

## IMPROVING THE DEVELOPMENT OF SMALL BUSINESS IN UKRAINE THROUGH CREATION OF EFFECTIVE MECHANISM OF ITS LOAN BASIS FOR CUSTOMER INTERESTS OF CREDITOR AND LENDER

### СТИМУЛЮВАННЯ РОЗВИТКУ МАЛОГО БІЗНЕСУ В УКРАЇНІ ЧЕРЕЗ СТВОРЕННЯ ЕФЕКТИВНОГО МЕХАНІЗМУ ЙОГО КРЕДИТУВАННЯ НА ОСНОВІ УЗГОДЖЕННЯ ІНТЕРЕСІВ КРЕДИТОРА ТА ПОЗИЧАЛЬНИКА

*In the article the foreign models of small business lending of the world economy leading countries are investigated based on systematization of indicators of the role of small business in the country and their public-public support systems. Using statistical and expert approaches factors that hinder the development of small business lending from the standpoint of banks and from the standpoint of small enterprises in Ukraine are identified. An algorithm based on internal factors consideration for studying the availability of credit for small enterprise is proposed, based on the construction of an economic-mathematical model. An effective lending mechanism based on the coordination of the interests of creditors (banks) and borrowers (small business) has been developed and justified the feasibility of using it as an effective tool for stimulating the development of small business in Ukraine. It is proved that the development of small business in Ukraine is a significant underexposed reserve of economic growth of the country, and its activation is largely dependent on increasing the efficiency of lending to banks by small enterprises at all stages of its life cycle.*

**Keywords:** small businesses, financing, loan mechanism, lender, borrower.

*В статті досліджено зарубіжні моделі кредитування малого бізнесу провідних країн світової економіки на основі систематизації показників ролі малого підприємництва в країні та систем їх державно-громадської підтримки. За допомогою статистичного та експертного підходів встановлено фактори, що перешкоджають розвитку кредитування малого бізнесу з позицій банків та з позицій малих підприємств в Україні. Встановлено за допомогою причинно-наслідкового і порівняльного аналізу, що кроки, спрямовані на рішення проблем неефективного механізму кредитування малого бізнесу, повинні одночасно вживатися як з боку кредитних організацій, держави, так і з боку самих малих підприємств. Комплекс заходів, пов'язаний з подоланням «внутрішніх» проблем малих підприємств, є більш складним і, по суті, вилітається в загальний перелік заходів щодо підтримки малого бізнесу. На основі врахування внутрішніх факторів, запропоновано алгоритм дослідження доступності кредиту для малого підприємства на основі побудови економіко-математичної моделі. Встановлено, що основним критерієм доступності банківських кредитів для малого бізнесу має бути зростання вартості основних виробничих фондів, яке забезпечить виконання двох критеріїв: розмір процентів не повинен перевищувати загального прибутку та розмір чистого прибутку повинен перевищувати боргові зобов'язання. За допомогою критичного аналізу та формальної логіки розроблено ефективний механізм кредитування, який, на відміну від існуючих, ґрунтується на визначенні конкретних внутрішніх та зовнішніх проблем фінансування малого бізнесу та, на їх основі, заходів щодо їх вирішення, та обґрунтовано доцільність його застосування як ефективного інструменту стимулювання розвитку малого бізнесу в Україні. Доведено, що розвиток малого бізнесу в Україні є істотним недовикористаним резервом економічного зростання країни, а його активізація здебільшого залежить від підвищення ефективності кредитування банками малих підприємств на всіх етапах його життєвого циклу та є одним з ключових пріоритетів регулювання соціально-економічного розвитку економіки України.*

UDC 336.77:334

**Bukreieva D.S.**

PhD, Associate Professor of Department of Economic Analysis and Finance  
Dnipro University of Technology

