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BANK CREDIT RISKS REGULATION AS A TOOL TO PROMOTE INVESTMENT LENDING OF MANUFACTURING: KAZAKHSTAN CASE STUDY

The article presents a model to promote lending of fixed assets in the processing industry of Kazakhstan based on the analysis of the identified issues associated with high credit risks. Their impact on lending and the key factors of credit risk as the main points in its management are analyzed. Basic principles and elements of the model are presented along with the recommended rate of interest in the model and calculations on the distribution of the minimum balance to calculate the limit.

Keywords: investment lending; credit risks; manufacturing industry; banks; Kazakhstan.

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РЕГУЛЮВАННЯ КРЕДИТНИХ РИЗИКІВ БАНКУ ЯК ІНСТРУМЕНТ ПРОСУВАННЯ ІНВЕСТИЦІЙНОГО КРЕДИТУВАННЯ (ЗА ДАНИМИ КАЗАХСТАНУ)

У статті представлено модель стимулювання кредитування основних фондів переробної промисловості Казахстану на основі аналізу виявлених проблем, пов'язаних з високими кредитними ризиками. Проведено аналіз їх впливу на кредитування й ключові чинники кредитного ризику як основних точок його регулювання. Запропоновано базові принципи і елементи моделі, рекомендовано відсоткову ставку в межах моделі і розрахунок розподілу мінімального залишку коштів для обчислення ліміту.

Ключові слова: інвестиційне кредитування; кредитні ризики; переробна промисловість; банки; Казахстан.

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РЕГУЛИРОВАНИЕ КРЕДИТНЫХ РИСКОВ БАНКА КАК ИНСТРУМЕНТ ПРОДВИЖЕНИЯ ИНВЕСТИЦИОННОГО КРЕДИТОВАНИЯ (ПО ДАННЫМ КАЗАХСТАНА)

В статье представлена модель стимулирования кредитования основных фондов перерабатывающей промышленности Казахстана на основе анализа выявленных проблем, связанных с высокими кредитными рисками. Проведен анализ их влияния на кредитование и ключевые факторы кредитного риска как основных точек его регулирования. Предложены базовые принципы и элементы модели, рекомендуемая процентная ставка в рамках модели и расчет распределения минимального остатка средств для вычисления лимита.

Ключевые слова: инвестиционное кредитование; кредитные риски; перерабатывающая промышленность; банки; Казахстан.

Problem statement. The development of the financial system in Kazakhstan has been formed the way that its major dominant element is the banking system. Wherein, there is virtually no securities market as a source of economy's financing. Since the beginning of the world financial crisis lending fell due to increased risks, primarily the credit ones. This, in turn, led to a decline in lending, especially in the most risky industries such as construction, small and medium-sized businesses and real produc-

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tion. The current situation affects not only the banking system, but also the economic situation in the country in general.

This requires state intervention, both in the short term (in the form of financial assistance to the most problematic banks), and also in the long term. One of the stable lending objects could be a production (manufacturing) sector of economy, which the state intends to develop within the framework of industrial-innovative development programme.

By itself, manufacturing is not attractive for lending, because of its immaturity and backwardness, its high credit risks, the sector is considered to be disadvantageous for bank lending.

Involvement of bank capital is possible only with proper government support, the creation of certain conditions, under which banks would not lose their profit, and get a low level of credit risks and enterprises would get a stable and affordable financial source.

Recent research and publications analysis. Theoretical aspects of credit risks (and other types of banking risks), such as the definition, classification, management are widely described in various economic literature sources by such authors as I.O. Lavrushin and N.I. Valentseva (2007), Kosterina T.M. (2005), V.V. Zharikov, M.V. Zharikova and A.I. Evseychev (2009). Credit risks are analyzed in (Kostychenko, 2010).

P.P. Kovalev (2005) conceptually described the definitions of credit risk management. Analysis of problems in credit risk management under the conditions of Kazakhstan's financial system was made in the works of such scientists as S.N. Abuova (2010), S.S. Palzhan (2008), M.V. Tyutyunikova (2010).

Risk management in Kazakhstan is researched by L.Zh. Kudaibergenova (2010), but without the analysis of influence on the environment. S. Akhmetov (2007) is researching issue of financing businesses in the context of the economy's development, but not touching the issue of credit risks.

