UDC 336.13:336.64

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## CORPORATE FINANCING OF PUBLIC-PRIVATE PARTNERSHIP PROJECTS: ASSESSMENT OF FINANCIAL OPPORTUNITIES AND RISKS

**Abstract.** An integral condition for the effective functioning of the economic system of the state is the constructive interaction of the state and business in order to solve common financial, economic and social problems. At the same time, an important task of the state is to create conditions for the development of corporate financing of public-private partnership. Given the importance of private financing of public-private partnership projects, the purpose of the study is to determine the activity of such investments in certain areas of social or economic infrastructure in domestic and foreign practice, as well as to investigate the financial capacity of business entities due to high capital projects, a long period of their implementation. The relevance of the study is to identify existing problems and risks that arise in the process of corporate financing of public-private partnership projects. Systematization of literature sources and approaches to solving the problem of corporate financing of public-private partnership indicates the need for further research in this area to improve the implementation of forms of partnership between government and business with the establishment of guarantees to private partners on risks associated with exchange rates, lending, parity liability of partnership participants for breach of contractual obligations. The research findings can be useful for public authorities, which should encourage private partner participation in long-term projects. However, such support should be provided in order to implement the most necessary public-private partnership projects to significantly improve the living conditions of the population in a given region, as such projects are unprofitable in the case of purely commercial funding. The research may be of interest to business entities that are potential investors in publicprivate partnership projects.

*Keywords:* public-private partnership, corporate financing, projects, forms and models of partnership relations, economic risks.

**JEL Classification** G32, G38, H54 Formulas: 0; fig.: 3; tabl.: 0; bibl.: 12.

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# КОРПОРАТИВНЕ ФІНАНСУВАННЯ ПРОЄКТІВ ДЕРЖАВНО-ПРИВАТНОГО ПАРТНЕРСТВА: ОЦІНКА ФІНАНСОВИХ МОЖЛИВОСТЕЙ І РИЗИКІВ

Анотація. Невід'ємною умовою ефективного функціонування економічної системи держави є конструктивна взаємодія держави і бізнесу для розв'язання спільних фінансових, економічних і соціальних проблем. При цьому важливе завдання держави — створення умов для розвитку корпоративного фінансування державно-приватного партнерства. Зважаючи на вагомість приватного фінансування проєктів державно-приватного партнерства, метою дослідження є з'ясувати активність здійснення таких інвестицій у певних сферах соціальної чи економічної інфраструктури у вітчизняній і зарубіжній практиці, а також дослідити фінансову спроможність суб'єктів підприємницької діяльності, що зумовлено високою капіталомісткістю проєктів, тривалим терміном їх реалізації. Актуальність дослідження полягає у виявленні наявних проблем і ризиків, що виникають у процесі корпоративного фінансування проєктів державно-приватного партнерства. Систематизація літературних джерел і підходів до розв'язання проблеми корпоративного фінансування державно-

приватного партнерства свідчить про потребу подальших досліджень у цій сфері задля вдосконалення реалізації форм партнерських відносин держави і бізнесу з установленням гарантій приватному партнерові за ризиками, які пов'язані зі зміною курсу валют, кредитуванням, паритетної відповідальності учасників партнерства за порушення зобов'язань за контрактами. Висновки дослідження можуть бути корисними для органів державної влади, які повинні стимулювати участь приватного партнера в довгострокових проєктах. Однак така підтримка повинна надаватися з метою реалізації найнеобхідніших проєктів державно-приватного партнерства для значного поліпшення умов життя населення в певному регіоні, адже такі проєкти є неокупними в разі виключно комерційного фінансування. Дослідження може зацікавити суб'єктів господарської діяльності, які є потенційними інвесторами проєктів державно-приватного партнерства.

*Ключові слова*: державно-приватне партнерство, корпоративне фінансування, проєкти, форми і моделі партнерських відносин, економічні ризики.

