

DOI: 10.55643/fcaptp.2.43.2022.3695

Shuliuk B.

Ph. D. in Economics, Associate Professor, West Ukrainian National University, Ternopil, Ukraine;
e-mail: BohdanaShulyuk@i.ua;
ORCID: [0000-0001-8692-1983](https://orcid.org/0000-0001-8692-1983)
(Corresponding author)

Horyn V.

Doctor of Economics, Associate Professor, West Ukrainian National University, Ternopil, Ukraine;
ORCID: [0000-0002-6048-8330](https://orcid.org/0000-0002-6048-8330)

BANKING PROJECT FINANCING OF PUBLIC-PRIVATE PARTNERSHIP AND ITS ROLE IN ENSURING PUBLIC WELFARE

ABSTRACT

The article reveals the peculiarities of the use of bank project financing in the field of PPP. It is substantiated that the peculiarity of the application of PPP project financing is the creation of a special project company, which is responsible for mobilizing financial resources for project implementation; the presence of a hierarchy of investment; more objective assessment of the borrower's solvency and reliability and evaluation of the project itself in terms of its efficiency, security and risk; significant transaction costs to settle the interests of all members of the partnership.

It is proved that in modern conditions the role of project bank lending in the sources of project financing is growing rapidly, and the role of banks in this process is much wider than in traditional forms of lending. They not only provide financial support for the project, but also become direct participants in the implementation of the PPP project, performing management, settlement, consulting, guarantee and other functions. Given the specifics of PPP projects (large scale, long implementation time, cost), the participation of commercial banks in their financing is complicated. International development banks and international financial institutions play a leading role in the formation of project financing in the field of PPP, and the syndicated lending mechanism is also used in foreign practice. However, in Ukraine, bank project financing is practically underdeveloped, which is due to its institutional and legal irregularities. The use of syndicated lending mechanisms in Ukraine is unique, as well as the financing of PPP projects through credit and export agencies. PPP project financing with the support of international financial institutions, in particular the EBRD, has been the most developed, concentrating in such areas as infrastructure development, energy reform, and construction. In this regard, the problems of economic, legal and managerial nature, which hinder the development of bank project financing in the field of PPP in Ukraine in modern conditions, are outlined.

Keywords: public-private partnership, project financing, bank project financing, project company, project crediting, public welfare

JEL Classification: G23, G24, G31, H43, H54

INTRODUCTION

In conditions of economic instability and permanent lack of budget resources, the introduction of innovative financial technologies that will enable the mobilization of private sector resources to implement important economic and social development projects is an urgent issue of public administration practice. According to world practice, the banking segment of the financial market plays an important role in the implementation of projects in cooperation between the state and the private sector, as banks usually initiate and organize large investment projects, they organize the mobilization of necessary financial resources. An important area of application of project financing technology is the implementation of projects with the participation of the state as a stakeholder and donor. The state's participation in public-private partnership project financing (hereinafter - PPP) has a multilateral positive effect, which, along with reducing the fiscal burden on the budget system and implementing important projects for the state, is the introduction of new management technologies and improving public financial management. Banks as participants in PPP project financing receive benefits in the form of

Received: 25/01/2022

Accepted: 16/02/2022

Published: 29/04/2022

© Copyright
2022 by the author(s)



This is an Open Access article
distributed under the terms of the
[Creative Commons CC-BY 4.0](https://creativecommons.org/licenses/by/4.0/)

stable income from the implementation of projects with a relatively low level of risk (because PPP projects usually provide government guarantees), as well as image benefits. Given such complementary positive effects of the application of PPP project financing for various economic agents, a thorough study of the theoretical foundations and practices of its implementation in conditions of economic uncertainty have significant prospects.

LITERATURE REVIEW

Despite the significant prospects for the application of the PPP mechanism for the implementation of development projects in Ukraine, scientific papers on the problems of its financing are presented in the domestic economic literature sporadically. Among the research of recent years is the work of M. H. M. Marvan on identifying the features of bank project financing and identifying factors that hinder its development in Ukraine [1], as well as on the development of the institutional environment to enhance cooperation between the banking sector and the state. implementation of PPP projects [2]; K. Pashinska, which is devoted to the general characteristics of project financing in the field of PPP [3]; O. Zayachkivska [4] regarding the prospects of using project financing for the implementation of investment projects.

