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Financial relationships between commercial banks and industrial enterprises: the principles of organizing and risks

Stosunki finansowe między bankami komercyjnymi i przedsiębiorstwami przemysłowymi: zasady organizowania i ryzyka

Key words: financial relationships, commercial banks, industrial enterprises, risk

Słowa kluczowe: stosunki finansowe, banki komercyjne, przedsiębiorstwa przemysłowe, ryzyko

Introduction

To ensure the effectiveness of the enterprise, it must have sufficient amount of financial resources and reliable sources of their receiving in case of additional needs. One of the most popular sources of funding for long-term development programs as well as the current enlargement of working capital of enterprises are bank credits. Bank lending could provide income growth to an enterprise (borrower) and the bank (creditor). However, under certain circumstances, this process can lead to significant economic losses to these subjects of business relationships. It is noteworthy that among these subjects there may be the same types of cooperation. It should be noted that among subjects there maybe the same types of cooperation (for example, credit agreements of one borrower with several commercial banks), but the level of risk each relationship may differ significantly. In particular, it will depend on the market position and interests of parties of the relationship, their credit policy, the sharpness of needs in cooperation, dependence parties from other subjects and so on. Today there are a number of cases of not returning credits by borrowers or non-payment of percent of their use. The reason for this can be the banking institutions as a result of

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inaccurate estimates of the borrower's creditworthiness, unreasonable interest rates and tough sanctions set too high, not paying enough attention to risk management of the relationship with the borrower at the stage of initiation and during all crediting term (today often activation of appropriate management action occurs only after this period) and others. There are also situations in which commercial banks do not fully give loans to enterprises under signed contracts or too late, change unilaterally their conditions and so on. Often the cause of such conflicts is the wrong choice of commercial bank and not implementation management of risk relations by borrower. Relevance of the problem is growing through the large scale of these relationships – at the end of March 2013 balances of loans granted to non-financial corporations are 613 billion UAH[1]. That is a high need for qualified management of risk relations both from banking institutions and borrowing enterprises.

This study[2] indicated that negative events (including loan default) in the relationship of the bank with one or more borrowers of substantial sums of money could affect the growth of the risk of bank's relationships with all customers (both borrowers and depositors for deposit accounts), due to inability to perform its obligations by the bank due to lack of the necessary financial resources. G. Sidor[3] emphasizes that the enterprises, in setting up and developing relationships with banking institutions, must remember that in assessing the risk of the relationship with the borrower, they should take into account a number of criteria, including: reputation, capabilities (including the ability to get the flow of financial resources from their activities and use them effectively), capital, conditions of macro- and meso-environment; bail. Besides, it is necessary to remember that at risk relationship significantly affects adherence to the principles of cooperation that put forward by credit structure, in particular the principles of maturity, task orientation, etc[4].

The study[5] noted that the level of creditworthiness of enterprises has a significant influence on the risks of relationships of study enterprises with commercial banks, determined by using classification models or models of complex analysis. This also indicates that domestic commercial banks frequently, to assess a borrowers creditworthiness, are using financial ratios such as coverage ratio and other liquidity ratios, the rate of profitability sales, ratio of autonomy and sufficiency of working capital, turnover of receivables and payables, etc. However, many of the methods for determining these parameters of financial condition have significant shortcomings

[1] Statistical issues of the National Bank of Ukraine in March 2013. Mode of access: http://www.bank.gov.ua.

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that have been analyzed in several publications[6,7]. There are many deficiencies in the methodology for determining another important indicator – the level of threat occurrence of bankruptcy. Questions related to the assessment and management of banking risks are highly relevant today despite the presence of many works[8–14] on this subject. However are not structured principles of financial relationships to involve financial resources and isn't insufficiently developed tools evaluation of risk relationships industrial enterprise with commercial banks, and the influence factors on its changes.

1. The principles of optimal financial relationship industrial enterprise with commercial banks

In order that financial relationships of industrial enterprise with commercial banks to involve financial resources were optimal, one must follow such principles:

- financial independence – the financing of the enterprise does not lead to substantial financial dependence on creditors and reducing its financial stability;
- complexity – most rational combination of available sources of financial resources to fully support them in all areas related to the chosen model of enterprise development;
- efficiency of use – financial resources should be used in accordance with the purpose and planned budget of the enterprise, and also taking into account possible future changes in the internal and external environment of the enterprise;
- profitability – financial resources should be involved in the most favourable conditions for enterprise of all possible options (the smallest interest on loans, the biggest time of their return, extra credit, etc.);
- balance – flow of financial resources should be mutually agreed with their spending or return certain creditors in the time aspect in terms of stages of economic development of the enterprise;

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– reserve – availability of reserve funds enterprise in case of unanticipated costs associated with the development of enterprises, and foreign reserve funding;
– assuredness – availability of appropriate safeguards in contracts banks to follow certain pre-conditions for granting loans, and not to violate its obligations, regardless of any situations or reasons;
– priority – the presence of clear delineation of priorities involvement and use of financial resources to finance the processes associated with the development of the enterprise;
– security – balanced selection method and place of storage of financial resources accumulated to finance projects and programs associated with the chosen model of development (in the currency, on deposit accounts, in securities, etc.).

