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BANKRUPTCY OF COMMERCIAL BANKS: CAUSES AND WAYS TO PREVENT

Bankructwo banków komercyjnych: przyczyny i sposoby zapobiegania

Abstract

Due to keen competition, banks may increase their market share and profits by imposing price policies, such as raising deposit rates, lowering loan rates, or even worse by loaning to those with high risks, which all could increase the probability of bankruptcy.

The number of failed banks has reached a high unparalleled since the great Depression. Research in developing predictive models for bank failures is therefore warranted and desirable in this turbulent period.

This article is devoted to the problems of the bankruptcy of commercial banks in Ukraine. The main approaches to define bank failure and its effect on the banking system stability are described in the article. The basic causes of bankruptcy of banks, their classification on external and internal features defined reasons such as Ukraine.

The main aim of the research is the analysis of methods of management of financial stability of banks. The improvement of mechanism of early diagnostics of bankruptcy of banks is offered due to determination of summarizing index of inclination of concrete bank to bankruptcy on the basis of construction of cluster model of the domestic banking system after the algorithm with long-term horizon of prognostication. The proposed approach allows to detect bankruptcy threats and provide suitable measures timely to rehabilitate them to increase financial stability and prevent possible liquidation procedures, which will significantly increase the stability and balance of the banking sector overall the country. The authors-developed model will significantly increase the financial stability of banks and their effective development, ensure high accuracy in assessing the probability of bankruptcy and establish the level of bankruptcy risk. As far as the usage of this model allows not only to assess the state of functioning of the risk management system for a specific period of time, but also allows to predict the probable problems on the basis of the obtained data of the bank in the future. Consequently, cluster models which are capable of producing successful solutions for semi-structural and non-structural problems, can be used effectively in evaluating and forecasting banking crises.

Keywords: *bankruptcy, banks, insolvency, commercial bank, banking system bankruptcy assessment, financial statements.*

Streszczenie

Ze względu na ostrą konkurencję, banki mogą zwiększać swój udział w rynku i zyski poprzez narzucanie polityki cenowej, np. podwyższanie stawek depozytowych, obniżanie stawek kredytowych, lub co gorsza poprzez udzielanie kredytów osobom o wysokim ryzyku, co w sumie może zwiększyć prawdopodobieństwo bankructwa.

Liczba ogłaszanych upadłości wzrosła do poziomu nie notowanego od czasu wielkiej depresji. Dlatego też w tym burzliwym okresie pożądane są badania nad opracowaniem modeli predykcyjnych dla bankructw.

Niniejszy artykuł jest poświęcony problemom upadłości banków komercyjnych na Ukrainie. W artykule przedstawiono główne próby zdefiniowania upadłości banków i jej wpływu na stabilność systemu bankowego. W artykule przedstawiono podstawowe przyczyny upadłości banków, ich wpływ na czynniki zewnętrzne i wewnętrzne, które zostały zdefiniowane na przykład na Ukrainie.

Głównym celem badań jest analiza metod zarządzania stabilnością finansową przedsiębiorstw. Poprawa mechanizmu wczesnej diagnostyki bankructwa kostek jest proponowana dzięki wyznaczeniu sumarycznego wskaźnika skłonności kostek betonowych do bankructwa na podstawie konstrukcji modelu klastrowego krajowego systemu bankowego według algorytmu z długoterminowym horyzontem prognozy. Zaproponowany model pozwala wykryć trzy przypadki bankructwa i w odpowiednim czasie zapewnić odpowiednie środki zaradcze w celu ich przywrócenia, aby zwiększyć stabilność finansową i zapobiec ewentualnym procedurom likwidacyjnym, co znacznie zwiększy stabilność i wiarygodność sektora bankowego w całym kraju. Opracowany przez autorów model znacząco zwiększy stabilność finansową banków i ich efektywny rozwój, zapewni wysoką dokładność w ocenie prawdopodobieństwa upadłości i oszacuje poziom ryzyka upadłości. W związku z tym wykorzystanie tego modelu pozwala nie tylko ocenić stopień funkcjonowania systemu zarządzania ryzykiem w określonym czasie, ale również pozwala przewidzieć prawdopodobne problemy na podstawie uzyskanych danych banku w przyszłości. W związku z tym modele klastrowe, które są zdolne do tworzenia skutecznych rozwiązań dla problemów półstrukturalnych i niestructuralnych, mogą być skutecznie wykorzystywane w ewakuacji i prognozowaniu kryzysów bankowych.

