

## Features of risk management organization for certain types of credit institution's risks

Natalia Ewaldovna Sokolinskaya

Department of Banks and Banking Management, Financial University under the Government of Russian Federation, Leningradsky prospect, 49, Moscow, 125993, Russia

**Abstract.** This paper summarizes the approaches to risk management system in credit institutions, defines the risk management system, and highlights its basic principles and main elements. The main attention is focused on systematization and identification of credit and foreign exchange risks and risks of bank's operations with securities, as well as the choice of methods of regulation and restrictions within the considered types of risks.

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### Introduction

The analysis of performance indicators of the Russian banking system shows the stable contradictions, which can be divided into problems related to the state of credit organizations' capital, issues of credit policy and changes in regulatory policy of the Central Bank, including the specifics of performing the functions of a mega-regulator. In these circumstances, on the first place there are problems of organization of bank's risk management. [1-3]

Financially sustainable system for the management of credit organization occurs when tasks of the bank's departments, directorates and divisions, their functions, communication, modes of work with information and activities are clearly defined, and, when banks build effective relationships with clients. [4,5] When the crisis phenomenon in the national economy occurs, a credit organization must be particularly mobile so as to adapt to the rapidly changing economic and social environment and to achieve a new level of quality in providing customer services. In these conditions, requirements for appropriate organization of risk management increase dramatically. [6,7] The internal factors, which determine the actuality and necessity of search and evaluation of new methods of organization of risk management, include the lack of systematization approaches to identifying the risks and factors that influence them, the absence of a guidance documents set on risk management. Therefore, the issues of systematization of risk management tools are still seem to be actual, and come to the fore at the organization of risk management in credit institutions.

### 1. Principles of risk management in credit institution

**The system of risk management** is a set of related items such as: process of management; means and methods of risk assessment and forecasting; tools for the limitation and reduction of risks, forms of

risks' monitoring, the information flow; organizational structure that ensures the functioning of this system; the system of internal control. [8,9]

The basic **principles of the risk management** system are:

- business continuity;
- the principle of duties' segregation;
- the principle of information's adequacy;
- the principle of assessment;
- the principle of limitation;
- the principle of control;
- the principle of significance;
- the principle of content over form;
- the principle of comparability.

Based on the above, when building a system of risk management for individual types of risks: credit, currency risk or risks on transactions with securities of special importance (following all of these principles) are elements of the risk management system as:

1. Competent construction of credit organization's policy in the field of risk;
2. Creating a full and detailed methodological base;
3. Effective distribution of functions and organization of relations between structural divisions;
4. The organization of the risk management process:
  - Proper identification of risk;
  - Building a system for risk assessment;
  - Selection and justification of the methods of regulating and limiting the risk;
  - Risk monitoring;
  - Training of competent personnel.

**Table 1. A list of main interbank documents for implementation of operations, assessment, regulation and risk control**