Issues of project financing with the involvement of banking resources are also disclosed in the scientific work of foreign scholars. Kh. Ganbat, I. Popova, I. Potravnyy [5] analyze the role of bank loans in financing environmentally and socially oriented projects. G. Hodge and C. Greve [6] argue that the most important area of research on the implementation of PPP projects is their funding. N. Linh, X. Wan, H. Th. Thuy reveals the key channels of participation of banking institutions in the implementation of PPP projects (lending, participation through the financing of the PPP project company) [7]. F. Blanc-Brude and R. Strange [8] reveal the determinants of the cost of bank financing of PPP projects and argue that it is most affected by market risk, while technical risks are subject to diversification through project structuring. X. Wang, L. Shi, B. Wang, M. Kan [9] draw attention to methodological approaches to assessing the level of credit risks of PPP projects and suggest taking into account the uncertainty and other characteristics of PPP project financing.

Despite some development of the banking sector's participation in PPP project financing, most studies consider it briefly, in the context of covering more general issues of project financing. In view of this, the urgent task today is to develop the theoretical basis of bank project lending in the context of identifying its features and factors that hinder its development in Ukraine.

The purpose of the scientific article is to reveal the peculiarities of the application of bank project financing in the field of PPP in Ukraine. Realization of the set purpose provides identification of immanent signs of project financing in the field of PPP, estimation of tendencies of its application in Ukraine and identification of factors of legal, economic and organizational character which restrain development of project financing at realization of PPP projects in modern conditions.

RESULTS

The most acceptable form of public-private partnership financial mechanism (both in terms of risk and efficiency) is project financing. Given that public-private partnership projects have widespread support from the state, this type of financing is the most reasonable and appropriate, as it does not require additional collateral for the loan.

The emergence of PPP project financing is due to the implementation of large-scale projects initiated by several large investors who cannot implement them on their own. The peculiarity of this form of financing is the creation of a special project company. In this case, the newly created legal entity has neither a financial history nor sufficient assets to provide collateral. The founders of the company are the initiators of the PPP project, which provide funding through the formation of the authorized capital of the project company. It is the special project company, not the initiators of the project, that attracts credit resources to implement the project. Usually about 30% of the project is the company's investment, and the rest of the project company borrows from financial institutions for an average of 5 to 15 years. The movement of funds in the project financing of PPP is shown in *Figure 1*.

It is considered that this ratio minimizes the risks of creditors, as investors in the project have already invested enough of their own funds and, therefore, more than interested in the successful implementation of the project. In this case, the condition of creditors is the investment of investors' own funds in the initial stages of the PPP project (design and construction), and then carry out their financing. However, in contrast to traditional forms of lending, project financing allows lenders to more accurately determine the solvency and reliability of the borrower; evaluate the investment project from the standpoint of its efficiency, security, risks; predict the final outcome of the PPP project.

The large number of participants in PPP project financing causes some difficulties in organizing partnerships, as it takes a long time to reach a compromise between partners. Negotiations on the most important financial aspects of the project

and their regulation may take more than a year. During this time, partners may change. As a result, operating costs are doubled compared to traditional lending. They can reach up to 10% of the total cost of the infrastructure project.