Słowa kluczowe: bankructwo, banki, niewypłacalność, bank handlowy, system bankowy, oceny bankructw, świadczenia finansowe

Relevance of research.

Ensuring the economic development of the financial system of each state is virtually impossible without a reliable and developed banking system. In turn, the recent economic crises and significant changes in the national economies of other countries have a negative impact on the level of competitiveness, stability and growth of unprofitable banks, and as a result of the entire banking system. During the last decades the banking system of Ukraine tested considerable bankruptcy and liquidation of commercial banks.

Analysis of the last researches and publications

These changes the direct-coupled with imperfection forming and adjusting of the Ukrainian banking system, by the high level of mistrust to the banking system, by instability of political situation, that resulted in appearance widely of circle of researches of this question in labours of scientists I.A. Blank, V. Biloshapka, N.P. Bilolipeckiy, R. Burganov, V.S. Dombrovskiy, G. Kireycev, A. Moroz., S.Onisko, T.V. Pepa, E.A. Revtuk, M. Savluk, A.Turbanov, O. Tretyak, E. Shabalin, A.D. Sheremet, A.S. Yablonska. Substantial are researches of question of reasons and effective methods of adjustment of the state of bankruptcy of banks at the level of the general system.

The aim of the article consists in determination of economic essence of bankruptcy, reasons and research of methods of removal of crisis position and as a result of non-admission of passing to the stage of bankruptcy and liquidation of bank.

The task of research is: establishment of economic essence, kinds and reasons of bankruptcy of banks, realization of analysis of current events of adjusting of the banking system, realization of estimation of methods of early diagnostics of bankruptcy of bank, opening of essence of maps of Kahonena.

Exposition of basic material

A concept "bankrupt" originates from Italian expression of "banca rotta", that from translation means to "kick about the bench of banker, that stood on the area of city, in case of his insolvency to settle up with creditors". In turn in world practice, economic essence of concept "bankruptcy" is vast enough, that is confirmed by the wide circle of researches, as home so foreign researchers.

Bilolipeckiy N.P. determines bankruptcy, as a crash of subject of menage in accordance with the level of technical or physical inability to liquidate the born financial obligations.

On determination of Skvorcova, bankruptcy is the state of exceeding of charges above acuestss, that results in financial insolvency.

In turn Pepa T.V. characterizes bankruptcy insolvency of subject to carry out redemption of own debt obligations through a shortage in the necessary volume of money.

The analysis of normatively-legal base provides determination of this concept in Commercial Code of Ukraine, where it is marked that bankruptcy is inability of debtor to renew the solvency and satisfy with confessed the court of requirement of creditors differently as from application of certain cramps of liquidating procedure.

To our opinion actual is opening of concept "bankruptcies" as judicial the confessed state of insolvency of business entity to execute the undertaken

obligations and carry out activity on corresponding market segments as a result of her economic inefficiency, that is the negative result of deep financial crisis and, as a rule, results in application of liquidating procedure.

For commercial banks bankruptcy means:

- financial decline and reaching of insolvency level;
- absence of possibilities to conduct financing of current activity;
- accumulation of debts without possibilities to pay them .

In accordance with it, bankruptcy of commercial bank is insolvency to carry out financing of current operating activity, and bear responsibility for by own debt obligations before creditors, as a result of insufficient volume of liquid assets [2, 25].

