PUBLIC ADMINISTRATION

USE OF INVESTMENT INSTRUMENTS FOR DEVELOPMENT OF WATER SUPPLY AND WASTEWATER SPHERE IN UKRAINE

¹DSc (public administration), PhD (economic) **Oleksandr Ignatenko** ²Candidate of Law **Iryna Krylova**

Ukraine, Kyiv, National Academy for Public Administration under the President of Ukraine ¹Associate Professor of Department of economic policy and governance ²Doctoral student

DOI: https://doi.org/10.31435/rsglobal_ws/30062019/6568

ARTICLE INFO

ABSTRACT

Received: 17 April 2019 Accepted: 25 June 2019 Published: 30 June 2019

KEYWORDS

water supply and wastewater sphere, state regulation, investment activity, investment program, participatory budget, local securities market. The article is devoted to the clarification of the peculiarities of the use of investment instruments for the development of the water supply and wastewater sector in Ukraine. The sphere of water supply and wastewater of Ukraine requires significant investments for the renewal of fixed assets of water supply and wastewater enterprises, reconstruction and development of engineering infrastructure, introduction of the latest technologies, improvement of the quality of services, etc. The authors consider the concept of investment, investment activity, investment program in the general context and in the field of water supply and wastewater. The structure of planned volumes of financing of measures of investment programs of water supply and wastewater enterprises in 2018 is being analyzed. Issues of application of other modern financial and economic mechanisms in the field of water supply and wastewater are considered. The article analyzes the state of realization of public-private partnership in the field of water supply and wastewater on the basis of statistical data. Investment approaches based on participative financing, which involves the use of financial resources not only of the state but also of local communities, business and civil society institutions, and financing through the use of opportunities of the market of debt obligations, including at the expense of the issue of municipal securities in the form of bonds of a local loan.

Citation: Oleksandr Ignatenko, Iryna Krylova. (2019) Use of Investment Instruments for Development of Water Supply and Wastewater Sphere in Ukraine. *World Science*. 6(46), Vol.2. doi: 10.31435/rsglobal_ws/30062019/6568

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Introduction. The current state of the water supply and wastewater system in Ukraine is characterized by such criteria as a lack of financial resources necessary for the proper operation and maintenance of water supply and wastewater systems, unsatisfactory technical condition of structures and equipment, imperfection of the structure of industry management and regulatory framework to ensure its reliable and efficient functioning. The sphere of water supply and wastewater of Ukraine requires significant investments for the renewal of fixed assets of water supply and wastewater enterprises, reconstruction and development of engineering infrastructure, introduction of the latest technologies, improvement of services quality, etc. According to the calculations of the Ministry of Regional Development of Ukraine, the need for capital investments in the sphere of water supply and

dwater wastewater is only \$ 19 billion. US, including: \$ 7.6 billion USA - for the repair of plumbing networks; 9.9 billion dollars USA - repair of sewer networks; USD 463 million USA - bringing the quality of drinking water to the norm; 1.3 billion dollars US - reduction of water energy supply [22; 23]. Own funds of water supply and wastewater companies are insufficient for updating and modernizing fixed assets, coverage of tariffs for services is 60-80%. Significant lack of funds is observed not only at the level of water supply and wastewater enterprises, but also in budgets of all levels of the country. Annual volumes of investments in the Ukrainian economy are at a rather low level due to the unfavorable investment climate due to the imperfect regulatory framework, undeveloped financial and credit system and the stock market; ineffective tax policy; ineffective use of depreciation deductions, etc. These factors also do not promote the attraction of foreign investment in the country's economy. In view of this, the investment process in the field of water supply and wastewater requires a continuous in-depth study on the choice of effective investment instruments, as well as finding new ways to intensify investment activity.

Purpose of the study: The purpose of the paper is to clarify the peculiarities of the use of investment instruments for the development of the water supply and wastewater sector in Ukraine.

Research results. World experience shows that countries are not able to develop their economies without attracting and efficiently using investments. By accumulating private, public or foreign capital, providing access to modern technology and management, investments not only contribute to the formation of national investment markets, but also stimulate the markets for goods and services. In addition, investments, as a rule, contribute to macroeconomic stabilization measures and allow solving social problems of the transformation period [14].

