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O. M. Parubets, Doctor of Economics,
Associate Professor,
O. V. Boyko, Doctor of Economics,
Associate Professor,
D. O. Sugonyako, Candidate Economic
Sciences, Associate Professor

O. M. Парубець, д. е. н.,
доцент,
O. В. Бойко, д. е. н.,
доцент,
Д. О. Сугоняко, к. е. н.,
доцент

DEVELOPMENT OF MUNICIPAL LENDING SYSTEM BASED ON THE USE OF MODERN INFORMATION TECHNOLOGIES

РОЗВИТОК СИСТЕМИ МУНІЦИПАЛЬНОГО КРЕДИТУВАННЯ НА ОСНОВІ ЗАСТОСУВАННЯ СУЧАСНИХ ІНФОРМАЦІЙНИХ ТЕХНОЛОГІЙ

Urgency of the research. In the conditions of a shortage of local financial resources, financing of infrastructure projects is impossible without the development of the system of municipal lending.

Target setting. An important condition for the development of the municipal lending system is the introduction of modern information technology in the process of interaction between local governments with potential lenders and investors.

Actual scientific researches and issues analysis. Theoretical and methodological aspects of the development of municipal lending, the market for municipal borrowing are considered in the scientific works of domestic and foreign scholars, in particular D. Bergstresser, O. P. Kyrylenko, A. V. Petrykiv, J. Reck, I. Z. Storonianska.

Uninvestigated parts of general matters defining. However, in the context of e-government development, the low level of application of modern information technologies in the municipal lending market requires further research.

The research objective. The purpose of the paper is to substantiate the need for the use of modern information technologies by local authorities and local governments in the system of municipal lending.

The statement of basic materials. The article reveals the problems and necessity of introducing modern information technologies into the system of municipal lending. The use of local government and local government cloud technologies, systems of Internet-trading, creation of centers of information and financial technologies for expanding the boundaries of information interaction between all the participants of municipal lending is proposed.

Conclusions. As a result of the introduction of information technologies into the system of municipal lending, the amount of funds will be increased to solve the financial problems of the development of the local economy.

Keywords: municipal loan; information technology; financial resources; budget, infrastructure projects.

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Urgency of the research. In the conditions of a chronic shortage of local financial resources, the implementation of investments in the development of modern infrastructure of settlements is impossible without the development of a system of municipal lending.

Актуальність теми дослідження. В умовах дефіциту місцевих фінансових ресурсів фінансування інфраструктурних проектів неможливе без розвитку системи муніципального кредитування.

Постановка проблеми. Важливою умовою розвитку системи муніципального кредитування є впровадження сучасних інформаційних технологій в процес взаємодії органів місцевого самоврядування з потенційними кредиторами та інвесторами.

Аналіз останніх досліджень і публікацій. Теоретико-методологічні аспекти розвитку муніципального кредитування, ринку муніципальних запозичень розглянуті в наукових працях вітчизняних та зарубіжних вчених, зокрема Д. Бергстрессера, О. П. Кириленко, А. В. Петрикіє, Дж. Река, І. З. Сторонянської.

Виділення недосліджених частин загальної проблеми. Однак, в умовах розвитку електронного урядування низький рівень застосування сучасних інформаційних технологій на ринку кредитування муніципалітетів потребує проведення подальших досліджень.

Постановка завдання. Метою роботи є обґрунтування необхідності застосування сучасних інформаційних технологій органами місцевої влади та самоврядування в системі муніципального кредитування.

Викладення основного матеріалу. У статті виявлено проблеми і необхідність впровадження сучасних інформаційних технологій в систему муніципального кредитування. Запропоновано використання органами місцевої влади і самоврядування хмарних технологій, системи Інтернет-трейдинг, створення центрів інформаційно-фінансових технологій для розширення меж інформаційної взаємодії між усіма учасниками муніципального кредитування.

Висновки. В результаті впровадження інформаційних технологій в систему комунального кредитування збільшиться обсяг коштів для вирішення фінансових проблем розвитку місцевої економіки.

Ключові слова: муніципальний кредит; інформаційні технології; фінансові ресурси; бюджет; інфраструктурні проекти.

