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## **Providing lease transactions of agricultural enterprises with bank loans in Ukraine**

### **Introduction**

The formation of competitive agricultural production needs the growth of investment bank credit provision for agricultural enterprises. The system of centralized supplying technical equipment to the agricultural enterprises was eliminated in the process of transformation of economic relations in agriculture. At the same time the appropriate market mechanisms were not created that had a negative influence on the process of providing reformed agricultural enterprises with technical equipment. For the last 19 years the amount of purchasing some kinds of equipment by agricultural enterprises has reduced by 35–50 times, and 80–90.0% of such equipment have become outdated and worn-out. Taking into account the present-day crisis in the economy, the problem of providing agricultural enterprises with investment bank is considered to be urgent nowadays. The same problems in the word practice are successfully solved with the help of the development of lease technologies, that's why examining the present-day situation with investment bank lending, revealing the tendencies and working out prior trends in investment bank loan provision of agricultural enterprises need theoretical and mythological researches.

### **Research goals, tasks, objects and methods**

*Goal* of the research is related to the analysis of the possibilities of the development of lease financing of the agricultural enterprises under financial disturbance. Implementation of this goal is associated with the solution to the following *tasks*:

- examining the state and trends of lease growth in the agrarian sector of Ukraine;
- studying the peculiarities of lease financing of agricultural enterprises;

- analyzing the mechanism of making lease transactions by banks;
- considering the possibilities of using innovative lease technologies by banks.

*Research object* includes an aggregate of the processes of bank lending and finance leasing in the agrarian sector of Ukraine within the context of theoretical, applied and methodological aspects. *The following methods were used in the research:* analytical, statistical, normative, formalization, observation, etc.

## **State and trends of leasing in agrarian sector of Ukraine**

A need for the development of leasing in Ukraine is conditioned by the unfavourable state of technical equipment: a large amount of outdated and worn-out equipment, low efficiency in its use, lack of spare parts, etc. In the countries with the strong economy lease operations for the majority of agricultural enterprises predominated with the replacement of far more efficient equipment.

In accordance with legal acts banks, financial companies and other legal persons (which have the right to provide financial services) are able to grant a lease. They are lessors. Since 2003 in Ukraine we can see an increase in the numbers of small-scale lease businesses and the growth of lease transaction activity. In 2004 161 companies with the main activity ‘finance leasing’ were registered. There were 208 lessors in 2009. But only a few businesses granted finance leasing. In particular, during the 2009<sup>th</sup> only 3 finance companies, or 9.0% of the registered companies in the Record, and 124 lessors (59.0%) provided finance leasing. Besides, the activities of lease businesses are not high. So one company made only 21 lease agreements on average, amongst which there were 5 newly-made deals where the cost of one deal was 420,000 UAH.

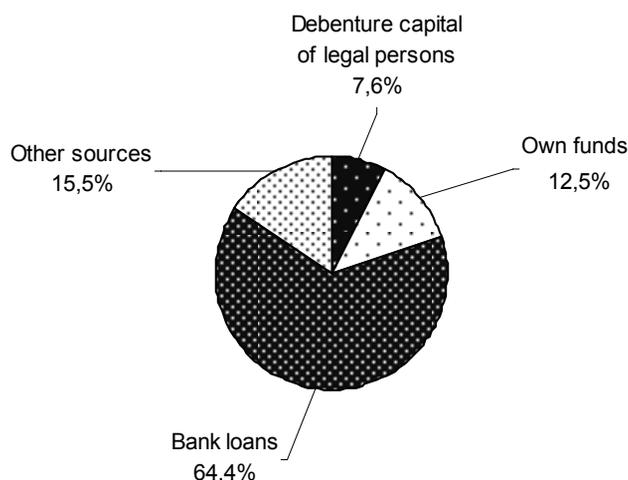
The cost of the agreements made during the 2008<sup>th</sup> went down in comparison with the year of 2007, mainly because of the financial crisis and a decrease in the inside and outside financing, but the cost of finance leasing agreements was 28.5 billion UAH, that is 8.3 billion UAH more than in 2007 [Sabluk 2009, p. 386].

The situation in the market of lease transactions in Ukraine is characterized by the fact that demand outdistances supply. Lease businesses are engaged in either finance or operational leasing. Only 29.0% of lease businesses provide finance leasing, 10.0% – solely operative, 26.0% of lease businesses make lease-back and 3.0% of the companies are engaged in the international leasing.