**Bozok Ye.M.**

Master in Finance, Banking and Insurance  
Dnipro University of Technology

*стран мировой экономики на основе систематизации показателей роли малого предпринимательства в стране и систем их государственно-общественной поддержки. С помощью статистического и экспертного подходов установлены факторы, препятствующие развитию кредитования малого бизнеса с позиции банков и с позиции малых предприятий в Украине. На основе учета внутренних факторов, предложен алгоритм исследования доступности кредита для малого предприятия на основе построения экономико-математической модели. Разработан эффективный механизм кредитования, основанный на согласовании интересов кредиторов (банков) и заемщиков (малого бизнеса), и обоснована целесообразность его применения как эффективного инструмента стимулирования развития малого бизнеса в Украине. Доказано, что развитие малого бизнеса в Украине является существенным неиспользованной резервом экономического роста страны, а его активизация в основном зависит от повышения эффективности кредитования банками малых предприятий на всех этапах его жизненного цикла.*

**Ключевые слова:** малый бизнес, финансирование, механизм кредитования, кредитор, заемщик.

*У статті досліджено зарубіжні моделі кредитування малого бізнесу провідних країн світової економіки на основі систематизації показників ролі малого підприємництва в країні та систем їх державно-громадської підтримки. За допомогою статистичного та експертного підходів встановлено фактори, що перешкоджають розвитку кредитування малого бізнесу з позицій банків та з позицій малих підприємств в Україні. Встановлено за допомогою причинно-наслідкового і порівняльного аналізу, що кроки, спрямовані на рішення проблем неефективного механізму кредитування малого бізнесу, повинні одночасно вживатися як з боку кредитних організацій, держави, так і з боку самих малих підприємств. Комплекс заходів, пов'язаний з подоланням «внутрішніх» проблем малих підприємств, є більш складним і, по суті, вилітається в загальний перелік заходів щодо підтримки малого бізнесу. На основі врахування внутрішніх факторів, запропоновано алгоритм дослідження доступності кредиту для малого підприємства на основі побудови економіко-математичної моделі. Встановлено, що основним критерієм доступності банківських кредитів для малого бізнесу має бути зростання вартості основних виробничих фондів, яке забезпечить виконання двох критеріїв: розмір процентів не повинен перевищувати загального прибутку та розмір чистого прибутку повинен перевищувати боргові зобов'язання. За допомогою критичного аналізу та формальної логіки розроблено ефективний механізм кредитування, який, на відміну від існуючих, ґрунтується на визначенні конкретних внутрішніх та зовнішніх проблем фінансування малого бізнесу та, на їх основі, заходів щодо їх вирішення, та обґрунтовано доцільність його застосування як ефективного інструменту стимулювання розвитку малого бізнесу в Україні. Доведено, що розвиток малого бізнесу в Україні є істотним недовикористаним резервом економічного зростання країни, а його активізація здебільшого залежить від підвищення ефективності кредитування банками малих підприємств на всіх етапах його життєвого циклу та є одним з ключових пріоритетів регулювання соціально-економічного розвитку економіки України.*

**Ключові слова:** малий бізнес, фінансування, механізм кредитування, кредитор, позичальник.

**Introduction.** As evidence of theoretical studies and practical experience, small businesses are the driving force of the economy nowadays, they are the basis of the formation of a stable middle class of countries. Small businesses are the largest segment of supporting global business, which promotes not only the creation of new jobs and the provision of a high level of employment, but also creates conditions for raising the standard of living and people's income. They are also important factor in innovation and transformation processes in the economic world.

However, it should be noted that the impact of small business on the economic is different in each countries: in Ukraine small business provides up to 21% of jobs and its share in the national economy of the country does not exceed 16% [1], while in developed countries the share of small businesses in economy is 52-70%, and it share in the total employment and creating job opportunities is 55-82% [2].

The analysis of the small business regulation of the activities in developed countries provides grounds for arguing that its main instruments are finance, credit,

tax and information [3]. In Ukraine, according to studies [4], development of a small business is impossible without improving the financing system, and the main problem that impedes its development is the lack of liquid assets. This fact leads to the emergence of the requirement for borrowed resources, and therefore, objectively provides for the establishment of relations with commercial banks in the field of lending.

**Analysis of recent research and publications.**

An overview of recent scientific publications in recent years has shown that the problems of small businesses development in Ukraine. There are works which are devoted to this problem as K. Vashchenko, O. Kuzhel, Y. Ivanov, O. Mazur and others. The issue of bank lending to small businesses is the subject of research by Y. Galitsejskaya, N. Kovalev, Z. Kryhovetskaya, I. Semenchy and others.