To improve the process of financing long-term development of industrial enterprises, one needs to perform the following steps: always conduct the search for new own and involved in different conditions financial resources; continuously monitor the situation related to the compliance schedule of income and expenditure of financial resources and respond quickly to variations in the period specified in it; carefully examine clarity of staff compliance responsibilities involved in optimizing the structure of financial resources and managing their use; in time analyze the cause of the loss of financial resources and prevent such incidents in the future and so on.

2. Evaluation of risks of industrial enterprise relationships with commercial banks

Risks relationships of industrial enterprises with commercial bank – a threat occurrence of economic damage or failure to obtain expected results due to complications or termination of the relationship with a particular commercial bank by failing to discharge the parties of relationships to existing agreements between them, failure to the accepted principles of cooperation, or adverse effects of other factors internal and external environment.

The risk of relationships at the macro level affects a significant number of factors, including: the reliability of the banking system of the country; discount rate of the NBU, monetary and credit policy of the NBU, inflation, the macroeconomic situation in the country and so on. At the level of counterparty banks of industrial enterprises is to provide such factors as interest rates on loans of specific banks, currency lending, credit policy of banks to certain terms of the loan (including bail, timing, etc.) and so on. However, the complexity of these relationships primarily occurs due to commercial banks establishing unfavourable credit conditions which industrial enterprises through the hopeless situation have to make but very hard to perform on as timely repayment of the loan and the payment for its use unreasonably high interest rates.

The risks of relationships with commercial banks should be assessed in the contract, the implementation of cooperation and its termination.

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Assessing the risks of industrial enterprise relationships with potential lenders (commercial banks) at the stage of selecting sources of credit, it is necessary to analyze the following groups of indicators:

– financial stability (indicators of financial condition of commercial banks, their dynamics, etc.);
– business reputation (country, number of years in the market, the absence in the history of the credit institution's significant negative aspects (crisis, fraud, etc.), business partners, availability of reliable guarantees to customers, the competitive position of the bank, its mission and objectives, lack of corporate conflicts, etc.);
– conditions of cooperation (loan terms, interest on loans, mortgage, penalties for breach of contract, the possibility of debt restructuring) and others.

The risk of existing relationships of industrial enterprises with commercial banks is a multifaceted category, and therefore for its evaluation one should use indicators[15] which would characterize it from different angles, in particular in the areas:

1. The level of non-compliance of contractual obligations in the relationship, which may lead to their complexity or termination initiated by both enterprise and commercial banks, and thus lead to the onset of economic loss or failure to obtain the expected results.

2. The level of probability of occurrence of adverse events in the course of the relationship, either alone or in combination may lead to their complexity or termination initiated by the enterprise or commercial banks, which can lead to economic loss or non-receipt of the expected outcome.

3. The level of impact of possible economic loss or non-receipt of the expected outcome or complication caused by the termination of the relationship between industrial enterprise and commercial banks, on further activity of parties of this relationship.

The level of non-compliance of contractual obligations by commercial bank, which may lead to complications or terminate the relationship initiated by industrial enterprise (RNZ_b^j), should be determined using our proposed factor model:

$$RNZ_b^j == \frac{Z_{kt}^j}{Z_{kr}^j} \times \frac{Z_{kr}^j}{Z_{km}^j} \times \frac{Z_{km}^j}{Z_{zk}^j} = RDD_b^j * RSP_b^j * RVP_b^j, \quad (1)$$

where Z_{kt}^j – amount of loans that the bank has issued significantly delayed on the agreed date (delay, leading to complications for: finance industrial enterprise business processes, implementation of investment and other projects, meet financial obligations to creditors and others), and loans which the bank requires to repay prematurely and the amount wrongfully significantly higher percent (according to leadership of

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enterprise) and other significant unreasonable payments (including unreasonable penalties) that led to substantial economic loss or substantial difficulties in economic activity, thousand UAH;

Z_{kr}^{j} – amount of loans, percent and related charges for which the enterprise has significant claims related to breach of contract and conditions of cooperation by bank (such those, that led to significant losses and complications, and those that, regardless of the violations of contracts, did not lead to significant negative consequences), thousand UAH;

Z_{km}^{j} – amount of loans, percent, commissions and other payments associated with credit for which enterprise has any (both essential and nonessential) claim, thousand UAH;

Z_{zk}^{j} – the total amount received by enterprise from a particular bank loans and accrued interest on them, commissions and other payments associated with credit for the period, thousand UAH;

RDD_{b}^{j} – the level of commercial bank destructive actions against the borrower – industrial enterprise (that is how breach of contract by the commercial bank significantly affects the activity of industrial enterprises), in fractions of a unit;

RSP_{b}^{j} – the level of scale significant violations obligations by commercial bank to the borrower, in fractions of a unit;

RVP_{b}^{j} – the proportion of implemented settlements in which commercial bank committed any breach of its obligations to the borrower in the total settling with him, in fractions of a unit;

j – specific subject of relationships.

