

UDC 336.64

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## **FEATURES OF ASSESSING THE CREDIT CAPACITY OF BUILDING COMPLEX ENTERPRISES**

The article defines the risks of crediting the construction complex and further developed the methodology for assessing the creditworthiness of construction enterprises, taking into account the specifics of construction projects. The main purpose of the study is to identify the peculiarities of lending in the construction industry and to detail the available creditworthiness assessment methods, taking into account the specifics of the functioning of the construction organization and the characteristics of construction projects.

The systematization of literary sources and approaches to solving this problem showed that in the works of domestic and foreign scientists, many methodological approaches to assessing the creditworthiness of enterprises have been developed, in banking practice, a methodology for assessing the creditworthiness of the borrower has been developed, which takes into account the type of economic activity and the size of the enterprise. However, the existing methods of assessing the creditworthiness of the enterprise, which include a system of generalized indicators of the financial condition, need to be detailed taking into account the specifics of the functioning of the construction organization and the characteristics of construction projects.

The urgency of solving this scientific problem lies in the fact that in the conditions of modern challenges of an unstable economy, the problem of assessing

and managing the creditworthiness of construction enterprises remains a priority both for creditor banks and for the developers themselves. The study of the problem was carried out in the following logical sequence: first, the financial indicators of the enterprises of the construction complex in Ukraine were analyzed; the specific features of construction production were identified and the corresponding risks of lending to this sector of the economy were outlined; modern methods of assessing the creditworthiness of economic entities, which form quantitative and qualitative approaches to assessing the creditworthiness of the enterprise, are given; their advantages are determined; a system of indicators for assessing the creditworthiness of builders is proposed, which includes five blocks of indicators: an assessment of the current financial condition of the builder, an expert assessment of the construction project, an assessment of the business reputation of the construction company, an analysis of the adequacy of the provision, a description of the construction industry in the region.

The methodological tools of the research were: systematic approach, methods of analysis and synthesis, logical generalization, comparison, etc. Enterprises of the construction complex of Ukraine were chosen as the object of the study, and the indicators of their creditworthiness were the subject.

The results of the study can be used when assessing the creditworthiness of developers by their management and banks. The application of the proposed approach will increase the efficiency of crediting decisions, reduce banking risks and contribute to the effective development of the construction industry.

**Key words:** construction companies; credit risks; construction projects; solvency; expert evaluation.

## **ОСОБЛИВОСТІ ОЦІНКИ КРЕДИТОСПРОМОЖНОСТІ ПІДПРИЄМСТВ БУДІВЕЛЬНОГО КОМПЛЕКСУ**

У публікації проаналізовано стан розвитку будівельних підприємств в Україні. Визначено специфічні особливості будівельного виробництва та відповідні ризики кредитування будівельного сектору. Запропоновано систему показників оцінки кредитоспроможності забудовників з урахуванням специфіки будівельних організацій та характеристики будівельних проєктів.

**Ключові слова:** будівельні підприємства; кредитні ризики; будівельні проєкти; кредитоспроможність; експертна оцінка.

**Statement of the problem in a general form and its connection with important scientific and practical tasks.** At various stages of the production process or development planning, construction enterprises are faced with the problem of lack of own funds and the need to attract external financial resources. The simplest and most logical way to solve such a problem is to obtain a bank loan. However, in practice, not all enterprises of the

construction complex actively receive loans from banks. On the one hand, too high interest rates on loans continue to scare away potential borrowers, on the other hand, the financial condition of the enterprise itself does not always meet the creditworthiness criteria set by creditor banks for their clients. Therefore, in today's realities, the problem of assessing and managing the creditworthiness of construction enterprises remains relevant both for creditor banks and for developers themselves.

**Analysis of the latest studies, in which the solution to the problem was initiated.** The issues of analysis, evaluation and improvement of the efficiency of credit management of the enterprise have always been in the field of attention of scientists and expert practitioners in the field of financial analysis, financial management and credit activities of banks. Made a significant contribution to the development of this problem E. Altman, E. Brihkhem, M. Bilyk, V. Vyhovskyi, V. Vovk ta O. Khmelenko, O. Holovko, M. Demianenko, O. Hudz, P. Stetsiuk, M. Kuzheliev, K. Kovalova, O. Nepochatenko, Yu. Tiutiunnyk, V. Roleders, S. Ross, P. Rouz and others. In banking practice, a methodology for assessing the borrower's creditworthiness has been developed, which takes into account the type of economic activity and the size of the enterprise. At the same time, in the conditions of the challenges of the modern unstable economy, there is a need to detail the developed methods, taking into account the specifics of the functioning of the construction organization and the characteristics of construction projects.