However, the problem is the construction of an effective lending mechanism that would be able to optimally satisfy the interests of both sides, the creditor and the borrower, which determines the relevance of this study.

**The research purpose** is to develop an effective mechanism for lending money and credit to small businesses, based on the coordination of the interests of the creditor and the borrower.

**Research results.** In the past twenty years, small business has become widespread throughout the world. Considering the experience of foreign businesses, we came to the conclusion that any assistance to small businesses, including financial and credit, in different countries is carried out in different

ways, but necessarily with certain participation of government bodies, be it direct subsidized, guaranteed loans from private banks or preferential taxation.

In the tab. 1 we have systematized comparative indicators of the role of small business in the leading countries of the world economy and their public support and development systems.

In studying foreign models of lending to small businesses (tab. 1), the main focus was on the experience gained in the United States, Germany, France and Japan. The analysis of the global experience of supporting small business, shows that the most significant participation of lending credits to small businesses in the represented countries belongs to USA. The study of this experience is important for small businesses in Ukraine, especially in terms of developing a long-term strategy for its development and support.

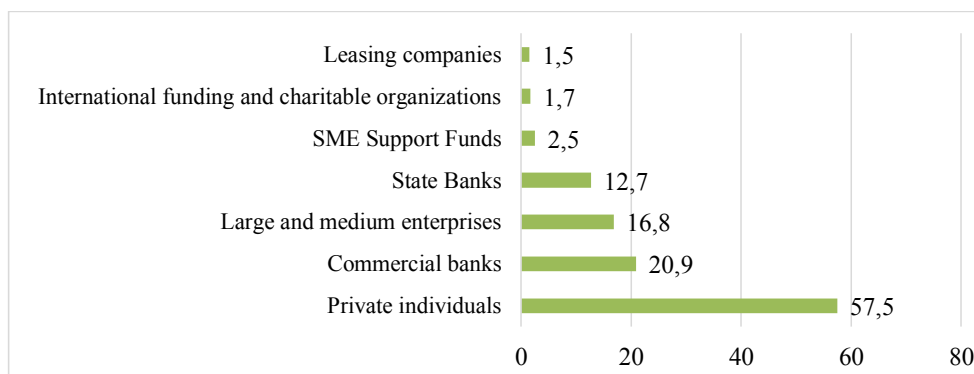
It should be noted that small business enterprises are independent from the market economy, which are characterized by mobility, the ability to quickly adapt to changes in consumer demand, flexibility, rational organizational structure of the enterprise, the speed of development of production of new products in small batches, and low operating costs [3]. At the same time, small businesses experience significant lack of funds at different stages of their life cycle: from the moment of their establishment to the need to replenish turnover funds. Within the framework of the tasks set in our work, we analyzed the main sources of loan resources for small enterprises, the results of the analysis are presented in Fig. 1.

Table 1

**The main indicators of the role of small business in the leading countries of the world economy**

Country / Indicator	Ukraine	USA	Japan	Germany	France
MP share in GDP of the country, %	16	52	51,6	57	49,8
MP share in total employment, %	21	50,1	69,5	69,3	56,6
The share of MP in quantity enterprises, %	81,5	97,6	99,2	99,3	97,6
Amount of annual financial support of MP (\$ billion)					
On the support infrastructure:	0,001	0,8	1,64	1,8	1,5
Credits:	-	21,6	39,9+2480* * private loans	61,9	9,2
Guarantees:	-	1,67		-	4,7
Government order and subcontract	In the stage development	There is a nationwide system of search and ordering			
Infrastructure of services for MP					
Financial and financial services	In the stage development	There is a nation-wide ramified network of banks, funds, investment and insurance companies			
Centers of development of MP	30	1100	313	374	600
Information centers	20	1100	13	33	34
Business incubators and industrial parks	20	330	11	182	216
Export Promotion Centers	-	20	net	net	26
Social centers	-	118	186	90	41
Public support	Consumer cooperatives	Lobbying interests of MPs by various public, business associations at all levels of legislative and executive power			

Source: compiled by authors based on [2; 5; 6]



**Fig. 1. The main sources of loan resources for small businesses (% of respondents who received loans in one or more times)**

Source: compiled by authors based on [1; 7]

As it is showed on Fig. 1, acutely small business faces difficulties with access to credit resources (only 20,9% compared to using own funds at 57,5%). Such a trend, in our opinion, is due to excessive requirements of banks for obtaining loans, limiting financial opportunities and disabling of entrepreneurial activity.

