

V. F. Stolyarov,

*DrHab (Economics),**Chernivtsi Trade and Economics Institute of Kyiv National
Trade and Economics University, Chernivtsi,*

D. M. Artemenko,

Kyiv National Economic University named after Vadym Hetman

**SPECIFICS OF DETERMINING THE MARKET ASSESSMENT RIGHTS
REQUIREMENT FOR OBLIGATIONS ARISING FROM THE IMPLEMENTATION
OF THE BANK CREDIT OPERATIONS OF DIFFERENT QUALITY
THAT ARE SECURED AND UNSECURED COLLATERALLY**

Problem and its solution. Debt obligations of the debtor to the creditor are special kind of assets, which are based on the right to obtain certain economic benefits. The problem of the assessment rights requirement for obligations under the credit agreement has acquired special urgency after the crisis of 2008, when the banks had overdue portfolios of loans (bad debts of borrowers).

The cost of the claim is the result of many factors analysis, however the arrear is one of the main but not the only factor in the value of the rights requirement for obligations. Despite the presence of publications on this issue that highlight the general methodical bases of the object evaluation, there are still many unresolved problems in contemporary assessment practice. First of all it is necessary to develop a model for determining the assessment rights requirement for obligations arising as a result of bank credit operations implementation in specific conditions related to assess, the status of the lender (the Bank) and the lack of sufficient information regarding the object assessment.

The number of local scientists and practitioners dedicated their research papers to the finance assessment of debt obligations. Among them I.Galkin, O.Drapikovskyy, Y.Dehtyarenko, N. Zhylenko, I. Ivanova, V. Lartsev, N. Lebid, J. Marcus, O. Mendrul, S.Sivets, S.Skrynko, O.Puzenko, F.Puziy, A.Chirkin as well as the international scientists such as A.Damodaran, V.Hrybovskyy A.Hriaznova

A.Gregory, F.Evans, Y.Kozyr, V.Mykhaylets, O.Stoyanova, T. Harrison.

Taking into the consideration their significant contribution to the methodological support formation of the financial assessment of property rights, it is worth noting the lack of disclosure of the assessment rights requirement for obligations problem arising as a result of bank credit operations implementation.

The article aims to study and test the standardized mechanisms of the assessment rights requirement for obligations arising as a result of bank credit operations implementation.

Presentation of the main material.

The demands on the reliability of the banking system are increasing with the development of market relations in Ukraine and which is largely determined by the size and condition of the credit institutions assets. In these conditions the need of their reliable value assessment is increasing and is adequately characterized by the market value.

On the whole, the information about the market value of credit institutions assets can serve as a basis for the solution of many problems both the issues of general importance and the ones of the banking sector functioning and some of its units. This assessment allows making more informed decisions about maintaining the efficiency of credit institutions with the owners, managers and investors when making decisions on mergers and acquisitions, liquidation and treatments conducting; maintaining the financial situation which are adequate to market conditions; predicting their future development and behavior in the market; a more accurate risk assessment of the interaction between contractors and the credit institution.

At the national level, these kinds of data help to implement the effective regulation and the banking system supervision that are very important in solving problems of restructuring, treatment and strengthening of the whole financial system. In addition, this information is essential to determine the actual tax base and for credit institution property insurance.

The commercial bank as the most important financial and economic institute, of course, obviously has its own peculiarities of assessment and its value determination. Considering this question one of the prominent representatives of foreign school American economist P. Rose comes from the premise that the bank activity indicators are oriented on two interrelated characteristics i.e. profitability and risk that are to be materialized in the bank value indicator. This is because commercial banks are entrepreneurial corporation with the task to maximize the funds value contributed by shareholders, while maintaining acceptable level of risk.

Naturally, the main asset of the bank, which determines the size and financial situation, is the individuals and entities loan portfolio. So, it is extremely important to develop a unified methodology of the assessment rights requirement for obligations in these loans portfolios.

The background information for the assessment rights requirement for credit, credit is in the case materials and is formed on paper and should contain:

- written request (application) about the debtor's loan;
- business plan, feasibility study of need for the definite goal (if applicable);
- contracts and / or purchase and sale agreement (if any);
- financial statements (for legal entities), income information (for individuals) of a debtor;
- financial and budget statements (for budgetary institutions);
- information on receipts on current bank accounts at least the last six full months;
- information provided by the debtor and validated by other banks about:
 - a. debtor indebtedness defining basic terms of the loan (the amount of the contract, term debt balance, type of collateral, etc.);
 - b. evidence of the overdue indebtedness;
- information about the debtor's obligations to the bank according to previous agreements, credit history (if any);
- information about the verification of proper loan use;
- supporting documents (statement of balance sheet and off-balance sheet accounts, payment orders, etc.) providing the evidence of loan provision and repayment, the existing financial obligations, mortgaged property recognition, etc;
- audit report on the financial status of the debtor;
- constituent and registration documents (for legal entities), copies of the relevant pages of the passport and the registration number certificate of the taxpayer registration card (for individuals);
- loan agreement and additional agreements thereto;
- mortgage loans agreements and additional agreements to them, guarantee letters;
- documents confirming person authority to sign a loan agreement, mortgage loans agreements and additional agreements thereto on behalf of the counterparty bank;
- copies of title documents on property (the legal claim) that is transferred as collateral;
- documents confirming the market value of the mortgaged property (the legal claims) during the loan disbursement;

