

# АКТУАЛЬНІ ПРОБЛЕМИ СЕКТОРАЛЬНОЇ ЕКОНОМІКИ

## PRIORITY PROBLEMS OF INDUSTRIAL SECTORS' ECONOMICS

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### UNDERWRITING AS A TOOL TO IMPROVE THE EFFICIENCY OF RISK MANAGEMENT OF THE BANK

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*Балан О.С., Соколовська О.О. Андерайтинг як інструмент підвищення ефективності ризик-менеджменту банку.*

У статті визначено роль андерайтингу як інструменту підвищення ефективності управління кредитними ризиками в банках в умовах фінансової нестабільності. Наведено основні завдання та обов'язки андерайтерів, проаналізовано інструменти визначення основних показників платоспроможності позичальника. Розроблено практичні рекомендації щодо створення ефективної системи платоспроможності позичальників.

**Ключові слова:** андерайтинг, ризик-менеджер, кредитування, кредитний ризик, портфельний кредитний ризик, борг, PTI, NDI, EBITDA, OTI

*Балан А.С., Соколовская О.А. Андерайтинг как инструмент повышения эффективности риск-менеджмента банка.*

В статье определена роль андерайтинга как инструмента повышения эффективности управления кредитными рисками в банках в условиях финансовой нестабильности. Приведены основные задачи и обязанности андеррайтеров, проанализированы инструменты определения основных показателей платежеспособности заемщика. Разработаны практические рекомендации по созданию эффективной системы платежеспособности заемщиков.

**Ключевые слова:** андерайтинг, риск-менеджер, кредитование, кредитный риск, портфельный кредитный риск, долг, PTI, NDI, EBITDA, OTI

*Balan O.S., Sokolovskaya O.O. Underwriting as a tool to improve the efficiency of risk management of the bank.*

The role of underwriting as a tool to improve the efficiency of credit risk management in banks in the financial volatility is determined in the article. The basic tasks and responsibilities underwriters are given, instruments defining the basic parameters of the borrower's solvency are analyzed. Practical recommendations for an effective system of borrowers are developed.

**Keywords:** underwriting, risk manager, lending, credit risk, portfolio credit risk, debt, PTI, NDI, EBITDA, OTI

According to international experience, improve the performance of risk management is the main productive way to reduce credit risks. The underwriter acts as an intermediary between the lender and the borrower in the process of making decision on issuance of credit. Underwriting refers to the process where the financial service provider (Bank, insurance company, investment house) assesses the eligibility of a customer to receive its products (equity capital, insurance, mortgage, or credit) back after a certain period with interest without potential risk of default.

#### Analysis of recent researches and publications

Investigation of risks in lending is devoted a number of scientific works of foreign and domestic economists: Yu. Brigham, S. Ross, V. Sutormina, V. Jeka, N. Drozdova, K. Maslov-Yurchenko. They addressed the underwriting agreements in civil law system understanding the moat. Yu. Petrunya, S. Cherkasova, R. Soroka researched money market and the problems of assessing the creditworthiness of the borrowers, but in their works there is no detailed analysis of the characteristics and objectives of underwriting in the banking sector.

On the basis of the research we see that improving the efficiency of the Bank risk management is an effective mechanism for lowering and pre-warning of credit risk, which may occur during all stages of the credit process, and especially during the financial crisis, when the problem of stabilization of the banking system is particularly acute.

*The aim of the article* is to determine the role of underwriting in enhancing the effectiveness of credit risk management in banks in the conditions of financial instability and the development of practical recommendations for creating an effective system of calculation of the solvency of the Bank's clients.

### The main part

In the past, 2013, the volume of lending to individuals rose for the first time since 2008. The volume of lending for residential realty decreased – it was not helped by benefit programs. The auto loans were subject to short-term market trends. The main trends and events of physical persons' crediting market were studied and analyzed by leading banking institutions last year. Regarding the dynamics of the physical persons' crediting market for the last year, bankers estimated as positive in general. "The credit

market has evolved and showed that it is still relevant and it has reserve to grow", – Dmitry Klimenkov said (head of medium and small loans in IMEXBANK) [11].

According to the NBU, during the first 11 months of 2013, total loans issued by Ukrainian banks to borrowers, increased to 4,5 billion UAH or 2,4% to 192,7 billion UAH. For comparison: in 2012 the volume of loans of Ukrainians decreased to 11 billion or 5,5%. Moreover until since 2008 the volume of credit of individuals decreased annually (fig. 1) [10].