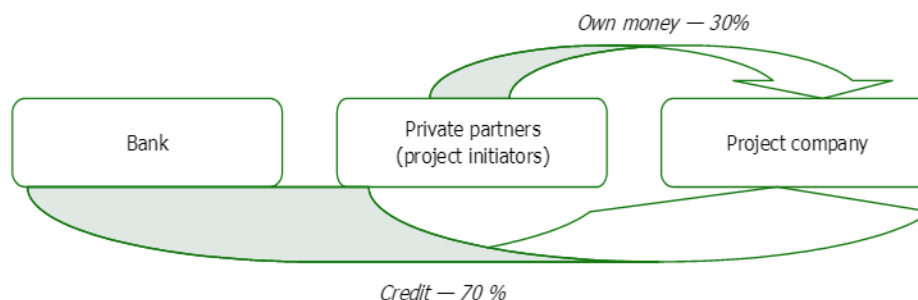


Figure 1. Cash flow in the project form of public-private partnership financing

PPP project financing has been actively used in foreign practice for many years, but until 1996 there was no statistical information on the volume and structure of sources of its financial support. Since 1996, Project & Trade Finance has created a database on the implementation of government-business partnership agreements on the basis of project financing in different regions of the world. At present, such statistics are conducted on a global scale by the analytical agencies Thomsom Reuters and IJ Global.

In assessing this financing, IJ Global examines the dynamics of its structural sources, including investments by international financial institutions, loans, project bonds and business equity. So, the data of *Figure 2* show that in 2011 project lending was not carried out at all, due to the exit of banks from the financial crisis. Instead, investments of international financial institutions prevailed, accounting for 52.7% of the total sources of PPP project financing. However, during 2012-2017, the situation changed significantly, as loans began to predominate. During this period, their share ranged from 36.4 to 61.6 percentage points. The period 2018-2019 was characterized by an increase in the role of project bonds and investments of international financial institutions, and in 2020 - project loans.

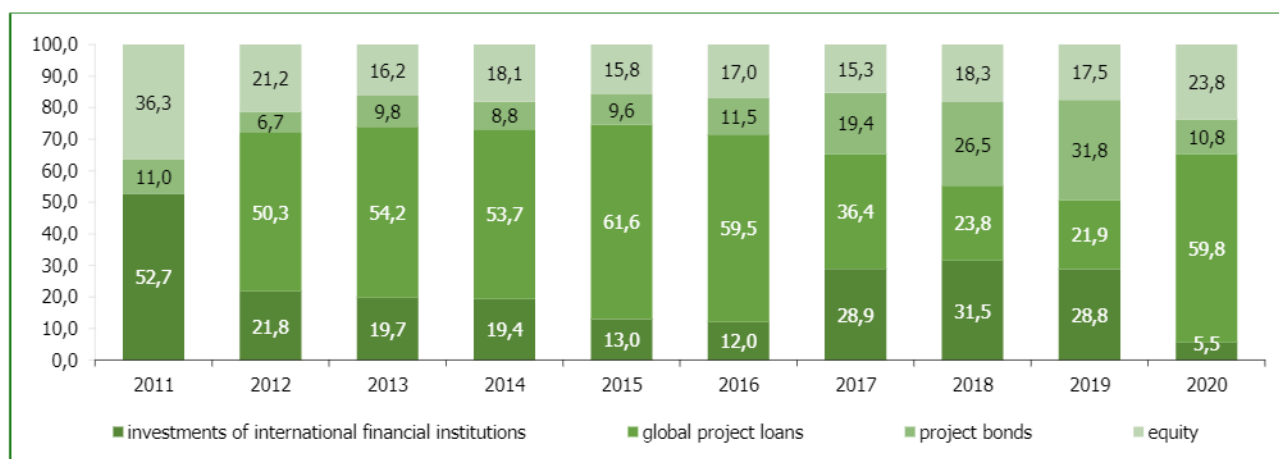


Figure 2. The structure of sources of project financing in world practice for 2011–2020, %. Research regions of the world: Europe, North America, Asia-Pacific, Latin America, the Middle East and Africa (*Source: research regions of the world: Europe, North America, Asia-Pacific, Latin America, the Middle East and Africa.*)

Given the predominance of borrowed funds in the structure of PPP project financing, a significant number of scholars [12-15] claim that its implementation is carried out on the principles of bank lending. However, the functions of banks in project financing are much broader than in lending. They not only provide financial support for the project, but also become direct participants in the PPP project, managing (participating in the selection of project company founders, preparing project documentation, project risk assessment, project management, continuous monitoring of their implementation, etc.), settlement, consulting, warranty and other functions (*Figure 3*).