The term "investment" comes from the Latin term invest, which means an economic transaction that involves the acquisition of fixed assets, intangible assets, corporate rights and securities in exchange for funds or property. In the broadest sense of this category, investment is the investment of capital for its future growth. In this case, the growth of capital should be sufficient to compensate the investor for refusing to use his available funds for consumption in the current period, to receive a remuneration for the risk, to recover losses from inflation in the future period [14].

According to the Law of Ukraine "On Investment Activities" (1991, September 18), investments are all types of property and intellectual property that are invested in objects of entrepreneurial activity and other kinds of activity, which results in the creation of profit (income) and / or the achievement of social and ecological effect. Such values can be as follows: 1) funds, targeted bank deposits, shares, shares and other securities (except bills); 2) movable and immovable property (buildings, structures, equipment and other tangible assets); 3) proprietary intellectual property rights; 4) a set of technical, technological, commercial and other knowledge, drawn up in the form of technical documentation, skills and production experience necessary for the organization of a particular type of production, but not patented ("know-how"); 5) rights to use land, water, resources, buildings, structures, equipment, as well as other property rights; 6) other values [17]. At the same time, the legislator gave special status to investments aimed at the creation (acquisition), reconstruction, technical re-equipment of fixed assets, the expected useful life of which exceeds one year. Such investments are made in the form of capital investments [17]. This means that investments can only be made in the form of expenses for the construction of buildings, structures and other objects, including construction and installation work, the cost of equipment and inventory included in the construction estimates; costs for the purchase of machines and equipment not included in the construction estimates; expenses for the purchase of vehicles, computers, etc.; expenses for construction and equipment of dwelling houses, children's preschool institutions, cultural and community objects, etc. In addition, capital expenditures include the following: design and research; on land plots and resettlement in connection with construction; for technical supervision of construction; for research work, provided in the estimates for construction; to maintain the management of the under construction; other expenses that are not attributable to installation and construction work, but are provided by a consolidated cost estimate for construction [25].

Investment activity as a set of practical actions of citizens, legal entities and the state in relation to investment realization is carried out on the basis of: 1) investment by citizens, non-state enterprises, economic associations, unions and societies, as well as public and religious organizations, other legal entities, based on collective ownership; 2) state investment by state authorities at the expense of the state budget, borrowed funds, as well as state enterprises and institutions at the expense

of their own and borrowed funds; 3) local investment by local governments at the expense of local budgets, borrowed funds, as well as municipal enterprises and institutions at the expense of their own and borrowed funds; 4) state support for the implementation of investment projects; 5) foreign investment carried out by foreign states, legal entities and citizens of foreign states; 6) joint investment by legal entities and citizens of foreign states [17].

Investment activities are ensured through the implementation of investment projects (programs) and the conduct of operations with corporate rights and other types of property and intellectual property.

According to the Law of Ukraine "On Drinking Water, Drinking Water Supply and Wastewater" (2002, January 10), an investment program is a set of measures approved in accordance with the established procedure in order to increase the level of reliability and ensure the efficient operation of centralized water supply and wastewater systems, the subject of management in the field of centralized water supply and wastewater in relation to the construction (reconstruction, modernization) of objects in this area, improvement of the quality of services, with corresponding calculations and analysis as well as the sources of financing and execution schedule [18]. That is, the investment program is a sort of financial plan for the water supply and wastewater company, which determines the expected costs during the planning period (12 months for which the formation of tariffs, the funds at which expense are used to cover these costs).

Investment programs are developed by economic entities in the area of centralized water supply and wastewater. The procedure for the development, endorsement and approval of investment programs of business entities in the field of centralized water supply and wastewater depends on the regulatory body in the field of water supply and wastewater. In particular, the investment programs of business entities in the field of licensing activities are carried out by the state regulator of the NEURC, approved by NEURC (which is 3% of enterprises accounting for 74% of the water supply and wastewater companies are approved by the central executive body, which ensures the formation and implementation of the state policy in the sphere of housing and communal services (MinRegion of Ukraine) (97% of enterprises - 3% of the market).

The investment program is formed with indication of the volumes and sources of funding for its implementation. Depending on the amount of costs that are defined in the investment program, the value of the final tariff for centralized water supply and wastewater, which should be paid by the consumer, changes. In accordance with the Procedures for the Development, Endorsement and Approval of Investment Programs of Business Entities in the Sphere of Centralized Water Supply and Wastewater, approved by order of the Ministry of Regional Development of Ukraine dated December 14, 2012, No. 630 and by the NEURC of December 14, 2012 No. 381, the volumes of investments are determined on the basis of the technical condition of fixed assets, the principles of cost-effectiveness and the appropriateness of implementing appropriate measures, and also taking into account their impact on the level of tariffs [16].

