Risk Management in the Activity of Financial Institutions, In Conditions of Unstable Economic Development

Azhar Nurmagambetova, Ajgul Dzhondelbaeva and Sunkar Nurmagambetov
Kazakh Economic University named after T. Ryskulov, Almaty, Kazakhstan

Abstract: In this article, the authors examine risk management in the activity of financial institutions, in an unstable economic period. Research on risk management in the activity of financial institutions is becoming increasingly important for a variety of reasons. The financial crisis of 2008-2009 showed that a significant amount of the risks existing in the activity of financial institutions are not evaluated or are evaluated insufficiently. However, financial institutions operate successfully when the risks assumed by them are reasonable, controllable and are within their financial opportunities and competence. Assets (primarily loans) must be sufficiently liquid to cover any outflows, expenses and losses and still provide an acceptable profit margin for the members (shareholders). Today, the topic of a development strategy for risk management in financial institutions is a frequent and important subject of discussion. Within this subject, the most pressing issues are the implementation of Basel III, Directive Solvency II, defining the best practices and strategies for managing various risks, questions of choice and use of effective instruments to reduce the risks, as well as insurance of risks and use of stress testing.

Key words: Enterprise risks - Problems of small and medium businesses - Risk management stages

INTRODUCTION

Despite economic growth and a favorable monetary policy, there still remains a serious concern about the value of assets and quality of capital of most institutions in the financial market. The need to create sustainable and balanced growth of regional business in non-oil sectors of the economy, as well as preservation of existing and creation of new permanent jobs in Kazakhstan, is clear to everyone. The main attributes of an attractive investment climate are also widely known: favorable tax regime, low-interest loans, developed legislation, conditions for fair competition, an effective judicial system, minimal administrative barriers and a qualitative infrastructure for business development. National programs aimed at implementing the message of the President of Kazakhstan to the People of Kazakhstan "New Decade - New Economic Growth - New Opportunities of Kazakhstan" and the Strategic Plan for the Development of Kazakhstan till 2020 to support the economy, are pursuing the long-term strategic goals of creating in the Republic of Kazakhstan a civilized, caring society characterized by a high quality of life, which is based on a mixed economy assuming not only effective joint functioning of various forms of ownership, but also internationalization of the commodity market, labor and capital.

The prospects of project financing in the financial support of infrastructure projects is not easy to determine. The world financial crisis has increased the importance of risk management in projects for the implementation of national programs. A growing demand for financing infrastructure projects involves the development of project financing as a special form of financial support of investment projects, including the system of state guarantees.

MATERIALS AND METHODS

The purpose of this research is to evaluate the “risk management” system in an unstable financial sector. To achieve this goal it is necessary to solve the following problems:

- Define types and features of risk management in the banking sector, in conditions of instability of the financial sector;
Create a system of risk-sharing investment projects among the participants;
Develop a methodology for assessing "risk management," particularly as to how effective it is in the modern conditions of Kazakhstan;
Analyze the current tendencies of formation and development of the financial monitoring system, designed to prevent the risk of involvement of banks in money laundering;
Develop practical recommendations on the application of financial methods to neutralize the risk of money laundering;
Consider models of risk management in financial institutions and the use of leverage and capital indicators.

In reaching conclusions from this study and evaluating the prospects for further developments, the following things were done:

Types and features of risk management in the banking sector are defined;
The essence of an investment project and the risks inherent in the project are considered;
Risk management of investment projects in the framework of national programs is considered;
Recommendations on the use of financial monitoring to neutralize the risk of money laundering are given;
Models of risk management in financial institutions and the use of leverage and capital indicators are proposed.

Main Part: For any investment projects, the main goal is an increase in value or receipt of financial income (along with social outcomes) in the future. In this case, the investments can be considered as material goods, which should be refused now to get additional value in the future. An investment or investment process is a process of production and accumulation of means of production, finance for the movement and reproduction of capital by means of investment projects, implemented in the framework of entrepreneurial activity.

