#### NEWS

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

ISSN 2224-5294 Volume 4, Number 332 (2020), 67 – 73 https://doi.org/10.32014/2020.2224-5294.104

UDC 336.763 IRSTI 06.73

# A.T. Kokenova 1, G.I. Adbikerimova<sup>2</sup>, K.K. Nurasheva<sup>2</sup>, D.A. Kulanova<sup>3</sup>, A.T. Mergenbayeva <sup>2</sup>

<sup>1</sup> International Humanitarian and Technical University, Shymkent, Kazakhstan;
<sup>2</sup> M. Auezov South Kazakhstan state university, Shymkent, Kazakhstan;
<sup>3</sup> Miras University, Shymkent, Kazakhstan.
E-mail: abdikerimova71@mail.ru

### MUNICIPAL INFRASTRUCTURE BONDS: WORLD EXPERIENCE, PROBLEMS AND ADAPTATION

**Abstract.** History has repeatedly shown that the way out of the economic crisis is connected with the implementation of infrastructure projects by the state and the municipality, which allow reviving production, demand, and consumption.

Infrastructure projects are unique projects that are simultaneously characterized by high social and state significance, and low profitability, sometimes turning into unprofitability.

The article examines the advantages and disadvantages of municipal (sub-sovereign) bonds as a tool for financing infrastructure projects, and provides their classification. The analysis of the us municipal bond market is carried out. It is noted that the us States use municipal bonds as the main financial mechanism for raising funds for the creation and operation of infrastructure facilities.

Infrastructure facilities such as schools, hospitals, water supply facilities, and roads have the largest amounts of funding much less funding is provided for sewers, government buildings, police and fire stations, and flood protection. The specifics of the municipal bond taxation system lead to the fact that the main holders of securities are individuals, so that the municipal securities market in the United States is almost entirely American in terms of the national structure of investors.

To understand the reasons why the us municipal bond market has developed significantly in the world and what other countries, including Kazakhstan, need to do to make sub-sovereign bonds a popular tool for attracting long-term financing of infrastructure projects, we have studied the factors that affect the supply and demand of these securities.

It is revealed that the factors that determine the supply are increasing needs of regions and municipalities for financial resources, the ability to service debt, reducing the cost of borrowed funds, and improving the regulatory framework that promotes municipal borrowing.

**Keywords:** municipal bonds, municipal projects, municipal infrastructure, securities, resources, financial institutions, stock market segment, finance.

**Introduction.** At present, there is a situation in our country where the question of the need for some special municipal infrastructure bonds becomes very urgent.

On the one hand, all analysts agree that most of the problems in the economy are related to a lack or poor quality of infrastructure; on the other hand, due to the General decline in the financial market, the Arsenal of tools that investors can use to invest their accumulated funds is becoming narrower.

In the structure of the Kazakhstan financial market, there is no such instrument known to developed financial markets as an infrastructure bond.

This limits the ability to attract capital when creating and developing transport, energy, housing and utilities, and other infrastructure.

Meanwhile, the need for investment is estimated as enormous, and it cannot be fully met solely at the expense of the state.

In such circumstances, one of the important and expected directions for improving the market is to expand the list of financial instruments by introducing municipal infrastructure bonds into circulation.

**Methods.** The initial theoretical and methodological basis of the research was the scientific and practical developments of Kazakhstani and foreign researchers in the field of infrastructure project management, a comprehensive study of which allowed us to develop a fundamental context for the institutional, organizational and instrumental support for the development of municipal bonds in the securities market.

**Mainpart.** Municipal infrastructure bonds have as long a history as infrastructure projects. Since it is impractical to invest 100% of the state's infrastructure projects at the expense of budget funds, it is natural that the first priority is to attract an investor. Moreover, the attracted investor is usually unable to obtain credit financing for these projects, since there is no subject for securing the loan.

Municipal infrastructure bonds were established and developed abroad. In foreign practice, infrastructure bonds are often presented in the form of municipal target bonds and corporate infrastructure bonds. The United States, Australia, India, Chile, South Korea, Canada, Kazakhstan, Poland and a number of other countries have the greatest experience in applying infrastructure bonds [1].