Level of destructive activities of commercial banks in relation to the borrower depends on the amounts of loans that the bank has issued a major delay on agreed dates (late, leading to complications for: finance business processes by industrial enterprise, implementing investment or other projects; meet the financial obligations to creditors, etc.), credits to repay the bank requires and the amounts wrongfully significantly higher percent (in the opinion of company's management) and other significant undue payments (including undue penalties) that resulted in significant economic loss or substantial difficulties in economic activity. For the determination of the magnitude of significant violations by commercial bank of its obligations to the borrower one must, take into account the amount of loans, interest and related charges on which an enterprise has significant claims related to non-bank contract terms (as violations of contracts that resulted in heavy losses and complications, and those who, regardless of materiality not causing major disruptions in the enterprise). Not significant is the deviation that individually or in combination did not result in a violation of business and production processes of industrial enterprises, did not lead to additional costs, did not affect the completeness and timeliness of the performance of its obligations to contractors and others.

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The level of non-compliance of contractual obligations of industrial enterprise, which may lead to complications or termination of relationships initiated by a commercial bank (RNZ_e^j), we determined using our proposed factor model:

$$RNZ_e^j = \frac{Z_{sk}^j}{Z_{pk}^j} \times \frac{Z_{pk}^j}{Z_{pt}^j} \times \frac{Z_{pt}^j}{Z_{zk}^j} = RPN_e^j * RSP_e^j * RZP_e^j, \quad (2)$$

where: Z_{sk}^j – amount of hopeless payables (more than 3 years, or that the bank will not return (to pay) due to occurrence of certain events or conditions) (in case of bankruptcy with the existence of debts to the budget in an amount that exceeds the value of the assets; loss of property, which acted as collateral, due to natural disasters or industrial accidents; conducted raider attack on enterprise, etc.) and the payable, term has expired (amounts essentially enterprise loans, which term has expired, interest on them, commissions and other payments associated with credit), to a bank at least 3 years, which the industrial enterprise can not repay, despite the appeal of commercial banks to court or other stringent action to forcing the borrower to pay the debt, thousand UAH;

Z_{pk}^j – total amount of essentially enterprise loans, which term has expired, interest on them, commissions and other payments associated with credit (as those on which the bank prolonged the term of repayment (payment), and those for the return (payment) which has stringent action), thousand UAH;

Z_{pt}^j – total amount of essentially enterprise loans, which term has expired, interest on them, commissions and other payments associated with credit (including fines, penalties, etc.), thousand UAH;

RPN_e^j – probable level of no return by the borrower loans, failure to pay interest, fines, penalties, in fractions of a unit;

RSP_e^j – level of scale debts, term has expired, industrial enterprise to commercial banks, in fractions of a unit;

RZP_e^j – the proportion of implemented settlements in which commercial bank committed any breach of its obligations to the borrower in the total settling with him, in fractions of a unit.

Probable level of no return by the borrower loans (non-payment of interest, penalties, etc.) depends on the value of its hopeless and doubtful payable to the bank. In determining the level of scale debts, term has expired, industrial enterprise to commercial banks, should be noted that payables can be classified as stale for late payment as a single day, and three years and more. Therefore, in order to increase the reliability of determination of non-compliance of contractual obligations in relations of enterprise, we suggest using formula (3) to determine the corrected (Z_{ev}^j) payable to a commercial bank for using in equation (2). That is, instead of the indicator it should substitute the corrected indicator:

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$$Z_{ev}^{j} = \sum_{l=1}^{L} (Z_{ep}^{jl} * \frac{t^{jl}}{T}) + \sum_{l=1}^{L} Z_{eb}^{jl}, \tag{3}$$

where: Z_{ep}^{jl} – amount of payable, term has expired, of industrial enterprise to a specific commercial bank term not exceeding 3 years (except that part payable, term has expired, least 3 years, which can not repay the industrial enterprise to documentary request commercial bank), thousand UAH;

Z_{eb}^{jl} – amount of hopeless payables (more than 3 years, or that the bank will not return (to pay) due to occurrence of certain events or conditions) and the part of payable, term has expired, least 3 years, which can not repay the industrial enterprise to request documentary commercial bank), thousand UAH;

t^{j} – number of days on which the late paid particular commercial bank (within three years limitation period), days;

T – total number of days for thirty-six months from the date of termination of payment, days;

l – specific services from a particular commercial bank which is a termination payment, units;

L – total number of services from a particular commercial bank which is a termination payment, units. Amounts terminations payment terms contained in the context specific services from a particular commercial bank.