The State program on the development of the economy of Kazakhstan provides for accelerated development of non-oil sectors of the economy, ensuring diversification and increased competitiveness. At the same time, along with the implementation of major investment projects in the traditional export sectors of the economy, which was initiated by domestic companies and supporting the backbone companies of the fuel and energy sector and metallurgical industries, the priority of the program is the development of small and medium-sized businesses to create modern production with the prospect of the development of their export capabilities.

In this context, tools such as loan guarantees and interest rate subsidies on loans are quite popular and are used for the development and support of this or that sector of economy. These tools attract significant funds of commercial banks, which by virtue of the credit and related risks are in no hurry to invest in a particular sector of the economy.

The investment project assumes planning over time of three main cash flows: stream of investments, stream of the current (operational) payments and stream of receipts. Neither the stream of receipts, nor the stream of current payments, can be planned precisely enough, because there cannot be complete certainty about the future state of the market. Volumes and the price of realized production, the price of materials and raw materials and other monetary and cost parameters of the environment, upon their implementation in the long term, can vary greatly as to plan values, which are measured from positions of today.

The risk occurs only in those cases where it is necessary to make a decision (if no decision is necessary, it makes no sense to risk). In other words, the need to make decisions in the conditions of uncertainty generates a risk; in the absence of that need there is no risk. Secondly, the risk is subjective and uncertainty is objective. For example, an objective lack of reliable information on the potential volume of demand for the products leads to emergence of a range of risks for participants of the project. Thus, the risk generated by the uncertainty due to the lack of marketing research for the investment project, refers to the credit risk for the investor (bank financing for this investment project) and in the case of loan default, it refers to the risk of loss of liquidity and further to the risk of bankruptcy and for the recipient this risk is transformed to risk of unforeseen fluctuations of market conditions and for each of participants of the investment project the risk is manifested individually both in qualitative and in quantitative expression.

As uncertainty is a source of risk, it should be minimized by means of information acquisition, ideally trying to bring risk to zero, i.e. to complete certainty by obtaining qualitative, reliable, comprehensive information. However, this is not possible as a rule in practice. Therefore, while making a decision in conditions of uncertainty, it is necessary to formalize and estimate the risks.
In the financial and credit dictionary, "banking risks" are defined as the risk of losses arising from specific banking operations [1, p. 669].

The economic meaning of risk of investment crediting remains the same; however, it has some peculiarities. First, there is the action of time. Investment loans are over an extended period of time; extended, therefore this risk, as any other risk, is associated with the uncertainty of an event. Secondly, the risk of investment crediting is caused by factors differing both in width and specificity. Here we have to reckon with the fact that within investment financing of 3-5 years, the real risk factors are becoming those that in the case of short-term loans for 1-3 months may be disregarded (legal, political, natural, etc.). Specificity of risk factors is mainly related to the specific investment project, development and evaluation of which are not comparable to technical and economic calculations of borrowers in short-term crediting [2].

Speaking about the investment project, it should be noted that risks of an extremely wide range of spheres of human activity are inherent in it: economic, socio-political, technical, legal, natural, manufacturing, etc.

Summarizing the research of the nature of risk, we can distinguish its main components:

- Uncertainty - an objective condition of existence of risk;
- Need of decision-making - a subjective reason for the existence of risk;
- The future - a source of risk;
- The amount of losses - the main threat from the risk;
- The possibility of losses - the degree of threat of risk;
- Interrelation "risk profitability" - a stimulating factor of decision-making in the conditions of uncertainty;
- Tolerance to risk - a subjective component of risk [3].

Also, it is impossible not to note the inter-relationship of various risks. For example, currency risk can be transformed into an inflationary or deflationary risk. In turn, all these three types of risks are interconnected with price risk, which belongs to risks of fluctuations of market conditions.