At the same time, the average cost of finance leasing deals increased by 36.4%: if at the end of 2005 it was 480 million UAH, at the end of 2006 – 584 million UAH. The soaring cost of the signed finance leasing agreements is explained by the intense activity of lessors and an increase in demand for leasing service and in the cost of lease objects.

In Ukraine the formation of ramified network of lease business is taking place. So the majority of lease companies are concentrated in the Central Region. Having examined the group of lease founders, we should admit that banks and other financial institutions predominate amongst the founders in 16.1% of the companies, in 3.2% – public lease companies, and in 80.7% – individuals or legal persons. At the same time foreign legal persons own 23.0% of lease companies and 9.0% of the business have foreign investment. Besides, 29.0% of lease businesses were set up attached to banks that enables them to use bank loan assets, and 19.0% of the companies were formed with the help of powerful trade and production enterprises.

The lease companies, established by large industrial concerns, specialise in leasing the equipment needed for their founder. The lease companies financed from the budget meet the interest of their industrial conglomerates or the ministry, which gives money for providing enterprises with the equipment under the terms of leasing irrespective of their profitability. In particular, National Joint-Stock Company ‘Ukragroleasing’ is one of the biggest Ukrainian lease companies, which provides only agricultural enterprises with equipment and which is now through a difficult period of times. ‘The Ukrainian Finance Lease Company’, ‘Ukrderzhleasing’, ‘Ukreximleasing’ are considered to be the largest lease companies. National Joint-Stock Company ‘Ukragroleasing’ differs from the others on its specialization in leasing agricultural equipment. Bank loan is the main source of lease financing. Almost 64.4% of all deals are financed by means of bank loans (Figure 1).



**Figure 1**

Donors of finance leasing transactions

Source: The State Committee of Statistic of Ukraine: <http://www.ukrstat.gov.ua>

**Table 1**  
Amount of lease transactions in Ukraine

Indicators	Years								
	1998	1999	2000	2001	2002	2003	2004	2005	2006
Amount of lease transactions, MIO UAH*	380	1,812	1,750	1,500	1,348	504	2,650	3,836	6,183
Amount of lease transactions in GDP, %	0.37	1.39	1.26	0.82	0.66	0.21	0.76	0.90	1.15
Amount of lease transactions in gross investments, %	1.79	7.98	7.41	4.61	3.62	0.98	3.50	4.12	6.37

\* Exchange rate was 7.15 UAH/EUR in 2006

Source: All-Ukrainian Leasing Association 'Ukrleasing': <http://ukrleasing.com.ua>, the State Committee of Statistics of Ukraine: <http://www.ukrstat.gov.ua>

In spite of its rapid development in the world, leasing is not widely spread in Ukraine the lease transactions were made to the amount of 0.5% in GDP (Table 1). These are rather poor indicators, because the analogous indicators were 1.9% in GDP in the USA, 1.6% in Japan, 2.1% in Germany, 1.6% in France, 1.7% in Italy, 1.1% in Great Britain, 1.7% in Canada.

For the last 2–3 years the interest in lease transactions has grown in Ukraine (Table 2) and in 2006 their fraction was equivalent to 6.4% from the total cost of gross investments in the economy. Though in Ukraine the number of lease transactions is 20 times as little as in Europe and 70 times as little as in the USA.

In the Ukrainian market there are funds which have the legal right to make leasing transactions. 8 regional leasing funds were built up with the help of all-Ukrainian leasing association 'Ukrleasing'. In order to support leasing business in the country the State Lease Fund, assets of which are formed on the account of budget, was set up [Sobol 2007, p. 293].

**Table 2**  
Allocation of Lease Transactions in Ukraine

Indicators	2002 in % to the total	2003 in % to the total	2004 in % to the total	2005 in % to the total	2006 in % to the total	2007 in % to the total
Total	100	100	100	100	100	100
Finance Leasing	97.10	90.04	92.30	89.50	86.70	85.30
Operation Leasing	2.90	9.96	7.70	10.50	13.30	14.70

Source: Calculated according to the data of the State Committee of Finance Provision of Ukraine: <http://www.dfp.gov.ua>

Because of the underdevelopment of financial and investment markets, institutional infrastructure, microeconomic instability and particularly imperfection of legal regulations of leasing transactions and lack of real encouragement from the government for their growth, finance leasing is unable to fulfil its potential in full to meet investment needs of the domestic agricultural enterprises.