Consider the differences in the use of infrastructure bonds abroad. In the United States, municipal infrastructure bonds are divided into two types [2]: General-purpose bonds, which are not backed by any source of income, and bonds issued for specific projects and secured by income from these projects.

The latter type of bond assumes that the sources of income for debt payment are payments from service consumers (fare collection, electricity usage fee, etc.) [3,4]. Pension funds, insurance companies, and banks are invested in infrastructure bonds. The popularity of these bonds is due to the fact that they are not subject to Federal taxes and payments on them are guaranteed by the legislation of the state where the project is being implemented. In Australia, infrastructure bonds are also backed by project revenue.

However, the list of objects that infrastructure bonds can be involved in is narrow: land and air transport, housing and utilities: electricity, gas, water, sewage and water treatment facilities. Banks and insurance companies often act as bond issuers. In Chile, as in Australia, the list of objects in which infrastructure bonds are invested is strictly defined and includes housing and transport facilities (airports, roads, etc.). Often the initiators are not banks, but insurance companies, less often pension funds. India, on the contrary, prefers issuers-banks.

Here, great attention is paid to the amount of credit for infrastructure bonds, since the amount is tied to the economic indicators of the project - the amount of credit is strictly limited [5].

The disadvantage that hinders the development of infrastructure bonds in India is the fact that they are not protected from inflation, which significantly reduces interest in them due to the fact that the holder of this bond may not even get invested money, let alone additional income.

Kazakhstan is also known for its expertise in the implementation of the infrastructure bonds, however, are not so successful as in other countries. This is where the most high-profile default on infrastructure bonds occurred in 2008 due to high inflation in the country [6]. Due to the fact that the mechanism of state responsibility was not clearly spelled out: how, through which channels and from which budget program to allocate funds, the PPP project was transformed into a fully state-owned through the purchase of shares.

In a number of these countries, infrastructure projects are funded by pension funds through the issuance of municipal infrastructure bonds.

In the United States, the practice of issuing municipal municipal infrastructure bonds is widespread [7]. There are two types of municipal bonds: General-purpose bonds and project-backed bonds. The source of payment of debt for the latter is payments made by consumers of services, for example, for the use of water, electricity, or roads [8]. In addition, industrial development bonds are issued in the United States, and so on the Issuer of bonds is most often government authorities of different levels.

Municipal loans are among the most reliable financial instruments: mutual funds hold more than 35% of the volume of these instruments, about 15% are in the portfolios of insurance companies, and about 10% are in the portfolios of banks [9].

In the United States, pension funds invest in infrastructure bonds. For example, in 1993, the Connecticut state pension Fund invested \$ 50 million in a project to create new jobs in the state at 15% per annum [10].

In Australia, the main Issuer of municipal infrastructure bonds is the government.

The issue of municipal infrastructure bonds is regulated by two agencies: the Australian taxation office and the development grants authority (the latter is responsible for ensuring that the bonds meet the requirements of the law). The law on development grants States that infrastructure loans are made in the form of [11,12]:

- direct borrowing;
- indirect borrowing (providing credit);
- refinancings.

The legal restriction on the turnover of municipal infrastructure bonds is a clearly marked list of objects that are considered infrastructure. These include ground and air transport, power generation, power supply, gas supply, water supply, sewage and water treatment facilities. The public is charged for using these facilities.

In General, Australian infrastructure bonds offer their holders the opportunity to:

- in the future, get profit from the implementation of infrastructure projects;
- get tax preferences (for a maximum of 15 years) [13];
- annually review the issue of their participation in the project financing.

In Chile, pension Fund assets in bonds invested in specific projects – the construction of housing, airports, roads, etc., the First Latin American infrastructure bond was released here in November 1998 Source of emission was the money of pension funds and the funds accumulated in the hands of the insurers. The initiator of the launch of the first municipal infrastructure bonds was the insurance company Santander. The Issuer of municipal infrastructure bonds in Chile is a concessionaire. It should be noted that concession projects in Chile using the municipal infrastructure bond mechanism have received high credit ratings.