- documents proving the existence and the quality preservation of the mortgaged property (acts, information, inspections materials);

- documents proving the property encumbrances and its state registration in accordance with the laws of Ukraine;

- insurance agreements of the mortgaged property and documents confirming insurance payment (if any);

- information about measures taken by the bank to repay debt (documents certifying debt collection and recovery procedure).

Debt obligations nature causes a lack of their wear factors and does not include the cost of reproduction. The use of the cost approach for the debts obligations assessment reduces to their book value determination adjusting for the obligations which limitation period has expired or something alike. Therefore, taking into account the mentioned above, the cost approach is not used in the process of the assessment rights requirement for obligations.

Considering that information about such objects sale is limited and does not meet the criteria of reliability the comparative approach is not applied as well.

Income approach is the only one of the universally accepted approach that allows building the assessment model, taking into account the specifics of the object assessment and existing burden of rights requirement. That is why we believe it is necessary to apply the income approach as the one that reflects the market situation the most accurately.

The market value assessment of rights requirement for obligations is carried out in the following stages using the income approach:

- forecasting the possible income options from management (order) of the estimated legal requirements;

- determining the forecast period for each of the mentioned variants, presenting the key assumptions that will be used during the assessment;

- drawing up a possible plan of the debtor cash flow including debt collection regarding the presumptive time of payment receipt for each of the income presumptive options (cash flow). The expected gross income from obligation reimbursement is determined at this stage for each of the presumptive options.

- forecasting the presumptive volume of expenditures associated with gross income obtaining in each of the presumptive options;

- calculating the expected net cash flow for each forecast period as the difference between gross income and expenses;

- determining the discount rate for each of the presumptive options;

- calculating the value of rights requirement for obligations as the sum of the present value of net cash

flows for each of the presumptive options of forecasting and the results reconciliation, to justify the estimated the market value assessment of rights requirement for obligations.

The market value of the rights requirement for loan agreements is advisable to calculate according to the formula:

$$V_m = V_{col} \frac{1 - R_{col}}{(1 + r_0)^N} + (V_d - V_{col} \frac{1 - R_{col}}{(1 + r_0)^N}) \times \frac{1 - R_{cr}}{(1 + r_k)^N} \times p_e,$$

where:

V_m – the market value of debt obligations;

V_{col} – the collateral total value for credit operations;

V_d – the debt total value on a credit transaction at the assessment date;

R_{col}, R_{cr} – thereafter, rate risk associated with the presence of collateral property rights and rate risk associated with the presence of collateral property rights under the loan agreement;

r_0 – basic discount rate that is equal to the credit cost for commercial banks (offering to take at NBU discount rate);

r_k – the discount rate for credit operations in accordance with the credit quality category and the debt service state;

N – discount period – the period during which cash flows are expected from the execution of debt obligations (depending on the claim of the creditor);

p_e – plausibility that the debtor (payer) is able to fulfill debt obligations from an economic point of view.

It is worth mentioning that if $V_m > V_d$, then $V_m = V_d$.

The use of this model can adequately take into account not only the cash flows at the time, but also the legal and economic quality of these debt obligations that eventually form their cost.

Forecasting cash flow schedule (expected creditor revenues) from debt obligations fulfill is advisable to perform according to the state of claim activity (Table 1).

Table 1

Terms of fund receipts depending on the state of claim activity

Claim activity procedure and its duration	Claim activity stage	Term of the funds, months.
Claim activity is directed (terms of delay is 1-1.5 months)	Claim activity was not performed	10 -20
Waiting for a response and sue (1-2 months)	Claim activities are directed and period for reply is sustained	9-18
Judicial trial (3-6 months).	There is court decision and enforcement proceedings are initiated by the State Executive Service	6-12
Enforcement proceedings by the State Executive Service (6-12 months.)	-	-

The discount rate for loan operations (r_k) is determined by risk level for loan operations in accordance with the clause of the National Bank of Ukraine (Table 2) [3].