Performance RNZ_{b}^{j} and RNZ_{e}^{j} range from 0 to 1, and the growth of their value increases the overall risk of mutual relations with a particular commercial bank. If any of the indicators Z_{kt}^{j}, Z_{kr}^{j}, Z_{km}^{j}, Z_{zk}^{j}, Z_{sk}^{j}, Z_{pk}^{j} or Z_{pt}^{j} will be zero, then according factor models (1) and (2) can not be used, and the values RNZ_{b}^{j} and RNZ_{e}^{j} are determined by expert.

The author's factor models successfully implemented at several industrial enterprises that received from commercial banks long- and short-term loans. Practical application of models helped identify causes of the deterioration of economic relations between the particular enterprise and the bank. Besides, the use of models allowed to plan and implement management measures to reduce the level of non-compliance of contract and decrease the overall risk level of relations between industrial enterprise and commercial banks.

The analysis of risk existing in relationships at industrial enterprise with commercial banks should also explore the importance and dynamics of the relationship of certain quantitative factors that affect the level of risk. In particular, it must take into account: the amount of loans that are available in various forms of industrial enterprise specific commercial bank, amount of profit or loss, receivables and payables, assets and equity of industrial enterprises, and their dynamics and more. It also needs to consider the importance and dynamics: ratios of financial condition (liquidity, financial stability, business activity and profitability) of industrial enterprise and its market share; proportion of the value of loans that are granted to the

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industrial enterprise specific commercial bank in the total amount of loans given to all borrowers – legal persons; proportion of amount of financial resources that are seeking industrial enterprise in particular commercial bank in the total amount of bank funds designated for the purposes of corporate lending and more.

Among the quality indicators that should be taken into account when analyzing the relationship of industrial enterprises from commercial banks are: credit history of the industrial enterprise, its size and major activities, reputation and competitive position, business prospects or the specific project for which assignment loan funds; competitiveness of industrial enterprises; signs raider attack or availability lawsuits on businesses, the presence of conflict between top management and shareholders; availability of industrial enterprises access to international financial resources, type of borrower's obligations (mortgage, etc.), the duration of the relationship with a particular commercial bank in lending, business reputation and professionalism of top management of the enterprise, the effectiveness of management and others.

In addition to analyzing the risk of relationship, one must consider how a particular commercial bank is committed to working with industrial enterprise. For this, in particular, these need to be analyzed: the number of actual financially stable borrowing enterprises, the financial indicators of commercial bank, the stage of the life cycle of the bank and its credit policy and strategy development and so on.

In assessing risk during the suspension of relations between an industrial enterprise and commercial bank, one must take into account: the presence of outstanding commercial bank debt, even a small amount; full implementation of all the parties of the contract, the existence of the claims of the parties, the presence of conflicting points in the completion of cooperation, presence of possibility and feasibility of continuing the relationship and so on.

Conclusions

So optimally arranged financing programs and projects related with the chosen model of long-term development of industrial enterprise will enable its management to timely and fully perform its associated planned spending, to avoid deviations from the schedule due to unforeseen costs and strengthen the economic security enterprise as a whole. For this it is important to adhere to the system proposed the principles of optimality of financial relationships with industrial enterprise and commercial banks. Increasing the level of development of the region in which enterprise is located in a certain extent decreases for it the problem of attracting financial resources and minimize costs associated with this attraction. Also the use of management of the enterprise offered by us factor models will allow to investigate the influence of several factors on the risk of relationships with specific commercial banks to analyze the feasibility of further cooperation.

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Financial relationship between commercial banks and industrial enterprises: the principles of organizing and risks

In the article a system of principles of optimizing financial relationship of industrial enterprise with commercial banks is proposed, methodological approach to risk assessment of industrial enterprise relationships with commercial banks at different stages of cooperation is justified, in particular, the factor models to identify indicators that characterize the level of risk from the perspective of both sides of the relationship are proposed.

Stosunki finansowe między bankami komercyjnymi i przedsiębiorstwami przemysłowymi: zasady organizowania i ryzyka

W pracy zaproponowano system zasad optymalizujących relacje finansowe pomiędzy przedsiębiorstwami przemysłowymi a bankami komercyjnymi. Uzasadniono podejście metodyczne do oceny ryzyka tych relacji na różnych etapach współpracy. W szczególności zaproponowano model identyfikacji wskaźników charakteryzujących poziom ryzyka z perspektywy obu stron (banku i przedsiębiorstwa).