Issuers of municipal infrastructure bonds in India are mainly banks (for example, ICICI and FDBI). Two types of infrastructure bonds are common in this country: «tax-saving bonds» and regular income bonds [14].

«Tax-saving» bonds allow you to get a deduction from the tax base for income tax in the amount of 20% of the invested amount [15]. At the same time, the legislator set the maximum amount of investment in infrastructure bonds, as well as the maximum amount of tax deduction).

Regular income bonds include pension bonds, educational bonds, income-multiplying bonds, and so on.

Banks provide loans to investors against infrastructure bonds (as well as against their collateral). The amount of credit secured by municipal infrastructure bonds depends on the economic performance of a particular infrastructure project. The amount of interest on infrastructure bonds does not depend on the level of inflation, and therefore in the long term, these securities may not be very profitable. In General, the holder of Indian municipal infrastructure bonds is not immune from non-receipt of funds invested in these bonds.

In General, the international practice of issuing and circulation of municipal infrastructure bonds highlights the following features in comparison with traditional corporate bonds:

- targeted use of funds received from the placement for the implementation of long-term investment infrastructure projects (roads and Railways, ports, airports, power lines, pipelines and oil and gas pipelines);
- issuing municipal infrastructure bonds, primarily as part of the implementation of concession agreements between the state or local authorities and the concessionaire company that is the Issuer of the bonds [16];
- the main investors who invest in infrastructure bonds are institutional (pension funds, insurance companies) and other conservative investors;
- long-term circulation period of municipal infrastructure bonds linked to the period of construction (reconstruction) of the infrastructure facility and the period of its operation (on average 15-25 years);
- providing the bond issue with state guarantees, risk insurance, Bank guarantees and sureties, as well as other security guarantees.

The main consumers of future municipal infrastructure bonds are, of course, conservative investors (pension funds, insurance companies) [17]. This is primarily due to the fact that the requirements for the composition and structure of their assets are quite strict and therefore, in the context of the financial crisis, their ability to invest their accumulated funds is constantly decreasing.

Obviously, since all the requirements and restrictions related to the asset structure of conservative investors are tied to the listing rules, the fastest and best way to remove such restrictions was to change these very rules.

Kazakhstan has added to the list of exceptional cases when securities can be included in quotation lists without complying with some of the relevant requirements – in particular, if there is no monthly volume of transactions, the Issuer's existence is insufficient, it has no losses, as well as if there are no reports on international standards.

As a result of the introduction of these exemptions for the listing procedure, certain bonds that are issued, perhaps, to attract funds to infrastructure projects (at least, when it comes to concessions, this is exactly the case), will be able to count on the funds of pension funds and insurance companies to be invested in these bonds. In this regard, with some degree of conditionality, we can say that as a result of these changes initiated by the regulator, it is possible to issue municipal quasi-infrastructure bonds in Kazakhstan.

Why quasi? Because to a large extent, all these exemptions apply to a fairly limited number of issuers. The adopted changes are only the beginning of the way to introduce municipal infrastructure bonds as a special instrument of the financial market of Kazakhstan. At the moment, infrastructure bonds are just a name, not a tool with real content.

The concessions described above are, in General, absolutely logical: it is obvious that bonds issued by a concessionaire company (usually a specially created project company) will not meet even the minimum requirements for entering the quotation lists, let alone meet the requirements of the highest quotation lists. However, although such issuers do not meet the requirements for reliable issuers, it should be noted that the conclusion of a concession agreement with the state is a lengthy and costly process. In addition, due to the requirements imposed on the concessionaire, it should be recognized that the very fact of entering into a concession agreement is the basis for considering the concessionaire company as a serious borrower.

In the case of guaranteed performance of obligations under bonds by the state guarantee or Vnesheconombank, additional arguments in favor of the fact that these bonds can be included in the quotation lists with certain allowances are superfluous.

If to speak about state-guaranteed bonds, despite the fact that the legislation of Kazakhstan envisages the possibility of granting long-term state guarantees for obligations of third parties, including those resulting from their implementation of issue of securities, that the provision of state guarantees for the obligations of securities issuers is a really effective mechanism, and despite the possibility in principle of attracting investment in the project under the state guarantee, the very fact of issuing a state guarantee does not make the bonds infrastructural with all the consequences that follow.

