

## NEWS

OF THE NATIONAL ACADEMY OF SCIENCES OF THE REPUBLIC OF KAZAKHSTAN  
SERIES OF SOCIAL AND HUMAN SCIENCES

ISSN 2224-5294

<https://doi.org/10.32014/2019.2224-5294.102>

Volume 3, Number 325 (2019), 121 – 125

UDK 336.71

**Z. K. Zhanybaeva, Z. O. Lukpanova, A. K. Orazgalieva**

<sup>1,2</sup>Kazakh University of Economics, Finance and International Trade, Astana;

<sup>3</sup>Kazakhstan Innovative University. C.Semey

zamza@bk.ru, zhanar\_or@mail.ru, arailymk78@mail.ru

## THE NEWEST TECHNOLOGIES IN THE FINANCIAL SPHERE

**Abstract.** According to the authors, we live in the “golden age” of information technology, with which the majority of humanity agrees. Recent advances in financial platforms, sensor technologies with internet access, unmanned vehicles, cloud solutions and data analytics are leading to a change in the paradigm of capital projects, creating real opportunities that organizations can use now. The main factor of transformation in the field of finance is the active use of the latest information technologies and the formation of a global virtual environment. The effect of this factor on the current state of the world stock market is devoted to the material offered to the reader. New technologies will allow people to manage the card and account via a smartphone. At the same time, universal drivers for a changing world, calling them «digital promise», formulate customers.

**Keywords:** technology, finance, virtual business environment, securities, management.

### INTRODUCTION

The rapid development of the financial sector and its globalization have transferred financial services to a qualitatively new level - the level of the global Internet: the full range of financial services becomes available to a wide range of consumers at any time. It is in the financial sphere that the most noticeable use of the Internet is being carried out, which is an inexhaustible reservoir of information about markets, products, and competitors. In developed countries, the predominant part of investments is financial investments, mainly investments in securities. They must be monitored, they must be managed, having a record of basic data. Portfolio investments in stocks of young high-tech companies are the most risky and at the same time possibly the most profitable in terms of gains in their market value. Internet technologies make it possible to make wide use of the giant information reservoir practically free of charge for the analysis of the securities market.

### MAIN PART

Modern technologies have changed not only the structure of the stock market, but also made changes in the securities trading, significantly expanding the market framework at the expense of a new generation of investors, for whom the possibility of an individual search for information has opened. The investor will be able to receive analysis tools that were previously inaccessible to him, including, for example, special programs that help monitor the movement of stock prices, etc. There are new types of employees investment assistants instead of the traditional broker, the so-called. Discount brokers who, upon the request of clients, carry out operations with securities without providing them with consulting services. Thus, transaction costs for the client are significantly reduced.

Discount online brokers are connected to the Internet and provide an opportunity for their clients to trade stocks via the Internet. Theoretically, any person who has a computer connected to the Internet and, of course, money can become a client of an online broker. In reality, virtual financial transactions may cause a state deficit. In addition, for countries with a high level of social obligations, this threatens to increase social tensions.

In the digital economy, the main function of money is no longer the preservation of value - the main argument in favor of using currencies secured by gold, but facilitation of transactions and flexibility is the main reason for the total expansion of paper money. One day, cash will disappear altogether from the economy, now with their help, you can pay for goods in online stores, mobile communications and utilities, make transfers to other users, exchange money for other forms, and much more. The growth of the electronic cash market is getting higher and higher every year, and, according to forecasts, this dynamic will only intensify over the next few years.

However, there are a number of drawbacks to such a rapid growth of the influence of the Internet on the financial sector. If we assume that the main part of the population will switch to a new type of financial services, then it is necessary to think about the consequences of such a transition. The growth in the use of virtual payments will result in a reduction in the rate of circulation of national units and the taxable base, which previously existed in the national currency. Thus, the national currency may have a strong competitor. For small countries, this threatens the complete disappearance of their currency, since not enough operations can be performed to serve the interests of the local economy, for example, in the same bitcoins [1].

In reality, virtual financial transactions may cause a state deficit. Moreover, for countries with a high level of social obligations, this threatens to increase social tensions: the state will not have enough income for the maintenance of budgetary institutions and the payment of subsidies.

The second direction that can change the financial system as a whole will be the use of financial Internet services. If we talk about the financial industry as a whole, then in its essence it is conservative and inflexible to change, but the use of alternative services has become a serious impetus to the movement. Given the above arguments, we can draw the following conclusion. The financial sector of the economy is reaching a new level, where technologies that can automate processes, reduce costs, and find the optimal solution to repetitive tasks take advantage. Building new business models can lead to a complete transition of financial operations to the Internet, which will significantly affect the role of the state in the economy, so now you should think about the development vectors and begin a scientific understanding of the prospects for the development of new financial models.

