

**DIFFERENTIATION BETWEEN THE NBU
REGULATIONS AS TO PROVISIONING
FOR ACTIVE BANK TRANSACTIONS**

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Theoretical principles and practical advice on the formation of reserves on active operations of banks were considered. The main differences were identified between Regulation No. 23 "About the formation and use of Ukrainian banks' reserves to offset possible losses from active banking operations" dated 25.01.2012, and Regulation No. 279 "About the procedure of forming and using reserves to compensate for possible losses on credit operations of banks" dated 06.07.2000. Ways to improve the regulations were justified on the basis of the revealed differences between them. The results of the differentiation that can be practically applied by banks are given in the table.

Keywords: crediting, reserves, active operations of banks, corporate lending, NBU, reimbursement.

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**ВСТАНОВЛЕННЯ ВІДМІННОСТЕЙ МІЖ УПРОВАДЖЕНИМИ
ПОЛОЖЕННЯМИ НБУ З ФОРМУВАННЯ РЕЗЕРВІВ
ЗА АКТИВНИМИ ОПЕРАЦІЯМИ БАНКІВ**

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Розглянуто теоретичні положення та практичні рекомендації щодо формування резервів за активними операціями банків. Визначено основні відмінності між Положенням "Про порядок формування та використання банками України резервів для відшкодування можливих втрат за активними банківськими операціями" від 25.01.2012 р. № 23 та Положенням "Про порядок формування та використання резерву для відшкодування можливих втрат за кредитними операціями банків" від 06.07.2000 р. № 279. Обґрунтовано шляхи вдосконалення цих положень на основі визначення відмінностей між ними. У формі таблиці наведено результати встановлення відмінностей, які можуть бути практично застосовані в діяльності банків.

Ключові слова: кредитування, резерви, активні операції банків, кредитування юридичних осіб, НБУ, відшкодування витрат.

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**УСТАНОВЛЕНИЕ РАЗЛИЧИЙ МЕЖДУ ПОЛОЖЕНИЯМИ НБУ
ОТНОСИТЕЛЬНО ФОРМИРОВАНИЯ РЕЗЕРВОВ
ПО АКТИВНЫМ ОПЕРАЦИЯМ БАНКОВ**

Рассмотрены теоретические положения и практические рекомендации по формированию резервов по активным операциям банков. Определены основные различия между Положением "О порядке формирования и использования банками Украины резервов для возмещения возможных потерь по активным банковским операциям" от 25.01.2012 г. № 23 и Положением "О порядке формирования и использования резерва для возмещения возможных потерь по кредитным операциям банков" от 06.07.2000 г. № 279. Обоснованы пути совершенствования этих положений на основе определения различий между ними. В форме таблицы приведены результаты установления различий, которые могут быть практически применены в деятельности банков.

Ключевые слова: кредитование, резервы, активные операции банков, кредитование юридических лиц, НБУ, возмещение расходов.

The problem of making reserves for active banking transactions is one of the most topical problems of the entire banking sector of the financial services market of Ukraine. Gaps in the mechanism of bank lending appeared in 2008, when the priority areas of the credit policy of banks of Ukraine built the loan portfolio, increasing clients' database by providing loans to individuals and business entities.

The similarity of the strategic objectives contributed to the regional competition in banking markets. Given the failure of the regulatory capital of most banks, a growing demand for credit, particularly for consumer loans to individuals, financial institutions entered the market of foreign borrowing. The banking system of Ukraine has significantly increased the proportion of foreign capital, so to enhance the competitiveness of domestic banks it is necessary to look for new approaches to making the reserves for active transactions, hence the relevance of the study.

Different theoretical and practical aspects of making active transactions were covered in the works by local and foreign scientists and specialists, including I. Voloshyn,

A. Drobizak, V. Melnychuk, O. Kuznetsov, A. Pylypenko, O. Tereshchenko, R. Burks [1 – 7].

The following general research methods were used: analysis and synthesis, deduction, abstraction, specification, reasoning, comparison, the method of classification and generalization by which the general conclusions were drawn.

