THE ASSESSMENT PROCEDURE OF THE OPERATIONAL RISK EVENTS

Iulia Iuga[1]

ABSTRACT: A credit institution must establish a management framework of the operational risk. This framework must cover the appetite and tolerance to the operational risk of a credit institution, in accordance with the management policies of this risk, including the measure and method in which the operational risk is transferred outside the credit institution.

The management framework of the operational risk should include policies and processes for the identification, assessment, monitoring and control/diminishing of the operational risk.

Key words: operational risk, frequency and validation, risk levels, monitor, indicators.

JEL codes: G21; E58; G24.

Introduction

The operational risk is the risk of loss determined either by the use of inadequate processes, systems and human resources or by the use of processes, systems and human resources that haven't fulfilled their function adequately, or by external events and actions.

The objective of each bank is to manage the operational risk in order to combine the avoidance of financial losses and the influence over the bank's reputation with the cost's effectiveness and the avoidance of excessive control procedures that restrict initiatives and creativity.

The main responsibility of developing and implementing inspections regarding the operational risk belongs to the management of each unit. The responsibility is backed up by the development of general standards for the operational risk's management related to the following areas:

- requirements to divide the responsibilities, including the independent authorization of transactions;
- requirements regarding the empowerment of employees by including in the job description some responsibilities regarding the operational risk management;
- requirements to reconcile and monitor the transactions;
- aligning to the regulating and legal requirements;
- requirements for the periodical analysis of the operational risk that the bank is subjected to and adjusting the inspections and the procedures in order to prevent the identified risks;
- requirements to report the operational losses and proposals to rectify them;
- developing contingent plans;
- professional development and training;
- establishing standards of ethics;
- diminishing the risk, including the insurance against it.

The specific responsibilities are:

- framing events related to the operational risk in categories and subcategories, according to the categories and subcategories lists adopted by the bank, a first estimation of the direct and/or potential effects of the events;
- establishing the overall conditions that allowed the events' materialization;

[1] „1 Decembrie 1918" University of Alba Iulia, Romania, e-mail: iuga_iulia@yahoo.com

- imposing immediate measures to determine and control the effects of the events with an operational risk;
- the efficient reporting of the existent condition to the established hierarchic levels.

Law review

According to Regulation no. 18 from September 17, 2009, Official Gazette, Part I September 23, 2009 (Going into effect September 23, 2009) regarding the management framework of the credit institutions' activity, the internal assessment process of adjusting the capital to the risks and the externalization conditions of their activity, the internal assessment process of adjusting the capital to the risks within a credit institution should result in determining the adequate value of the internal capital of a credit institution.

Credit institutions must inform the National Bank of Romania regarding:

a) the way in which the internal assessment process of adjusting the capital to the risks is structured;
b) the speculations that are used to determine the risks on sectors and types of risk;
c) the risk sensitivity and the trust levels used to quantify the risks;
d) the aggregation method of the risks in order to determine the demand of internal capital.

The strategies, policies and management processes of the operational risk of the credit institution must be approved and revised periodically by the management structure.

A credit institution must have adequate IT policies and processes, which must approach areas like informational security and system development and must have investments in IT in direct ratio with the dimension and complexity of the operations.

Research methodology

Identifying the operational risk in order to assess it

Assessing a risk means to determine the threat level of an event's occurrence in the banking activity. In essence, this process is reflected at the level of the credit institutions, at the level of the risk exposure, by identifying the risk events that could generate losses.

The procedure to set risk matrixes is relatively identical for most banks. The elements included in the banks' matrixes are presented thenceforth.

Some Romanian banks have aligned their policies to the methodology of the Risk Management Association (RMA). The Risk Management Association (RMA) – is a professional association whose purpose is to help its members to identify, assess and manage the impact of the credit risk, the operational risk and the market risk that can occur within their business and for their clients.

This implies doing a risk assessment in accordance with three elements:

- product, which will be framed in one of the activity categories in the Basel II structure;
- a category of operational risk;
- generic stages of process.

The frequency and validation of the assessment

The frequency levels used by the bank to include the operational processes are:

- very low frequency;
- low frequency;
- average frequency;
- high frequency;
- very high frequency.

Table no. 1.