Table 2

Risk calculation of indicator provided to the debtor

Credit quality category	Number of delayed days of	The accepted value of the discount rate, %
I – the highest category	0-7	0-6
II	8 -30	7-20
III	31 - 90	21-50
IV	91 - 180	51-99
V – the lowest category	beyond 180	100

On the basis of the relevant legal analysis, determination of the probability that the debtor (payer) will be required to fulfill the collateral (guarantee, mortgage) debt obligations from a legal point of view, is the risk associated with the presence of collateral property rights. This risk is offered to be calculated according to the following algorithm:

1) the total risk is determined according to collateral certain type (not more than 100%);

2) cost shares of all collateral types for credit operations are calculated;

3) weighted risk associated with the presence of property rights for all kinds of collateral is calculated.

Criteria for determining the total risk for a certain type of collateral listed below [6].

Real Estate:

- physical lack of documented collateral is 100% risk which does not allow the further collateral assessment;
- lack of registration record in the state register is a high risk of penalty imposition on the property. The recommended risk is 30-50%;
- lack of the borrower corporate body decision carries a high threat of a positive outcome for property enforcement procedure. The recommended risk is 50%;
- the collateral correct description is critical in case of significant errors in the subject description. The risk can be assessed up to 100% depending on the correctness;
- the collateral quality characteristics may be affected by the time of the assessment date until the collateral realization (physical wear and intentional harmful effect). The risk can be assessed up to 20%.

Movables:

- physical lack of documented collateral is 100% risk which does not allow the further collateral assessment;
- the disputes availability over the collateral property is estimated depending on the collateral appeal process, the lawyer represents the expert assessment of the litigations successful outcome probability. The risk can be assessed up to 100%;
- the risk is zero if the fully autonomous use of collateral is possible, if the autonomous use of the collateral involves significant capital investment to its current state, the risk is assessed in proportion to the level of expenditure;
- risk of inconsistencies in the details of the property mortgage contracts and accounting documents could be assessed up to 100% in consultation with a lawyer Client (as in the case of appeal cases with similar collateral);
- the collateral quality characteristics may be affected by the time of the assessment date until the collateral realization (physical wear and intentional harmful effect). The risk can be assessed up to 50%.

Guaranty

- lack of the borrower corporate body decision carries a high threat of a positive outcome for property enforcement procedure. The recommended risk is 50%;
- the recommended risk is 100% in the absence of information on the financial and property status of guarantor.

The determining of probability that the debtor (payer) will be required to fulfill the debt obligations under the credit agreement from a legal point of view is the risk associated with the presence of rights requirement under this agreement. This risk is offered to be calculated according to the following recommendations:

- incorrect execution of agreement on the loan and additional agreements to it. The risk can be assessed up to 100%;

- lack of the borrower corporate body decision carries a high threat of a positive outcome for property enforcement procedure. The recommended risk is 50%;
- the risk is 100% in case of absence of borrower's physical accessibility (borrower left the country, died or his location is not established).

The probability that the debtor (payer) meet debt obligations from an economic point of view depending on the debt service state has been identified and summarized by an expert, based on actual assessments of loan portfolios (Table 3).

Table 3

Terms of debt, days	Probability
to 30	1
31-60	0,95
61-180	0,50
181-365	0,35
366-545	0,25
546-1095	0,10
beyond 1095	0,05

* 5% probability is taken to resolve the situation for ATO and Autonomous Republic of Crimea zones.

Example of the market value calculating of the loan portfolio is presented in table 4.

It should be noted that the revaluation of portfolios that are NBU pledged and the loans which quality has deteriorated to the III-V categories of quality aren't taking into consideration (NBU Resolution of November 18, 2015 N 794).

Conclusions

Nature of debt obligations is specified by lack of wear factors and does not include the cost of reproduction. The cost approach usage for debt obligations assessment is reduced to the determination of their carrying value with amount of obligations adjustment for which the period of limitation is expired. Therefore, the cost approach in the process of determining the value of the assessment rights requirement for obligations is not used.

Using a comparative approach in the debt obligation assessment is not possible due to lack of market information related to the analogs selection and editing performing. That is, the application of the income approach for the assessment rights requirement is the only option. The income approach methods correspond to the principles of determining the assessment market value mentioned above.

The approaches and assessment methods correspond to the current legislation to implement professional appraisal activities in Ukraine as well as national and international standards and meet the resolution criteria of the National Bank of Ukraine on the calculation of the loan risk indicator.

Table 4

The market value of rights requirement calculation for credit operations

S No.	Name of the borrower on the loan whose rights requirement is estimated	The total amount owed on the loan, UAH.	Quality credit category	The collateral total cost at the assessment date	R_{col}	R_{er}	Credit risk index	Stage of claims	The loan market value
1	2	3	4	5	6	7	8	9	10
1	Ivan Ivanov	176 849,46	I	100 289,98	0,95	1	0,00	Work wasn't carried out	176 849,46
2	Anton Lazo	266 191,95	II	186 789,74	1	1	0,20	Work wasn't carried out	231 577,51
...