The next types of bankruptcy of commercial banks determine:

- real bankruptcy - is characterized complete insolvency to proceeding in financial stability and solvency during a current period as a result of loss of capital;
- technical bankruptcy - the state of insolvency, origin of that is the result of substantial accumulation of the debtor outstanding debt;
- intentional bankruptcy - is the consequence of lawless actions of shareholders and higher link of management(leader or proprietor of bank establishment) and consists in proof financial insolvency;
- fictitious bankruptcy is the not legislative(fictitious) announcing bankruptcy of bank, purposeful closing of current financial status as a result of avoiding fulfilling commitment or receipt of postponement of terms of their payment;
- hidden bankruptcy - arises up as a result of lawless concealment of fact of proof financial position of bank establishment, provided by the idea of not reliable data about the results of activity.

The state of bankruptcy of bank establishment from the point of view of supervisory bodies is characterized one of terms:

- permanent insolvency personal touch of that is absence of assets in a sufficient volume that will satisfy implementation of certain obligations, id est the state of deficit of the personal funds;
- absence of possibilities to execute the obligations before the depositors of money or creditors are unliquidated of establishment.

Process of confession a jar considerably differs a bankrupt from confession of enterprise a bankrupt. An actual decision-making about bankruptcy of bank is accepted by the National bank of Ukraine, organ that carries out a supervision and adjusting of bank activity, and a court only accepts or declines this decision. An insolvent bank, actually bankrupt, can

long time carry out ineffective activity, increasing debts. Therefore a decision of NBU in relation to bankruptcy of bank is absolutely logical.

By the signs of gradual offensive by a bank bankruptcies that is preceded to his announcement consist in:

- 1) assumption reduction of sizes of the capital of bank and normative capital on 10 and more percents during a current month, from the set sum in accordance with the normatively-legal acts of the National bank of Ukraine;
- 2) during five and more working days a bank did not carry out implementation of requirements of depositor or other creditor;
- 3) bank carried out a right for violation of legislation in the field of adjusting of question of prevention and counteraction to legalization(to washing) of acuestss got a criminal way, as a result of financial machinations;
- 4) by a bank offence of requirements of legislation was carried out in relation to the question of presentation and promulgation of accounting, presentation and promulgation of unreliable in accounting information that results in curvature of data about the financial state of bank establishment;
- 5) presence of threats to interests of depositors or other creditors, as a result of the systematic unproviding of the effective functioning and control system by risks. Procedure of liquidation of bank is officially completed by including of corresponding record about bank-bankrupt in the Single state register of enterprises and organizations of Ukraine.

If in a term marked by a legislation (180 days), a situation in a bank was not well-regulated, then NBU makes decision in relation to determination of bank insolvent and stops a supervision after his activity.

Development of ways of adjusting of the banking system and introduction of events of warning of offensive of the state of insolvency and bankrupt, as a result, needs research of reasons of origin of this position. A question of origin of bankruptcy is important enough and simultaneously difficult, as reasons of his origin divide into two categories:

- 1) External reasons of bankruptcy - these circumstances do not depend on activity of shareholders and guidance of bank. To them take is economic instability of the state; political vibrations; mass exceptions of holding; a loss of trust is to the banking system; high level of risk of credit-currency politics; blanks are in the normatively-legal base of legislation; strengthening of level of competition; considerable rate of inflation; instability is on currency and credit markets; natural calamities and others like that.

- 2) Internal reasons of bankruptcy - is a result economically not effective administrative decisions of guidance and include: non-fulfillment of terms of legislation of the country; machinations are in the process of reflection of information in accounting; absence of competent personnel's and internal checking systems; lacks of forming of the interbank system; deficit of own turnover means; an increase of level of not economic charges is in their general structure; realization of uneffective politics of investing and financial activity by establishment: low level of events of marketing activity; conflict situations between the proprietors(by founders) of establishment and others like that [1, 87].

The estimation of the real and objective state of bank establishment is possible only at taking into account of all factors that result in the state of insolvency, not only internal, for forming and introduction of counter-measures of reacting on negative factors that are basis of offensive of bankruptcy.