Any risk at all and the risk of an investment project in particular, is very diverse in its manifestations and often represents a complicated design from elements of other risks. For example, the risk of fluctuation of market conditions represents the whole set of risks: price (both on costs and of production); risks of change of structure and demand volume.

As a result of investment decisions in conditions of uncertainty, it is necessary to understand the possibility of occurrence of the complex adverse events entailing losses which are individual for each participant of the investment project, in quantitative and in a qualitative terms.

Risk of involvement of commercial banks in the process of money laundering exists not only at the international level, but also in Kazakhstan. This risk is particularly dangerous for the domestic banking system, as it leads to loss of business reputation of banks and thus prevents the expansion of Kazakh banks in the global financial markets.

Increase of the social and economic threats connected with the risk of involvement of commercial banks in money laundering, causes the necessity of creating an effective system of bank financial monitoring for neutralization of this risk.

The desire of “owners” of the criminal income to hide its true origin, change its status and keep control over the capital, make inevitable the use of financial institutions, in particular, commercial banks, as well as specialized financial and credit organizations in the country and abroad [4, p.100].

Hers is a classification of typical banking risks, in accordance with which it is possible to classify the external and internal risks with respect to their impact on the risk of financial loss from the involvement of commercial banks in money laundering:

**External (Systemic) Risks:**

- Country risk is a risk of money laundering, arising in connection with the features of the national legislation on counteraction of legalization of income gained by criminal means;
- Market risk is the risk including:

Stock market risk associated with the probability of bank transactions in the stock market by buying and selling stock values ??or investing in securities, that carry the risk of money laundering by the other party;

Currency risk arising from currency transactions in the global or national currency market for legalization of the criminal income by clients of commercial banks;
Internal Banking Risks:

- The credit risk is a probability of involvement of a commercial bank in a credit transaction related to the borrower’s desire to legalize the criminal income by providing credit;
- Liquidity risk arises from the probability of unexpected loss of liquidity, due to the outflow of funds in connection with a large client’s desire to legalize the income gained by a criminal means or performing doubtful transactions with bank accounts;
- Operational risk can arise from the lack of attention of staff of a bank to an operation having signs of money laundering, or conscious assistance of legalization of money of clients who have a criminal intent;
- Legal risk arises from the possibility of obtaining financial losses due to the bank’s non-compliance with requirements of the legislation of the Kazakh Republic and the international regulations on counteraction of money laundering;
- The risk of loss of business reputation of commercial bank (reputational risk)-is a risk of probability of financial losses at the bank due to the sharp reduction of its client base, owing to the formation of a negative image in the economic community because of violation of normative legal acts on counteraction of legalization of income gained in a criminal way and financing of terrorism;
- The strategic risk is connected with emergence of financial losses at a commercial bank, as a result of choosing a risky business strategy and strategic management of the bank, not taking into account the possible risks associating with money laundering by shareholders, insiders and large customers.

In our opinion, besides the typical risks connected with a risk of legalization of criminal income, it is also necessary to include such risks as:

- The risk of capital sufficiency of a bank should occupy a special place in this classification as the most relevant for Kazakhstan banks, as banks having insufficient capital, limiting their profitability, are more inclined to be involved in doubtful kinds of activities, including operations on money laundering;
- Legal risk as the probability of judicial decision on the facts of money laundering, which deteriorate the financial condition of the bank;

Thus, on the basis of a systematized classification of risk - the risk of money laundering can be defined as: the risk of legalization of criminal income is an assessment of probability of financial losses and reduction of business reputation as a result of the bank’s involvement in processes to create a legal origin of the funds obtained by criminal means.

However, based on theoretical and methodological concepts of the present research, it is necessary to identify two main groups of bank risks:

Manageable Banking Risks: It is necessary to refer the majority of bank risks to this category: capital adequacy, liquidity, credit, investment, currency, interest rate, stock risks. The higher the level of these risks, the more profit the bank can get. Therefore, in order to limit these risks, norms of prudent supervision are used and in order to manage - a system of financial control is established with use of the following standard methods: diversification, insurance, minimization, hedging.