The possibility of development and providing businesses with financial resources by adjusting financial indicators, affecting the decision to grant a loan, particular credit risks, remain unexplored. Also, the issues of credit risks management not within banks, but in the external environment are not being addressed.

The purpose of the research is to offer an investment lending scheme for the manufacturing sector, aimed at credit risks reduction and ensuring the availability of credits for borrowers.

Key research findings. This work proposes the scheme of cumulative investment lending, where the main hypothesis is that despite high credit risks in manufacturing, there are many borrowers who have sufficient financial flows to participate in the program and are able to bear the burden of a loan.

Cumulative investment lending is a kind of credit relations between a borrower and a bank, in which borrower does not get credit immediately, but only if meeting certain conditions, and passing the cumulative period. The first condition is that credit should be directed on the development of fixed assets of industrial production (manufacturing), and be a long-term investment. The second condition is that a borrower must provide equity in the investment project of lending. The next condition is that the share of a borrower must be accumulated over a period of time (cumulative period), with a certain size of cumulative contribution to savings deposit.

Cumulative contribution is the agreed sum payable by a borrower under the cumulative investment lending, part of an amount of the investment project not related to the cost of purchase of fixed assets which serve as a security deposit for a loan (passing expenses: hiring and training of employees, VAT, rental of premises etc.), which the borrower must allocate in equal installments on cumulative deposit within a cumulative period.

Cumulative period is a definite period of time in which a borrower must make cash contributions in the defined amount to savings deposit to accumulate the required amount to participate in the loan project under cumulative investment lending procedures, so that a bank would be able to estimate its cash flow and financial capabilities in time dynamics.

Savings deposit is a bank deposit, opened at the beginning of the cumulative period, to which cumulative contributions are transferred under the equity of borrower regulations, and which is closed after the end of the cumulative period, and the cumulative sum goes to finance the credit project. A special feature of cumulative deposit is that it is interest-free.

The proposed system of cumulative investment lending is able to provide the basic conditions for expanding investment lending for manufacturing industry which does not have sufficient own resources (Figure 1).

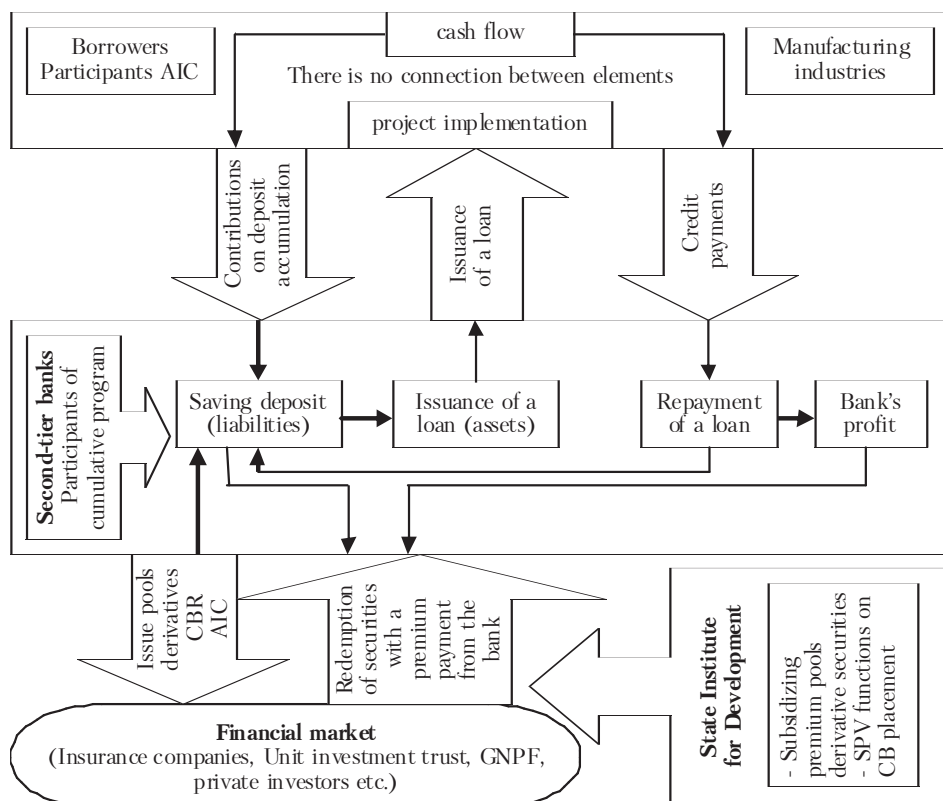


Figure 1. AIC subjects' relation and cash flow, compiled by the author

Thus, the possibility of long-term investment loans is related to the 3 main conditions:

Minimize the risks of long-term loans (A).