According to the National Bank of Ukraine «Lending statistics for small and medium business» [7], as of 2018, the small and medium business accounted for 12,4% (a year earlier – 1,4%) of total business lending. Such data is also confirmed by the survey results presented in Fig. 1.

Considering the above, in order to increase the share of financing small business by banks, it is expedient to determine the characteristics that should be given to an effective mechanism for financing small business in Ukraine.

First of all, in our opinion, the development of such an effective mechanism of bank lending business should take into account the interests of both the creditor and the borrower. Thus, the interests of the creditor, in addition to profit, may be support for the development of business in the country, long-term cooperation with borrowers in one or another branch. The economic interests of small business entities are the desire to provide entrepreneurial activity with sufficient cash to develop and maintain positions in a competitive market environment.

In order to develop an effective mechanism for financing small business, which is based on the coordination of the interests of creditors (banks) and borrowers (small business), at the first stage it is necessary to identify the problems that hinder the process of lending to date.

Among the reasons that impede lending credits to small businesses from the standpoint of banks, it is advisable to distinguish the following main factors [4-6]:

- opaque and unreliable reporting, lack of incentives to adequately reflect the financial results in the reporting;
- a small scale of business, making it difficult to assess its status;

- low quality of elaboration of business plans in attracting loans;

- frequent legislative adjustments, mainly in the area of taxation of small enterprises;

- low level of legal literacy of the borrower, which prevents the proper execution of all necessary documents;

- high share and absolute value of operating (non-interest) expenses in the process of lending due to the insignificant size and term of the loan itself and, as a result, the inability to ensure sufficient profitability of operations due to small, in absolute value, interest income of the bank;

- limited or complete lack of legal (and economically justified) mechanisms for reducing credit risk at all stages of lending (analysis of a loan application, business valuation, choice of collateral, loan support, sale of collateral);

- complexity of refinancing and management of a loan portfolio, which includes many various small-scale loans.

It should be noted that as our research showed, various aspects of the interaction between the bank and the borrower are usually manifested.

As it was said earlier, there are also several «internal» problems that entrepreneurs face, which make it difficult for small businesses to obtain bank loans. The main factors of the alienation of small enterprises from bank loans are the following:

- loans high interest;
- the need to make a deposit;
- difficulties encountered during the registration of documents;
- reluctance of banks to lend to small enterprises;
- the availability of a loan in terms of the amount of profit received by the enterprise;
- change of banking standards reduces the ability to refinance existing loans.

In tab. 2 it is presented the substantiation of the identified factors based on an analysis of the conditions for lending by small business banks in Ukraine as

the basis for the emergence of credit relations between banking institutions and small business entities.

In tab. 2 it is showed that the lowest real rate is 18,70%, while in the European extreme rates they range from 3,5 to 5,5% [2]. It is because of such high interest rates that small businesses do not have a prospect of development, which is why the issue is raised about introducing changes in the banking sector in order to scale the middle class through the creation of an effective mechanism for financing small business.

Considering the established internal factors which hinder and slow down the development of small businesses in Ukraine, we propose to conduct a study on the availability of credit for a small business based on the construction of an economic and mathematical model. To ensure the growth of a small business, two conditions [5-7] must be fulfilled:

1) Necessary ratio (where the amount of interest should not exceed the total profit):

$$M^o(t) = 1 - cP(t) - s > 0 \quad (1)$$

2) Sufficient balance (where the net profit should exceed the debt):

$$\frac{dA}{dt} > 0 \text{ or}$$

$$M(t) - S > 0 \text{ or}$$

$$E_t > 0 \quad (2)$$

Granting a one-time loan at time  $t = 0$

where  $c$  – specific cost;  $P(t)$  – output at time  $t$  in value terms;  $S$  – parts of the main debt at time  $t$ ;  $s$  – interest paid in the same period;  $A(t)$  – the value of fixed assets;  $M^o(t)$  – total profit of a small enterprise;  $M(t)$  – net profit minus tax deductions;  $E_t(t)$  – the share of net profit deducted for reinvestment.