Frequency Levels – operational risk events

Level	Frequency lapse	Coefficient
Very low	1 event every 5 years or more	A
Low	1 event every 2 to 5 years	B
Average	1-5 events per year	C
High	More than 5 times a year	D
Very high	At least once a month	E

Source: The Risk Management Association (RMA)

The assessment of the operational risk for each business line must be established with a certain annual frequency.

The minimum distance between assessments should be 9 months and the maximum should be 15 months.

In special cases (new businesses, new products) the assessment should take place immediately.

The risk levels

The risk levels represent the level of the actual or potentially achieved or estimated loss, resulted from the materialization of the risk events at the level of each operational process taken into account.

Certain banks assess the risk levels depending on the value span where the actual or potential loss is situated (see Table 2).
There are five risk levels: very low; low; average; high; critical.

Table no. 2.

The risk levels assessed by credit institutions

Risk Level	Value span (RON)	Coefficient
Very low	0 – 1000	A
Low	1001 – 25000	B
Average	25001 – 200.000	C
High	200.001 – 500.000	D
Critical	Beyond 500.000	E

Source: The Risk Management Association (RMA)

A risk level estimated for each operational level taken into account results by taking into consideration the allotted frequency level and the estimated risk level (see table 3).

Table no. 3.

The frequency and the impact of the operational risk

Frequency						
Very large	E	2	3	4	5	5
Large	D	2	3	4	4	5
Average	C	1	2	3	4	5
Low	B	1	2	3	3	4
Very low	A	1	1	2	3	3
	Impact	A	B	C	D	E
		Very low	Low	Average	Large	Critical

Source: The Risk Management Association (RMA)

For each operational process, the risk level is calculated by adding up the risk levels estimated for each highlighted subcategory of risk events. For each subcategory and category of operational risk events, an aggregated risk level is calculated by adding up the estimated risk levels for each operational process unfolded in any bank.

A risk map is compiled from the resulted data, which will highlight the risk areas and levels from the activity of any bank that must be approached through an increased control and through diminishing the risk exposure. The following factors will be taken into account in order to reach this goal:

- the level and the stages of the implemented inspections;
- the history of the risk events for that process;
- the risk appetite aggregated by the bank.

The Romanian banks assess the intensity of the operational risk in each intersection point of the two axes: risk categories and generic process stages.

The levels are grouped in three risk areas:

- limited risk (low): correspondent to levels 1 – 3;
- average risk: correspondent to levels 4 – 6;
- high risk: correspondent to levels 7 – 9.

In case in an intersection point, within the matrix, it doesn't apply to the referred to stage of the activity, that cell will be granted the 0 level. For all the other situations, when there is always a possibility for a risk to occur, the risk levels will be between 1 and 9.

In each point of the risk, the exposure risk will be assessed and placed on a scale from 1 to 9, where the 9th ranging indicates a critical event for the element. A risk level of 7 describes a significant impact over the annual bookkeeping. Other risks are included in category 1.

The risk levels are included on a scale from 1 to 9, being grouped on an ascending line in three areas, depending on the exposure.

Table no. 4.

Ranging the risk levels

Exposure	**Risk level**	**Level**
Low	1	Low
	2	Average
	3	High
Average	4	Low
	5	Average
	6	High
High	7	Low
	8	Average
	9	High

The example below gives a more detailed image over the rating of the risk level:

Table no. 5.

The calculus of the Risk Tolerance Capacity

Risk Level	Lost sum (EURO)
9	28.000.000
8	14.000.000
7	14.000.000
6	14.000.000
5	14.000.000
4	14.000.000
3	14.000.000
2	14.000.000
1	14.000.000

Annual turnover	140.000.000,00	
Credit risk	84.000.000,00	0.60
Market risk	28.000.000,00	0.20
Operational risk	28.000.000,00	0.20

The Risk Tolerance Capacity associated to the incidence area of the operational risk is calculated by applying a percentage to the Total Risk Tolerance Capacity calculated as a whole at the level of a bank. This weight can change periodically, depending on the risk policy of each bank.

Instruments to monitor the operational risk

The instruments that are used for checking the existence of internal control measures and their efficiency are:

- the operational risk profile
- key indicators of operational risk.