Sources of financing of the investment program of the water supply and wastewater company may be the funds received from the enterprise from the licensed activity, which finances investment program measures, in particular depreciation deductions, production investment from profit, funds in the amount stipulated in the established tariffs for implementation of investment programs, and other receipts received from the conduct of economic activity, related and not related to the licensed kind of activity (own funds), and borrowed funds (bond loans, bank loans), attracted funds (funds received from the sale of shares attracted under financial lease agreements, share and other contributions of citizens and legal entities, investors, grants), budget funds [16].

During 2018, 48 investment programs for water supply and wastewater companies were submitted to the NEURC for consideration and approval, which is equal to 94% of 51 licensees. By the decision of NEURC, 44 investment programs for 2018 were approved for a total amount of UAH 1,095.16 million, which is 32% more than the planned investments in the previous year. These investment programs have been found to be well-founded and geared towards improving production efficiency and environmental protection [11].

The structure of the planned amount of funding for investment programs in 2018 by sources of funding is given in Table 1 (created on the basis of [11]).

Table 1.		
Investment sources	Volume of investments,	Structure of investments
	UAH million	by their sources, %
Depreciation	714,34	65,2
Profitable production investments	228,94	20,9
Unused funds of previous periods	126,78	11,6
Other funds raised	25,10	2,3
Total by 44 investment programs	1 095,16	100,0

From the given data it is clear that the main source of investments in 2018, as in previous years, was depreciation in the volumes provided by the structure of tariffs (65% of the total investment). The funds were also attracted at the expense of profits provided for in the structure of enterprises' tariffs. The volume of productive investment from profit is determined in the amounts necessary for the gradual restoration of networks (improving the functioning of the water supply and water wastewater enterprises), and taking into account the requirements for fulfilling the financial obligations of water supply and wastewater companies to international financial organizations. The main goals for which investment was directed in 2018 were: reduction of specific costs and losses of energy and other resources; increase of ecological safety; improving the quality of services [11].

The ineffectiveness of the budget financing of the sphere, as well as the inability to maintain the water supply and wastewater system solely at the expense of tariffs, call for the introduction of other approaches to investment in the sphere. Effective state regulation is impossible without the use of modern financial and economic mechanisms, and this applies to all spheres of public life [5, p. 439]. In conditions of limited budget financing and the presence of crisis phenomena in the economy, the introduction of public-private partnership mechanisms was considered particularly relevant [10; 13, p. 86]. Moreover, public-private partnerships have proven effective in the markets of developed industrialized countries of the world, and it is one of the main tools that allows the state (municipalities) to cooperate with individuals in infrastructure projects.

However, in Ukraine, the mechanisms of public-private partnership have not become widespread and are developing too slowly in infrastructure sectors (including in the water supply and wastewater sector). As of 01.01.2018, 39 contracts are implemented on the basis of public-private partnership on the basis of the water supply and wastewater (collection, purification and distribution of water), which is 21.4% of the total number of contracts in all infrastructure areas 182 [8]. Among them there are contracts of lease and concession of integral property complexes of water supply and wastewater companies (Table 2).

City, population	Contract description	Term of lease
City, population	Contract description	
0.1		/ concession
Odessa	The integral property complex of communal enterprise	49 years
population -	Odesvodokanal was leased from 01.01.2004 to OOO "Infox Ltd."	
1013292 people	(branch "Infoxvodokanal"). At the time of the lease, the	
(as of 01.01.2019)	constructions and equipment state of the enterprise was close to	
, , , , , , , , , , , , , , , , , , ,	the critical one: the depreciation of fixed assets amounted to	
	55%, water losses in water supply networks - 42%, arrears for the	
	used electric power - 25 mln.	
Severodonetsk	The integral property complex of the communal enterprise	25 years
Population -	"Severodonetskvodokanal" in 2009 was transferred to the	- J
104,503 people	concession LLC "Town service".	
(2018)		
Bila Tserkva	The integral property complex of the utility company	15 years
		15 years
Population –	"Bilotserkivvodokanal" in 2012 was transferred to the concession	
209 176 people	LLC "Belotserkivvoda". According to the concession contract, not	
(2018)	all property complex was transferred to the concession, but only	
	those objects connected with water supply and water wastewater.	
	The remaining property will continue to be serviced and maintained	
	by the utility company "Bilotserkivvodokanalom".	