In economic research, the value of the credit is usually estimated by the indicator  $\mu(t)$ , which is calculated as the ratio of the debt obligation to the net profit of a small enterprise:

$$\mu(t) = \frac{S(t)}{M(t)} = \frac{S}{M(t)} \quad (3)$$

At  $\mu(t) \leq 1$  credit at time  $t$  is available, at  $\mu > 1$  – respectively, inaccessible. Condition (3) defines the ratio of the parameters included in  $S$  and  $M(t)$  and ensures the availability of loans for a small business.

Thus, with a sufficiently rapid increase in the value of the main productive assets  $A(t)$ ,  $\mu(t) < 1$  is provided.

The obtained modeling results indicate that the main criterion for the availability of bank loans for small businesses should be the increase in the value of fixed assets, which will ensure the accomplishment of two criteria: the amount of interest should not exceed the total profit and the amount of net profit should exceed the debt.

Thus, we have established that the steps aimed at solving the problems of the ineffective mechanism of lending to small businesses should be taken simultaneously both by credit organizations, the state, and by the small enterprises themselves. The complex of activities related to overcoming the "internal" problems of small enterprises is more complex and, in fact, results in a general list of measures to support small businesses.

Thus, in this research which focused on the problems of small business financing in Ukraine, identifying factors that slow down its development, as well as studying the experience of European countries in improving the mechanism for stimulating the development of small business, we have developed an effective (effective) mechanism for coordinating the interests of creditors (banks) and borrowers (small business) in the process of lending, which, unlike existing ones, it's based on the definition of specific internal and external problems of financing small businesses and, on their basis, to their solution (Fig. 2).

Conclusions. The development of small business in Ukraine is a significant understatement of the country's economic growth. Its activation, as shown by the study we conducted, largely depends on increasing the efficiency of lending to small businesses at all stages of its life cycle. We have found that steps aimed at solving the problems of the ineffective mechanism of lending to small businesses should be taken simultaneously both by credit organizations, the state, and by the small enterprises themselves. Considering the above, we developed and substantiated the feasibility of introducing a mechanism for coordinating the interests of creditors (banks) and borrowers (small business) in the process of lending as an effective tool for stimulating the development of small businesses in Ukraine.

The prospect of further research in this direction is the expansion of the proposed mechanism, considering the global trends in the transition to a new technological approach – the Industry 4.0.

