

Risk classification solvency loss (bankruptcy) of the bank on the basis of differentiation

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The economic literature often identifies the risk of insolvency with the risk of bank failure [1, p.17; 2, p.451; 3]. Obviously, the point is when bank insolvency ends and bankruptcy begins. Are these concepts identical? To answer this question we will study the risk of the bank insolvency on the basis of differentiation.

The economic literature commonly considers the risk of insolvency and bankruptcy to be comprehensive and systematic as financial risks: credit, liquidity, foreign exchange, interest rate and investment. The risk of insolvency of banks is a measure of uncertainty that the bank will be unable to meet its obligations.

This means that the bank will be both illiquid, unprofitable and with negative equity. The risk of insolvency (bankruptcy) of commercial banks is derived from all the financial risks.

Insolvency risk means the probability that the bank can not meet its obligations even if the rapid realization (sale) of assets. The risk of insolvency is closely linked to liquidity risk and the risk of bankruptcy and is derived from the remaining risks. That is why the management is based on direct control of the overall level of risk that takes the bank [3].

Thus, L.O. Prymostka emphasizes that the risk of insolvency is derived and occurs when the value of the asset sale will not cover the cost of liabilities. Absolutely the correct relationship to the risk of insolvency and liquidity risk of bankruptcy. However, there is no distinction risk of insolvency and bankruptcy, although the fact that these risks are interrelated, suggests that they are different.

Sometimes the definition of liquidity is served in a way that blurs the boundary between liquidity risk and insolvency. Liquidity risk is the risk of losses (loss of capital) as a result of failure or inability of the bank in a timely manner and without

loss to themselves attract more financial resources or to realize the assets to fulfill its obligations to creditors and investors [1, p.17]. This definition extends beyond the liquidity risk to the risk of insolvency.

The term "insolvency" is typical for liquidity risk and for the risk of insolvency and bankruptcy of the bank. It is evident that separates all of these risks result of insolvency.

Summarizing, we can say that the risk of insolvency has two aspects: efficient and factor. Efficient side is interpreted more narrowly, as factor specifies efficient, more accurate and revealing its contents. Taking risks in its operations, the bank relies on the success of the simultaneous requirement to know how to overcome the negative effects.

Failure to fulfill the obligations of the bank leads to negative results. It is in this sense of "insolvency risk" becomes "the risk of bankruptcy".

To better understand the content of the risk of insolvency and liquidity, find out the essence of "solvency" and "liquidity" of the bank. Obviously, the concept of "ability to pay" is much larger than the "liquidity" but liquidity is a necessary condition for solvency. The concept of "ability to pay" includes the ability to perform bank credit operations, receive income and expand operations. The condition for solvency is calculated by the obligations undertaken.

A necessary condition for liquidity is the timely repayment of the balance sheet and off-balance sheet liabilities of banks with acceptable costs. For example, if the depositor is required to pay the deposit ahead of time, and the bank not have the financial resources that liquidity problems, the bank incurred additional costs and buy the appropriate resources. The obligation of the depositor will be completed on time, say the next day that is important.

It is reasonable to consider the various options of relationships "solvency-liquidity" and evaluate the results of their manifestation. Table 1 show that the solvency of the bank is a broader concept, the liquidity and bankruptcy situations that are specific manifestations of solvency (solvency loss).

Table 1. – Variants of display performance situations "solvency-liquidity" [4]

Category	Liquidity	Illiquidity
Solvency	Bank liquidity and solvency have no problems to meet the needs of customers in cash, accounts and other obligations	Bank customers unable to fulfill obligations on time during this period. The Bank performs its obligations with delay at the expense of other activities
loss of solvency	Bank debt takes time, but mainly due to the resources involved in the interbank market and bear additional costs. The situation is unsustainable and poses a threat	The Bank is not able to fulfill debt obligations. Reserves and lost equity to pay off debt. In fact, the situation of insolvency and bankruptcy

So, if liquidity risk is derived from active and passive operations, the risk of bankruptcy derived from all the financial risks of the bank. Moreover the risk of bankruptcy entails usually a number of functional risks: reputation, loss of customers, and others.

According to the author, because of systemic manifestations, the risk of insolvency can be classified according to the degree of differentiation in differentiated and undifferentiated. Under the differential risk of insolvency is expedient to select high, medium and low risk differentiated (Table 2).

Table 2. – Classification of risk of insolvency the degree of differentiation (made by the author)

Category	Characteristic
Highly differentiated	Expressed in certain situations as liquidity risk under the "solvency-liquidity"
Moderately differentiated	Manifested scheme "solvency-illiquidity" as liquidity risk
Low-differentiated	Is expressed as the risk of loss of solvency under the "insolvency-liquidity"
Not differentiated	Appears as a risk of bankruptcy under the "insolvency-illiquidity"

Differentiation shows the extent or complexity of systemic risk. What is the highest degree of differentiation, the fewer risks associated risk of insolvency of the

bank and the links between risk management is not strong. The lower degree of differentiation, the greater the number of risks associated risk of insolvency of strong ties . With a high degree of differentiation of risks can isolate and with low contrast make it difficult or even impossible. When the risk of insolvency becomes undifferentiated - it means that it is so intertwined and interconnected with other risks that can not be divided. This situation can be comparable with the monolith. In this situation, the risk of insolvency becomes a risk of bank failure.

Highly differentiated risk of insolvency of the bank is the simplest. It generally appears two or three little risk linked. Each risk is primarily independent and is adjustable weighted management decisions. In highly differentiated risk of insolvency Commercial Bank is exposed constantly to the activity, but it is easy to manage.

Moderately differentiated risk of insolvency is manifested simultaneous action of several financial risks. These risks can isolate and control. At the same time a manifestation of a risk may have a moderate impact on other risks.

Low- risk differentiated insolvency manifested simultaneous action of several financial risks that are difficult to provision out, strong links between risk and manifestation of any of them has an impact on others. Low-risk differentiated insolvency act comprehensively, but only within a financial risk.

Undifferentiated risk of insolvency is manifested simultaneous action of many risks. These risks are inseparable. Links between risks durable, and display any of them has an effect on everyone else. Undifferentiated risk of insolvency is a complex not only with financial risks, but also functional.

In nature, the risk of insolvency of the bank can be compared with cauliflower. As we know it is composed of numerous shoot - buds. Each shoot - buds can be compared with the corresponding risk. All shoots, buds are powered from a single stem, as well as the risks of bank resources, including home equity. Originally inflorescence shoots sprout singly and not tight - that is highly differentiated. Then there is a seal, but rather moderate. Shoots, buds still be divided, although they are beginning to find fault with one another inflorescence - moderate differentiation.

Further, inflorescence stems thicken and buds partially intertwined. They can no longer be divided so as not to damage - a low differentiation. Finally, inflorescence stems and sealed so intertwined that they can not be extracted without damaging the integrity. This is an example undifferentiated.

From a mathematical point of view, the risk of insolvency of the bank can be described as an inverted graph rooted up trees.

Thus, the expression of the risk of insolvency and bankruptcy is systemic because their research should be carried out using a systematic approach. The systems approach is a methodological research in this direction in which the object of study is considered as a complete set of elements in a set of relationships and interactions.

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