As for the possibility of a state guarantee for quasi-infrastructure bonds, the question arises as to whether such a guarantee is appropriate from the point of view of government spending [18]. The fact is that state guarantees for the purposes of budget legislation are the same expenses, and therefore the state actually pays through budget expenditures what was supposed to be paid by the concessionaire. In addition, the amount of state guarantees is in any case limited by budget legislation, and the issuance of guarantees is a complex administrative procedure.

Taking into account all the arguments, it should be recognized that the introduced quasi-infrastructure bonds will not solve the tasks that they should solve, and will not become a universal way to attract investment in infrastructure projects, but will only be a personal tool for attracting investment in individual projects.

The changes made to the rules for listing securities solve only one of the tasks set, namely, they allow you to invest in certain infrastructure projects the funds accumulated by pension funds. These changes do not solve the systemic problems of insufficient funding for infrastructure projects. Moreover, without further progress on the way of introducing into the legislation the norms of special regulation of the procedure for issuing municipal infrastructure bonds, the word «infrastructure» will continue to remain nothing more than a loud epithet that has no legal or economic significance.

At the same time, other state bodies are not going to stop at the intermediate stage achieved by changing bylaws. Currently, the process of drafting a full-fledged law that will regulate procedures related to the implementation of infrastructure projects, including the issue and circulation of municipal infrastructure bonds, is in full swing.

Based on the foreign experience of using municipal infrastructure bonds, as well as the analysis of the current situation in the Republic of Kazakhstan, we can identify the following options for implementing this tool in Kazakhstan, in which infrastructure bonds will be [19]:

- a type of government bonds that are of a targeted nature;
- corporate bonds that have a targeted nature and are secured by state guarantees;
- derivative securities that may be issued by an entity that finances an infrastructure project.

In order for infrastructure bonds to become a universal tool for implementing projects in various sectors, with different amounts of financing and with different distribution of ownership rights to the infrastructure object being created, the regulatory framework governing infrastructure bonds will have to provide for the possibility of issuing bonds under any of these schemes, with the most flexible conditions for issuing and circulation of bonds, so that not only Federal-level megaprojects fall within the scope of possible application of these bonds, but projects of constituent entities of the RK, and even municipal projects, providing not only the infrastructure construction, directly after construction transferred to the state, but projects casinonazionale numerous ways (LCC-contracts, service contracts, etc.).

**Results and discussion.** In any case, the General distinguishing feature of the new type of bond will be the targeted nature of spending of funds received by the Issuer as a result of the bond issue. At the same time, since there is currently no legal definition of infrastructure in the legislation, it will be necessary to introduce this definition into the law and include in this definition not only transport infrastructure, but also social, energy, utilities, etc.

Naturally, in addition to the above-mentioned aspects, the law should regulate the relationship between the Bank and the Issuer of municipal infrastructure bonds, as well as the specifics of issuing derivative securities (if this option is chosen).

It is necessary to establish requirements for bond issuers and infrastructure projects that are planned to be financed by the issue. The law will certainly regulate the mechanisms of state control over all participants in the process, since the issue of ensuring the fulfillment of obligations by the Issuer is a key issue both in terms of ensuring the rights of investors and in terms of the success of infrastructure projects that will have infrastructure bonds embedded in the financing mechanism.

The preparation of a regulatory framework for municipal infrastructure bonds in today's difficult conditions gives developers an unprecedented opportunity to take into account all the shortcomings of corporate bond regulation at the stage of introducing a new instrument into circulation.

At the same time, the task of the regulator is greatly simplified due to the fact that infrastructure bonds, by virtue of their targeted nature, unlike ordinary corporate bonds, fully reflect the essence of investment, which consists not in a simple supply of funds to the Issuer from trusting investors, but in the financing of specific projects with specific and measurable parameters.

In such a situation, it is absolutely logical that the measures of control over the Issuer's activities by investors that have only just begun to be considered in relation to corporate bonds and, moreover, the targeted nature of investments in infrastructure bonds will allow the regulator to establish closer control over bond issuers, which will ultimately lead to greater protection of investors in infrastructure bonds from the problems that the debt financing market is currently facing.