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**Introduction.** In domestic and foreign practice, increasing attention is paid to the intensification of relations between the state and private business. The implementation of numerous socio-economic tasks of the country is associated with ever-increasing constraints in the budget sphere, as well as the need to improve the quality of services provided. In this regard, an integral condition for the effective functioning of the economic system of the state is the constructive interaction of the state and business in order to solve common financial, economic and social problems. At the same time, an important task of the state is to create conditions for attracting private capital on the basis of public-private partnership. After all, corporate financing allows not only to save budget funds, but also to develop entrepreneurship, socio-economic infrastructure.

**Recent research analysis and problem setting.** Theoretical-conceptual and practical principles of the developed public-private partnership were studied by such domestic and foreign scientists as: M. Ayrapetyan, I. Babkin, Ya Belinska, O. Bilovodska, M. Deryabina, M. Gerrard, T. Kalita, S. Kuzmina, M. Mashchenko, M. Orshanska, L. Sharinger etc.

However, given the importance of private financing of public-private partnership projects, it is advisable to determine the activity of such investments in certain areas of social or economic infrastructure in domestic and foreign practice, as well as to explore the financial capacity of business entities due to high capital intensity of projects long term of their realization, emergence of various types of risks.

**Methodology and research methods.** The methodological basis of the article is scientific publications, laws and regulations of Ukraine, Internet resources. The system approach, methods of analysis and synthesis, comparison and logical generalization were used during the research.

The results of the research. The process of financing public-private partnership projects (hereinafter — PPP) by a private partner may be carried out by self-financing — the use of own funds (cash in accounts, funds in settlements, as well as fixed assets and current assets (including their liquidity)), or attraction of borrowed funds by a private party on the basis of payment, urgency, return, security, targeted use of funds.

For the most part, private partners are not interested in investing their own funds in the implementation of PPP projects, which is explained by such deterrents as: the predominance of private partnerships of limited liability companies, for which there are restrictions on further increase of authorized capital; lack of legal requirements for the minimum level of equity of private partners; failure of the state, due to the constant lack of budget funds, budget support for PPP projects, despite the fact that the law on public-private partnership provides for various forms of such support.

Despite the existing problems and risks that arise in the process of joint activities of the state and business, the equity of private partners is the main component of successful implementation of PPP projects. In addition, a sufficient level of equity of the business entity is the basis of its financial stability, a sign of crisis, solvency and competitiveness, as well as allows to attract credit

resources, without which the implementation of partnership projects between government and business is impossible.

Bank loans are a potential source of financing for PPP projects. By lending to highly profitable public-private partnership projects, banks have the opportunity to improve their financial base, control the borrower's activities at all stages of PPP projects, and be co-owners of business. In this regard, Belinska and Kalita note that «the point of combination of interests of banks and enterprises is to determine the lower limit of return on investment, which is usually the rate of return» [1, p. 6].

In order to implement a PPP project, it is first and foremost important for a private partner to determine the amount of financial resources it can attract, taking into account the rates of bank loans, the expected amount of profit in order to cover debt obligations. In addition, the size of the loan must meet the financial needs of the business and maintain its liquidity, even in the event of late payments. Attracting credit resources by a business entity is carried out in stages, which are shown in *Fig. 1*.

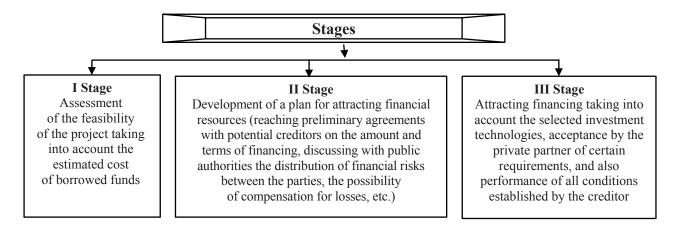


Fig. 1. Stages of attracting credit resources by a private partner to finance PPP projects *Sources*: developed by the author.

The main advantages of using bank lending for the borrower are: low cost of borrowing, additional credit due to increased collateral and guarantors, guaranteed cash, the possibility of both debt restructuring and early repayment. However, such a source of funding for PPP projects is accompanied by certain difficulties for business. In particular, it is a rather expensive way of financing (*Fig. 2*).