Documents for credit operations	Documents for currency operations	Documents for operations with securities
Policy for the management of credit portfolio of the Bank	Policy on management of currency portfolio of the Bank	Policy on management of investment and trading portfolios.
Policy for the management of credit risk	Policy on management of currency risk	Policy on management of risk of investments in securities
The procedure of issuing and repayment of syndicated loans	The reassessment of currency transactions of the Bank	The reassessment of trading and investment portfolios
The procedure for setting and monitoring limits on credit operations	The procedure for setting and monitoring limits on foreign exchange operations	The procedure for setting and monitoring limits on operations with securities
The procedure for the issuance of large loans (including setting and monitoring limits in respect of the borrower side)	Procedure for conducting of large currency transactions (including setting and monitoring limits in relation to the counterparty)	Procedure of purchase of large blocks of securities (including setting and monitoring limits in relation to an adverse party)
Order for suspension of unprofitable operations, including the establishment and monitoring of limits for the risk potential losses	Order for suspension of unprofitable operations, including the establishment and monitoring of limits for the risk potential losses	Order for suspension of unprofitable operations, including the establishment and monitoring of limits for the risk potential losses
The order of loans classification	The order of classification of foreign exchange operations	The procedure for classification of the Bank's operations with securities
The procedure for determining the financial condition of individuals and legal entities (of the borrower, guarantor and underwriter)	The procedure for determining the financial conditions of individuals and legal entities (the counterparty to the transaction)	The procedure for determining the financial conditions of individuals and legal entities (the counterparty to the transaction)
The procedure of formation and use of reserves for possible losses on loans and similar transactions	The order of formation and use of reserves for possible losses on foreign currency transactions	The order of formation and use of reserves for possible losses on securities
The accounting balance sheet and off balance sheet credit operations and provisions	The accounting balance sheet and off balance sheet currency operations and provisions	The accounting balance sheet and off balance sheet operations with securities and provisions
The order of keeping the accounting system of credit operations	The order of keeping the accounting system of currency operations	The order of keeping the accounting system of operations with securities
The position of the credit department, in which rights and responsibilities of individual staff are clearly delineated	The position of the credit department, in which rights and responsibilities of individual staff are clearly delineated	The regulations on the Treasury Department, including the Department of operations with securities in which rights and responsibilities of individual staff are clearly delineated
The regulation on the Department of forecasting and analysis (including the division of forecasting and credit risk analysis)	The regulation on the Department of forecasting and analysis (including the division of forecasting and currency risk analysis)	The regulation on the Department of forecasting and analysis (including the division of forecasting and operations with securities' risk analysis)
The regulation on the Department for control of risk (including the risk controlling unit of credit operations of the Bank)	The regulation on the Department for control of risk (including the risk controlling unit of currency operations of the Bank)	The regulation on the Department for control of risk (including the risk controlling unit of operations with securities of the Bank)
The methodology for the individual types of credit operations	The methodology for the individual types of currency operations	The methodology for the individual kinds of the Bank's operations with securities
Methods of conducting inspections of credit operations	Methodology for the conduct of inspections of foreign exchange operations	Methods of conducting audits of the operations with securities
Primary documents: <ul style="list-style-type: none"> <li>ongoing credit and similar transactions (agreements, contracts, interbank agreements, guarantees, sureties, journals, motivated imprisonment and so on);</li> <li>client application for granting the credit;</li> <li>decrypt receivables;</li> <li>in case of availability, distribution of sub-limits of crediting for the head office and branches of the Bank.</li> </ul>	Primary documents of the Bank: <ul style="list-style-type: none"> <li>ongoing conversion transactions (agreements, contracts, agreements between banks, magazines and so on);</li> <li>ongoing conversion transactions for immediate delivery; including operations with cash foreign currency</li> <li>ongoing fixed-term operations (forward and futures transactions, settlement forwards, swaps and other) for which there are requirements and liabilities in foreign currency;</li> <li>the clients' orders for purchase and sale of foreign currency;</li> <li>contracts on operations with foreign currency, term of delivery of the reporting date;</li> <li>in case of availability, the distribution of sub-limits to the AFP for the head office and branches of the Bank.</li> </ul>	Primary documents of the Bank : <ul style="list-style-type: none"> <li>on the operations (agreements, contracts, agreements between banks, magazines, dealer reports, stock certificates, texts and so on)</li> <li>ongoing fixed-term operations (forward and futures transactions, settlement forwards, swaps and other) for which there are requirements and obligations;</li> <li>the clients' orders and instructions on the purchase and sale of securities;</li> <li>contracts on operations with securities to be delivered after the reporting date;</li> <li>in case of availability, distribution of sub-limits on operations with securities for the head office and branches of the Bank.</li> </ul>

Credit organization's policy in the field of risk includes:

• main directions of credit organization's functioning in setting risk management system; in the management of credit

risk it can be the following techniques of: building a system of limits, credit risk assessment, creating the policy for administration, creating the policy for loan price setting, creating the policy for loans' maturity ranking, for types of loans issued, determining the concentration of loans, and loans' geography; when managing the currency risk, management system includes: methods of limits calculation on the types of foreign currency transactions, revaluation of currencies, risk assessment of the counterparty, maintaining the open currency position, creating restriction limits on new markets, limiting the concentration of currency risk on suspension of currency operations, modeling the movement of exchange rates; when managing market risks, it may be the following methods: assessment of stock market risk (general and special), assessment of interest rate risk for financial instruments that are sensitive to changes in interest rates, the risk of counterparty in transactions, financial accounting, a set of restrictions on using stock portfolio in the new markets, the revaluation of a bank's trading portfolios, modeling portfolios and movements in market prices, etc;

- features of the process of operation's implementation and risk control;
- methodological base;
- distribution of responsibilities.

**Table 2 . Classification of risk identification**

Identification of credit risk	Identification of currency risk	Identification of the risk of operations with securities
The risk of the borrower: Risks of current activities effectiveness; Financial Position risk; Business risk; Liquidity risk; The risk of default; The risk of losses in case of bankruptcy of the borrower; The risk of fraud	The risk of exchange rate's changes: <ul style="list-style-type: none"> <li>• Risk of changes in the direct quotation currencies;</li> <li>• Risk of change in reverse (indirect) currency quotations;</li> <li>• The risk of Cross-rates;</li> <li>• The risk of fluctuations in rates of purchase and sale;</li> <li>• Risk of changes in spreads;</li> <li>• Risk of change of the individual indexes of the exchange rate.</li> </ul>	Systemic risk
Creditor's risk: The risk of market strategies; Risk credit policy; The risk of structural diversification of the credit portfolio); Operational, or selective, risk; Time risk; Revocable risk; Interest rate risk; Risk on balance sheet transactions; Risk on off-balance sheet operations; Banking risk of abuse.	The conversion risk:  The risk of violations of restrictions on the carrying out of exchange operations; <ul style="list-style-type: none"> <li>• The risk of violation of day and night position limits and regulatory norms and rules;</li> <li>• The risk of losses limit.</li> </ul>	Selective risk

**Methodological base** includes:

- developing the qualitative interbank documents on the implementation of operations , assessment, regulation, and risk control (Tab.1);
- distribution of functions.