Beginning the estimation of level of bankruptcy of bank the important stage there is establishment of the state of the banking system, appropriating one the categories, in accordance with five basic groups of level of financial stability:

- a financially stable bank;
- banks with the initial state of instability, that is characterized non-permanent unprofitableness of activity upon the current date, understating of capital in compared to the set norm, presence of unpaid, during four dates, documents of clients, disparity of forming of obligatory reserve to the set procedures;
- banks that have the temporally complicated financial position (during three months supported unprofitable activity and failure to observe of normative level of capital, reserve of reimbursement of possible losses is absent);
- financial state, that characterize the first signs of the state of bankruptcy;
- banks with the critical level of financial instability.

Realization of this description is based on the presence of certain signs of bankruptcy, to that take:

- 1) the direct signs of instability of activity of bank, that consist in: violation of legislative base of adjusting; by instability of balance of monetary resources on correspondent accounts; by the accumulation of unpaid documents of clients of bank; realization not reasonably of risk credit and percent politics; by the low level of trust to the bank and increase of level of complaints of his clients and others like that.

- 2) The indirect signs of instability characterize: highly risk and unreliability and highly to risky activity at the market; by absence of possibilities to potential development; a high percent of interbank credits is to the general volume of the attracted backlogs; unbalanced of procedures of bringing in and placing of money; introduction of methods of the aggressive marketing of bringing in of attention of potential clients.

An achievement of bankruptcy a bank is by the final stage of development of financial crisis. To the state of bankruptcy the stages are preceded so passing of bank:

- origin of initial problems in the system of adjusting of bank activity (level of qualification of guidance and administrative link that does not answer the necessities of development to bank activity, as a result uneffective activity of supervisory service of bank, fallaciousness or irrelevance of certain bank transactions, increase of break of liquidity, increase of level of open currency position);
- presence of the state of latent insolvency (delay in time of arranging for payments, considerable increase of interest rates after part of the attracted resources with the use of the aggressive marketing, increase of gossips about the unfavorable financial state of bank);
- Presence of the obvious state of insolvency a jar(one of methods of adjustment this situation there is bringing in of temporal administration) is changes of skilled personnel, reduction to the volume of client operations, realization of the fixed assets of bank, increase of amount of cases of violation of legislation);
- offensive of the state – bankruptcies (there is absence of realization of any payments, realization of process of liquidation of bank, recall of license to bank activity, realization of trials).

Setting essence, reasons of origin and estimating the financial state of bank important there is concentrating of attention on events that will provide stable economic development, both separate bank and all banking system. The important events of adjusting at state level is : a variable of current legislation to the terms of present time, modernization of process of licensing, guaranteeing of transparency of the banking system, introduction of politics of administration of bank establishment, providing of firmness of political situation of the country.

At the level of separate bank adjusting events must provide: introduction of the quality internal checking system after activity of bank, increase of level of qualification of workers of the banking system by realization of training, removal of possibilities of realization of financial machinations by the employees of establishment, to work out and inculcate the quality system of

exposure and reacting on risks, to conduct the events of optimization of charges of the bank.

Will consider the process of adjusting of the financial state at the level of separate bank more detailed. For banks with the high level of financial problems actual is adjustment of level of liquidity [3, 7]. It is expedient to set the maximum values of indexes that is used for description of liquidity, as an exit outside these norms is the negative phenomenon of bank activity.

One of the most effective methods of adjusting of bankruptcy there is realization of early diagnostics of bankruptcy, that are the mortgage of perfection of economic activity, for an account, to the search of potential backlogs and optimization of control system [4, 310]. Early diagnostics is the effectively coordinating system, that provides intercommunication between the processes of forming of the informative system, analysis, planning and adjusting of realization of activity a bank. This process is sent to the estimation of the quantitative and quality state of bank in certain moment of time and realization of prognosis of activity in future periods.