Thus, the expansion of investment services on the Internet contributes to a further rise in the stock market. Nevertheless, a significant obstacle in the development of electronic investment is the problem of security and safety, an increase in additional costs. In general, the Internet environment is unsafe for any financial transactions. This factor, in turn, stimulates the search for effective means of protecting the Internet user and helps reduce the specific risks associated with new technologies. This will require the development of standards for the electronic transmission of confidential information, and this will necessitate changes in the legislation of many countries.

These new technological problems are aggravated by the globalization of the financial sector, which makes it difficult to determine the risk factor.

The information revolution increases the importance of the psychological factor: the widespread use of the latest information technologies, on the one hand, creates the possibility of expanding the information base when making decisions, and on the other hand, increases the likelihood of frauds with information. While the World Wide Web served as an electronic display for announcements, there was no security problem. However, trading in securities, banking services in real time (on-line) via the Internet has expanded financial risk areas for users of its services.

Because of the well-known crisis phenomena in the global financial markets at the end of the 90s, when the securities rate broke away from the level dictated by the profit, a reassessment of risks nevertheless occurred, and a significant portion of capital began to return to developed civilized markets. Another, even more important shift is some weakening of the attractiveness of speculative operations with securities, including with shares of hi-tech companies, since this resource of hypertrophied expectations has begun to exhaust itself. Moreover, this, in turn, means a gradual orientation towards innovations in the real sector of the economy, and not only in the portfolio sector, although both of them, in general, do not compete with each other. Some (not yet firmly identified) shift in investment preferences increases the increase in the share of new innovative technologies in the framework of real investment.

It should be noted that the obstacles arising at the new stage of technological progress are rather quickly overcome. It is

- a) About the already achieved general high technical level of the whole chain of related industries, industries and services;
- b) An extremely developed and mature financial system;
- c) The existence of a significant group of users with medium and high incomes, etc.

That is, in the end, it can be said that all previous technical, economic and social development of society has prepared the ground for innovation. Thus, the rapid growth of e-commerce has undoubtedly been helped by the experience gained over the years in catalog sales.

Computer literacy of Kazakh people is more than 82% in all parameters presented in the table 1.

Table 1 - Share of the population with skills of using a personal computer, smartphone, tablet, laptop; standard programs

	The share of the population with the skills of using a personal computer, smartphone, tablet, laptop; standard programs
Akmola	73,4
Aktobe	79,3
Almaty	88,4
Atyrau	81,8
West Kazakhstan	78,6
Zhambylskaya	80,7
Karaganda	76,4
Kostanay	86,4
Kyzylorda	92,8
Mangystau	84,7
Pavlodar	82,3
North Kazakhstan	76,0
Turkestan	81,5
East Kazakhstan	78,5
Nur-Sultan	95,8
Almaty city	87,8
Shymkent	81,9
Average rate	82,7

The basic mass of residents of the Republic of Kazakhstan with skills of using a personal computer, smartphone, tablet, laptop and a standard set of programs averages about 83% of people. That also stimulates the development of new technologies in banking.

Financial services institutions that understand the implementation of block chain technology in client-oriented business methods are looking forward to purchasing costs and competitive advantages. Software vendors with ready-to-manufacture and ready-to-use block chain services will be interested in the first organizations seeking to accelerate the implementation of their block chain strategies and will begin to combine more cost-effective innovations in their company's operations. The company's specialists point out that banks and financial and technological companies, enterprises seeking ways to present new types of technologies, need to work together to achieve their goals. Banks are looking for new approaches to digital innovation, while financial and technological companies need "capital, scale, data, customer confidence and support from regulatory authorities."

Artificial intelligence will help banks automate processes and improve customer service, so Capgemini experts say that robots are 50-90% cheaper than using full-time and freelance employees, and that banks will invest more and more in AI in an attempt to improve their efficiency while maintaining high quality customer service.

## CONCLUSION

Clients have become better at authenticating payments on smartphones with a fingerprint. Banks will promote the same attitude to face recognition systems and user identification based on voice patterns.

Given that customers have to memorize an ever-increasing number of passwords, biometric authentication systems will help simplify security procedures and provide more reliable methods of identity verification.

Already, some robots can perceive the details of their environment, recognize objects and respond to information and objects with safe and useful behavior. Self-driving cars have performed very well in real-world tests. Over time, they will be able to perform not only more tasks, but also more complex tasks. Service robots are in the early stages of a long development cycle, and they still face some major technological obstacles. In the next three to five years, we expect modest, evolutionary successes. However, after that we expect rapid growth, since the new models combine more powerful and standard modular platforms with the possibility of learning.