Table 2. Current lease / concession agreements for water supply and wastewater companies (created on the basis of [19])

Compared to the leading countries of the world and emerging markets, Ukraine is behind the level of development of public-private partnerships. World Bank data on the implementation of public-private partnership projects in various fields indicate that water supply and water wastewater is a key sector of modernization of infrastructure, since in the period from 1990 to 2018, in this sector in the world as a whole, 996 projects were implemented on the amount of USD 80,901 million [2]. According to the Ukrainian Center for the Promotion of Public-Private Partnership Development, more than 730 public-private partnership projects in the field of water supply and wastewater have been implemented in the world over the last 20 years in the amount of USD 65.5 billion [7]. In its turn, only 25 public-private partnership projects were implemented in Ukraine during the same period of time, in which 12 million USD was invested, of which about 202 thousand USD - in the field of water supply and water wastewater [27].

Among the main problems of the implementation of public-private partnership in the sphere of water supply and wastewater of Ukraine (which is characteristic of all infrastructure projects), determine: absence of a logical and understandable system of legal regulation of the relevant relations (inconsistency between the Laws of Ukraine On public-private partnership (2010, July 1), On concessions (1999, July 16; 2010, October 21) and several laws regulating concession agreements in the areas of construction of highways, heat and water supply objects of communal ownership, objects of the fuel and energy complex lexis of state ownership, infrastructure); insecurity of investors; caution and uncertainty of public authorities; low institutional capacity of central and local authorities; lack of awareness of society in this area; high risks [9].

Consequently, the process of implementing public-private partnership in the field of water supply and wastewater is concentrated mainly at the central level (at the level of legislative and executive authorities, which form and ensure the implementation of state policy in the field). However, investment projects in the field of water supply and wastewater have a clearly defined regional component, in which a significant role belongs to local self-government bodies, as the owner of water supply and wastewater companies, and the guarantor of the provision of water services and wastewater services to population of territorial communities. The decentralization reform launched in 2014 is of a particular significance, aimed at the creation of effective local self-government and territorial organization of power in order to form and maintain a healthy living environment for citizens, to provide high-quality and affordable public services, the establishment of institutions of direct democracy, harmonization interests of the state and territorial communities [20]. This means that there must be well-defined mechanisms of interaction, a clear division of powers and appropriate actions between the three important processes - state policy in the field of water supply and wastewater, regional policy in this area and decentralization. At the same time, the process of decentralization of power in Ukraine, which proceeds simultaneously with the process of reforming local self-government, administrative-territorial structure and state regional policy, as well as carrying out sectoral reforms, should include conditions for the transfer of functions in the field of water supply and wastewater, investment development, public-private partnerships at lower levels of governance with specific mechanisms for their implementation.

Another approach that allows solving the problems of implementing investment projects in the field of water supply and wastewater, based on participative financing, which involves the use of financial resources not only of the state, but also of local communities, businesses and civil society institutions. Participation budget (participative budget) is an important tool for direct, e-democracy, through which citizens participate in decision-making, which develops the culture of self-government, the participation of the city population in the process of managing city finances in relation to the distribution of budget funds [24, p.65]. As a rule, the budget of participation is a part of the city budget, in which the inhabitants of the city independently choose to spend on them by voting, the results of which have direct effect, regardless of the will of officials and deputies [1, p.78].

At present, participatory budgeting has been introduced in the following cities of Ukraine: Berdichev, Vinnytsia, Zaporizhia, Zhytomyr, Ivano-Frankivsk, Irpin, Kaniv, Kramatorsk, Kremenchug, Kryvy Rih, Lutsk, Lviv, Mariupol, Nikolaev, Obukhiv, Pokrovsk, Poltava, Pryluky, Romny, Svitlovodsk, Slavyansk, Sumy, Trostyanets, Ukrainka, Cherkasy, Chernivtsi, Chernigov, Uzhgorod [6, p.97; 26, p.2]. The main purpose of its creation is to provide new opportunities for participation in the distribution of municipal finances for those people who are usually excluded from this process. Such a mechanism compensates for the imperfections of representative democracy: complements, but does not replace representative bodies [3, p.45]. Participatory budgeting can take place at the level of the whole city, a certain area or a certain area of urban life (for example, education or culture). It can focus on the interests of all residents or a particular social group that has limited opportunities to participate in city governance (say, young people or women). Given this specificity, as well as the national peculiarities of the budget process, the mechanism of participatory budgeting can be adjusted.