**Distribution of functions** is connected with the organization of jobs in the operation and participation in implementation and monitoring of the credit organization's structures and with the establishment of schemes of interaction between departments. For example, when performing credit operations, one should consider the relationship of the Credit Department of the Bank with the Department of accounting, risk management Department, analytical Department, training Department, and such departments as: foreign currency lending, accounting and reporting, calculation and accounting, automation, Dilling Department, front office and back office, Committee on assets-liability management, the Bank's management Board, etc. [9, 10]

**The risk management process** includes risk identification, risk assessment, regulation (minimization) of risk, and methods of regulation.

**Risk identification** means identifying its impacts on the operation (Tab. 2).

<p>The risk of the credit portfolio of the Bank</p>	<p>Commercial risks:</p> <ul style="list-style-type: none"> <li>• Counteragent risk;</li> <li>• the risk of the counter party</li> <li>• risk of fraud</li> </ul>	<ul style="list-style-type: none"> <li>• Overvaluation risk;</li> <li>• Exchange rate risk.</li> </ul>
<ul style="list-style-type: none"> <li>• Portfolio risk for individual loans and the risk of a portfolio of homogeneous loans</li> </ul>	<p>Conversion risks:</p> <ul style="list-style-type: none"> <li>• Risks of open currency positions;</li> <li>• Transfer risk ;</li> <li>• Risk of transactions.</li> </ul>	<p>Credit risk:</p> <ul style="list-style-type: none"> <li>• Risk of a counterparty in transactions;</li> <li>• Risk of default;</li> <li>• Risk of losses in case of bankruptcy of the borrower;</li> <li>• Risk of fraud;</li> <li>• Liquidity risk.</li> </ul>
<p>The risk of ruble and foreign currency portfolios</p>	<p>Interest rate risks</p>	<p>Inflationary risk</p>
<p>Portfolio risk for legal entities and portfolio risk of individuals</p>	<p>Calculation risks: Risks of redundancy; Risks on correspondent accounts; Operational risk</p>	<p>Revocable risk</p>
<p>Risk on the portfolio of deposits, including interbank credits (deposits, loans)</p>	<p>Country (sovereign) risk</p>	<p>Country (sovereign) risk</p>
<p>Risk on the portfolio of other invested assets, including requirements for receipt (repayment) of debt securities, shares and promissory notes issued under the loan agreement;</p>	<p>Technological risk</p>	<p>Technological risk</p>
<p>Portfolio risk of discounted promissory notes</p>	<p>Risk by types of currency operations:</p> <ul style="list-style-type: none"> <li>• Import and export of currency;</li> <li>• Operations on attracting and placing funds;</li> <li>• Operations reservation;</li> <li>• Operations for the enforcement of obligations;</li> <li>• Transactions by preliminary registration;</li> <li>• Repatriation operations.</li> </ul>	<p>The risk of trading portfolio securities: Risks of shares; Risk of bonds; Risk of debt; The Risk of derivative financial instruments. The risk of the investment securities portfolio: Risks of shares; Risk of bonds; Risk of debt.</p>
<p>Risk on the portfolio of the amounts paid by the credit institution to the beneficiary by the Bank guarantee, but not recovered from the principal;</p>	<p>Risks of currency operations connected with capital movement; risks of current operations</p>	
<p>The risk on the portfolio of monetary claims of the credit organization on transactions of financing with assignment of monetary claim (factoring); Risk portfolio requirements of the credit organization acquired under the transaction rights (requirements) (cession);</p>	<p>The risks of currency operations of residents and non-residents</p>	
<p>The risk on the portfolio of the requirements of the credit organization purchased on the secondary mortgage market;</p>	<p>Risks of non-trade foreign exchange operations; Risks of Trading currency Operations.</p>	

The risk on the Portfolio requirements of the credit organization on sale (purchase) of financial assets with deferred payment (delivery of financial assets);	The risks of currency: Letters of credit; Collection; Translations.	
The risk on the portfolio of claims by a credit organization to the payer under the paid letters of credit (uncovered part of export and import letters of credit);	The open currency position risk: • Risk total position; • Risk by individual currencies; • Risk of loss of capital;	
The risk on the portfolio of the requirements for the contractor to refund the second part of the acquisition of securities or other financial asset with the obligation to return them alienation in case if securities are unquoted;		
The risk on the portfolio of the requirements of the credit institution (the lessor) to the lessee for Finance lease (leasing).		