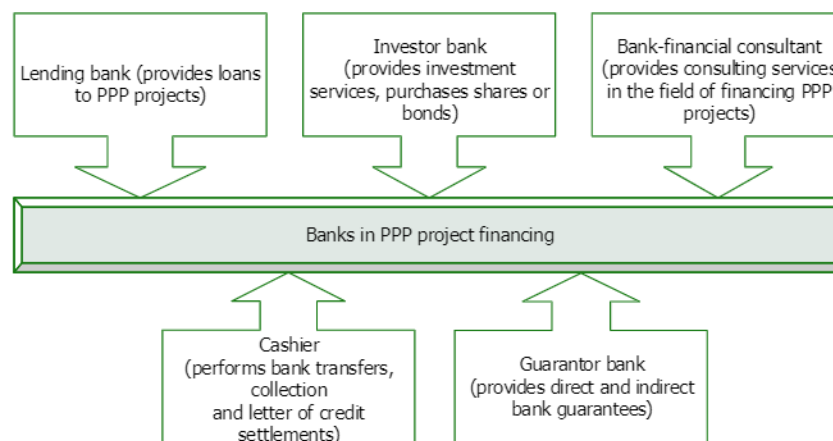


Figure 3. The role of banks in project financing of public-private partnership

Banking activities in the field of PPP project financing are primarily related to the provision of loans. This form of financing PPP projects can be used by powerful banks that have the ability to borrow or receive funding from parent companies. Due to the scale of most infrastructure projects, their long implementation period and high cost, most commercial banks are unable to lend to long-term PPP projects at a low interest rate.

In the context of intensified globalization processes, the PPP project financing mechanism is actively used by the International Bank for Reconstruction and Development, the European Bank for Reconstruction and Development, the International Finance Corporation, and the world's leading investment banks to help countries with capital shortages. These banks are also involved in financing projects in Eastern Europe that are experiencing transition difficulties. Eurocredits provided by international consortia (syndicates) of banks are a common supranational source of bank project financing. In addition to lending, these institutions are involved in PPP project financing in the early stages as investment advisers. This allows you to consider in detail all the aspects that may affect the cost of the project and the timing of its implementation.

In the domestic practice of public-private partnership, project financing is the newest form of financing, which emerged in Ukraine with the advent of foreign creditors. These include banks with foreign capital, in particular OTP Bank or BNP Paribas, which have introduced new banking services by creating project finance units in their structure.

However, the financial crisis of 2008–2009 did not contribute to the further development of bank project financing in Ukraine. Its underdevelopment is facilitated by the fact that domestic legislation does not regulate this segment of the banking services market, as Ukrainian legislation does not even interpret the term «project financing». At the same time, most banks position themselves on the official websites as active participants in the project financing market, while providing long-term lending for investment projects. The situation is complicated by the lack of statistics of the National Bank of Ukraine on the amount of such funding, information on the conditions of participation of banks in such PPP projects. This indicates the problems of development of this type of banking services.

According to the information provided by domestic commercial banks, Raiffeisen bank Aval is a participant in project financing in the banking services market (develops individual financing schemes for each project, provides loan repayment benefits, diversifies project risks); UkrSibbank and Alfa-Bank (both use project financing for construction (reconstruction) of various types of real estate, implementation of technological and infrastructure projects); Ukreximbank (improves the process of production (provision of services), organizes the production of new products, co-financing long-term PPP projects to achieve the strategic goals of the partnership); Kredobank (finances projects to create high-tech industries); OTP Bank (provides the most complete information on the procedure and conditions of PPP project financing).

In world practice, consortium associations (syndicates) are quite common in the field of PPP project financing, which allows minimizing financial risks due to their division between creditors. However, in Ukraine, these associations are infrequent, due to the reluctance of banks to inform competitors about their financial and credit activities, different approaches to risk management. The most famous domestic banking consortium is Ukreximbank-Oschadbank.