In Ukraine, participatory budgeting is not regulated at the national level and is mainly realized with the help of international financial institutions. In particular, since 2007, the Government of the Swiss Confederation has supported the creation of decentralized water supply systems in selected regions of Ukraine. This is done within the framework of the Swiss-Ukrainian Decentralization Support Project in Ukraine DESPRO. During the project implementation through DESPRO, support was provided to more than 100 rural communities. Due to the implementation of projects, about 70 thousand rural residents improved or got access to quality centralized drinking water supply for the first time. The approach used has proved that there is a great potential for further use of such systems in Ukrainian villages [21].

According to experts and researchers, participatory budgeting will be successful and will be able to improve the quality of city governance, subject to compliance with the mandatory components of participative budget practice: (1) conducted from year to year, rather than a one-time action; (2) is accompanied by an information and educational promotional campaign for attracting as many residents as possible; (3) all residents have equal opportunities to participate; (4) is allocated in advance determined by the specific amount of funds of the city budget; (5) community involvement at all stages: from prioritization to project implementation; (6) competent choice: the participants are given all the necessary information; (7) all decisions and selected projects are executed in full [6, p.99].

Another approach is investing in local and regional water and wastewater projects using the debt market. Investment projects in the field of water supply and wastewater are usually long-term with a long payback period. Therefore, one of the options for their beneficial financing - financing through the use of opportunities for the market of debt, including at the expense of the issue of municipal securities in the form of bonds of a local loan. This type of securities is issued by local government bodies with the following objectives: 1) attraction of financial resources for implementation of investment programs that are of a purely local importance, but which are critical to the functioning of the community (development of electricity, water and sanitation systems, housing construction, development of transport networks, construction of educational facilities, health care, meeting the needs of communal services, etc.); 2) attraction of additional financial resources; 3) meeting the urgent needs of local authorities or territorial entities in cash in anticipation of future revenues; 4) reducing or covering the deficit of the local budget; 5) repayment of existing obligations (previously issued by ICS); 6) implementation of extrabudgetary goals [12]. The legal principles of the functioning of the institution of local borrowing are defined in the Laws of Ukraine On Securities and the Stock Market (2006, February 23), On State Regulation of the Securities Market in Ukraine, On Amendments to Certain Legislative Acts of Ukraine on Facilitation of Business and Engagement Investments by Securities Issuers (2017, November 16), Resolution of the Cabinet of Ministers of Ukraine On Approval of the Procedure for the Implementation of Local Borrowings (2011, February 16, No 110), Resolution of the National Commission on Securities and Stock Market of Ukraine On Approval of the Regulation on the Procedure for Issuing Local Bonds and their Circulation (2018, June 14, No 391). Registration of the issue of bonds of local loans is carried out by the National Commission on Securities and Stock Market of Ukraine (NSSMC).

In favor of the need for the expansion of the municipal securities market in Ukraine, the following shows: 1) the market of municipal bonds is "the basis of financial markets - healthy and strong, despite the fact that they have lower rates than corporate shares and government bonds, the cost of their placement yet smaller", issuing municipal securities, local authorities get cheap, compared with bank loans, funds; 2) municipal securities as loan instruments are of great importance to cities, as they are the source of "long" funds, which allows them to attract resources to finance various long-term urban development projects and infrastructure projects; 3) funds attracted from the issue are directed to specific programs of development of the area, which stimulates production activity, allows to create jobs, develop transport infrastructure, etc.; 4) expansion of the range of use of local loans is one of the important directions of diversification of the debt policy of the state as a whole, contributes to the development of debt management, the expansion of stock market instruments [4; 12]. At the present stage, the main feature of the Ukrainian market of municipal borrowings in general and the Ukrainian municipal bond market is its "freezing", since the share of contracts for them is 0%. The dynamics of volumes of registered local bonds is unstable (from the active issue of local bonds to their full absence) (Fig. 1)