NBU Regulation No. 23 "About the formation and use of Ukrainian banks' reserves to offset possible losses from active banking operations" dated 25.01.2012, [8] is a new regulatory instrument that is substantially different from that used in the earlier years. But the new procedure also has some limitations, it pays little attention to the analysis, evaluation and modeling of credit risk.

The aim of the article is to determine the main differences between the previous [9] and the new operating techniques provisioning for active transactions [8], as well as to justify the improvement process.

The revealed differences between the Regulations providing for active transactions are given in Table 1.

Table 1

The differences between the National Bank Regulations providing for active transactions

Index	Regulation No. 279 "About the procedure of forming and using reserves to compensate for possible losses on credit operations of banks", dated 06.07.2000	Regulation No. 23 "About the formation and use of Ukrainian banks' reserves to offset possible losses from active banking operations", dated 25.01.2012
1. Determination of the borrower class	Based on the assessment of the financial condition, major economic indicators are calculated, the borrower's class A, B, C, D, E is determined	The financial condition of the debtor is evaluated by calculating the integral index: $Z = a_1K_1 + a_2K_2 \dots a_nK_n - a_0,$ where K is the financial coefficient; a is parameters; a ₀ is a free term. The borrower class is determined by the results of the calculation of the integral index taking into account the value of the enterprise class 1 – 9
2. Determination of the borrower's debt service	The debt service state is determined (good: 0 – 7, weak: 8 – 90, poor: more than 90 calendar days overdue debt)	The state of the debt service by debtor – legal entity is determined (high: 0 – 7, good: 8 – 30, solid: 31 – 90, moderate: 91 – 180, poor: more than 180 days overdue repayment)

3. Determination of the credit transaction	The category of the credit transaction is determined: "standard", "controlled", "substandard", "doubtful" or "hopeless"	The loan quality category is determined as a loan from 1 to 5, due to the classification matrix by debtor class and the debt service state
4. Determination of the amount of the reserve	The size of the reserve is determined by measuring the amount of money that is recorded on the individual bank's correspondent account, by the appropriate reserve ratio	For the calculation of the reserve for credit operations the debt coverage ratio is calculated: $R_{ind} = BVL - PVL$, where R _{ind} is the amount of the reserve for a loan; BVL is book value of the loan, net amounts of previously established reserves; PVL is the present value of the estimated future cash flows of the loan
5. Other differences	Reserve for the credit risk is defined as net credit risk multiplied by a factor of reservation	The mathematical tool varies depending on the industry of the borrower

According to Table 1 the changes in the regulatory control provide a more detailed and qualitative assessment of the financial condition of the borrower, thus reducing the risk of loan default, but intraorganizational bank techniques require further adaptation to new techniques in accordance with international standards.

Credit rating of the borrower is based on the analysis of quantitative indicators given by the Bank, qualitative characteristics that may to some extent affect the obligations of the borrower on the loan, with the level of their likely impact on the conditions of the contract of the loan by setting the optimal values for each of the indicators [1]. Performance evaluation of the creditworthiness of a borrower – a legal entity – is listed in Table 2.

Table 2

Credit rating of a borrower – a legal entity

Analysis of the creditworthiness of a borrower	Analysis of the qualitative characteristics
Solvency. Financial stability. Business activity. Profitability. Cash flows, etc.	Reputation of the management. Leadership skills. Credit History. Debts in other banks. Time of activity. Security level etc.

Thus, according to Table 2, to assess the creditworthiness of the borrower – a legal entity, the NBU recommends to consider and evaluate the dynamics of such quantitative indicators [6]:

solvency (coefficients of immediate, current and total liquidity);

financial stability (mobility rate of the equity, the ratio of the borrowed funds and equity);

sales volume;

turnover of accounts (the ratio of receipts on the borrower's accounts and the loan amount, the availability of accounts with other banks, the availability of non-payment filing);
composition and dynamics of receivables, accounts payable (for the last financial year and the current year);

production costs;

profit and loss;

profitability.

In addition to these bank quantitative indicators it is possible to use additional indicators to obtain a more complete understanding of the features of the client's

operations and determine the probability of repayment of his debt on the loan.