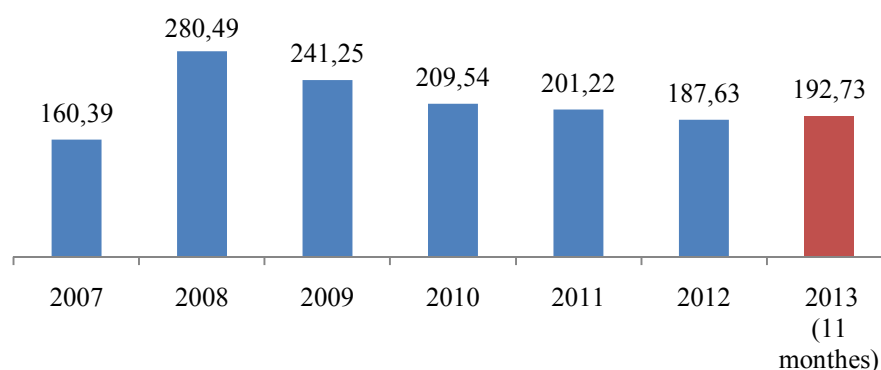


Fig. 1. Dynamics of volume of individuals' lending, billion in Ukraine [10]

Thus different directions of lending to individuals – consumer, residential realty and auto loans showed a different, and sometimes quite opposite dynamics. For example, the volume of consumer crediting in January-November 2013 increased from 7,4% to 135,65 billion UAH. And the volume of mortgages during the same period decreased from 9,5% to 52,36 billion UAH. For the position of lending has become

more qualitative and more secure for banks, banks impose underwriting procedure that provides an opportunity to assess in advance the risk of defaults on debt before applying for the loan as legal and natural persons [10].

There are many probabilities of risk when lending. In term of bank's credit risk, it is necessary to distinguish between the following dates (table 1).

Table 1. Terminology of underwriting

Definition	Describing	Author
The risk of banking activity	«... it is a possibility to suffer losses in the event of adverse circumstances for the Bank»	O. Berezhniy
Credit risk for respect to credit agreement	«... the probability that the borrower (debtor) fails to repay the debt in accordance with the terms of the contract (agreement), and the Bank is not able to timely and fully make use of collateral to cover potential losses»	T. Raevska
Portfolio credit risk	«... weighted average risk relative to all of the agreements of the loan portfolio, where the weights are the share amounts of the agreements in the total amount of credit portfolio»	I. Burdenko
Risk management	«... this is the sum of individual actions aimed at the creation of the General philosophy of risk management, development of regulations on management, risk analysis, regulation level, the use of financial mechanisms for the compensation of losses ...»	O. Pozhar

Source: compiled by the author based on [13, 14, 15]

The effectiveness of risk management is to avoid, minimize, in a comprehensive and consistent classification, to define clearly the boundaries of the cargo manifest is the range for the results of this case, it all relates to the responsibilities of the underwriter. In bank sphere, underwriting is the detailed credit analysis preceding the granting of credit based on

credit information provided by the borrower; such underwriting falls into several areas:

1) underwriting of consumer lending includes checking items such as the employment history of a potential client, his salary and financial statements; the loan history of the borrower specified in the credit report; assessment of the purpose of the loan the

borrower's needs and ability to pay the loan. Examples include mortgage lending.

2) commercial (or business) underwriting is the assessment of financial information provided by small businesses, including business analysis balance sheet including retained earnings, the ratio of debt to total value (leverage) and available liquidity (current ratio). Analysis of the statement of profit and loss, typically, includes trends in revenue, gross margin, profitability and debt servicing (see ratio of debt service).

Credit Underwriting ensures the objected and balanced analysis of each transaction with the task of support allows the decision makers to make fully informed decisions according to risk and relative return associated with investments, mortgage or pledge of property.

For the analysis of transactions successfully passed to the underwriters proposes the requirements specified at job descriptions [17], which include:

- assessment of individual credit risks of clients – physical persons;
- participation in the development of internal documents of the bank in terms of lending and credit risk management;
- analysis of problem loans and the provision of evidence-based recommendations to improve the evaluation (development of principles and

approaches) and improvement of products by lending to individuals;

- analysis of changes in the quality of credit operations and the factors influencing these changes;
- timely identification and recording of changes in the external environment (the study of the effects of the economy, changes in legislation, political processes, crisis, unemployment and the like), can affect the quality of the loan portfolio;
- development and implementation of criteria that help to identify, assess and prevent credit risk;
- coordinating the work of other employees in joint activities to achieve final form of further results.