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Target setting. Conducting a decentralization reform, constant changes in the political, economic and social environment, activation of integration processes requires the informatization of relations between the public and private sectors not only at the state but also at the local level. Particularly tangible need for information interaction between these sectors arises at the stages of development and decision making regarding the diversification of forms and types of municipal loans. An important condition for the development of municipal lending is the rationale for the conceptual framework for the introduction of information technologies in the process of interaction between local governments with potential lenders and investors.

Actual scientific researches and issues analysis. Theoretical and methodological aspects of the development of municipal lending, the market for municipal borrowing are considered in the scientific works of domestic and foreign scholars, in particular D. Bergstresser, O. P. Kyrlyenko, A. V. Petrykiv, J. Reck, I. Z. Storonianska and many others.

In these works, research was carried out on the historical aspects of the formation, the current state, prospects of development and the problems of disseminating the information about municipal borrowings.

Uninvestigated parts of general matters defining. With the development of e-governance, the low level of application of modern information technology in the lending market of municipalities requires further research.

The research objective. The purpose of the work is to substantiate the need for the use of modern information technologies by local authorities and local governments in the system of municipal lending.

The statement of basic materials. The current state of financial and credit relations in Ukraine is controversial and does not meet the needs of the development of the local economy. In the context of the decentralization reform, redistribution of powers and resources between levels of state and local authorities occurs, as a result of which a significant part of the commitments for the development of various objects of local infrastructure is transferred to local self-government bodies that do not have sufficient amount of financial resources for their implementation. A chronic shortage of funds leads to the depreciation of the material and technical base of housing and communal services, enterprise of critical infrastructure and social infrastructure.

Financing of local infrastructure projects is carried out at the expense of local budgets, which are limited, and bank loans. At the same time, banks are reluctant to lend to long-term infrastructure projects that are characterized by high credit risks. In such conditions, for the implementation of local infrastructure projects, it is necessary to actively involve additional funds through the issuance and placement of municipal bonds [6, p. 8].

According to the report of the National Commission on Securities and Stock Market in 2013, 2015 and 2016, no issue of local bond bonds was registered [7, p. 36]. In recent years, municipalities have preferred to attract credit resources for infrastructure projects through international financial institutions, in particular, the European Bank for Reconstruction and Development, the European Investment Bank, the Northern Ecological Finance Corporation, etc.

Issuance of local bond bonds is complicated by a number of problems related to their legal, financial, organizational and, especially, information security. On the hindrance of the development of informatization processes of municipal-credit relations there is an insufficient level of informational content of websites and the level of publicity of executive authorities and local self-government; low level of financial and informational literacy of the population, pace of development of information technologies in the field of financial and credit relations on the ground; lack of the developed financial and information infrastructure, insufficient reliability and capacity of the created information systems.

In the conditions of the formation of the information society, the requirements of legislation to the level of publicity of local self-government are increasing. The introduction of state-of-the-art e-government and e-democracy technologies enables online public services to form a new level of public finance relationships based on transparency and openness.

Despite the existence of a strong legislative framework in the field of transparency of public finances, outstanding issues are related to the lack of state reporting standards and the obligations of munic-

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ipalities to disclose information about their financial status and operational activities; a clear list of subjects providing access to public information; established mandatory requirements for the organization of information interaction between state, regional, municipal levels; criteria for disclosure of information; sources of financing of informatization of activities of local self-government bodies and creation of modern information and communication infrastructure [8, p. 11-12; 9, p. 9].

The free access to information on the state of formation and implementation of local budgets, the indicators of socio-economic development of regions and cities, the effectiveness of the implementation of decentralization reforms and the state of the municipal bonds market can be found on official sites of central executive authorities. The public organizations, which on their websites inform the public about the state of local finances, publish the ratings of transparency of the local self-government bodies in the context of individual cities and regions of Ukraine, play an important role in accelerating e-government processes.

In accordance with the budget transparency rating established by the international organization International Budget Partnership [10], Ukraine in 2017 received 54 points out of 100 possible transparency indicators of the budget, which is higher than the average indicator of 42 points, which is determined by 115 countries of the world. With the participation of the public in the formation of the budget 34 points, indicating that the population's low capacity to influence the course of the budget process. According to the experts of the said organization, one of the ways of raising the level of public participation in the processes of budget formation and execution is the creation of mechanisms for communication with representatives of executive authorities.