Despite the fact that the cost of long-term (starting from 2015) and short-term loans (starting from 2014) decreased slightly from 26,4% to 19,2% and from 20,8% to 13,9%, respectively, the average value of interest rates on loans was 18,58% and 17,31%. In addition, the real cost of the loan usually exceeds the nominal interest rate, as it includes fees paid to banks, as well as other additional costs under the contract.

At the same time, according to the Ministry of Economic Development, Trade and Agriculture of Ukraine, the average return on investment in PPP projects is about 13—15% in the long run (10—15 years).

The excess of the value of borrowed funds over the profitability of private partners causes additional losses, which leads to the need to restructure the debt, and in the future — to bankruptcy.

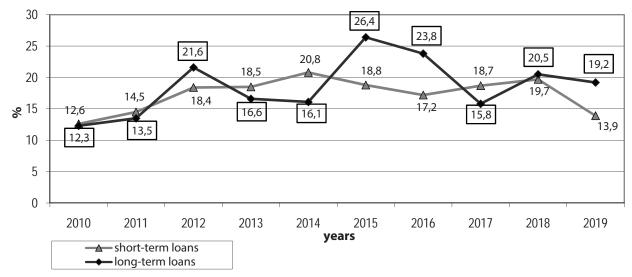


Fig. 2. The cost of loans to businesses in the national currency at the end of the year during 2010—2019

Sources: [2].

In addition, banks are not interested in providing long-term loans (more than 5 years) to finance PPP projects, as they seek to quickly return on their capital. According to the National Bank of Ukraine, which are shown in Fig. 3, during 2010—2019, banks increased the volume of loans to non-financial corporations for more than 5 years for UAH. However, there is a tendency for the predominance of short — (up to 1 year) and medium-term loans (from 1 year to 5 years) over longterm. In the general structure of loans, they ranged from 37 to 52 and from 32 to 45 percentage points, respectively. Therefore, loans with a term of more than 5 years for the study period ranged from 12% to 22%, which indicates a slight increase in such loans.

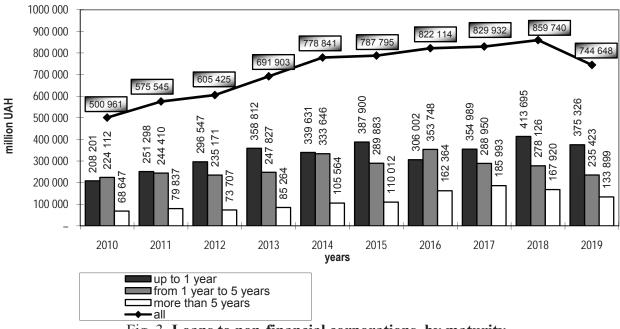


Fig. 3. Loans to non-financial corporations, by maturity

Sources: [2].

Banks also consider the social sphere to be a risky investment. The use of this source of financing is significantly limited by the absence in the domestic legislation of preferential lending by banks to business entities that implement socially important PPP projects. Ignoring legislative preferences for banks, as well as government guarantees, reduces the interest of credit institutions in

ISSN 2306-4994 (print); ISSN 2310-8770 (online)

lending for such projects. Even the provision of collateral, additional guarantees and impeccable business reputation do not always influence the bank's decision to lend to these projects, as future flows of long-term projects are almost impossible to predict. Many projects are unprofitable, due to, for example, the inability to guarantee a private partner a tariff for services provided under the agreement at a level that would allow to recoup the costs incurred. Or the impossibility of setting prices when creating or improving social infrastructure facilities, certain facilities in depressed regions.

Thus, in the domestic practice, the use of bank lending by private partners is due to: the lack of interest of the banking sector in lending to PPP projects, in particular in the social sphere, due to the high probability of risks of non-repayment of debt; high cost of bank loans for business; lack of proposals from banks for loans that would meet the amount of funding required and the timing of partnership projects.