Banks have access to cheap long-term resources (B).

The possibility of providing low bank lending rates (B).

Minimizing risks in the cumulative system of investment lending is ensured by the following factors.

1. Careful selection of potential borrowers; study of the investment project, the study of a potential borrower creditworthiness by the procedures applicable in the bank, learning the management system and accounting books of the borrower.

When the banking market of cumulative investment lending is likely to expand second-tier banks' customer base, due to those companies which previously could not be financed by borrowing because of its inaccessibility to them. Primarily, these can be companies of light industry, machine-building and chemical industries.

2. Lending of investment is only into fixed assets, which will use the acquired goods as a security deposit.

Loans are granted only for investments into fixed assets – a set of costs, aimed at creation and reproduction of fixed assets (new construction, expansion and renovation and modernization of facilities that increase the initial cost of objects and refer to additional capital of an organization, acquisition of machinery, equipment, vehicles etc.) are taken into account without VAT.

Loans for investment into fixed assets shall be issued only after a potential borrower will accumulate on its savings account in the bank an amount sufficient to provide funding for the remaining costs of the investment project. Other costs may be associated with the cost of paying VAT on the expenses linked to the investments into fixed assets, with the payment of customs duties on imported goods, associated with transport costs, costs on education, training etc.

A potential borrower must demonstrate its creditworthiness over the period of loan agreement.

3. Successfully passing the cumulative period by the borrower, during which it will have to accumulate funds for investment project implementation in order to finance other costs in addition to the costs into fixed assets. In the cumulative period, a potential borrower actually is to demonstrate its consistency and reliability.

The starting point for monitoring in the cumulative period should be a specific schedule of payments of a specific borrower (a copy of which is sent to oversee the delivery to an account manager).

"Disturbing signals" include:

1. Incidents that disrupt production (fire etc.).
2. Loss of key customers (suppliers, customers).
3. Delay in payments for more than 10 days or more than once.
4. Change of legal or actual addresses (physical or legal entity).
5. Actions which are difficult to explain and/or statements of management, signaling the presence of potential problems, including avoidance of personal meetings, telephone conversations, unanswered letters, systematic apologies about temporary financial difficulties, failure to pay taxes, customs duties, attempt to hide these facts from the bank.

6. Causing an obstruction when checking accounting books and other data.
7. Conclusion of contracts which are considered to be illogical and impracticable from the economic view.
8. Change of leadership (tops, chief accountant etc.), changes in the Board of a company, significant reduction in the number of employees, conflict situations etc.
9. Drastic change in the profile of company's activities.
10. Sale or disposal of real estate and other property.
11. Termination or non-renewal of lease agreements of premises.
12. Changes in the cost structure, such as those associated with increased costs for raw materials and supplies, wages etc.
13. Changes in the previously planned terms of payment (for example, a client works by barter).
14. Serious deterioration of health condition of people that have a significant impact on the borrower, or their family members.
15. Stay of management or their families abroad.
16. Disproportionate salaries, purchasing for personal use of expensive things and real estate, including those abroad.
17. Obtaining any (official or unofficial) negative information on the potential borrower (for example, about their links with criminal groups, appointing to the Board criminal bosses etc.).
18. Change of legal entity form.
19. Reduction or absence of cash flow, delayed wages to employees, as well as delayed payments to budget and others factors, that may directly or indirectly affect borrower's financial independence.
20. Other factors.

Source of liquidity of the cumulative system of investment lending is monthly transfers of cash from customers of the company with whom the bank has signed contracts for the cumulative system of investment lending; those who are still accumulating funds and those who received a loan for investment purposes and performs repayments on loans.

The basic idea of the proposed model is that the balance of the company's funds should provide along with the current inflow, debt repayment on its current liabilities, with a given probability.

Let us consider the dynamics of cumulative fund, depositors of which invest first of the required amount from them (open deposit), then get a loan from the fund for the full amount, and in the final stage they return the remaining part to the fund.