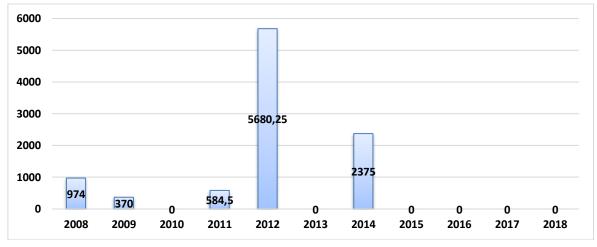


Fig. 1. Dynamics of registered issues volumes of local bonds of Ukraine in the period of 2008-2018, UAH million. (compiled on the basis of [15])

Among the problems that hinder the wider development of the municipal securities market in Ukraine, experts identify: 1) insufficient interest of potential investors in the municipal securities market due to the low yield of these securities (the yield of municipal securities varies from 10-12%); 2) insufficient liquidity of municipal bonds compared with other debt instruments of the stock market; 3) prevalence of short-term bonds in volume of emissions and inefficient use of borrowings; 4) the existence of significant financial risks of investing in municipal securities (the lack of transparency of financial transactions at the local level, reducing the level of liquidity of securities forms the basis for the risks to the investor. For the issuer, in a context of slow rising dynamics of filling the revenue part of local budgets, the risk of non-fulfillment of obligations increases on the settlement of municipal bonds, which, in turn, could lead to a worsening of the debt crisis, and the level of investors' confidence in the city authorities as a result of unstable ness of economic and political situation and the level of public confidence in financial institutions); 5) an additional burden on the local budget generated by the issuance of municipal securities; 6) lack of developed stock market infrastructure that does not allow all interested parties to participate in the formation of demand for municipal securities through different funds, low level of municipal financial management, lack of experience in managing projects for placement of local loans, difficulties in assessing the riskiness of local investment projects [12].

Ukraine still has little experience in the operation of municipal securities, the first issue of bonds was made in Kyiv in 1995. The current example of successful projects under which the issuance of municipal securities has been made include projects for the holding of Euro 2012: repair and reconstruction of roads in Kharkiv (issue of bonds worth 100 million USD), construction of a stadium in Lviv (300 million UAH) [12].

Achievement of success in the investment development of the water supply and wastewater system is possible only under conditions of effective investment policy, coordination of interaction of all investment instrument tools, combination of structural components, and finding the optimal balance between centralization and decentralization in the management of investment flows. At the same time, the role of the state in determining the directions of investment development in the sphere of water supply and wastewater must remain crucial in the normalization, organization and coordination of processes.

Conclusions. The development of the water supply and wastewater sector in Ukraine requires significant capital investments and to support functioning water supply and wastewater enterprises, and for the implementation of new projects. What is impossible without attracting and efficiently using investments. Despite the world tendency to deregulate the economy, the water supply and wastewater sector in many countries of the world, including Ukraine, is characterized by an overwhelming majority of the fate of municipal (state) property and state (municipal) regulation. Within the limits of state regulation, the state determines possible financial and economic mechanisms for supporting and development of the sphere, organizes and organizes their implementation. The main source of investment in the field of water supply and wastewater is the profits of water supply and wastewater companies, whose activities are the subject of state regulation in Ukraine. According

to the value of the final tariff for centralized water supply and wastewater, which must be paid by the consumer, depends on the amount of expenses that are determined in the investment program of the company, approved by the regulator. The company's investments in water supply and wastewater can be directed to the construction (reconstruction, modernization) of objects in this area, improvement of the quality of services. As in the previous years, the main source of investments in water supply and wastewater companies was depreciation in the volumes provided by the structure of tariffs (65% of the total investment). Under conditions of limited budget and local financing, lack of own funds of the enterprise, and the presence of crisis phenomena in the economy, it is particularly important to introduce mechanisms of public-private partnership, use of approaches based on participative financing, which involves the possibility of using financial resources not only state, but also local communities, businesses and civil society institutions, and financing through the use of market opportunities for debt obligations, including at the expense of the issue of municipal securities in the form of bonds of a local loan. However, in Ukraine, the mentioned mechanisms of public-private partnership have not become widespread and are developing too slowly. In order to improve the investment activity in the field of water supply and wastewater, structural changes are needed, such as: development of a strategy for the development of the water supply and wastewater sector development; definition of long-term and short-term financing plans; review and update the state financing program of the industry; the introduction of a systematic approach to various forms of investment with the indication of specific implementation mechanisms; review of legal norms to strengthen the institution of property, protect the interests of infrastructure owners, protect the interests of investors and consumers of services, analyze the problem issues of the implementation of credit projects and take them into account when reviewing the country's financial and budgetary system.

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