The main methods of prevention of risk are the calculation of the indicators of solvency of the borrower by the underwriters. Banking instruments of the underwriter include the following indicators: PTI, NDI, EBITDA, OTI.

If the underwriter knows how to calculate a loan payment, he can figure out how much the client can afford to borrow funds in credit for large purchases such as a car or a house. Calculating loan payments ahead of time means that there are no surprises. For this purpose it was decided to calculate the following indicators in the following formulas, which we can find in textbooks which cover the procedure underwriting at table 2.

Table 2. Calculation of indicators

Index	Description	The calculation formula
PTI	(from English “payment on the loan” – payment on the loan), is taken into account the loan amount, loan term in months or years and the interest rate. The calculations are usually carried out in Microsoft Excel or online calculators	$M = P * (J / (1 - (1 + J)^{-N}))$ . where: M – monthly payment, P – the principal or loan amount, J – annual monthly interest is divided by 100, then divided to 12, N – the number of months of depreciation specified by length in years of the loan. Should not exceed 35%, the percentage depends on the bank and the situation in the country (with a stable situation can grow in unstable – dropping)
NDI	(from English “net disposable Income” – net disposable income) – is money that remains after taxes. With such simple steps find out how much money left after repayment of the loan, lease. Should be no less than 1, the subsistence minimum per person. If there's less than minimum wage, the credit is not issued.	The sum of all expenditure on Debt / Salary
EBITDA	(from English “Earnings before Interest, taxes, depreciation and amortization) – analytical screening-nick equal to the amount of income before deducting interest expense, taxes, depreciation and amortization	Net income + income tax expense tributary profit tax(+ extraordinary expenses) (extraordinary income)+ interest paid-interest received = EBIT + depreciation on tangible and intangible assets – revaluation of assets = EBITDA
OTI	(from English “Obligations to Income” – liabilities income-Doo) – the ratio between the monthly payment on the loan and the net income the borrower (client) (the client). When lending under the scheme of cooperation with GIU should not exceed 45% (according to the Standards of the GIU). This includes loan payments, alimony, rents, and other required monthly payments	Is calculated by the ratio of the required monthly payments to wages.

Source: compiled by the author based on the calculation indicators for classifying the creditworthiness of borrowers