The development of bank project financing promotes opportunities for cooperation with foreign financial institutions. Foreign commercial banks are quite reluctant to lend to PPP projects due to the impact of various types of risks, including commercial, macroeconomic and political. However, project financing with the participation of international development banks, such as the EBRD and the EIB, has become significant. Over 30 years of operation in Ukraine, the European Bank

for Reconstruction and Development has financed development projects worth more than 14.5 billion euros, with the leading areas of lending being infrastructure development, energy reform, projects in agriculture, construction and more. Within the project financing with the participation of the EBRD in Ukraine implemented major investment projects for the development of transport (rail, road) infrastructure of national importance, port management, modernization of urban transport in many urban communities of Ukraine [16]. An important area of project financing with the participation of the EBRD is the implementation of projects to improve the environmental situation in the territorial communities of Ukraine. This gives grounds to define bank project financing as a powerful financial instrument for improving public welfare, as its development intensifies the implementation of socially important projects aimed at improving the quality of life.

Along with banking institutions, among the financial market institutions, potential participants in PPP project financing are insurance companies, guarantor banks, consultants, export credit agencies, etc., which participate in the PPP project depending on their interest in it. Often these participants make significant changes to the project, which makes it more attractive and reliable by minimizing risks.

Active participants are export credit agencies — specialized institutions that provide insurance services for export credits. Thanks to them, supplies of foreign-made goods for PPP projects from different countries are financed: the USA, Germany, France, Canada, Sweden, China, etc. Cooperation with such institutions has the following advantages: taking credit resources for the long term (from 1 to 10 years), setting favorable interest rates, the ability to provide a grace period to repay the loan.

However, there are no export credit agencies in Ukraine, which are primarily used by PPP project participants to insure against risks. After all, the issue of insurance remains out of the focus of legislative activity. Therefore, domestic banks are forced to turn to foreign insurers, who agree to such cooperation. In Ukraine, in the banking services market, project financing through international export credit agencies is provided by such banks as Raiffeisenbank Aval, the State Export-Import Bank of Ukraine, UkrSibbank, Prominvestbank and others.

Given the above, in developed countries, bank project financing is an effective way to raise funds for PPP projects that are important to the population. It is aimed at improving the quality of education, provision of medical services, compliance with social standards; improving the tourist and investment attractiveness of the territories. Among the leaders of PPP project financing in the context of ensuring public welfare among European countries are Sweden, Germany, Italy, France and the United Kingdom, where the relevant areas of such funding are the implementation of socially important projects in such areas as education, health, social services. The implementation of these projects leads to the development of social infrastructure, which directly determines the parameters of the quality of life of society. However, in Ukraine, the social sphere remains an unattractive area of investment, which is typical for countries with economies in transition. The leading areas of PPP project financing in Ukraine continue to be the development of transport infrastructure, energy sector reform, and the construction industry.

CONCLUSIONS

Bank project financing is one of the promising forms of financial support for PPP projects, which has multilateral benefits for all its participants. However, at present in Ukraine there are a number of problems that prevent its full use, including:

- the absence of legislative acts regulating the procedure of bank project financing of PPP, protect the interests of creditors and investors;
- lack of experience in using PPP project financing causes banks to misunderstand its essence, which they identify with lending. As a result, these financial institutions do not evaluate the effectiveness of the PPP project, but the current financial condition of the borrower and the accumulated assets;
- unfavorable investment climate due to the unstable macroeconomic and political situation in the country. Therefore, it is expedient for the state to intervene by providing guarantees to banks that finance social PPP projects, insuring project risks;
- restrictions of the National Bank of Ukraine on the volume of investment, as well as a high rate of reserve funds of commercial banks, which leads to increased cost of credit;
- imperfection of the procedure for taxation of long-term investment projects of PPP, which provides for the collection of tax from the investor bank when making an investment. This happens at a time when there is no return on the project, and there are only costs. This situation increases the cost of the project and reduces its effectiveness;

- the difficulty of attracting financial resources for large-scale projects from external sources, due to underdeveloped stock market instruments and the network of financial institutions: investment banks, investment funds, trust companies (because the participants in project financing are exclusively universal banks);
- high risks of bank project financing of PPPs and insufficient use of financial instruments to manage them;
- lack of open information space for potential investors regarding the implementation of PPP social projects.