$T_1, T_2, T_3, \dots$ are the moments of deposits opening by depositors, and $\xi_1, \xi_2, \xi_3, \dots$ are the sums of loans they want to receive, and at first, investors save up some part of the loan $\alpha_1 \xi_1, \alpha_2 \xi_2, \alpha_3 \xi_3, \dots$ where $\alpha_i \in 0.1m$, and after saving up the required amount they receive the remaining amount $(1 - \alpha_1) \xi_1, (1 - \alpha_2) \xi_2, (1 - \alpha_3) \xi_3, \dots$

We also denote as $\theta_1, \theta_2, \dots$ — the times during which depositors want to save the main part of the loan, and as $\vartheta_1, \vartheta_2, \dots$ — the times during which depositors plan to pay off to the fund the remaining part.

We set S_0 as the initial capital of the cumulative fund and $S_{(t)}, S_{(0)} = S_0, t \geq 0$ — the dynamics of capital of the fund over time.

The problem is to determine the capital adequacy, i.e. such values as S_0 which within a specified period of time t^* , the fund will be ready to fulfill its obligations, i.e. capital of a company will be greater than zero with the probability of 1 or close to it.

Proposal 1: The period of time t^* , is less than the accumulation period:

$$t^* < \theta_i, i \geq 1. \quad (1)$$

For example, t^* is equal to one year, and the period of accumulation of the initial amount – several years.

The assumption is that at the initial time management of the cumulative fund is aware of the amount of payouts to depositors and the times of payment. We denote the number of payments to depositors with K , times of payments $t_1, t_2, \dots, t_K$ and the amount of payments with $P_1, P_2, \dots, P_K$. Furthermore, it is obvious that at the initial time management of the fund is also aware of the speed rate of funds accumulation $\alpha_1, \alpha_2, \dots, \alpha_K, \alpha_{K+1}$ on fund accounts for the period $(0, t^*]$, provided that there will be no new investors during the time $(0, t^*]$. It is a simple arithmetic problem: in the initial time point the capital equals to S_0 , in the period $t \in (0, t_1)$ the capital is $S_0 + \alpha_1 t$ and at the time of the first payment it is $S_0 + \alpha_1 t_1$, in the period of time $t \in (t_1, t_2)$ capital is $S_0 + \alpha_1 t_1 - P_1 + \alpha_2 t$ and at the time of the second payment $S_0 + \alpha_1 t_1 - P_1 + \alpha_2 t_2$ etc.

Given that there will be no new investors, the required capital is:

$$S_0^* = -\min\{Q_1, Q_2, \dots, Q_K\} \quad (2)$$

where $Q_1 = \alpha_1 t_1 - P_1$; $Q_2 = \alpha_2 t_2 - P_2$; ...; $Q_K = \sum_{i=1}^{K-1} Q_i + (\alpha_K t_K - P_K)$.

The situation can change for better if during the time $(0, t^*]$ new investors come. For example, if one investor comes at the moment $T_1 \in (0, t_1)$ with the accumulating speed b_1 , the required fund capital is

$$S_0 = -\min\{Q_1 + b_1(t_1 - T_1), Q_2 + b_1(t_2 - T_2), \dots, Q_K + b_1(t_K - T_1)\}. \quad (3)$$

It is obvious that $S_0 \leq S_0^*$, where S_0^* from the ratio (2). It is desirable for the fund to keep in reserve as little capital as possible, but at the same time to have assurance of reliability.

The problem is that the moments of new investors arrival $T_1, T_2, \dots$, the amount of loans they want to receive $\xi_1, \xi_2, \dots$ and the amount they want to save $\alpha_1, \alpha_2, \dots$ as well as the time $\theta_1, \theta_2, \dots$, during which investors want to accumulate the initial part of the loan are random. In other words, $T_1, T_2, \dots$, and $b_1, b_2, \dots$ are unknown.

Further, additional assumptions are required. Suppose

$$N(t) = \max\{i : T_i \leq t\}. \quad (4)$$

Thus, $N(t)^*$ is the number of new investors during the period $(0, t^*]$.

Assumption 2: $N(t)$ has the Poisson distribution.

This assumption means that investors come to the fund in a uniform manner with respect to time, and during a small period (for example, one hour) no more than one investor can come.

In this formulation of the problem there is an issue of unknown values $b_1, b_2, \dots$. In our opinion, it is a technical issue: loosely speaking, it is possible to substitute b_i

with their average values Eb_i or to estimate their distributions. The assumption goes further:

Assumption 3: $b_i = b, i \geq 1$.