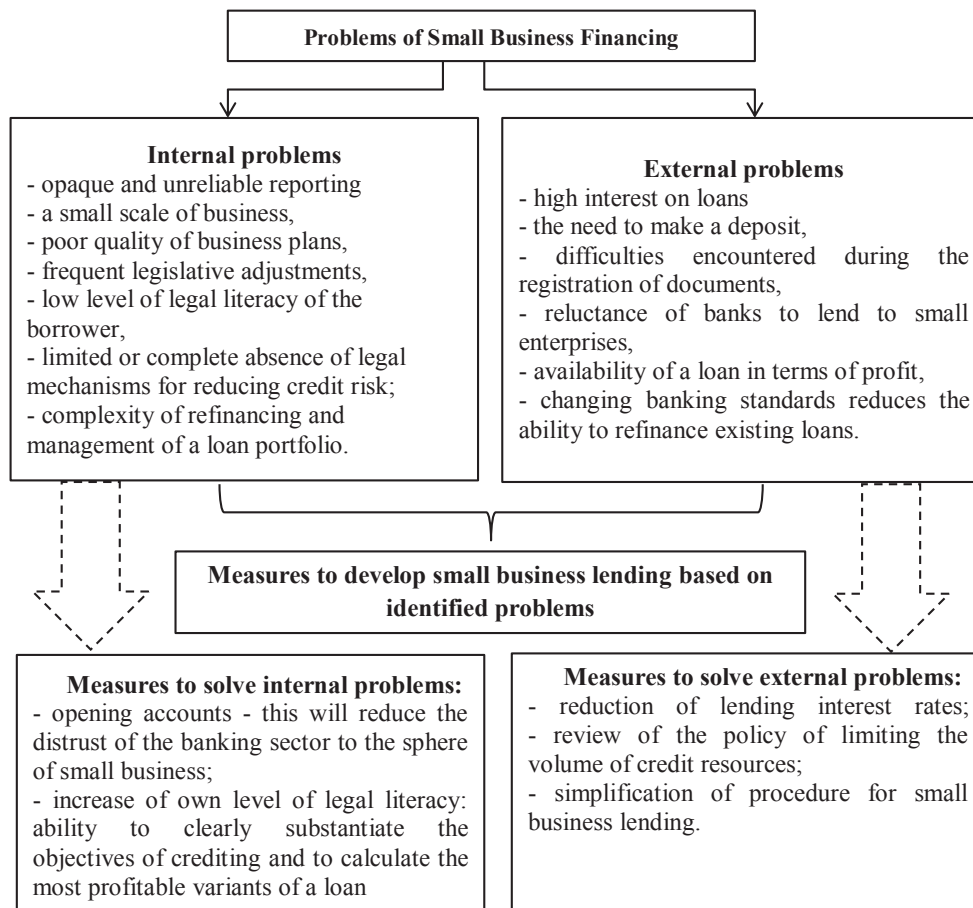
Table 2

**Bank's terms of lending to small business in Ukraine as of 2018**

Bank	Actual bid	Annual rate	One-time commission	Advance
UKRSIBBANK	18,70	16,90	1% of the amount	of 30,00%
PrivatBank	19,00	19,00 %	-	of 0,00%
Savings Bank	19,37	19,00 %	0,2% of the amount	of 25,00%
Credit Agricole	19,85	18,00 %	1,00% of the amount	of 25,00%
Ukrgasbank	19,95	18,10 %	1,00% of the amount	of 30,00%

Source: compiled by authors based on [8; 9]





**Fig. 2. The mechanism of coordination of the interests of creditors (banks) and borrowers (small business) in the process of lending**

Source: developed by authors

**REFERENCES:**

1. Dergavniy comitet statistiki [The State Committee of Statistics]. Available at: <http://www.ukrstat.gov.ua> (accessed 22.12.2018).
2. The World Bank. Data catalog. Available at: <http://data.worldbank.org> (accessed 22.12.2018).
3. Bukreieva D.S. (2016) Udoskonalennya mekhanizmu rozvitku malogo biznesu v Ukraini: podatkovno-integratsiyniy aspect [Improving the Small Business Development Mechanism in Ukraine: Tax-Integration Aspect]. *Ekonomichnyi prostrir*, vol. 109. pp. 85-97.
4. Maliy biznes v Ukraini nalashtovaniy na pozitivni zminy [Small business in Ukraine is determined to make positive changes]. Available at: <https://www.ukrinform.ua/rubric-economy/2431820-malij-biznes-v-ukrain-nalastovaniy-na-pozitivni-zmini-doslidzenna.html> (accessed 20.12.2018).
5. Semencha I.E., Kovalev N.D. (2017) Upravlinnya bankivsk'kim kredituvannyam malogo ta serednogo

6. Galileuka M. (2017) Napryamki rozvitku malogo ta serednogo biznesu [The directions of small and medium business development]. *Novoe vremya* [New time] (electronic journal), Available at: <https://biz.nv.ua/ukr/experts/naprjamki-rozvitku-malohota-serednoho-biznesu-2453039.html> (accessed 22.12.2018).
7. Natsional'niy bank Ukrainy [The National Bank of Ukraine]. Available at: <http://www.nbu.gov.ua> (accessed 08.01.2019).
8. PrivatBank [PrivatBank]. Available at: <https://privatbank.ua> (accessed 08.01.2019).
9. Raiffeizen Bank Aval [Raiffeisen Bank Aval]. Available at: <https://www.aval.ua> (accessed 08.01.2019).