### А.Т. Көкенова<sup>1</sup>, Г.И. Абдикеримова<sup>2</sup>, К.К. Нурашева<sup>2</sup>, Д.А. Куланова<sup>3</sup>, А.Т. Мергенбаева<sup>2</sup>

<sup>1</sup> Халықаралық гуманитарлық-техникалық университеті, Шымкент, Қазақстан; <sup>2</sup>М.Әуезов атындағы Оңтүстік Қазақстан мемлекеттік университеті, Шымкент, Қазақстан; <sup>3</sup>Мирас университеті, Шымкент, Қазақстан

#### МУНИЦИПАЛДЫҚ ИНФРАҚҰРЫЛЫМДЫҚ ОБЛИГАЦИЯЛАР: ӘЛЕМДІК ТӘЖІРИБЕ, ПРОБЛЕМАЛАР ЖӘНЕ БЕЙІМДЕУ

**Аннотация.** Тарих экономикалық дағдарыстан шығу мемлекет пен муниңипалитеттің өндірісті, сұранысты және тұтынуды жандандыруға мүмкіндік беретін инфракұрылымдық жобаларды іске асыруына байланысты екенін бірнеше рет көрсетті.

Инфрақұрылымдық жобалар – бір мезгілде жоғары элеуметтік және мемлекеттік маңыздылық пен төмен рентабельділік сипатталатын, кейде шығынды өтейтін біреғей жобалар.

Мақалада инфрақұрылымдық жобаларды қаржыландыру құралы ретінде муниципалдық (субсуверендік) облигациялардың артықшылықтары мен кемшіліктері зерттелген және жіктелген. АҚШ муниципалдық облигациялар нарыгына талдау жүргізілді. Америкалық Штаттар муниципалдық облигацияларды инфракұрылым нысандарын құруға және пайдалануға қаражат тартудың негізгі қаржылық тетігі ретінде пайдаланды.

Ірі көлемді қаржыландыруға мынадай инфракұрылым нысандары кіреді: мектеп, аурухана, сумен жабдықтау нысаны, жол; аз қаржыландырылатын нысанға кәріз, үкіметтік гимарат, полицей мен өрт станциясы, су тасқынынан қорғау жатады. Муниципалдық облигацияларға салық салу жүйесінің ерекшеліктері қағаздың негізгі ұстаушылары жеке тұлғалар болып саналады, сондықтан АҚШ-тағы муниципалдық қағаздар нарығы инвесторлардың ұлттық құрылымы бойынша іс жүзінде толығымен америкалық болып саналады.

Муниципалдық облигациялардың америкалық нарыгы элемде айтарлықтай даму себептерін және басқа елдерге не істеу керектігін түсіну үшін, оның ішінде субсуверленген облигациялар инфракұрылымдық жобаларды ұзақ мерзімді қаржыландыруды тартудың қажетті құралдарына айналуы үшін осы бағалы қагаздардың сұранысы мен ұсынысына әсер ететін факторлар зерделенуі үшін Қазақстан да қажет.

Ұсыныстың анықтаушы факторлары мынадай: өцірлер мен муниципалитеттердің қаржы ресурстарына деген қажеттілігінің артуы, борышқа қызмет көрсету мүмкіндіктері, қарыз қаражаты құнының төмендеуі, муниципалдық қарыз алуға ықпал ететін нормативтік-құқықтық базаны жақсарту.

**Түйін сөздер:** муниципалдық облигация муниципалдық жоба, муниципалдық инфракұрылым, бағалы қагаз, ресурс, қаржы институттары, қор нарыгының сегменті, қаржы.