Web resources of the local self-government bodies in most cases do not contain the full information stipulated in the current normative-legal acts; have insufficient level of information content and timely updating of information resources. This is especially true in the absence of information support for the development of the municipal lending system, which reduces the level of awareness of the business structures and population of the territorial communities on the issues of participation in the financing of local programs for the development and modernization of infrastructure objects. This is confirmed by the information provided in the report of the Center for Political Studies and Analysts "EIDOS" [11, p.32-34] regarding the level of access to public information by local authorities and local self-government bodies. Inadequate information on the approval and implementation of target / regional programs is published on the sites of local self-government bodies. Thus, on the sites of regional state administrations, 33% were disclosed, cities of the regional centers - 25%, city councils - only 18% of the required data. Regarding information on the state of local budgets, it is most open on the sites of councils of the cities of the regional significance - 65%, other councils provide budget transparency at a lower level, namely, regional councils - 25%, regional state administrations - 23%, other cities - 13 %

On this basis, informatization of the financial and credit relations at the local level requires the development of the appropriate conceptual framework covering a set of strategic and tactical measures aimed at the developing of economic and informational interaction among all participants in municipal loans in order to increase the financial capacity of the territorial communities. Such principles include the justification of the mechanism for the practical implementation of the informatization of the system of municipal lending, which provides for simplification of permitting procedures in the market of municipal borrowings; development of a system of the specialized credit institutions; expansion of the boundaries of interregional and inter-municipal financial and credit cooperation; use of cloud technologies in the system of municipal lending.

The process of informatization at the level of municipalities requires the development of network information and communication technologies, which are based on a combination of the principle of centralization, which involves state support to the processes of informatization of the system of municipal lending with the principle of decentralization, which is aimed at increasing the volume of local financial resources. The main advantage of information network technologies is their efficiency, simplicity and user-friendliness, focusing on time and resource savings, and building a reliable system for managing various types of risks. The main types of these technologies at the level of the municipalities are:

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- the development of online trading of local loan bonds with the help of the system of Internet trading, for which it is necessary to introduce special software at the municipal level;
- the implementation of the information transparency tools of the municipalities based on the cloud technologies, which will allow to effectively use the information resources, reduce costs for the development, operation and maintenance of the local information systems, providing a high level of their protection against cyber attacks.

Using cloud technologies involves high-speed access to the Internet. In connection with this, the information and communication infrastructure of the municipalities needs to be replaced and upgraded. In the context of the development of e-governance and multifunctionality of the Internet, the use of cloud technologies in the municipal lending system should be in line with the needs of the public and private sectors in the field of information and communication support for the functioning of the financial and credit relations at the municipal level and include the constituent elements shown in the figure 1. The cloud technology development needs support from the local government IT companies that develop and implement cloud-based applications and services, providing flexible and low-budget cloud services.