It should be noted that among the recommended by the NBU quantitative indicators of creditworthiness assessment of a borrower – legal entity, such an indicator as production costs, is of no value for the bank as it is indirectly taken into account in the calculation of the net income and the impact on the profitability. Therefore, this indicator was very rarely analyzed separately in the assessment of the creditworthiness of the borrower.

The source of information for the assessment of the financial condition of borrowers – legal entities – is financial and statistical reports, submitted to the bank along with the loan application, as well as information from external sources: Internet, mass media, etc. [9].

In considering the formation and use of Ukrainian bank's reserves for possible losses on active banking operations by improving the method of formation of the reserve, a growing influence of the state debt service should be noted compared with the assessment of the financial condition.

Regulation No. 23 is a first step towards the implementation of the rating assessment system, which provides an opportunity to get a more complete and accurate information about the financial condition and results of their activities [8; 9].

To compare the two methods an experiment was conducted to analyze the financial statements of an enterprise that is engaged in the organization of real estate for sale or lease, which is the borrower PJSC "Megabank" and is in arrears for 20 days.

According to Regulation 23, the financial condition of a debtor is assessed by calculating the following integral index:

$$Z = a_1K_1 + a_2K_2 \dots a_nK_n - a_0,$$

where K is the financial coefficients;

a is parameters,

a₀ is a free term [8].

By the type of economic activity the enterprise will be treated as group No. 5 "construction", i.e. the general model will look like:

$$Z = 0.02 \times K_1 + 1.7 \times K_3 + 0.01 \times K_4 + 0.3 \times K_6 + 0.4 \times K_7 + 2.9 \times K_8 - 0.1.$$

The required financial ratios calculated in the MS "Excel" based on the statements of the company are presented in Table 3 [8].

Table 3

Financial ratios used to calculate the integral index

Ratios	The value
1. K1 is the coverage ratio (ratio of the third degree)	2.49342
2. K2 is the interim coverage ratio	0.001719
3. K3 is the coefficient of financial independence	-5.16526
4. K4 is the coverage ratio of non-current assets by equity	-0.36114
5. K5 is the rate of return on equity	-3.29693
6. K6 is the rate of return on the sale of the financial results of operating activities (EBIT)	-
7. K7 is the rate of return on the sale of financial results from ordinary activities (EBITDA)	-3.48237
8. K8 is the coefficient of net profit profitability	-0.14614
9. K9 is the turnover ratio of current assets	0
10. K10 is the turnover ratio of loan capital for financial results from ordinary activities (EBITDA)	-0.37227

According to table 3 the integral index (z) was calculated:

$$Z = 0.02 \times 2.49 + 1.7 \times (-5.16526) + 0.001 \times (B4) + 0.3 \times 0 + 0.4 \times (-3.48237) + 2.9 \times (-0.14614) - 0.1 = -10.6483 \text{ un.}$$

Then, according to the above data, the debtor – legal entity class is determined for a large or medium-sized enterprise. According to the integral index, the value of which is within less than -3.80, by position number 23 class 9 of the debtor, i.e. the lowest one, is identified in accordance with Regulation No. 23.

Further, according to Table 4, the state of the debt serviced by the debtor – legal entity is classified as a loan to the debtor with respect to the debt service state.

Table 4

3	I	II	III	IV	V
4	I	II	III	IV	V
5	II	II	III	IV	V
6	II	III	IV	IV	V
7	II	III	IV	IV	V
8	II	III	IV	IV	V
9	II	III	IV	V	V

Thus according to the data in Table 5, despite the fact that the majority of parameters of the company solvency are quite low values, the quality of the loan is 3. According to Table 6, indices of the credit risk are within the level of 0.21 – 0.50.

Table 6

The state of the debt serviced by the debtor – legal entity

The number of days of delay (inclusive)	Status of the debt service
from 0 to 7	"High"
from 8 to 30	"Good"
from 31 to 90	"Satisfactory"
from 91 to 180	"Weak"
from 180	"Unsatisfactory"

According to the data in Table 4, when the company was late 20 days of the date of calculation of provisions for debts, the debt service state should be evaluated as "good".