The operational risk profile

The operational risk profile of each product contributes to bringing to life the risk profile of a credit institution[2]; it is done when the product is launched (after the approval of the regulations package in CNP) and is subjected to a permanent updating, depending on the changes in the risk environment or in the features of the product.

The implementation of the operational risk profile established by a credit institution will have to be followed in close connection with the level of the bank's capital base, as well as the nature, dimension and complexity of the run activity.

The operational risk profile of any bank is brought off per PRODUCT or GROUP OF PRODUCTS that are homogeneous as an assessment of the exposure to possible operational risk losses. The loss is estimated depending on the annual frequency => how often a certain risk could occur for a specific activity (an assessment based on experience, or on incidents that already happened) multiplied with the seriousness of the caused impact (the value estimated in money).

Key indicators of operational risk

Banks use the same indicators of operational risk, among which the most important are:

[2] Norm no. 17 from December 18, 2003 regarding the organization and internal control of the activities in a credit institution and managing the significant risks, as well as organizing and carrying the internal audit activity of the credit institutions, published in Official Gazette no. 566/28.06.2004

Table no. 6.

Operational risk indicators

$Indicator\ 1 = \dfrac{Number.of.cancellations}{Total.number.of.operations}$
$Indicator 2 = \dfrac{Number.of.transactions.poured.automatically.by.the.system}{Total.number.of.operations}$
$Indicator 3 = \dfrac{Expenses(losses)\,from.operational.incidents}{Total.income.from.operations}$
Indicator 4 = The availability level in Core-Banking normal parameters
Indicator 5 = The availability level in normal parameters of the cards system

The development of an ascertainment and monitoring program for the key indicators of operational risk represents an objective that must be fulfilled in order to ensure an efficient climate for the identification, monitoring and reporting of the specific risks.

The main objectives of any bank in establishing the key indicators of operational risk are:

- reporting the risk profiles to the top management;
- supporting the integration and risk management processes;
- establishing the risk appetite by elaborating and managing a limits system within the banking activity.

Methods to reduce the consequences of the operational risk

The materialization of the events with an operational risk and their outcomes imposes the existence and the implementation of reducing techniques regarding their consequences.

An important point within the reducing techniques of the consequences of an operational risk is represented by the integration of the redundant data that are collected at the level of the different directions of the bank.

The implementation of the standards in the current activity represents another action to reduce the effects of the operational risk events. The work norms and procedures adopted by the banks regard the legal regulations in force, as well as the work assignations stipulated in the internal and international conventions.

The standardization of the current activity has the advantage of the possibility to impose an efficient control at the level of the entire banking network of the banks.

One of the methods to reduce the consequences of the operational risk events is represented by the transfer of the operational risk to the insurers. All banks have insurance policies.

These insurance policies insure the partial or full retrieval of the possible losses suffered by the banks with the condition to honor the stipulated requirements. The existence of these policies doesn't eliminate the obligation of the bank to manage as efficient as possible the current banking activity in order to prevent the materialization of events with operational risk.

Conclusions

Putting into effect the notion of operational risk management implies the implementation of an assessment system that is capable to measure and consolidate all the risks associated with the activity in an consistent manner, taking into consideration all the existent and possible inter-relationships and to present the exposure and sensitivity of the banks or of any business cell to any risk factor, at any time.

In order to improve risk management in the Romanian banks I recommend the implementation of a standard-model of risk management that will include the stages of establishing the strategic context, the risk management context, the identification, analysis and investigation of the risks, the handling of the risks (choosing the adequate solutions that allow reaching the objectives to reduce the risk occurrence probability, reducing the financial impact of the risks, risk transfer, in certain situations – holding and managing risks as a source of competitive advantage and/or eliminate the risk) and the implementation/monitoring of the risk management plan.

In order to implement the integrated risk management, is recommended to examine the commercial banks from system positions, namely, the bank is regarded as a link of the financial system, being one of its components, which activates in accordance with certain principles for which the followings are distinctive: complexity, limiting the resources, the multitude of factors that influence the system's evolution, the stochastic nature of the events, the multitude of possible evolution trends, etc. From the point of view of the financial system, the financial activity of a commercial bank can be seen as a flow of exit signals (financial results), resulted after the decisions of the bank managers and the outside signals, which have an undetermined nature.