Risk assessment includes the use of methods of risk assessment and substantiation by writing a reasoned conclusion.

The level of risk on the main operations of the bank and the quality of risk management depends on a correct evaluation of the following factors by the bank:

- the economic and political situation in the country and the region, that is affected by macroeconomic and microeconomic factors (the crisis state of the economy in transition, the incompleteness of formation of the banking system etc);
- the degree of concentration of credit activity in some sectors, sensitive to changes in the economy (that is, a significant amount of the funds granted or used in a narrow range of counterparties or sectors), creditworthiness, solvency, reputation and types of contractors by property form, ownership, and their relationships with suppliers and creditors;
- large specific weight of loans and other banking contracts and transactions per customers experiencing financial difficulties, the concentration of the activities of credit organizations in poorly studied, new, non-traditional areas of banking operations (leasing, factoring, derivatives, financial instruments, etc.), the specific weight of new and recently attracted clients, the bank does not have sufficient information, taking objects as a collateral, which are difficult to realize or are the subject to impairment of values, or inability to obtain adequate provision for credit or transaction;
- diversification of credit, currency, trading and investment portfolios of the bank;
- the precision of the feasibility study of each transaction and commercial or investment project;

- frequent changes in credit policy of the organization for the provision of loans and the formation of the loan portfolio;

- type, shape and size of the loans granted and its collateral.

**Risk management** is related to timely use of match-forming structures of the credit organization methods and techniques to minimize risk on separate banking operations. Thus, the regulation of the credit risk is associated with the timely application of the relevant structures of the credit institution methods for the minimization of the credit risk exposure on individual banking operations (credit insurance, renewal of collateral, market revaluation collateral, operations, barter, sale of problem loans, clearance compensation, contract, innovations etc.) or the entire credit portfolio diversification (the sale of the portfolio part, exchange, creation of sufficient reserves, a decrease in the share of large loans, etc.). [6,9]

**Methods of regulation or minimization of risks** are applied depending on the situation, but should strictly match requirements set out in the relevant documents of the bank, so as to the public officials it would be clear in what cases which methods to use. For example, in case of credit operations this could be: extension of credit, early recovery of credit, restriction on limits, pledge of collateral, assignment of receivables, bad debts sale, making REPO operations, write-off of questionable loans due to the early creation of provisions for possible losses. In case of foreign exchange operations - the suspension of loss-making transactions, the reduction of limits on settlement risk, conversion of currencies, hedging of currency risk, revaluation of positions and so on. In case of market risks - applying suspension of operations, urgent sale of securities, conclusion of futures deals opposite the open position, redistribution of country portfolios and others. [4, 8]

**Risk monitoring** means a developed by the credit institution tracking system of risk at all stages of the operation. Of particular importance here acquire information flows. This condition can be best performed by internal analysis and management reporting system, which could inform the Board and senior managers of the Bank on how the Directives are performed, and provide them with sufficient information to assess activities of management of the lower level and to assess the status of the relevant transactions or Bank portfolios.

**Monitoring of credit risk** means a developed by the credit institution tracking system of risk at all stages of the lending operation (testing the proper use of the funds lent by the creditor, collateral appraisal, checking the changes in the financial condition of the borrower and changes in the prospects of its activity and other).

**Monitoring of currency risk** means tracking the movement of the exchange rate, timeliness revaluation, establishment of checkpoints to control limits, liquidity, profitability, daily monitoring of open foreign exchange position and its influence on the bank's equity.

**Monitoring risks on operations with securities** means the control over the purchase and sale of securities, over the costs of transactions, price dynamics on the organized securities market for quoted securities, a systematic evaluation of the financial position of the issuer, over the state limits, liquidity, profitability, timely transfer of securities listed into non-listed, transfer of equity from trading in the investment portfolio and vice versa.

### 3. Discussion and conclusion

The study is based on a generalization of both foreign and domestic sources, describing different aspects of the banking risk management in the conditions of the ongoing crisis and uncertainty in the economic system. The carried out research of the main trends of the banking risk management has confirmed the necessity of forming a modern methodological and informational-analytical base for the integrated estimation of efficiency of control over credit organizations in part of risks inherent to their activity. With this aim, a methodology for comprehensive approach to the regulation of banking risks disaggregated into separate stages and phases of the organization's risk management in relation to major risks of the credit organization was developed. The introduction of the integrated approach to the

management of banking risks will enable the banking sector to move to a new stage of economic development in difficult economics conditions, including rising uncertainty.

### Corresponding Author:

Dr. Sokolinskaya Natalia Ewaldovna  
Department of Banks and Banking Management  
Financial University under the Government of  
Russian Federation  
Leningradsky prospect, 49, Moscow, 125993, Russia

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