## **Providing lease transactions of agricultural enterprises with bank loans**

There is a definite conformity of bank lending by leasing schemes: highly-liquid objects are mainly provided with loans-purchasing of vehicles (45.0%), of agricultural machines (31.0%); it is medium-term financial instrument with an increase in the number of short-term agreements (up to 2 years); direct lending of agricultural enterprises is only 8.0%, and its amount does not exceed 10.0–12.0% of agricultural enterprises' demand for investment by lease technologies [Hudz 2007, p. 218].

The main reasons which retard the growth of leasing in Ukraine are: a contradiction between the provisions of legal acts; weak awareness of all the advantages of leasing transactions amongst the enterprises; sluggishness and weakness of finance institutions, which are unwilling to carry out the additional work on installation of leasing transactions (loans are preferable); objective difficulties forecasting lease interests and bonus; lack of specialists who know all the peculiarities of leasing transactions; underdevelopment of secondhand equipment market; the high rate of shadow economy and difficulties with legalization of earned money, lack of sufficient amount of disposable capital for long-term investments; weakness of regional lease businesses; and also a great location of lease companies in the central part of the country, unwillingness of their moving towards the regions, because it is difficult for them to assess the risks; “fancy” leasing; dynamic and heavily forecasted environment, where the Ukrainian lease companies operate; political instability and amateurish government participation in the development of leasing [Artysh 2004, p. 5].

Lease financing is provided by the two main groups of lessors: leasing companies and banks. The differences in adjustment of their functioning are in a series of peculiarities of economic and legal adjustment of leasing transactions. A need for making bank reserves for possible credit losses belongs to the peculiarities which influence the effectiveness of leasing deals between banks and leasing companies. Apart from leasing businesses banks should make reserves for possible credit losses at the rate of 1.0–20.0% depending on the class of a borrower (without taking into account problem loans with reserves

at the rate of 50.0% and 100.0%). Actually reserve for possible credit losses doesn't exceed the bank limits, that's to say assets are reserves and they are not withdrawn from the correspondent account. Banks are not prudently controlled, so they do not burden themselves with making reserves. Banks consciously find themselves in less cleared conditions than leasing companies. A demand for reserve leads to an increase in the cost of bank lease lending.

A great deal of relevant documents and circulation of registration and contractual documents are amongst the shortcomings of bank lease lending. While making lease agreements, banks use the procedures of standard loan agreements, so the list of required documents consists of about 10–20 items.

Proceeding from the corporative principles of internal management, banks are willing to impose maximum regulations on loan provision and the ordinary principle of making agreements of finance leasing is providing it in detail.

## Mechanism of bank's conducting lease transactions

The high loan rate accounts for the high cost of lease provision. According to the calculation of the specialists, to obtain minimize profit from leasing transactions, loan rate is not to exceed 22.0%. So only banks are able to provide lease facilities regarding essential capital accumulation [Kolesnykov 2007, p. 57].

The average cost of one lease agreement is falling, despite the total increase in their number. There is also a reduction in loan portfolio of some banking lease companies (Table 3). Almost 75.0% of the companies take out insurance against risks connected with loss, damage or destruction of a lease item. In order to pro-

**Table 3**  
Providing Leasing Transactions of Agrarian Enterprises with Bank Loans in 2005–2008

Year	The number of banks	The number of leasing companies	The number of agreements, items	The average cost of a signed agreement, thousand UAH*	Interest rate	The cost of lease transaction
2005	29	17	483	553.89	17.4	25.7
2006	34	24	467	413.11	16.2	24.3
2007	38	27	511	387.63	15.1	22.0
2008	43	32	527	294.78	15.3	21.2

\* Exchange rate was 9.86 UAH/EUR in 2008

Source: Calculated according to the data of the State Committee of Statistics of Ukraine: <http://www.ukrstat.gov.ua>, the Ministry of the Ukrainian Agrarian Policy: <http://www.minagro.kiev.ua>

vide due rental payment, the leasing companies use penalty (fine) in 90.1% of the cases.

The mechanism of providing leasing is directly connected with the lessee expenditure: the fewer loan brokers are, the higher cost of rental payment is (the higher lessee expenditure is).

In the Ukrainian practice there are different methods of lease rating. So, a series of author's methodical workings includes the calculation of rental payment and comparison the obtained result with the possibilities of buying tangible assets by their own investment funds or borrowed donors. Having analyzed the theoretical workings and practical experience of agreement parties, we produced a set of methodical recommendations as to calculation of the basic elements of rental payment.