УДК 336.71

**З. К. Жаныбаева<sup>1</sup>, Ж.О. Лукпанова<sup>2</sup>, А. К. Оразгалиева<sup>3</sup>**

<sup>1,2</sup>Қазақ экономика, қаржы және халықаралық сауда университеті, Астана;

<sup>3</sup>Қазақстан инновациялық университеті, Семей

### **ҚАРЖЫ САЛАСЫНДАҒЫ ЖАҢА ТЕХНОЛОГИЯЛАР**

**Аннотация.** Авторлардың пікірінше, біз адамзаттың көпшілігі келісетін ақпараттық технологияның «алтын дәуірінде» тұрамыз. Қаржылық платформалардағы соңғы жетістіктер, интернетке кіру мүмкіндігі бар сенсорлық технологиялар, ұшқышсыз көлік құралдары, бұлтты шешімдер және деректер талдауы күрделі жобалардың парадигмасының өзгеруіне әкеліп соқтырады. Қаржы саласында трансформацияның негізгі факторы - соңғы ақпараттық технологияларды белсенді пайдалану және жаһандық виртуалды ортаны қалыптастыру. Бұл фактордың әлемдік қор нарығының ағымдағы жағдайына әсері оқырманға ұсынылған материалға арналған. Жаңа технологиялар адамдарға смартфон арқылы картаны және шотты басқаруға мүмкіндік береді. Сонымен қатар, тұтынушылар өзгертін дүниедегі әмбебап драйверлердің көмегімен «сандық уәде» деп атайды.

**Түйін сөздер:** технологиялар, қаржы, виртуалды бизнес ортасы, бағалы қағаздар, басқару.

УДК 336.71

**З. К. Жаныбаева<sup>1</sup>, Ж.О. Лукпанова<sup>2</sup>, А. К. Оразгалиева<sup>3</sup>**

Казахский университет экономики, финансов и международной торговли, г. Астана<sup>1,2</sup>

Казахстанский инновационный университет, г. Семей<sup>3</sup>

### **НОВЕЙШИЕ ТЕХНОЛОГИИ В ФИНАНСОВОЙ СФЕРЕ**

**Аннотация.** По мнению авторов, мы живем в «золотом веке» информационных технологий, с чем согласна основная масса человечества. Последние достижения в области финансовых платформ, сенсорных технологий с выходом в интернет, беспилотных транспортных средств, облачных решений и аналитики данных ведут к смене парадигмы капитальных проектов, создавая реальные возможности, которыми организации могут воспользоваться уже сейчас. Основной фактор преобразований в сфере финансов - активное использование новейших информационных технологий и формирование глобальной виртуальной среды. Тому, какое влияние оказывает данный фактор на современное состояние мирового фондового рынка, посвящен предлагаемый вниманию читателя материал. Новые технологии позволят населению управлять картой и счетом через смартфон. При этом для клиентов формулируют универсальные драйверы для меняющегося мира, называя их «цифровым обещанием».

**Ключевые слова:** технологии, финансы, [виртуальная бизнес-среда](#), [ценные бумаги](#), управление

#### **Information about authors:**

Zhanybaeva Zamzagul kairatovna - candidate of economic Sciences, specialty 08.00.10 – Finance, monetary circulation and credit. Kazakh University of Economics, Finance and international trade, Astana. <http://orcid.org/0000-0003-4162-3602>

Lukpanova Zhanar Haralanova - Candidate of economic Sciences on the specialty 08.00.10 – Finance, monetary circulation and credit. Kazakh University of Economics, Finance and international trade, Astana. <http://orcid.org/0000-0002-2552-4332>

Orazgaliyeva Arailym Kanatovna - PhD, Kazakhstan innovative University. G. Semey, <http://orcid.org/0000-0002-4601-3865>