Thus, it can be concluded that:

- if one investor comes, it is possible to use the estimate:

$$S_0 \left| 1 \leq - \sum_{j=1}^K r_j \min\{Q_1, Q_2, \dots, Q_j, Q_{j+1} - t_j, Q_{j+2} + b(t_{j+2} - t_j), \dots, Q_K + b(t_K - t_j)\}, \quad (5)$$

where $t_0 = 0, r_j = \frac{t_j - t_{j-1}}{t^*}, j = 1, \dots, K-1, r_K = \frac{t^* - t_{K-1}}{t^*};$

- if two investors come, it is possible to use the estimate:

$$S_0 \left| 2 \leq - \sum_{j=1}^K r_j^2 \min\{Q_1, Q_2, \dots, Q_j, Q_{j+1} + 2b(t_{j+1} - t_j), Q_{j+2} + b(t_{j+2} - t_j), \dots, Q_K + 2b(t_K - t_j)\} \right. \\ \left. - 2 \sum_{j=1}^K r_j r_j \min\{Q_1, Q_2, \dots, Q_i, Q_{i+1} + b(t_{i+1} - t_j), Q_{j+2} + b(t_{j+2} - t_i), \dots, Q_j + b(t_j - t_i), \right. \\ \left. Q_{j+1} + b(t_{j+1} - t_j + t_{j+1} - t_j), Q_{j+2} + b(t_{j+2} - t_i + t_{j+2} - t_j), \dots, Q_K + b(2t_K - t_i - t_j)\} \right. \quad (6)$$

- if 3, 4, 5, ... etc. investors come.

Remark 1. Placement of investors is $K + 1$ cell, with the probability of the investor getting into i -th cell is equal to r_i .

Now it is easy obtain the estimate for the required capital:

$$S_0 \leq S_0^* \times P(N(t^*) = 0) + S_0 \left| 1 \times P(N(t^*) = 1) + S_0 \left| 2 \times P(N(t^*) = 2) + \dots \sum_{i=1}^{\infty} S_0 \right| i \times P(N(t^*) = i), \quad (7)$$

where $P(N(t^*) = j) = \frac{(\lambda t^*)^j}{j!} e^{-\lambda t^*}$ and the unknown parameter λ can be estimated statistically.

Example 1. We assume that during the period $(0, t^*]$ 2 payments will be made, i.e. $K = 2$, the time of payments $t_1 = 0.5t^*, t_2 = 0.75t^*$, the amount of payments P_1, P_2 . Besides, funds accumulation rate is $\alpha_1, \alpha_2, \alpha_3$ on the fund accounts during the period $(0, t^*]$, provided that there are no new investors during the time $(0, t^*]$.

As a result, if in initial a time point the capital equals S_0 , in the period of time $t \in (0, t_1)$ capital equals $S_0 + \alpha_1 t$ and at the time of the first payment it is $S_0 + \alpha_1 t_1$, in the period of time $t \in (t_1, t_2)$ capital is $S_0 + \alpha_1 t_1 - P_1 + \alpha_2 t$ and at the time of the second payment it is $S_0 + \alpha_1 t_1 - P_1 + \alpha_2 t_2$ during the period $t \in (t_2, t^*)$ the capital equals to $S_0 + \alpha_1 t_1 - P_1 + \alpha_2 t_2 - P_2 + \alpha_3 t$.

Provided that there will be no new investors, the required capital is:

$$S_0^* = -\min\{Q_1, Q_2\}, \quad (8)$$

where $Q_1 = \alpha_1 t_1 - P_1; Q_2 = Q_1 + \alpha_2 t_2 - P_2$.

We assume that during the period $(0, t^*]$ only one new investor comes and the time of its arrival is T_1 . The investor can come either during the period $(0, t_1]$ (probability of 0.5), or during the period $(t_1, t^*]$ (probability of 0.5).