Given these problems, PPP project financing in Ukraine is a rather risky type of banking activity. The significance for the bank of the risks associated with such financing depends significantly on the role played by the bank in this operation — lender, investor (sole or consortium), lessor or guarantor. At the same time, risk management in the PPP project financing system should be based on a systematic approach and the use of a set of different methods, tools and levers by banks.

REFERENCES / ЛІТЕРАТУРА

1. Marvan, M. Kh. M. (2019). Problemy ta perspektyvy derzhavnoi polityky u sferi bankivskoho proektnoho finansuvannia [Problems and prospects of public policy in the field of bank project financing]. *Investytsii: praktyka ta dosvid – Investments: practice and experience*, 23, 151–156. Retrieved from http://www.investplan.com.ua/pdf/23_2019/27.pdf [in Ukrainian].
2. Marvan, M. Kh. M. (2020). Perspektyvni mekhanizmy rozvytku partnerskykh vidnosyn derzhavy ta bankivskoho sektoru [Promising mechanisms for the development of partnerships between the state and the banking sector]. *Investytsii: praktyka ta dosvid – Investments: practice and experience*, 2, 158–162. Retrieved from http://www.investplan.com.ua/pdf/23_2019/27.pdf [in Ukrainian].
3. Pashynska, K. (2017). Modeli finansuvannia proektiv derzhavno-pryvatnoho partnerstva [Models of financing of projects state private partnerships]. *Ahrosvit – Agrosvit*, 12, 63–68 [in Ukrainian].
4. Zaiachkivska, O. V. (2020). Proiektne finansuvannia yak odna iz form zabezpechennia investytsii [Project financing as one of the forms of investment provision]. *Visnyk NUVHP. Ekonomichni nauky – Bulletin of NUVGP. Economic Sciences*, 1 (89), 82–91 [in Ukrainian].
5. Ganbat, Kh., Popova, I., & Potravnyy, I. (2016). Impact investment of project financing: opportunity for banks to participate in supporting green economy. *Baltic Journal of Real Estate Economics and Construction Management*, 4, 69–83.
6. Hodge, G., & Greve, C. (2018). Contemporary public-private partnership: Towards a global research agenda. *Financial accountability & Management in Government, Public Services and Charities*, Vol. 34, 1, 3–16. Retrieved from <https://onlinelibrary.wiley.com/doi/abs/10.1111/faam.12132>.
7. Linh, N., Wan, X., & Thuy, H. Th. (2018). Financing a PPP Project: Sources and Financial Instruments – Case Study from China. *International Journal of Business and Management*, Vol. 13, 10, 240–248.
8. Blanc-Brude, F., & Strange, R. (2007). How Banks Price Loans to Public-Private Partnerships: Evidence from the European Market. *Journal of Applied corporate finance*, Vol. 19, 4, 94–106. Retrieved from <https://onlinelibrary.wiley.com/doi/10.1111/j.1745-6622.2007.00163.x>.
9. Wang, X., Shi, L., Wang, B., & Kan, M. (2020). A method to evaluate credit risk for banks under PPP project finance. *Engineering, Construction and Architectural Management*, Vol. 27, 2, 483–501. <https://doi.org/10.1108/ECAM-06-2018-0247>
10. Global Project Finance Review (2015–2020). (n. d.). The official website of the agency «Thomson Reuters». Retrieved from <https://www.refinitiv.com/en/products/deals-intelligence/project-finance>.
11. IJ Global League Tables. (n. d.). The official website of the agency «IJ Global». Retrieved from <https://ijglobal.com/league-tables>.
12. Kryshtal, H. O. (2017). Mekhanizmy ta instrument partnerstva z boku derzhavy u vzaiemodii z bankivskym sektorom [Mechanisms and instruments of partnership by the state in cooperation with the banking sector]. *Ekonomika: teoriia ta praktyka - Economics: theory and practice*, 1, 54–61 [in Ukrainian].
13. Lapko, O. O. (2017). Proiektne finansuvannia yak innovatsiinyi mekhanizm realizatsii investytsiinykh proektiv [Project financing as an innovative mechanism for implementing investment projects]. *Naukovi zapysky Natsionalnoho universytetu «Ostrozka akademiia». Ekonomika - Scientific notes of the National University «Ostroh Academy». Economy*, 4 (32), 165–170 [in Ukrainian].
14. Tkachenko, Ya. S. (2016). Instrumenty finansuvannia