An object of diagnostics is a separate bank. A subject of process of diagnostics is a national bank of Ukraine and in the wide understanding public organs of general management, organs of statistics, organs of local self-government, other banks, clients of bank. An object is risks of potential bankruptcy. Important is research of factors that are basis of forming of credit risks and risks of liquidity.

It costs to take to the factors of estimation of credit risks:

- internal normative documents that provide adjusting of risks of commercial bank;
- list of services and types of activity, that form activity of bank establishment;
- classification of present and potential risks;
- behavior of clients of bank;
- quality of organization of control system by bank services;
- geographical location of establishment;
- level of providing of credit risk a mortgage;
- part of conditional obligations in their general structure(guarantees, uncovered and reserve letters of credit, credit lines and others like that);
- change in the structure of operations that is given by a bank(active operations overdue, negatively classified credits and losses as a result of active operations);
- level of provision of bank reserve sufficient for liquidation of losses from active operations;

- quality of dataware that is basis for realization of administrative activity;
- level of quality and provision of skilled resources.

By factors that are basis of estimation of risk of liquidity is:

- 1) A presence of assets of bank establishment and structure of their distribution are in accordance with the degree of liquidity (assets, securities and others like that);
- 2) Estimation of diversification of passive voices of bank establishment. Taking into account the volumes of separate type of obligations in the lump sum of passive voices of bank(urgent obligations, money separately physical and legal persons, interbank money, in the cut of suppliers of money, in accordance with the terms of redemption of obligations and others like that);
- 3) Clean breaks of financing are with accenting of attention on short-term to the breaks, namely: to the forecast requirements in financing, estimation of possibilities of adjustment of financial breaks of financing with the economically advantageous rates of percent for the use of the attracted resources, estimation of level of liquidity of financial markets for the sake of bringing in of additional funds, analysis of motion of money streams;
- 4) Presence economically effective plan of reacting on crisis circumstances and others like that.

Early diagnostics of bankruptcy is complex approach of estimation of activity of bank establishment, that includes for itself the list of the exchangeable stages of analysis of potential bankruptcy with determination of quantitative descriptions, establishment of the actual state of establishment, realization of prognosis in relation to future performance, forming and introduction of events of adjustment of financial position indicators, current control after reacting of the system on the preliminary realized events.

A process of introduction of early is diagnosticians of bankruptcy of bank needs realization of previous procedures of preparation of the system that provides in future :

- correspondence of the information basis of formation of internal accounting indicators with indicators of centralized data;
- adherence to pre-established technical and organizational parameters of the system in the process of conducting diagnostic procedures;
- carrying out the process of early diagnosis, in accordance with the principle continuity;

- openness of the results of the study of the state of the bank for all interested users of this information.

Main principles that specialists must follow in the process of realization of early diagnostics consist in:

- 1) orientation to quantify the direction of banks to bankruptcy;
- 2) timeliness of analysis activities to identify negative changes in the system;
- 3) optimality between simplicity and complexity of methods used by a specialist in the process of early diagnosis.

Relevant for today in the process of early diagnosis of bankruptcy is the use of banking institutions Kahonen cards, which provide a visual representation of the data structure in multidimensional space. The advantage of this method is the clarity of the research. Maps in the process of studying the state of the system allow you to perform the following list of analytical operations:

- identify previously unknown images and structural associations with their display on the map, excluding any external influences;
- make a description of the classes identified during the study;
- distribute objects by identified classes;
- compare the positions of several objects with the definition of characteristic differences;
- provide a process of monitoring the change in the state of each individual object over time relative to others;
- sorting objects according to the list of criteria due to the selection of areas shown on the map.

In the banking sector, Kahonen cards provide for the formation of a system that provides classification and systematization of banking institutions in accordance with prominent related characteristics and ensures the establishment of a class of banks with an increased probability of bankruptcy.