- if the investor comes during the period $(0, t_1]$, the equity of fund is

$$S_0 = -\min\{Q_1 + b(t_1 - T_1), Q_2 + b(t_2 - T_1)\}. \quad (9)$$

Obviously, the last ratio is less or equal:

$$-\min\{Q_1, Q_2 + b(t_2 - t_1)\} \quad (10)$$

- if the investor comes during the period $(t_1, t^*]$, capital assets are less or is equal S_0^* (see (8));

- thus, provided that only one investor will come

$$S_0 | 1 \leq -0.5 \times \min\{Q_1, Q_2 + b(t_2 - t_1)\} - 0.5 \times S_0^*. \quad (11)$$

We assume that during the period $(0, t^*]$ 2 investors will come and the time of their arrival will be T_1, T_2 . The task is to place 2 investors in 2 periods: $(0, t_1]$ and $(t_1, t^*]$. Here it is probably that 2 investors come during the period $(0, t_1]$ (probability of 0.5^2), or only one (probability of 2×0.5^2), or none of them (probability of 0.5^2) comes.

- if both investors come during the period $(0, t_1]$, capital assets don't exceed

$$S_0 = -\min\{Q_1, Q_2 + 2b(t_2 - t_1)\} \quad (12)$$

- if during the period $(0, t_1]$ only one of 2 investors comes, then

$$S_0 \leq -\min\{Q_1, Q_2 + 2b(t_2 - t_1)\}; \quad (13)$$

- if no investor comes during the period $(0, t_1]$, then

$$S_0 \leq S_0^*; \quad (14)$$

- thus, provided that exactly 2 investors come

$$S_0 | 2 \leq -0.5^2 \times \min\{Q_1, Q_2 + 2b(t_2 - t_1)\} - 2 \times 0.5^2 \times \min\{Q_1, Q_2 + b(t_2 - t_1)\} - 0.5^2 \times S_0^* \quad (15)$$

etc.

The task is reduced to placement of n investors into 2 cells with the probability of getting into each of them being equal 0.5. For example, the probability that m out of n of investors will come in the interval $(0, t_1]$ is equal to

$$\frac{n!}{m!(n-m)!} \times 0.5^m \times 0.5^{n-1}. \quad (16)$$

Generally, when there are K periods $(0, t_1], (t_1, t_2], (t_2, t_3], \dots, (t_{K-1}, t^*]$, then the probability of m_1 investors coming during $(0, t_1]$, m_2 investors coming during $(t_1, t_2]$, ..., m_K investors coming during $(t_{K-1}, t^*]$ is equal

$$\frac{n!}{m_1! m_2! \dots m_K!} \times r_1^{m_1} \times r_2^{m_2} \times \dots \times r_K^{m_K}. \quad (17)$$

The final result is calculated as the upper-bound estimate according to the ratio

$$S_0 \leq \sum_{i=0}^{\infty} S_0 | i \times P(N(t^*) = i), \quad (18)$$

where $P(N(t^*) = j) = \frac{(\lambda t^*)^j}{j!} e^{-\lambda t^*}$.

If the rate of the minimum cash balance is defined, there arises the problem of how to ensure sufficient funds within the limit.

We propose to issue bonds or derivative securities into the pools of loans following the system of incremental investment lending. Wherein the tangible assets purchased with credit funds can act as collateral securities.

The collateralized property united in pools can become the basis for the release of bank backed securities (bonds or derivative securities).

The role of state in this scheme is intermediary between the bank issuing pools of derivative securities and the investors purchasing them.

But nevertheless, to create a bigger interest and since investors also assume risk for the unpaid and overdue loans containing in a bullet, the bond yield for investors should not be lower than the deposit yield of the same bank (otherwise, it is more profitable for investors to put their money in a bank deposit, guaranteed by the deposit insurance fund), but higher to create a greater interest, because investors also take the risks of an unpaid and overdue loans in the pool.

It will allow increasing significantly securities reliability and the state will render direct assistance to development of investment process of the entities of processing industry since all-in cost of securities won't be included in percent on the credit. In the case of implementation of the proposed accumulative investment system of crediting it would be logical if the state takes care of the payment of some part of the interest on securities issued to raise additional liquidity of the resource base. This will significantly improve the reliability of securities and the State will boost the process of investing manufacturing industries, as the overall value of securities will not be included in credit interest.

According to the National Bank of Kazakhstan the interest rate for a loan in national currency includes the following components (Table 1).

Table 1. Shares of the main components of the average weighted interest rate on loans, %

Average weighted rate of on the fixed-term deposits	4.5
Losses on mandatory reserves and quarterly contributions to the Deposit Insurance Fund	0.3
Credit Risk Level	6.1
Burden charges	1.5
Minimum interest rate	12.4

Source: The Letter of The National bank #27104 as of 23.08.2004.