**Whole articles.** The purpose of a scientific publication there is a study of the peculiarities of crediting in the construction industry and the detailing of existing creditworthiness assessment methods, taking into account the specifics of the functioning of the construction organization and the characteristics of construction projects.

**Presentation of the main material of the study with a full justification of the obtained scientific results.** The construction complex is one of the important spheres of the national economy, which makes it possible to bring the country out of crisis in times of economic crisis, thanks to the fact that the development of

construction gives impetus to the development of many related industries. As research into the state of development of enterprises of the construction complex in Ukraine shows, despite the difficult economic and financial conditions and quarantine restrictions of activity associated with the Covid-19 pandemic in 2020-2021, until the beginning of a full-scale war in Ukraine the construction industry continued to increase the volume of construction residential and non-residential buildings and engineering structures. Thus, the number of enterprises involved in the construction sector has been growing annually since 2016, in particular from 50,208 units. to 56926 units in 2020, i.e. for 6718 enterprises in five years. At the end of 2021, as a result of the curtailment of activities due to the Covid-19 pandemic, the number of active construction firms decreased by almost 300 units to 56,627. At the same time, the volume of implemented construction works at the end of 2021 increased significantly (almost 3 times) compared to the end of 2016, which was caused both by an increase in the volume of completed construction and assembly works, and by an increase in prices for construction works, especially for engineering structures (*State Statistics Service of Ukraine, 2021*).

At the same time, the financial condition of most construction companies is not stable. As the analysis showed, the activity of a significant part of construction enterprises has remained mostly unprofitable for a long time. The share of unprofitable construction enterprises as of September 2021 was 24.7% (*State Statistics Service of Ukraine, 2021*). The financial capital of construction firms is dominated by loan capital. In general, construction organizations in Ukraine are characterized by unsatisfactory solvency and financial stability, which negatively affects their creditworthiness (Table 1).

In order to effectively manage its creditworthiness, a construction company must clearly understand which groups of indicators should be evaluated when making decisions by creditors regarding the granting of a loan. It should be taken into account that lending to the construction industry is more risky for banks, compared to other types of economic activity, which is due to the specifics of construction production.

Table 1

Dynamics of individual indicators of the financial condition of construction enterprises of Ukraine\*

Indicators	2016	2017	2018	2019	2020
Current liquidity ratio (coverage ratio)	0.940	0.890	0.913	0.892	0.865
The ratio of short-term receivables and payables	1.455	1.430	1.399	1.434	1.191
Coefficient of financial independence from creditors	-0.045	-0.054	-0.015	0.023	0.03
Profitability (loss) of operating activities, %	-0.4	1.6	3	4.6	1.3

\* Compiled by the authors based on official statistics (*State Statistics Service of Ukraine, 2021*).

In particular, construction production is characterized by: a long production cycle and high cost of construction objects and, accordingly, the need to attract a significant amount of funds for a long time; an insignificant share of the construction company's own funds, which negatively affects its financial stability and increases its dependence on creditors; dependence on funding from customers and, accordingly, the existence of risks of reduction/loss of solvency by customers, and a number of other risks that increase the demands of creditors on the activities of the construction company-borrower (Table 2).

Analysis of statistical data on lending to various sectors of the economy also testifies to the lack of activity in lending to the construction sector. According to NBU statistics, at the end of 2021 construction lending accounted for only 3% of all loans granted. For comparison, the share of lending to wholesale, retail trade and repair of motor vehicles and motorcycles was 38.9%; agriculture, forestry and fisheries – 11%; transport, warehousing, postal and courier activities – 4.3%, real estate transactions – 6.7%, etc. (*Statistics of the financial sector, NBU, 2021*).

Table 2

Specifics and risks of lending to construction enterprises\*

Specific features of construction production	Risks of lending
1. Long duration of the production cycle.	The need to attract long-term loan capital, the need for long-term loans.
2. High cost of construction objects.	The need for significant amounts of credit.
3. A small share of own funds.	Low level of financial independence and sustainability of the construction company, increased dependence on creditors.
4. Dependence on funding from customers.	Risks of decrease/loss of solvency on the part of customers.
5. Significant administrative obstacles and the presence of a corruption component in the construction market.	Risks of delaying the start of construction or commissioning of ready-made residential objects and completion of all settlements with customers.