- infrastruktury: suchasni svitovi tendentsii proektnoho finansuvannia [Instruments of financing of infrastructure: modern world tendencies of the project financing]. Naukovyi visnyk Khersonskoho derzhavnoho universytetu - Scientific Bulletin of Kherson State University, Vol. 19, 2, 144-147 [in Ukrainian].
15. Shevchuk, Ya. V. (2018). Hlobalnyi vymir rozvytku rynku proektnoho finansuvannia [Global dimension of project financing market development]. Naukovyi visnyk Uzhhorodskoho natsionalnoho universytetu - Scientific Bulletin of Uzhhorod National University, Vol. 20, 3, 151-158 [in Ukrainian].
16. Ministerstvo infrastruktury Ukrainy. (n. d.). Infrastrukturni proekty z YeBRR ta YeIB [Infrastructure projects with EBRD and EIB]. Retrieved from <https://mtu.gov.ua/content/infrastrukturni-proekty-z-ebrr-ta-eib.html> [in Ukrainian].

Шулюк Б. С., Горин В. П.

БАНКІВСЬКЕ ПРОЄКТНЕ ФІНАНСУВАННЯ ДЕРЖАВНО-ПРИВАТНОГО ПАРТНЕРСТВА І ЙОГО РОЛЬ У ЗАБЕЗПЕЧЕННІ СУСПІЛЬНОГО ДОБРОБУТУ

Розкрито особливості застосування банківського проєктного фінансування у сфері державно-приватного партнерства (далі – ДПП). Обґрунтовано, що особливістю застосування проєктного фінансування ДПП є створення спеціальної проєктної компанії, яка відповідає за мобілізацію фінансових ресурсів для реалізації проєкту; наявність ієрархії вкладення коштів; більш об'єктивне оцінювання платоспроможності й надійності позичальника та оцінювання самого проєкту щодо його ефективності, забезпеченості й ризику; значні трансакційні витрати на врегулювання інтересів усіх членів партнерських відносин.

Доведено, що в сучасних умовах роль проєктного банківського кредитування у складі джерел проєктного фінансування швидко зростає, при цьому роль банків у цьому процесі значно ширша, ніж за традиційних форм кредитування. Вони не лише надають фінансове забезпечення проєкту, а й стають безпосередніми учасниками реалізації проєкту ДПП, здійснюючи управлінські, розрахункові, консультаційні, гарантійні та інші функції. З огляду на специфіку проєктів у сфері ДПП (значний масштаб, тривалий час реалізації, витратність) участь комерційних банків у їхньому фінансуванні ускладнена. Провідну роль у становленні проєктного фінансування у сфері ДПП відіграють міжнародні банки розвитку та міжнародні фінансові інституції, у зарубіжній практиці також використовується механізм синдикуваного кредитування. Проте в Україні банківське проєктне фінансування практично не розвинуто, що пов'язане з його інституційною і правовою неврегульованістю. Одиначний характер в Україні має застосування механізмів синдикуваного кредитування, а також фінансування проєктів ДПП через кредитно-експортні агенції. Найбільшого розвитку набуло проєктне фінансування ДПП за підтримки міжнародних фінансових інституцій, зокрема ЄБРР, яке концентрується в таких напрямках, як розвиток інфраструктури, реформування енергетики, будівництво. У зв'язку з цим окреслено проблеми економічного, правового й управлінського характеру, які стримують розвиток банківського проєктного фінансування у сфері ДПП в Україні в сучасних умовах.

Ключові слова: державно-приватне партнерство, проєктне фінансування, банківське проєктне фінансування, проєктна компанія, проєктне кредитування, суспільний добробут

JEL Класифікація: G23, G24, G31, H43, H54