Thus according to the statutory classification matrix, (Table 5) a risk indicator for the credit provided to the debtor – legal entity can be determined by quality category [8].

Table 5

Classification of credit extended to the debtor – legal entity by the category "quality"

Class of the debtor – legal entity	Status of the debt service				
	High	Good	Satisfactory	Weak	Unsatisfactory
1	I	I	III	IV	V
2	I	I	III	IV	V

Determination of the risk of credit extended to the debtor – legal entity

Category of a loan	The value of the credit risk
I – the highest	0.01 – 0.06
II	0.07 – 0.20
III	0.21 – 0.50
IV	0.51 – 0.99
V – the lowest	1.0

According to Table 6 the bank determines the risk of the loans granted to the debtor – legal entity within the range based on the dynamics of the actual values of the integral index, debt coverage ratio, quality management of the debtor – legal entity, product markets, the availability of business plans, specified ratings of debtor – legal entity (if any) and other events and circumstances that may affect the timeliness and completeness of repayment. So, in this case the reserve ratio is within 0.21 – 0.50 of the amount of the loan. The bank sets a specific amount based on its own internal procedures. At the same time, in accordance with the method outlined in Regulation No. 279 [9], the debt service of the borrower meets the "dubious group" because debt servicing by the borrower belongs to a weak group, and the borrower class corresponds to level D according to Table 7 [9].

Table 7

Classification of the loan portfolio at risk

The financial condition of the borrower	Debt servicing borrower (group)			
	Class	Good	weak	unsatisfactory
A	standard	controlled	substandard	substandard
B	controlled	substandard	substandard	substandard
V	substandard	substandard	doubtful	doubtful
G	doubtful	doubtful	hopeless	hopeless
D	doubtful	hopeless	hopeless	hopeless

Next, according to the data in Table 7 and Table 8 the reserve ratio on credit transactions is calculated. For the debt that is included in the portfolio of homogeneous consumer loans, the level of the total credit risk is measured on the set reserve ratio depending on the category to which this debt was assigned.

Table 8

Determination of the reserve for credit operations [9]

Category of the credit transaction	Reserve ratio (for risk) by credit operations in the national currency, %
Standard	2 %
Controlled	10 %
Substandard	40 %
Doubtful	80 %
Hopeless	100 %

According to Table 8 we can see that by this method the company will need to reserve 80 % of the sum.

In order to improve the mechanism available to Ukrainian banks for credit risk assessment and adaptation to the unstable credit system of the country, changes in the risk assessment methodology for provisioning for active transactions were considered, problems and disadvantages of their use were identified, possible areas for improvement of provisioning for active banks operations were proposed.

Reserves to cover losses are created to improve the stability and reliability of the banking system, protect the interests of creditors and depositors. They are mandatory for commercial banks.

Regulation No. 23 is quite a new approach to assessing credit risk, as it is aimed at the transition of Ukraine's banks to the rating system of evaluation of borrowers – from the comparative assessment of the creditworthiness of a client in a particular segment of customers to a direct tool for assessing and managing credit risk. The main problem for banks is accumulation and analysis of statistical information necessary to ensure the effective management of credit risk. Adoption of Regulation No. 23 by the NBU is the first step to the internal rating system.

Regarding Regulation No. 279, the test results did not give objective information to make financial decisions – often

the same class of borrowers was assigned to customers with diametrically opposed values of finance performance and thus it was used to perform the NBU regulations for making adequate reserves.

It is necessary to take into account the individual credit risk of the borrower and increase the number of days for possible delays in meeting commitments to the reserve ratio, because the portion factor for the integral index is composed through the number of days of delay. In the most stable countries the required reserve rate is minimal or nonexistent. Each bank is individual and therefore it is necessary to apply an individual approach to provisioning, so the authors can offer that each bank individually develop its own standards, which will suit only their specifics. It will be more efficient and profitable not only for banks but also for the whole banking system of Ukraine.

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