Methodical measures included statistical data collection agencies in determining the likelihood that the debtor (payer) meets debt economically depending on the state debt service.

The statistical data of the debt collection agencies are included in the methodical measures to determine the probability that the debtor (payer) meet debt obligations from an economic point of view depending on the debt service state.

The proposed assessment model allows to determine the assessment rights requirement for obligations not only under the specific credit agreement, but also by formed credit portfolio of the bank, at minimum cost and in terms of not sufficient information conditions on property assessment.

References

1. Про затвердження Національного стандарту № 1 «Загальні засади оцінки майна і майнових прав: Постанова Кабінету Міністрів України від 10.09.2003 р. № 1440. 2. **Наказ** Фонду державного майна України № 1426 від 30.09.2011р. «Методичні рекомендації до оцінки права вимоги зобов'язання, що виникає внаслідок здійснення банком кредитних операцій». 3. **Положення** про порядок формування та використання банками України резервів для відшкодування можливих втрат за активними банківськими операціями, затверджене постановою Правління Національного банку України від 25.01.2012 р. № 23 зі змінами та доповненнями. 4. «**Міжнародні стандарти оцінки**». Восьме видання, 2008 / пер. з англ. С.О. Пузенка. – К.: «АртЕк», 2008. – 432 с. 5. **Методические** рекомендации «Оценка прав требования по кредитным соглаше-

ниям банков» [Электронный ресурс]. – Режим доступа: <http://www.ocenchik.ru/docs/456.html>.

Столяров В. Ф., Артеменко Д. М. Особливості визначення ринкової вартості прав вимоги за зобов'язаннями, що виникають внаслідок здійснення банком кредитних операцій різних категорій якості, які забезпечені та не забезпечені заставою

У статті запропоновані уніфіковані механізми оцінки прав вимоги за зобов'язаннями різних категорій якості, що виникають внаслідок здійснення банком кредитних операцій. Конкретні підходи та методи оцінки, відповідають чинному законодавству щодо здійснення професійної оціночної діяльності в Україні, а також національним і міжнародним стандартам оцінки та задовольняють вимогам положень Національного банку України про порядок розрахунку ризику кредиту. Запропонована модель оцінки дозволяє визначити вартість прав вимоги зобов'язань за сформованим кредитним портфелем банку, за мінімальних витрат та браком достатньої інформації відносно об'єкту оцінки.

Ключові слова: ринкова вартість, кредитна операція, оціночні процедури, підхід до оцінки, кредитний портфель, ризик кредиту, дисконт, забезпечення, принципи оцінки.

Столяров В. Ф., Артеменко Д. М. Особенности определения рыночной стоимости прав требования по обязательствам, возникающим вследствие осуществления банком кредитных операций различных категорий качества, которые обеспечены и не обеспечены залогом

В статье предложены унифицированные механизмы оценки прав требования по обязательствам различных категорий качества, возникающих в результате осуществления банком кредитных операций. Конкретные подходы и методы оценки, соответствуют действующему законодательству по осуществлению профессиональной оценочной деятельности в Украине, а также национальным и международным стандартам оценки и удовлетворяют требованиям положений Национального банка Украины о порядке расчета риска кредита. Предложенная модель оценки позволяет определить стоимость прав требования обязательств по сложившемуся кредитному портфелю банка, при минимальных затратах и нехватке достаточной информации относительно объекта оценки.

Ключевые слова: рыночная стоимость, кредитная операция, оценочные процедуры, подход к оценке, кредитный портфель, риск кредита, дисконт, обеспечение, принципы оценки.

Stolyarov V. F., Artemenko D. M. Specifics of Determining the Market Assessment Rights Requirement for Obligations Arising from the Imple-

mentation of the Bank Credit Operations of Different Quality that are Secured and Unsecured Collaterally

This article offers the standardized mechanisms of the market assessment rights requirement for obligations of different quality categories arising as a result of the bank credit operations implementation. Specific approaches and assessment methods are relevant both to the existing legislation of the professional appraisal activity implementation in Ukraine and to national and international assessment standards, and meet the criteria of the National Bank of Ukraine on the calculation of credit risk. The proposed assessment model allows to determine the assessment rights requirement for obligations by the formed credit portfolio of the bank at minimum cost and the lack of sufficient information concerning the object assessment.

Keywords: market value, credit transaction, assessment procedures, assessing approach, the credit portfolio, credit risk, discount, maintenance, assessment principles.

Received by the editors: 12.12.2015
and final form 28.12.2015