The research process itself consists in entering the necessary information into the system, data processing using a pre-built neural network and obtaining the result in the form of distribution of banks to the appropriate class depending on the calculated indicators. Banks that fall into the class of "potential bankrupt" (or related) need increased attention from analysts. In the future, a horizontal analysis is conducted to determine the period of time during which the bank from the class "potential bankruptcy" to make the transition to the class "bankrupt".

The formation of the system should ensure the implementation of such procedures as:

- 1) Separate from the general array of primary financial information only that part which contains data on the threat of bankruptcy of a banking institution;
- 2) Configure the system to obtain the necessary list and format of information, implement the use of certain methods of data processing, which will ensure the optimal process of distribution of banks by class;
- 3) Formation of a system of horizontal analysis of bankruptcy;
- 4) Assess the accuracy of the results of the study to determine the percentage of inaccurate calculations of troubled banks;
- 5) Based on the results of the analysis to form recommendations for the use of banking potential.

The quality of card construction is directly proportional to the completeness and quality of financial information about the activities of banking institutions of Ukraine during a certain period of time.

Requirements for financial inputs: uniformity, regularity and discreteness during the study period, high level of data reliability and reliability of sources, no technical errors in its formation, publicity and publicity to a wide range of stakeholders.

The basis of the analysis is the information published by the National Bank of Ukraine on its official website, published in official publications and systematized by the Association of Ukrainian Banks financial information on the list of banks in Ukraine. This information has a higher level of reliability and reliability, the possibility of inconsistency of data is minimal.

Additional information sources are information generated by the Deposit Guarantee Fund of physical axes, statistics of the Infin-service, reports of news agencies, etc. The use of additional sources helps to establish the class of banks with significant deterioration in financial condition using independent expert sources for analysis.

The array of primary information that forms the basis for early diagnosis of bankruptcy of banking institutions is quite wide and includes the main indicators of financial activity of the institution. The indicators include information that provides a characteristic:

- 1) Capital - the amount of balance, authorized, paid-up registered capital; own shares of the bank, purchased from shareholders; part of the dividends is aimed at increasing the authorized capital; emission differences; general reserves; reserve fund; results of revaluation of fixed assets and intangible assets, etc.;

- 2) Assets - the total amount of assets; share of highly liquid assets; loan portfolio; the amount of investments in securities; data on receivables; net assets, etc.;
- 3) Liabilities - the total amount of liabilities of the bank; share of funds of the National Bank of Ukraine, budgetary and extra-budgetary funds; demand deposits of individuals and time deposits; own debt securities; other liabilities;
- 4) Bank income - total income; the amount of interest and commission income; contingencies; other banking and non-banking operating income;
- 5) Bank costs - the total amount of costs; interest expenses; other bank and non-bank operating expenses; deductions to reserves and write-offs of doubtful assets; income tax, etc.;
- 6) Financial results of the bank - net profit (loss).

Thus, it can be **concluded** that banking is continuously interrelated with risks that can lead to economic decline, insolvency and ultimately to a state of bankruptcy. The main reasons that are the basis for the onset of bankruptcy include: lack of capital, the presence of risky transactions, non-compliance with reserves, inefficient management system of the banking institution, political instability in the country, etc..

The key risks of the imbalance of the financial system are: the dependence of the country's economy on changes in the foreign economic system; rising inflation; growth of currency imbalances in the banking system; accumulation of debt on loans, etc.

The formation and implementation of a cost-effective management system is the key to preventing insolvency and efficient operation of the banking institution. An important stage in managing the activities of a banking institution is the implementation of an early bankruptcy diagnosis system, which would effectively provide regular analysis of problems and negative changes in the financial condition of the institution with further development and implementation of corrective measures. Previous practical experience has shown the need to use in the process of early diagnosis of Kahonen cards, which is due to a systematic approach to determining changes in the crisis situation of individual banks of the whole system. The use of cards provides early detection of banks' problems and determining the level of propensity of each individual bank to bankruptcy. In turn, early diagnosis of bankruptcy is the key to timely improvement of the management system and the bank as a whole.

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