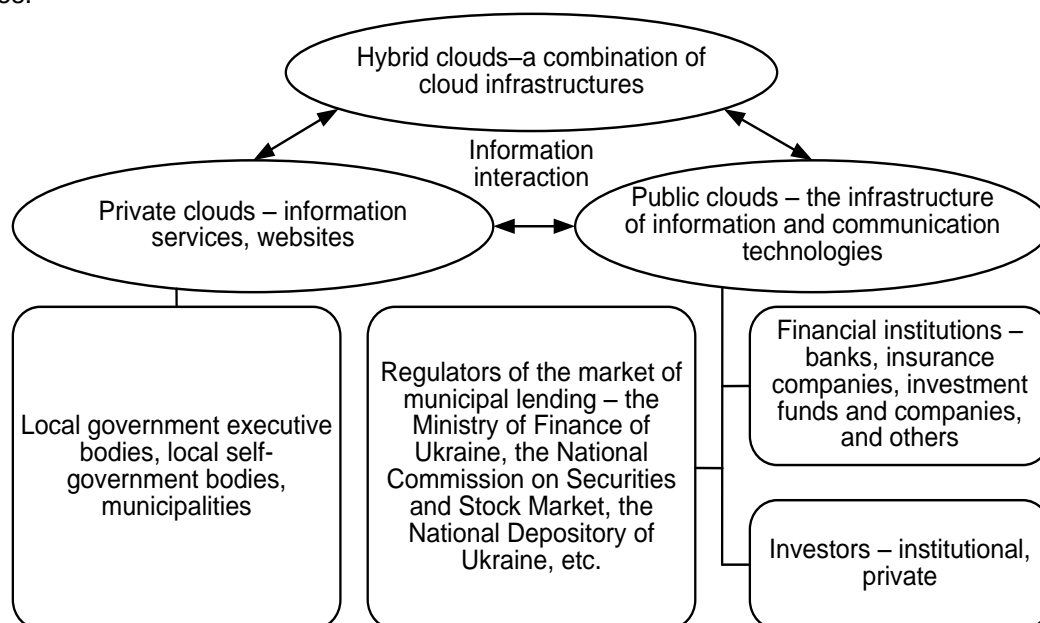


Fig. 1. Application of cloud technologies in the system of municipal lending

Source: compiled by the authors

Particular attention should be given to encourage the population of the territorial communities, as the main consumers of the services provided at the local level, to the process of the financing infrastructure projects. To this end, it is necessary to create centers of the information and financial technologies, on the basis of which, through the creation of a single interactive platform of the information interaction, provide real-time online consultations on the issues related to the use of municipal lending instruments, inform the public on the need and conditions for issuing local loan bonds, their level of profitability and the expediency of redemption by the population and the representatives of business structures.

Conclusions. Informatization of the financial and credit relations of the municipalities will allow to effectively plan, model and implement various local development projects based on the use of the modern information technologies, will promote transparency of activities of the local self-government bodies in the process of attraction and use of the borrowed funds, provide accurate and complete in-

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formation on financial needs and opportunities of the territorial communities, as well as an assessment of the level of autonomy, reliability and solvency of the self-government local authorities.

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ФІНАНСИ. БАНКІВСЬКА СПРАВА

- Парубець
Олена Миколаївна** доктор економічних наук, доцент, професор кафедри фінансів, банківської справи та страхування, Чернігівський національний технологічний університет;
<https://orcid.org/0000-0001-5357-7581>;
Researcher ID: H-5503-2015;
SPIN-код: 3883-1517;
E-mail: olena.parubets@gmail.com;
- Parubets
Olena Mykolaivna** Doctor of Economics, Associate Professor, Professor at the Department of Finance, Banking and Insurance, Chernihiv National University of Technology;
<https://orcid.org/0000-0001-5357-7581>;
Researcher ID: H-5503-2015;
SPIN-code: 3883-1517;
E-mail: olena.parubets@gmail.com;
- Бойко
Олена Володимирівна** доктор економічних наук, доцент, професор кафедри менеджменту організацій та управління проектами, Запорізька державна інженерна академія;
<https://orcid.org/0000-0002-4381-8502>;
E-mail: lvbojko@yahoo.com;
- Bojko
Olena Volodymyrivna** Doctor of Economics, Associate Professor, Associate Professor at the Department of Management of Organizations and Project Management, Zaporizhzhia State Engineering Academy;
<https://orcid.org/0000-0002-4381-8502>;
E-mail: lvbojko@yahoo.com;
- Сугоняко
Дмитро Олександрович** кандидат економічних наук, доцент, доцент кафедри публічного управління та менеджменту організацій, Чернігівський національний технологічний університет;
<https://orcid.org/0000-0002-5054-7253>;
Researcher ID: H-6572-2014;
SPIN-код: 5347-3400;
E-mail: dmytro.sugonyako@gmail.com;
- Sugonyako
Dmytro Oleksandrovych** Candidate Economic Sciences, Associate Professor, Associate Professor at the Department of Public Administration and Organizations Management, Chernihiv National University of Technology;
<https://orcid.org/0000-0002-5054-7253>;
Researcher ID: H-6572-2014;
SPIN-code: 5347-3400;
E-mail: dmytro.sugonyako@gmail.com