\* Compiled by the authors

The modern practice of interaction between lenders and borrowers has developed various methods of assessing the latter's creditworthiness. The developed methods of assessing the creditworthiness of the enterprise can be conditionally divided into two approaches: quantitative and qualitative (or complex). It is important for the lender to quantify the creditworthiness of the borrower. The quantitative approach is based on statistical methods of assessment, methods of financial coefficients that reflect the results of the financial and economic activity of the enterprise. The analysis of quantitative indicators of the company's activity can be carried out using the method of coefficients, point-rating methodology, cash flow analysis, predictive models of bankruptcy built on the methods of multifactor (multiple) discriminant analysis (MDA), etc. (*Tiutiunnyk et al., 2017; Holovko et al., 2020*;

*Nepochatenko & Melnychuk, 2013; NBU Regulation No. 351, 2016; Andrushkiv, 2008; Kuzheliev & Kovalova, 2019; Demianenko, 2008 et al.*). The advantage of these methods is ease of use, no need for special information support, convenience of ranking enterprises by results, etc.

A qualitative approach to assessing the creditworthiness of an enterprise involves, first of all, an assessment of the quality of management and an assessment of the enterprise's market environment. Many domestic banks rely on world experience to assess the creditworthiness of potential borrowers and use the CAMPARI methodology, the basis of which is: "C – *character* – customer characteristics, personal qualities; A – *ability* – ability of business to cover costs; M – *means* – margin (yield); P – *purpose* – the purpose for which funds will be spent; A – *amount* – loan size; R – *repayment* – amount of cash flows for the lending object; And – *interest and insurance* – insurance of the risk of loan default" (*Nepochatenko & Melnychuk, 2013, p. 308; Andrushkiv, 2008, p. 97*).

In the foreign practice of banks, similar methods of comprehensive assessment of the borrower's creditworthiness are also actively used, such as: "PARTS", "PERSER" (England), "MEMO RISK", System "4FC", Rule "5C" of bad loans, Rule "6C" (*Kuzheliev & Kovalova, 2019, p. 57*).

In order to assess the creditworthiness of a construction company, it is not enough to assess the financial condition, it is necessary to analyze the construction project by quantitative and qualitative indicators. Therefore, in our opinion, the existing methods of assessing the creditworthiness of the enterprise, which include a system of generalized indicators of the financial condition, need to be detailed taking into account the specifics of the functioning of the construction organization and the characteristics of construction projects.

Therefore, the methodology for assessing the creditworthiness of a construction enterprise should include the following five blocks of indicators:

Block 1 – Assessment of the borrower's current financial condition. This includes the analysis of the capital structure; liquidity

and solvency; predictive analysis of loss or recovery of solvency; analysis of indicators of profitability and business activity; analysis of current payables and point-rating assessment of the construction organization's creditworthiness based on the obtained financial ratios.

Block 2 – Expert assessment of the construction project. For a comprehensive assessment of the developer's creditworthiness, it will be necessary to carry out a technical and economic substantiation of the project (including the determination of the net present value of the project, the internal rate of return, the payback period); environmental safety analysis of the project; analysis of the price class of the construction object, taking into account the regional purchasing power and commercial attractiveness; analysis of the need for venture financing; analysis of project risks (increase in the cost of the project, violation of deadlines, uncertainty associated with adverse situations, etc.).

Block 3 – Evaluation of the business reputation of the construction company. Should include an analysis of the probability of bankruptcy; analysis of construction volumes in dynamics over a number of years, including quality assessment of previously put into operation real estate objects of this construction company; analysis of the borrower's credit history.

Block 4 – Analysis of the adequacy of credit security. It involves studying and analyzing the availability of sureties and guarantees; pledges of a package of shares/shares in the authorized capital; analysis of indicators for the requested loan (coefficient of securing the loan with collateral, the share of own funds in financing the project, the ratio of the loan to the cost of the project).

Block 5 – Characteristics of the construction industry in the region. When making a decision on granting a loan, it is necessary to analyze successful industry experience; positive dynamics of industry development; the sales market, which includes the study of the housing market situation, its growth prospects and the level of competition of the main regional construction companies.

The given list of indicators is not exhaustive, it can be expanded at the creditor's discretion, taking into account the specifics of the construction object being built.

**Conclusions.** Thus, this method of assessing the creditworthiness of the borrower – a construction company – in terms of project financing for the purpose of building residential premises will clearly reveal to banks an idea of the borrower's creditworthiness, and for the construction company itself, its potential opportunities for obtaining the required amount of credit for production needs. In our opinion, the application of the proposed approach will increase the efficiency of credit decision-making, reduce banking risks and contribute to the effective development of the construction industry.

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