In world practice, in the structure of sources of financing of PPP projects, the share of own funds invested by a private partner is mostly insignificant and amounts to about 5—10% of the planned investments [3] This is due to the fact that he took a significant number of operational risks of the project. Therefore, the vast majority of investments required for the implementation of PPP projects are attracted from the borrowing market.

It is extremely important abroad to develop a balanced and sound PPP project to ensure its attractiveness to attract resources from businesses or financial institutions at both the national and international levels. This is a long process that sometimes takes several years. The main task is the optimal distribution of risks between all participants in the partnership (government, private partner and creditors). For lenders financing PPP projects, the biggest risks are the borrower's insolvency and non-completion of the project. Therefore, in order to minimize these risks in international practice, creditors have the right to replace the default private partner with a new one, insure certain risks and receive guarantees from both the state and business. A rational combination of such measures makes it possible to obtain the necessary borrowings on the capital market to finance PPP projects.

Thus, according to the World Bank in 2019, about 55% of projects were funded by international private entities. The regions with the largest number of such financial resources are Latin America and the Caribbean (where Spain and France were the main sponsoring countries), as well as Europe and Central Asia (Russia and China). In addition, in the first half of 2019, five countries — China, Brazil, India, Russia and the Philippines together attracted 37,8 billion dollars, or 76% of global private investment in PPP projects. In particular, China — 16,8 billion dollars for 60 projects; Brazil — 11,9 billion dollars for 12 projects; India — 4,7 billion dollars for 24 projects; Russia — 2,6 billion dollars for seven projects; Philippines — 1,8 billion dollars for five projects [3].

The offer of international debt financing of PPP projects in Ukraine is quite limited. This is due to the socio-economic instability of the country; frequent change of political forces; military action in eastern Ukraine; the disinterest of the direct employees of the structural units responsible for investment activities in creating favorable conditions for attracting private capital; the absence of a single specialized body responsible for the development of PPPs in Ukraine; ultimately limited experience in project preparation. For projects using public-private partnership mechanisms, it is important to structure the agreements, identify and assess potential risks, and develop an action plan to minimize them. As the experience of developed countries shows, the quality of project documentation preparation is of great importance for the implementation of PPP agreements. Given the unfavorable situation in Ukraine, special attention should be paid to the «credit attractiveness» of the project structure. After all, only in the presence of the most transparent and clear project our country will have a chance to receive external private financing of PPP projects.

In Ukraine, business initiative for cooperation with the state is extremely low. The situation is complicated by the fact that potential investors are frightened by the neglected state of the social sphere and economic infrastructure, where almost all government facilities need modernization, which in turn leads to additional costs for the investor. Thus, according to the World Bank in

Ukraine during 2010—2019, 58 PPP projects were implemented, of which the largest number were projects in the energy sector (44 projects), 11 — in the field of heat supply and only 1 — in the fields of telecommunications, transport and processing waste. A total of 5,693 million dollars was invested, of which 4,115 million dollars — in energy, 1,320 million dollars — in telecommunications, 150 million dollars — in transport, 70 million dollars — in waste treatment, 38 million dollars — in heat supply [4].

The World Bank does not pay attention to domestic projects that are implemented in the social sphere. According to world experts, they are not considered PPP projects, having a short-term implementation period (usually 1 year). After all, the cooperation of local authorities with investors is conditioned by the annual budget, according to which co-financing of partnership projects is carried out. At the same time, they are selected on a competitive basis, and the main expenditures are financed by legal entities (mostly public organizations), in particular, the share of invested funds is more than 50% of the project cost. Therefore, agreements of local governments with private partners comply with the provisions of the Law of Ukraine «On Public-Private Partnership».

Social projects implemented on the basis of PPP are important for citizens. They are aimed at improving the quality of education, provision of medical services; compliance with social standards of the population; improving the tourist and investment attractiveness of the territories. In domestic practice, the social sphere is not a priority for investment. At the same time, in countries with developed economies, where there is a high level of GDP consumption per capita, adequate social protection, high quality health care and PPP education is common in the social sphere. Depending on the availability of state guarantees, such projects are divided into two groups:

- those in which the state guarantees the minimum profitability of a private partner. As a result, these projects have a high investment attractiveness;
- those in which the income of a private partner depends on consumer demand. Therefore, they are considered high risk and are not very interesting for investors.