Risks Which Are Subject to Neutralization: This category should include such risks that should not be taken by the bank where its goodwill is important.

- Risk of involvement in money laundering and terrorism financing;
- Operational risk;
- Risk of loss of business reputation of a bank.

Risks of the second group inevitably lead to financial losses from fines, a loss of customers and shareholders, increasing cost of doing business, revocation of license and termination of banking activity (Fig. 1).
In large banks, separate elements of financial monitoring are used, adapted to their specific activities. However, a universal and rather reliable complex monitoring system which corresponds to specifics of factors and processes of legalization built on the basis of the international standards and requirements of national regulations, taking into account modern changes of the external and internal environment of functioning of banks as global financial intermediaries, has not yet been created.

Risk management in banks is also produced through the management of capital structure. Capital is maintained at a level sufficient to meet the requirements of normative documents and the Committee on Financial Supervision of the Republic of Kazakhstan. Also, to maximize profitability, banks seek to optimize the structure and sources of capital. The approach of domestic banks to management of capital, of assets, of obligations and of risks in a coordinated manner, consists of evaluating the deficit between this and the required level of capital on a regular basis and taking appropriate measures to influence the bank's capital position in light of changes in economic conditions and the risk characteristics [6, r.76].

Certain requirements for the capital are established, requirements which are predicted and compared to the forecast of the available capital and the internal rate of return, simultaneously with the analysis of risk and sensitivity.

Financial risks in financial institutions arise in connection with the existence of open positions in currency and equity financial instruments, as well as interest rates, which are subject to market fluctuations.

In the theory of research of methods of risk assessment, there are many models of risk management. Special interest for us was represented by models on the basis of assessment of capital size. For most industries the notion of capital is used to determine the assets which are necessary to carry out business. In other words, the business model of companies in manufacturing industries, lies in the fact that a business earns income from the functioning of assets. But financial organizations earn income from functioning of obligations. Thus, for financial institutions, such part of their balance as provisions is an integral part of their business model. These commitments are used to acquire assets.

The purpose of banks is to make a positive spread between payments for liabilities and income from the use of assets. One of the most basic financial rules states that you cannot earn income without taking a risk. However, financial institutions must have a sufficient buffer for absorption of possible unexpected losses if they unexpectedly arise. Such function is born by the capital; it has to cover losses in case of the emergence of risks. Thus, the greater the risk, the greater the capital must be. Capital bears the risk management function and is an integrated part of the business model of financial institutions. Unlike non-financial companies, the capital does not simply represent requirements of shareholders of company; assets of the capital of financial institutions provides an ability to continue in business.

Of special interest is a model which considers a possible deviation from forecasted values and uses such an important indicator as the company's leverage.

The interrelation and interdependence of risks causes the need of applying such models of calculation of the capital in which at the functional level the ratio of the income, the ratio of losses with the size of assets, liabilities and the own capital of the company would be established and the risk level would be defined [7].

In order to avoid excessive concentration of risk, domestic insurance companies include in policies and company procedures special principles which are directed to maintenance of diversification of a portfolio. Thus, domestic insurance companies manage established risk concentrations.

Strelnikov N. V. developed an original technique of estimating the capital of an insurance company, taking into account an indicator of mean square deviation (a risk measure) of revenues and expenditures of the company, also taking into account the calculation of the solvency margin ratio, which allows the determination of the capital adequacy of a given level of risk. This model can be shifted and used to assess the risk of second-tier banks.

The model of an assessment of the capital is based on the calculation of capital value of expected net asset value, which is on a difference between assets and liabilities, net of capital.

As a criterion of risk level, the indicator of mean square deviation is used in this model. It allows you to predict the possible fluctuations of income and expenses of the bank. Thus, even at lower than expected income and higher costs, the bank will have a sufficient margin of safety for continuing its activity.