Under the PSA system investment lending a major factor in determining the degree of credit risk carried in the interest rate will be borrower's creditworthiness. The reliability of borrowers' creditworthiness assessment is reached due to continuous and long monitoring of borrower's behavior in the accumulative period.

The change of borrower's market condition, compliance of company product sales to plans and the forecasts described in the investment project and business plan will be visible after a long monitoring (Table 2).

Explanation. Coefficient of 4.4 indicates the level of borrower's reliability in case it meets the abovementioned requirements.

Respectively, the difference between the total coefficient of all factors (5.0) and coefficient of reliability (4.4) will be risk coefficient.

Risk ratio of the borrower on all the factors will be: $5.0 - 4.4 = 0.6$

If to define the risk level of crediting in % from the developed risk level in STB (6.1%), then risk level (RL) = $0.6 / 5.0 \times 6.1\% = 0.73\%$, where 0.6 – the risk coefficient; 5.0 – the total coefficient on all the factors; 6.1 – the developed average level of risk in STB.

Table 2. Risk assessment, compiled by the author

Risk	Required level for the AIC system	Admission	Assessment in ratio
1. Client's state of financial and economic activity in the dynamics	Stable indicators of solvency, liquidity and profitability	No	1.0
2. Borrower current ability to ensure sufficient cash flow to meet bank obligations	At the level of standard loan agreements	No	1.0
3. Borrower's market status and the prospects for the development of borrower's fields of activity	According to parameters of an investment project	By external circumstances	0.75
4. Moral and business reputations of borrower's management	Permanently high	No	1.0
5. Existence of liquid availability of mortgage property liquidity	According to the transacted loan	Specificity property	0.65
		Total	4.40

Thus, in case during the accumulative period the borrower provides full compliance to bank requirements on all the items – within admissions – the risk level can be established at the level of 0.73%.

Then the minimum interest rate can be established at the level of 7.03%.

Bank interest on loans is calculated basing on the following components:

- Remuneration for borrowed funds – 3.5%;
- Losses on obligatory reservations and contributions FGSD – 0.3%;
- Risk levels – 0.73%;
- Overhead costs – 1.17%;
- Bank profit – 2.0%;
- Total: 7.7%.

Table 3. SWOT-analysis for the system of accumulative investment crediting, compiled by author

Strengths	Weaknesses
The enterprise participates in joint financing of the project that causes responsible attitude of the borrower to the project; the share of borrowed funds is decreased; debt loading is reduced and the risk of non-return is declined. The accumulative period allows bank study better the investment project to define degree of borrower's reliability; the risk decreases, the credit rate decreases as a whole. The bank expands client base and increases the number of permanent and stable customers. The system involves private investors to implement investment projects.	Low profitability of this type of crediting and risks of long-term crediting. It is difficult for borrower to save financial resources for future project due to lack of current assets. It is unprofitable for enterprise to transfer regularly funds on the accumulative deposit with the zero rate. Filling of resource base depends on the success of implementation of derivative securities (bonds) this type of market in Kazakhstan hasn't been developed yet. Introduction of the system of accumulative investment crediting demands skilled bank professionals, development of bank infrastructure.
Opportunities	Threats
The system is attractive for a wide range of potential borrowers in terms of investment focus and the ability to provide low interest rate loans. Accumulative investment crediting carries multiplicative effect; it contributes to corporate securities market development. The state focuses on the development of priority sectors of the economy and manufacturing in particular.	Significant weakening of the national currency or devaluation, especially in case of foreign investment. Significant change in the refinancing rate of the National Bank. Deterioration of the investment climate in the country. Tightening the monetary policy by the National Bank

Remuneration on bonds is supposed to be 11.0%, when 3.5% at the expense of means of bank and 7.5% at the expense of state.

Remunerations on bonds are assumed to be in % out of the volume of capital issues (bonds). Remuneration is paid for at the expense of the bank that emits securities. Thus, part of interest payment on bonds is compensated by state (through an authorized representative).

To complete the picture of application possibilities of accumulative investment crediting in practice we offer a SWOT-analysis of this project (Table 3).

All the abovementioned mechanisms provide the basis for further credit relations between borrowers and banks, as it reduces potential risks in such relationships, which is beneficial for both bank (in terms of quality of borrowers), and business entities (cheaper credit services).

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