Let's study the example of determination of real payment under the terms of finance leasing argument. Under the agreement, the agricultural enterprise leased the equipment (with buy-out) for production of sugar beet at a cost of 24,850 EUR or 245,000 UAH. The term of the agreement was 5 years. Lease margin was 11.0% of annuity from depreciated cost of the equipment. The rental payment is made once a year at the end of business year. Annually the cost of equipment is refunded in equal parts to the amount of 49,000 UAH. Hence, the annual rental payment in that case consists of two parts only: lease margin and the amount of assets at the rate of annual refund of the equipment cost. Let's calculate lease margin not according to the average annual depreciated cost of the lease object but on the basis of its depreciated cost at the beginning of the year. The data of rental payment calculation are shown in Table 4.

**Table 4**

Calculation of rental payment according to the depreciated cost of lease object

Year	Depreciable cost, thousand UAH*	Lease margin, %	The amount of counted lease margin, thousand UAH*	Annual refund of cost, thousand UAH*	Rental payment, UAH*
1	245	11	26,950	49	75,950
2	196	11	21,650	49	70,560
3	147	11	16,170	49	65,170
4	98	11	10,780	49	59,780
5	49	11	5,390	49	54,390

\* Exchange rate was 9.86 UAH/EUR in 2008

Source: Authors' calculation.

The total amount of rental payment within 5 years is 325,850 UAH, lease margin is 80,850 UAH in particular. If in that case the method of calculation of lease margin were used according to the average depreciated cost, the amount of lease margin would be less. According to the data of Table 5, the amount of lease margin is 67,500 UAH or 13,350 UAH less than the previous determined amount by this method of calculation. The use of this method of lease margin determination would be unfair as to a lessor, but profitable for its partner – a lessee.

At the same time the use of this method would be unfair as to a lessee with monthly or quarterly payment. So, the method of lease margin determination has to be co-ordinated with periodicity of lease payoff.

In Table 6 there is an example of the calculation of annual lease payment proceeding from the terms of finance leasing agreement: interest rate – 28.0% of annuity; the amount of lessor's percentage – 1.0% from the original cost of property; prepayment – 12.0%, insurance of a lease item – 4.0%; the payment is proportional. The analysis of allocation of depreciation deduction by the years of using a combine-harvester indicated that an even method of counting amortization (tax amortization) should be used for finance leasing.

The amount of commission rate for lessor's providing a service has a considerable influence upon the effectiveness of leasing agreement. The elements of lease payment should be presented in the formulas of determination of net leasing

**Table 5**

Calculation of lease margin according to the average annual depreciated cost of lease object

Year	Cost of the equipment at the beginning of the year, thousand UAH*	Annual refund of the equipment cost, thousand UAH*	Equipment cost at the end of the year, thousand UAH*	Average annual depreciated cost of equipment, thousand UAH*	Lease margin, %	Amount of lease margin, thousand UAH*
1	245	49	196	220.5	11	24.3
2	196	49	147	171.5	11	18.9
3	147	49	98	122.5	11	13.5
4	98	49	49	73.5	11	8.1
5	49	49	0	24.5	11	2.7

\* Exchange rate was 9.86 UAH/EUR in 2008

Source: Authors' calculation.

**Table 6**

The Payment of agricultural enterprise-lessee by the years of agreement, UAH\*

Year	Cost at the beginning of the year	Cost refund	Interest rate	Insurance payment	Lessor's income	Total lease payment	
						also VAT	with prepayment and payoff proportion
1	262,250	52,450	50,772	10,490	2,623	139,601	125,229
2	209,800	52,450	39,233	8,392	2,623	123,237	102,283
3	157,350	52,450	27,694	6,294	2,623	106,872	102,283
4	104,900	52,450	16,155	4,196	2,623	90,508	102,282
5	52,450	52,450	4,616	2,098	2,623	74,143	102,283
Total		262,250	138,468	31,470	13,113	534,361	534,361

\* Exchange rate was 9.86 UAH/EUR in 2008

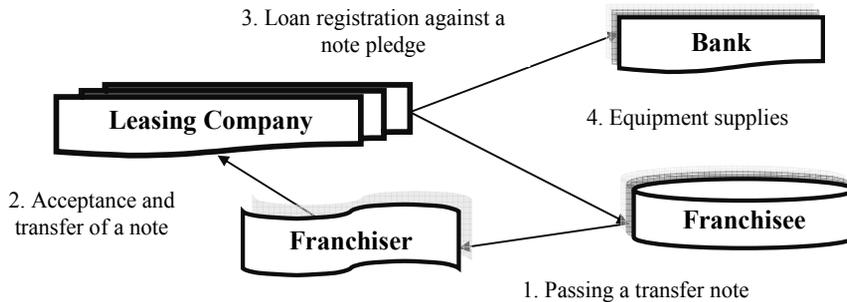
Source: Authors' calculation.

effect for a lessor and a lessee in detail and capital flow should be equated with zero, that is to say, determinate the effect of banking and leasing loan provision under the condition that expenditure on these transformation would be equal.