## REFERENCES

- [1] Sinki J. Financial management in a commercial bank and in the financial services industry: Trans. in English. M.: Al-Pina Business Books, 2007. p. 30.
- [2] The history of the monetary history of Russia. Training manual / Ed. N.I. Parusimova - Orenburg: GOU VPO OGU, 2004. 350 p.
- [3] Usoskin V.M. Modern commercial bank: management and operations. M.: "ALL FOR YOU", 1993. - 320 p.
- [4] Parusimova N.I. The transformation of the banking product in different types of economic systems. - Orenburg: IPK GOU OGU, 2004. 389 p.
- [5] Kussainova A.A., Kozlowski Waldemar, Gerashchenko I.P. The review of some features of the financial legal mechanism of obligatory social insurance in the republic of Kazakhstan. N E W S OF THE NATIONAL ACADEMY OF SCIENCES OF THE REPUBLIC OF KAZAKHSTAN SERIES OF SOCIAL AND HUMAN SCIENCES ISSN 2224-5294 Volume 6, Number 322 (2018), 21 – 27. <https://doi.org/10.32014/2018.2224-5294.31>
- [6] Berstambaeva R.K., Rubenkova N.B., Toyzhigitova Zh.A. Financial mechanism for supporting entrepreneurs and hedging their risks. REPORTS OF THE NATIONAL ACADEMY OF SCIENCES OF THE REPUBLIC OF KAZAKHSTAN ISSN 2224-5227 Volume 2, Number 324 (2019), 80 – 85. <https://doi.org/10.32014/2019.2518-1483.41>
- [7] Tlessova E., Khoich A., Kurash N. Scientific innovation potential of the republic of Kazakhstan and its perspectives. N E W S OF THE NATIONAL ACADEMY OF SCIENCES OF THE REPUBLIC OF KAZAKHSTAN SERIES OF SOCIAL AND HUMAN SCIENCES ISSN 2224-5294. <https://doi.org/10.32014/2018.2224-5294.16> Volume 5, Number 321 (2018), 89 – 94.
- [8] Chernykh L.A., Kuznetsova T.E., Niyazbekova Sh.U. *Tendencies and prospects of development banking products in Russia and other countries. Modern Economy Success*. 2017. № 1. C. 91-100.
- [9] Ostapenko E.I., Butyrskaya T.M., Amerzhanova D.A., Nurgabylov, M.N. TEACHING ECONOMIC DISCIPLINES IN A NETWORK OF MODERN TRENDS AND APPROACHES TO EDUCATION. News of the National Academy of Sciences of Kazakhstan. SERIES OF SOCIAL AND HUMAN SCIENCES Volume 1, Number 323 (2019), p. 97 – 101, ISSN 2224-5294 <https://doi.org/10.32014/2019.2224-5294.14>
- [10] Nailya K. Nurlanova, Anel A. Kireyeva, Rashid M. Ruzanov / Journal of Asian Finance, Economics and Business Vol 4 No2 (2017) 37-44 37 Print ISSN: 2288-4637 / Online ISSN 2288-4645 Evaluation of Economic Potential and Level of Concentration of the Regions of Kazakhstan Received: March 8, 2017. Revised: April 25, 2017. Accepted: May 2, 2017. doi:10.13106/jafeb.2017.vol4.no2.37
- [11] Sagiyeva, R.; Zhuparova, A.; Ruzanov, R.; Doszhan, R.; Askerov, A. 2018. Intellectual input of development by knowledge-based economy: problems of measuring in countries with developing markets, *Entrepreneurship and Sustainability Issues* 6(2): 711-728. [https://doi.org/10.9770/jesi.2018.6.2\(17\)](https://doi.org/10.9770/jesi.2018.6.2(17))
- [12] Kosherbayeva N. A., Abdreimova K., Kosherbayeva G., Anuarbek A. Synthesis of achievements of world mankind in humanity pedagogy. *Procedia - Social and Behavioral Sciences* 89, 2013. P.886-889. <https://doi.org/10.1016/j.sbspro.2013.08.950>
- [13] Kassymova, G. K., Arpentieva, M. R., Kosherbayeva, A. N., Triyono, M. B., Sangilbayev S. O., Kenzhaliyev B. K. (2019). Science, education & cognitive competence based on e-learning. *Bulletin of the National academy of sciences of the Republic of Kazakhstan*, 2019, (1), pp. 269–278. <https://doi.org/10.32014/2019.2518-1467.31>
- [14] Alibekova, G., Panzabekova, A., Satpayeva, Z., Abilkayir, N. /IOP Conference Series: Earth and Environmental Science/IOP Conf. Series: Earth and Environmental Science 177 (2018) 012010 (Web of Science Conference Proceedings Index и Scopus). DOI:10.1088/1755-1315/177/1/012010
- [15] T. Azatbek, A. Panzabekova, L. Bekenova, Zh. Yegizbyeva. The share of drug trafficking in Kazakhstan's GDP: methods for evaluation / *Economic Annals-XXI* (2017), 166(7-8), C. 31-36(Scopus). DOI: <https://doi.org/10.21003/ea.V166-06>
- [16] Khalitova M.M., Praliev G.S., Panzabekova A.Z., Andreeva Z.M., Dzhubaliyeva Z.A. Financial instruments of state regulation industrial and innovative development of Kazakhstan economy. *Life Sci J* 2014;11(10s):369-378. (ISSN:1097-8135). <http://www.lifesciencesite.com.70>
- [17] Khalitova M.M., Panzabekova A.Z., Berstambaeva R. K. Government debt of Kazakhstan under conditions of the global financial system's instability. *Life Sci J* 2014;11(4s):354-35]. (ISSN:1097-8135). <http://www.lifesciencesite.com.63>