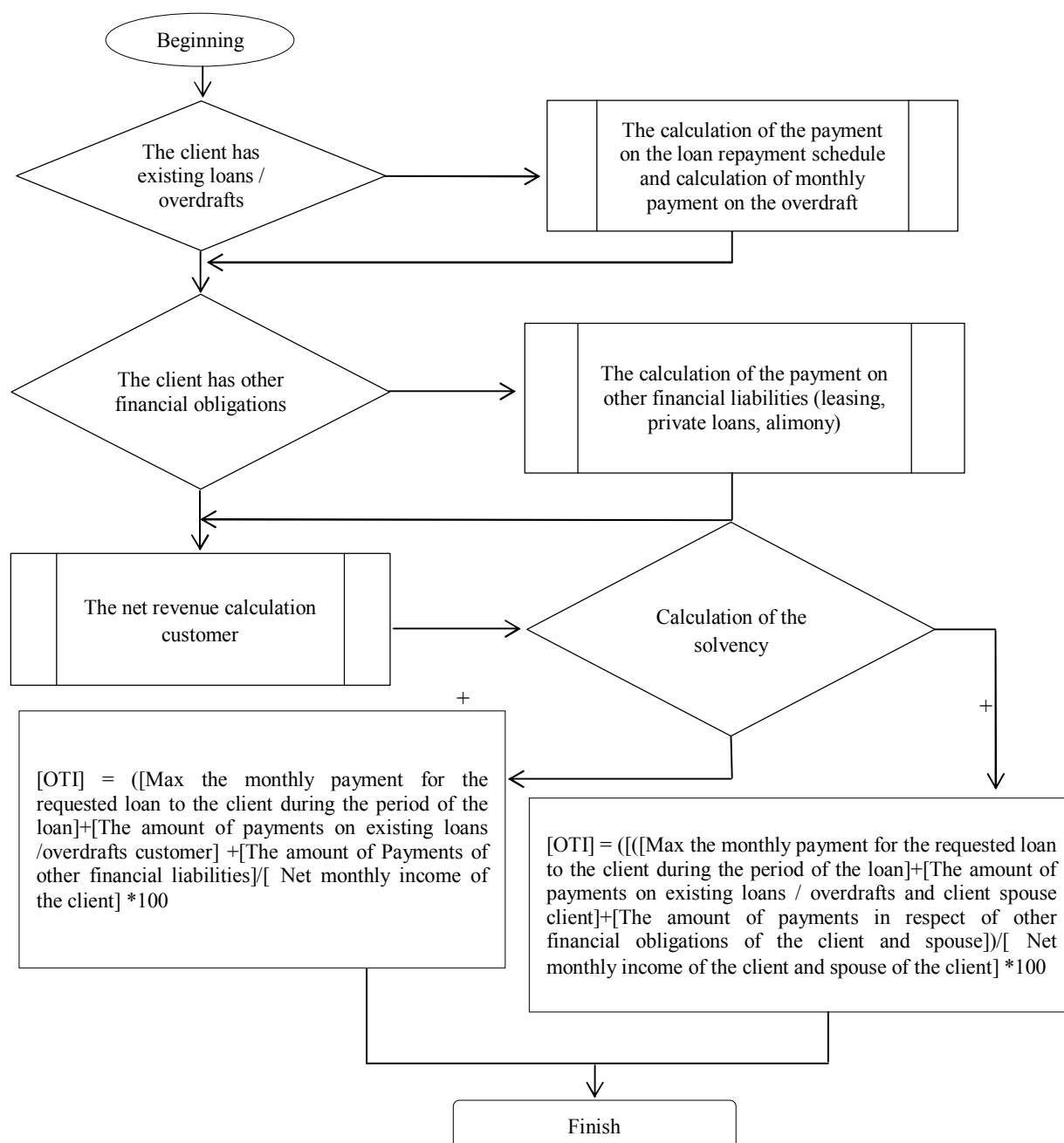


Fig. 2. The algorithm of calculation of the OTI (%)

Source: compiled by the author based on the description of the calculation of index

After these calculations of underwriting will be able to give an accurate assessment solvency of the borrower, in some cases, even to identify fraud and thereby save money bank that would not return. It all depends on the performance of the underwriters.

There are many problems that arise during the loan agreement. One of these is the problem of relations between creditors and borrowers. If the creditor had full information about the borrower, we could prevent the risk of non-repayment of funds. You need to have a special service, whose main goal is to collect and verify information about the borrower. Mostly about his financial status and how it is calculated with other creditors, etc. the better you will perform this job, the less risks.

The technique underwriting procedures each Bank has its own, and despite the fact that the criteria considered, as a rule, the same, different aspects can be given different meanings. One of the main criteria of interest to the Bank is exist and project future income of the borrower. It can be divided into three main areas: assessment of income of the borrower, analysis of his credit history and the valuation of the collateral provided by the borrower on the loan. By results of check the Bank either gives its consent to the grant of a loan or rejects it. A credit institution may also decide on the granting of the loan on the terms requested by the client. For example, the Bank may reduce the loan amount and/or increase the interest rate.

To facilitate the calculation of the index OTI developed a special algorithm based on the analysis of the description and calculation of the indicator, which defines what criteria can be taken into account for its calculation. The algorithm of calculation of the OTI(%) below for similar algorithms can be count and other indicators.

### Conclusions

Thus based on the research we can say that improving the effectiveness of risk management with the help of underwriting is required to reduce the level of credit risk, especially in conditions of financial instability. For this purpose they use different tools to identify risk for loans before granting credit. In addition, practical guidelines for creating an effective system of calculation to determine the risk

substantially covering improve the effectiveness of risk management and facilitate the work of the underwriters.

Banks need to carefully approach the choice of the customers, setting strict rules for the evaluation of potential borrowers, and the presence of the underwriters is a necessary condition to reduce the risks of lending. The main task of the underwriters accurate forecasting of bad debt and the amount of provisions to be created for the purpose of its coverage. Consequently, the management of credit risk and their legacy underwriters is a necessary objective basis for ensuring the stability of the banking system, and the underwriting is the basic procedure for improving the effectiveness of risk management.

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