovation in the organization's fixed capital.

Changing the legislative and regulatory framework, increasing competition in the banking market, significant regional differences in customer composition and business expansion opportunities, increasing requirements for the security and availability of telecommunications systems is all a motivation for innovation.

The process of implementing the innovation activities of commercial banks is closely related to the planning and implementation of their priorities, which are due to the characteristic features of the development of the banking system.

1. Liberalization of banking legislation;
2. Growing interbank competition;
3. The emergence of virtual banks;
4. Growing financial innovation in banks;
5. Universalization of banking;
6. Use of electronic payments system;
7. Internationalization and globalization of banking.

The development and introduction of new technologies into the existing functioning mechanism should not be forgotten about the possibility of risky situations [3].

The risks of innovation are inherent in the following features:

1. The main objective risks influencing financial innovation are interest, credit, market, innovation and liquidity risk;
2. Transactions between counterparties are based on differences in market behaviour forecasting, different investment horizons and subjective reasons.

The need to modernize commercial banks is largely due to changes taking place in the international arena.

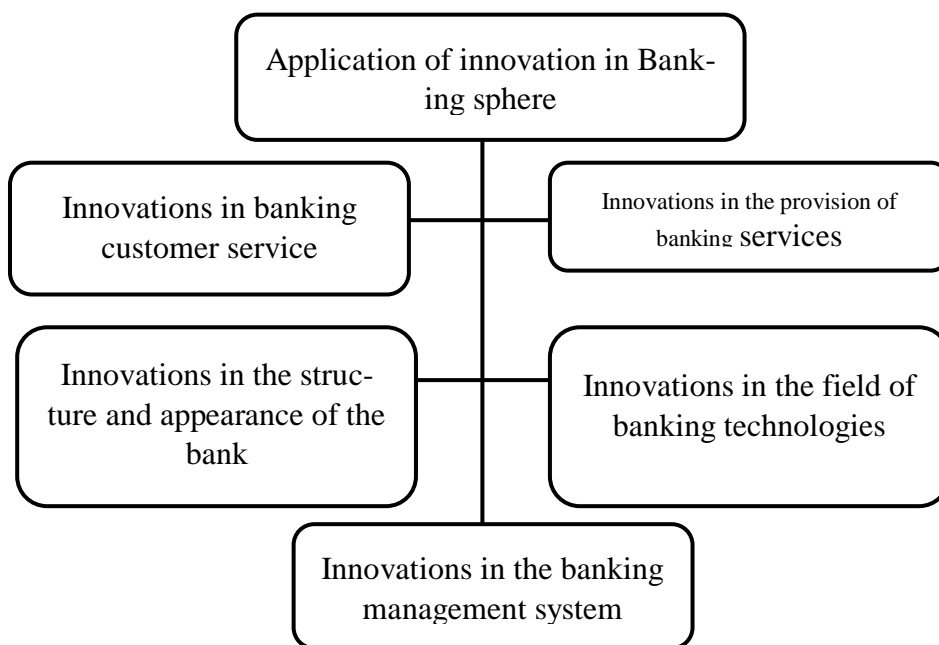
These changes are taking place at several levels: global, regional and national, as the international banking system increasingly appears as a global financial and information complex.

A logical relationship can be found between the technologies being implemented and the needs of commercial bank customers. The primary preferences of customers are satisfied with additional services of the bank. A good example is individual customer service (Private banking) or remote banking outside the cash center [4]. Remote management of bank accounts is carried out by the following services: Mobile banking (mobile banking, m-banking), Internet banking, Telebanking

The evolution of banking services towards the remote model is explained by a number of features, namely, changing the way of life of society, the constant dynamics of the social and economic environment of the banking sector, automation of banking operations in a highly competitive environment.

It should be noted that despite the conservative principles of domestic banks, the management of most of them is trying to apply innovation not only to solve issues related to the strategic development of the credit organization, but also to solve current problems.

For example, a number of credit institutions in Kazakhstan offer remote management of banking processes via phone – tele-banking, through a computer - e-banking, through the Internet - Internet banking, portable devices - mobile banking.



Picture 1 - Trends of innovations in the banking sphere

The shift of the center of gravity to remote banking models is due to changes in people's lifestyles, the introduction of new information technologies, and increased competition (Picture 1).

In this regard, bank branches become specialized service centers.

In the context of globalization, the introduction of innovative technologies and products by banks into their activities is an urgent necessity, as it will allow them to survive in competition.

Results of the research. Based on the experience of foreign banks, it is advisable for domestic credit organizations to develop an innovative strategy, to effectively operate and manage the innovation process, to monitor the environment of the bank's activities in order to determine the needs of changes in its activities; Develop strategies and shape change programmes for the bank as a system of collective action to achieve a common goal; to support innovative ideas and staff initiatives.

We believe that the activity of staff in the life of the bank will allow to form a special atmosphere in which it will not be necessary to conduct sociological monitoring.

And the creation of the bank's innovative infrastructure will solve the issue of a fair assessment of intellectual property in the innovation process; motivation to participate in innovation.

In our opinion, the problem of domestic banks lies not so much in obtaining banking innovations, but in introducing it into the bank's activities with the least time and money, in other words, with the required level of efficiency.

Conclusion. In today's environment, innovations allow the bank, providing services to customers, to receive additional income over a long period of time. But the effectiveness of the introduction of innovative technologies cannot always be measured by financial indicators. [5, page 6]

The qualitative changes in the functioning of the bank contribute to its efficiency, which is expressed through customer loyalty.

Thus, innovative technologies have formed the concept of the bank of the future, which in its activities applies technologies that give a strategic effect, consisting in increasing the number of customers, reducing the cost of banking operations at the optimal level of risk and will allow to realize their competitive advantages not only in the short term, but also to take a leading position in the global financial community.

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