### А.Т. Кокенова<sup>1</sup>, Г.И. Абдикеримова<sup>2</sup>, К.К. Нурашева<sup>2</sup>, Д.А. Куланова<sup>3</sup>, А.Т. Мергенбаева<sup>2</sup>

<sup>1</sup> Международный гуманитарно-технический университет, Шымкент, Казахстан; <sup>2</sup> Южно-Казахстанский государственный университет имени М.Ауезова, Шымкент, Казахстан; <sup>3</sup> Университет Мирас, Шымкент, Казахстан

## МУНИЦИПАЛЬНЫЕ ИНФРАСТРУКТУРНЫЕ ОБЛИГАЦИИ: МИРОВОЙ ОПЫТ, ПРОБЛЕМЫ И АДАПТАЦИЯ

**Аннотация.** История неоднократно показывает, что выход из экономического кризиса связан с реализацией государством и муниципалитетом инфраструктурных проектов, которые позволяют оживить и производство, и спрос, и потребление.

Инфраструктурные проекты — это уникальные проекты, которые одновременно характеризуются высокой социальной и государственной значимостью, и низкой рентабельность, порой переходящей в убыточность.

В статье изучены преимущества и недостатки муниципальных (субсуверенных) облигаций как инструмента финансирования инфраструктурных проектов, приводится их классификация. Проведен анализ рынка муниципальных облигаций США. Отмечается, что американские штаты используют муниципальные облигации в качестве основного финансового механизма привлечения средств на создание и эксплуатацию объектов инфраструктуры.

Наибольшие объёмы финансирования имеют такие объекты инфраструктуры, как: школы, больницы, объекты водоснабжения, дороги, значительно меньшее финансирование приходится на: канализацию, правительственные здания, полицейские и пожарные станции, защиту от наводнений. Особенности системы налогообложения муниципальных облигаций приводят к тому, что основными держателями бумаг являются физические лица, благодаря чему рынок муниципальных бумаг в США является практически полностью американским по национальной структуре инвесторов.

Для понимания причин, по которым американский рынок муниципальных облигаций получил значительное развитие в мире и того, что необходимо предпринять другим странам, в том числе и Казахстану, чтобы субсуверенные облигации стали востребованными инструментами привлечения долгосрочного финансирования инфраструктурных проектов, изучены факторы, влияющие на спрос и предложение этих ценных бумаг.

Выявлено, что факторами, определяющими предложение, являются: возрастающие потребности регионов и муниципалитетов в финансовых ресурсах, возможности обслуживать долг, снижение стоимости заемных средств, улучшение нормативноправовой базы, способствующей муниципальным заимствованиям.

**Ключевые слова:** муниципальные облигации, муниципальные проекты, муниципальная инфраструктура, ценные бумаги, ресурсы, финансовые институты, сегмент фондового рынка, финансы.

#### Information about authors:

Kokenova A.T., candidate of economic Sciences, docent, International Humanitarian and Technical University, Shymkent, Republic of Kazakhstan, https://orcid.org/0000-0002-8805-5924, E-mail: aiganymk7676@gmail.com;

Adbikerimova G.I., candidate of economic Sciences, docent Department of Economics, Faculty of Management and Business, South Kazakhstan State University named after M. Auezov, Shymkent, Republic of Kazakhstan, https://orcid.org/0000-0003-4206-0901, E-mail: abdikerimova71@mail.ru;

Nurasheva K.K., Doctor of Economics, Professor, Department of Economic Theory, Faculty of Management and Business, South Kazakhstan State University named after M. Auezov, Shymkent, Kazakhstan, https://orcid.org/0000-0002-4639-467X, E-mail: nurasheva@mail.ru:

Kulanova D.A., candidate of economic Sciences, Associate Professor, sector Economy and management, Miras University, Shymkent, Kazakhstan, https://orcid.org/0000-0001-9188-5243, E-mail: k\_dana\_a@mail.ru;

Mergenbayeva A.T., candidate of economic Sciences, head of the Department of economic theory of the faculty of management and business of the South Kazakhstan state University.M. Auezov, Shymkent, Republic of Kazakhstan, https://orcid.org/0000-0001-8387-7673, E-mail: aziza.mer.69@mail.ru.