The policies regarding the management of the operational risk of a credit institution must take into account at least the following categories of events:

a) internal fraud;
b) external fraud;
c) hiring and safety practices at the work place;
d) clients, products and commercial practices;
e) losses of tangible assets;
f) the interruption of the activity and the inadequate functioning of the systems;
g) the execution, delivery and management of the processes.

In order to identify and assess the operational risk, the credit institutions must at least take the following measures:

a) evaluate the products, the activities, the processes and the systems in order to determine those who are significant regarding the immanent operational risk;

b) establishing operational risk indicators which can determine the position of the credit institution exposed to risk – for example, the number of failed transactions, the frequency and/or gravity of the errors and omissions, the fluctuation rate of the personnel, the fast growth of the activity – and the periodical revision of their level, and maybe even establishing alert limits for them;

c) the assessment of the exposure to the operational risk – for example, based on the data regarding the history of losses recorded by the credit institution , the data regarding the losses recorded by other credit institutions, the analysis of different scenarios.

A credit institution must establish plans to restart the activity for unpredictable situations also, these plans must take into consideration different types of plausible scenarios that the credit institution could be exposed to, in direct ratio to the dimension and complexity of the run activity.

The plans to restart the activity in case of unpredictable situations must have the necessary quality for the credit institution to be capable to function according to the continuous activity principle and to minimize the losses, including the ones that could appear as a result of disturbances in the payment and reimbursement systems, in the event of serious interruptions of the activity; these plans must be tested periodically to ensure that the credit institution can execute the plans in case the activity is severely impacted.

A credit institution must identify the critical operational processes, including those processes that depend on the external suppliers or other third parties, for which the fast recommencing of the activity would be essential.

References

1. Bonin, J and Wachtel, P., 2003. *Financial sector development in transition economies: Lessons from the first decade*, Financial Markets Institutions and Instruments 12: 1–66
2. Bonin, J and Wachtel, P., 2005. *Dealing with financial fragility in transition economies*. In: Evanoff, D and Kaufman, G. (eds). Systemic Financial Crises: Resolving Large Bank Insolvencies. World Scientific Publishing Company: Hackensack, NJ, USA.
3. Dale F. Gray, Robert C. Merton, Zvi Bodie, November 2007. *New framework for measuring and managing macrofinancial. Risk and financial stability,* NBER Working Paper series, Working Paper 13607, National Bureau of Economic Research.
4. Haselmann, R and Wachtel, P., 2006. *Institutions and bank behavior*, New York University, Stern School of Business, Working Paper EC06-16
5. Haselmann, R., Wachtel P., 2006. *Risk taking by banks in the transition countries,* Comparative Economic Studies 49/2007.
6. Haas, R and van Lelyveld, I., 2006. *Foreign banks and credit stability in central and eastern Europe: A panel data analysis*, Journal of Banking and Finance 30: 1927–1952.
7. La Porta, R, Lopez-de-Silanes, F, Shleifer, A and Vishny, R., 1998. *Law and finance*. Journal of Political Economy 106(6): 1113–1155.
8. Guidelines on Credit Risk Management, 2004. *Rating Models and Validation*, These guidelines were Published by the Oesterreichische Nationalbank (OeNB), in cooperation with the Financial Market Authority (FMA).
9. Directiva 2006/49/EC privind adecvarea capitalului societatilor de investitii si institutiilor de credit
10. Basel Committee on Banking Supervision, Consultative document, Revisions to the Basel II market risk framework, Issued for comment by 13 March 2009, January 2009

Legislation:

1. Order no. 9 of 25.05.2007 reporting by credit institutions of the individual capital adequacy
2. Regulation NBR no. 23 of 14.dec.2006 on technical criteria relating to the organization and treatment of risk
3. Law No. 227 of 4 July 2007 approving Emergency Ordinance No. 99/2006, with amendments and supplements
4. Government Emergency Ordinance No.99/2006, on credit institutions and capital adequacy
5. Regulation NBR- NSC No.17/22//2006 regarding the consolidated supervision of credit institutions and investment firms
6. Regulation NBR- NSC No.22/27/2006 regarding the capital adequacy of credit institutions and investment firms
7. Order no. 12/2007 reporting requirements on minimum capital for credit institutions
8. Norm no. 17/2003 on the organization and the control of credit institutions and significant risk management and the organization and activities of internal audit of credit institutions.