In both cases, investments in social projects are more risky and less profitable than in other areas of economic infrastructure. In foreign practice, most PPP projects are implemented in the fields of health and education, while tourism and culture attract less attention from potential investors. Areas such as physical culture and sports, as well as social services are of the least interest to private business.

All infrastructure facilities can be built using different models of cooperation between government and business. According to Gerrard, this model can be described as a specific PPP project, which arose as a result of a legal and transparent procedure of selection of relevant PPP participants by private business to address specific tasks of economic policy [5, p. 17—18]. A certain model reflects the degree of participation of a private partner in the financial mechanism of the PPP. Each scientist, in accordance with his understanding of the essence of PPP, determines an individual set of models. However, the two most common approaches to their selection, based on the goals and nature of the tasks. According to the first, the models are divided depending on the purpose of the PPP [6; 7; 8, p. 113]:

- 1) organizational models the interaction of the private investor and the public sector is through the involvement of specialized «third parties», the delegation of certain functions, contractual obligations, as well as attention is paid to the possibility of transferring infrastructure to external management. For example, such a form of such a model could be a concession;
- 2) financing models represented by rent, leasing. It should be noted that such PPP models have similar features to project financing in terms of institutional framework. After all, provide for the creation of a project company with independence; implementation of financing at the expense of future cash flows; clear delineation of responsibilities and obligations; identification and assessment of risks, opportunities for their diversification between PPP partners;
- 3) models of cooperation based on the joint efforts of PPP partners responsible for the individual stages of the overall process.

According to the second approach, the models of cooperation between the state and private business are divided depending on the role each partner plays in terms of ownership, management

ISSN 2306-4994 (print); ISSN 2310-8770 (online)

and financing: concession, operator, cooperation, contract, leasing [9, p. 101; 10, p. 33; 11, p. 111; 12, p. 13].

In practice, the model is chosen in terms of ensuring efficient, quality service delivery and cost optimization. In our opinion, the most optimal model of public-private partnership is a mixed model, according to which public and private partners have the opportunity to agree on the sharing of risks, obligations and profits from a particular PPP project. In this case, all stages of project implementation should be guided by the state, but carried out by a private partner. A step-by-step partnership allows public authorities to continue or terminate cooperation with different partners, depending on the quality of their work. In addition, PPP participants can form a model of cooperation in which they agree on joint construction, design, financing, management and maintenance of the facility.

Along with the above models and forms of partnership between the state and business, World Bank experts highlight concessions, privatization, environmental projects, management and leasing. At the same time, in the world an important area of PPP implementation is to ensure environmental safety in production and consumption.

Unlike foreign countries, which have gradually mastered various forms of partnership — from simple to complex, gaining experience and improving legal relations, in Ukraine such forms are developing slowly, because only projects in the form of concessions and joint activities are implemented. The lack of a strategy and program for the development of public-private partnership leads to spontaneous and unreasonable decisions regarding the choice of forms of PPP without taking into account the real needs and capabilities of the economy. Therefore, it is necessary to improve the implementation of forms of partnership between the state and business with the establishment of guarantees to the private partner on the risks associated with changes in exchange rates, lending, parity liability of partners for breach of contract. This will allow attracting financial resources of business in various forms of PPP cooperation.

Conclusions from the conducted research. Thus, own and borrowed funds of private partners are one of the main sources of funding for domestic projects. Therefore, the corporate form of project financing is important in the financial mechanism of PPP, which represents the investment of investment resources of business entities in the form of cash, fixed and current assets, property rights and intangible assets, loans, etc. in the implementation of partnership projects of the state and business. The success of the PPP project depends on the accuracy of the definition of financial tactics by a private partner, from the solution of financial problems in the short term, taking into account the most important elements of the outlined financial strategy.

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The article is recommended for printing 15.03.2021

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