The starting position of the model lies in the fact that the main source of income of the insurance organization are premiums received from policyholders, from which are formed insurance reserves - obligations of the insurer.

Use of temporarily free reserves in investment operations creates the effect of leverage and allows a company to increase capital volume. At the same time, the
use of borrowed funds imposes on the bank an obligation to return the borrowed amount to creditors in the same volume and cover the losses of its own funds, in proportion to the size of losses.

The use of leverage ratio enables you to connect dimensions of incomes and payments with the value of existing assets, liabilities and equity.

"Leverage of liabilities" is defined as the relation of commitments to own equity (X (t)). Leverage of assets, respectively, - assets (A (t)) to the size of own capital. The ratio between them is the following: leverage of assets is equal to unit plus leverage of liabilities, which follows from a formula.

If

\[ X (t) = A (t) - L (t), \]

then, according to the law of arithmetic,

\[ \frac{X (t)}{X (t)} = \frac{A (t)}{X (t)} - \frac{L (t)}{X (t)} \]

Simplifying the expression, we obtain:

\[ 1 = \frac{A (t)}{X (t)} - \frac{L (t)}{X (t)} = A (t) / X (t) - L (t) / X (t) \]

To determine the required value using the net asset value of equation (2 ) - (2.3 ):

\[ ENW = NW + ENWG, \]

Where:

ENW - expected net asset value;
NW - equity;
ENWG - expected growth of net worth.

\[ ENWG = \frac{EAV}{(f (t) +1)-ELV}/(f (t)), \]

Where:

ENWG - the expected increase in net asset value;
EAV - expected value of assets;
ELV - expected value of liabilities;
f (t) - leverage liabilities.

\[ EAV = Pf (t) + I (1 + f (t)) + V (1 + f (t)), \]

Where:

EAV = Expected value of assets;
P = Amount of insurance premiums;
I = Income from investments;
V = Increase in the value of investment assets.

\[ ELV = C f (t) + I l(1 + f (t)) + V l(1 + f (t)) + 1 / 2 \left[ (1 + f) 2 - f 2 \right], \]

Where:

ELV = Expected value of liabilities;
C = Sum payments;
Il = Losses from investment activities;
Vl = Damages for loss of investment assets;
f (t) = Leverage liabilities;

\[ 1 i 2 - variance of income; \]
\[ 1 l 2 - variance of costs; \]
\[ 1 i - the standard deviation of income; \]
\[ 1 l - standard deviation costs. \]

Thus, at a positive difference of the expected cost of assets and liabilities, the bank can count on preservation or a capital gain, receipt of profit and payment of dividends to shareholders. Investment appeal of the company increases. In contrast, a negative difference demonstrates that the value of current assets, which is insufficient to cover the risks, can lead to bankruptcy. In this case, risk management needs to define measures to reduce risk.

CONCLUSION

For risk management, Banks use models for forecasting of future expenses for some years and then present results of the calculation to their boards. Banks use models which predict future expenses for several years, in order to manage risks and then present calculation results to their boards. Usually it is required by management that such extraordinary risks as the risk of natural disasters or adverse market scenarios be estimated as to long-term prospects. Management is required to answer questions like: "How many years in the event of disaster or adverse changes in the capital market can the company withstand, without capital injections from the outside?"
Or "How much risk capital do we need, in order to survive the next five years without external sources of capital?" Research of the German scientist Dorathea Diers offers a model of an assessment of risk capital on a long-term basis and offers a completely developed model of an assessment of internal risk and gives results of its practical application for banks [8-15].

Increase of profitability of operations is an important task for any bank. Its decision is connected with an increase in high-level operations that usually involves a great risk. Taking too much risk may lead the bank not only to a loss of profits, but also to a bankruptcy. Therefore, an effective risk management system in a modern bank should not interfere with but rather help business.

REFERENCES