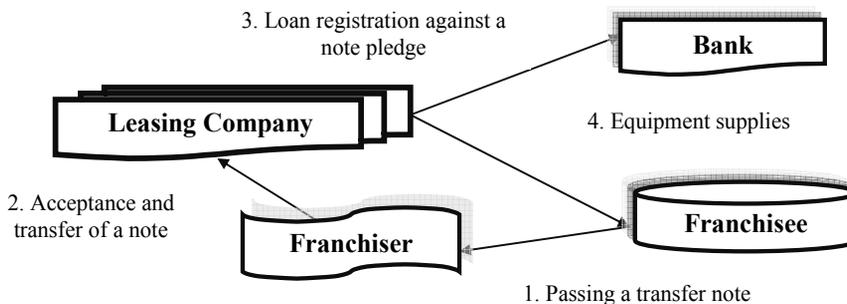
## Banking development of innovative lease technologies

Innovative lease option is considered to be one of the most reliable and effective financial instruments for reducing credit risks of bank leasing transactions. The essence of innovative lease option is that while making lease agreement with a lessee, a lessor should make a simultaneous innovative lease contract – put (Figure 2). It is to its distinct advantage to minimize the risks of impossible investment refund in comparison with the classical or back leasing. The use of the created technology of providing leasing transactions of equipment supplies with bank loans was substantiated in the system of franchising (Figure 3). A franchisee transfer note, accept by franchiser is used as a pledge.

There are some positive aspects of the introduced technology, such as: leasing company makes an agreement of finance leasing only with franchiser that simplifies the procedures of the execution of leasing agreement than in the case of dealing with all the franchisees; the examined model of financing is also a scheme of hedging lease agreement, because in the case of overdue payment a bank is able to give either a franchiser or a franchisee a note. Amongst the shortcomings



**Figure 2**  
Four-side innovative lease option  
Source: Authors' presentation.



**Figure 3**  
The use of franchising under providing leasing transactions of agricultural enterprises with bank loans  
Source: Authors' presentation.

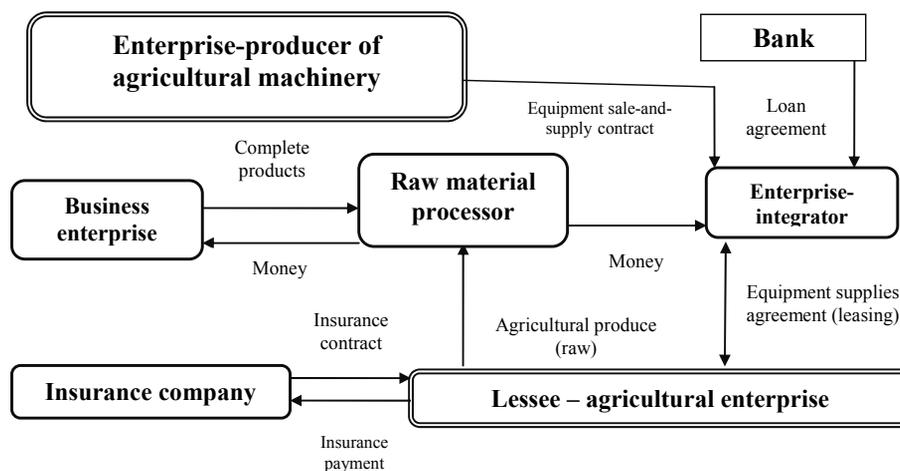
of this technology we can admit the specificity of using the introduced way of financing, because in practice it can be used only for the agricultural enterprises, working in the system of franchising.

The suggested technology of the organization of leasing relations in a chain 'lessor – lessee' eliminates the shown drawback of transactions of agricultural enterprises.

The peculiarity of the introduced technology is that a lessee refunds lease payment not by money but by the agricultural products which they take to the processing enterprises from the integral chain (Figure 4).