#### REFERENCES

- [1] Nurasheva K.K., Mergenbayeva A.T., Kulanova D.A., Abdikerimova G.I. (2019) et al. IPO Market: Transformation of Savings into Investments. Bulletin of National Academy of Sciences of the Republic of Kazakhstan, vol. 1, no. 377, pp. 119–125. URL: https://doi.org/10.32014/2019.2518-1467.14
- [2] Kilp J., Anvari V., Springfield S., Roberts C. (2019) The Impact of the Global Financial Safety Net on Emerging Market Bond Spreads. Russian Journal of Money and Finance, vol. 78, no. 2, pp. 43–66. URL: https://doi.org/10.31477/rjmf.201902.43
- [3] Khamidullina E.R. (2013) [The stages of development of the legislation on the securities market in Kazakhstan]. Vestnik KazNU. Ser.: Yuridicheskaya, no. 3, pp. 118–123. (In Russ.)
- [4] K.O. Shayakhmetova, A.T. Uteubaeva, A.A. Kabiev, B.T. (2019) Nazhmidenov CONCEPTUAL ESSENCE OF RISKS IN THE FINANCIAL MARKET // 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 3, Number 325, 284–294. https://doi.org/10.32014/2019.2224-5294.123
- [5] Sembiyeva L.M., Orozonova A.A. (2019). Strategy and tactics of financial policy of kazakhstan in the conditions of development of integration processes // News of the National academy of sciences of the Republic of Kazakhstan. Series of agricultural sciences. ISSN 1991-3494. 2019. Vol. 5, N 381. P. 24-30. https://doi.org/10.32014/2019. 2518-1467.127
  - [6] Oficial'nyj sajt Kazahstanskoj fondovoj birzhi (KASE). http://old.kase.kz/
  - [7] http://kase.kz/ru/news/show/89487/) http://kase.kz/ru/tickers/
- [8] Правила осуществления депозитарной и иной деятельности в отношении муниципальных облигаций. Утверждено решением Совета директоров АО "Центральный депозитарий ценных бумаг» 16.07.2010г. Введены в действие с 01.01.2019 г. http://www.kacd.kz/download/policy1/rules
- [9] Kilp J., Anvari V., Springfield S., Roberts C. (2019) The Impact of the Global Financial Safety Net on Emerging Market Bond Spreads // Russian Journal of Money and Finance. M.: TOM 78, no. 2, pp. 43-66. ISSN: 2618-6799 DOI: 10.31477/rjmf.201902.43
  - [10] AIFC Regulation on Obligations. December 20, 2017. Astana, Astana International Finance Centre.
- [11] Zakon Respubliki Kazahstan ot 2 ijulja 2003 goda № 461-II O rynke cennyh bumag (s izmenenijami i dopolnenijami po sostojaniju na 05.10.2018 g.).
- [12] Zakon Respubliki Kazahstan №524-IU ot 28 janvarja 2011 goda «O vnesenii izmenenij v nekotorye zakonodatel'nye akty Respubliki Kazahstan po voprosam regulirovanija bankovskoj dejatel'nosti i finansovyh organizacij v chasti minimizacii riskov»
- [14] G.Nurmanbekova, R. Duiskenova (2019). Realization of regional innovation policy // Bulletin of national academy of sciences of the Republic of Kazakhstan. Series of agricultural sciences. ISSN 1991-3494. 2019. Vol. 4, N 380. P. 201-209. https://doi.org/10.32014/2019.2518-1467.12
- [15] Cvirko S.Je. (2010) Infrastrukturnye obligacii: vozmozhnosti primenenija i riski // Vestnik Tambovskogo universiteta. Serija: Gumanitarnye nauki. URL: https://cyberleninka.ru/article/n/infrastrukturnye-obligatsii-vozmozhnosti-primeneniya-i-riski (data obrashhenija: 04.12.2017).
  - [16] Skogoreva A. Infrastruktura ne v mode. URL: http://slon.ru/articles/40111/
  - [17] https://www.mql5.com/ru/blogs/post/719435
- [18] Charnes A., Cooper W.W., Rhodes E. (1978) Measuring the efficiency of decision-making units // European Journal of Operation Research. T. 2, No. 6, S. 429-444.
- [19] Infrastrukturnye i kvaziinfrastrukturnye obligacii: novye vozmozhnosti realizacii infrastrukturnyh proektov. Analiticheskij obzor firmy "Vegas-Leks". URL: http://www.vegaslex.ru/