Such model of agricultural leasing relations can be used in the integrated structures as well. According to the present economic situation in the agricultural production, the main integrators are the processing enterprises [Nastasyev 2006, p. 319].

Besides, the world experience shows that it is expedient to use swap when making leasing transportation of agricultural enterprises. The considerable advan-



**Figure 4**

The Model of leasing transactions of agricultural enterprises with the help of enterprises-integrators

Source: Authors' presentation.

tage of swap is the opportunity of transferring open current position in the course of time. It is also expedient to use the transfer of right requirement – factoring transactions in the lessor activity to increase guaranty provision of leasing transactions and receive short-term loans (for 2–3 months), and in the lessee activity as well. Banks should transfer problem loans into leasing agreement by hybrid technology in order to eliminate a series of negative phenomena which occurs during bank loan provision, first of all the problems connected with overdue loan payoff and conglomeration of the great amount of problem and bad debts in loan portfolio of banks. Such technology is effective enough and can be examined as a scheme which considerably improves the quality of finance planning.

## Conclusions

1. In the recent years we can see a remarkable development of leasing in Ukraine. It was shown that bank loans (about 64.4% of all agreements) were donors of leasing transactions, but the crisis deformations stipulated the changes in donor structures of finance leasing in favour of private money of leasing companies and call money of legal persons (up to 22.15%). Such modern configuration of finance provision of leasing transactions became the main economic incentive to their growth.

2. The tendencies for providing leasing transactions of agricultural enterprises with bank loans are: a steadfast increase in the role of its qualitative characteristics; orientation towards equipment liquidity and steadiness of leasing transactions; increasing in the amount of loan provision for leasing transactions (a 59.7% increase in the amount of lease agreements) has discrete nature; the presence of long-term relations with supplies; an increase in the amount of financing occurs with the aid of private and borrowed money, not by means of founders' money; an increase in diversity of lease items proposed by banks and in the term of lease projects and their being provided with loans, complication with the access to the loan resources by leasing technologies; a decline in creditworthiness of the agricultural enterprises called forth a pause in the lease projects in 2008–2009; an increase in bank competition that requires the search for the new finance technologies which would give the possibility of a considerable increase in the amount of loan provision and a decline in credit risks.
3. From the viewpoint of a lessee, the use of any method of calculation of lease payment should strive for the goal – use of leasing agreement as a resource-saving method for making lease investment and use of simple mathematical method which allows simplified calculations without considerable distortion of economic quantity of calculated indicators. In this aspect the calculation of leasing margin should make not according to the average annual depreciated cost of leasing object, but on the basis of its depreciated cost at the beginning of the year. The analysis of allocation of depreciation deduction by the years of using a combine-harvester enabled to determine that it would be expedient for finance leasing to use an even method of counting amortization. Some factors such as taxation rate, cost of loan resources, the amount of percentage, reallocation of payoff by lapses of time have a considerable influence on the effectiveness of leasing agreement.
4. The innovative hybrid leasing technologies should be used to increase their competitiveness, in consequence of which, there is an interpenetration of the exiting trends of the new technological workings that would form preconditions for realization of the stage of innovative investment move and favour the expansion of loan provision for leasing transactions and formation of financial base for renovation of material and technical basis, stimulation of production activities of the agricultural enterprises.

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## **Kredyty bankowe w zabezpieczeniu operacji leasingu przedsiębiorstw rolniczych na Ukrainie**

### **Streszczenie**

W artykule przedstawiono stan i tendencje rozwoju leasingu w sektorze agrarnym gospodarki Ukrainy. Do głównych przyczyn bardzo wolnego tempa kredytowania operacji leasingu przedsiębiorstw rolniczych należą: niedoskonała polityka finansowo-kredytowa oraz ustawodawstwo, zawyżone stawki płatności leasingowych, niska zdolność płatnicza przedsiębiorstw rolniczych, nierozwinięty rynek usług leasingowych, niestabilność ekonomiczna i polityczna, brak należytego zabezpieczenia informacyjnego. Nie patrząc na fakt dużego udziału w źródłach finansowania operacji leasingu, banki nie cieszą się popularnością wśród przedsiębiorstw rolniczych jako instytucje kredytujące operacji leasingu. Przedstawiono rekomendacje dotyczące stosowania innowacyjnych hybrydowych technologii leasingowych w kredytowaniu przedsiębiorstw rolniczych.

