

## **RISK MANAGEMENT MODEL WITHIN AN ALTERNATIVE INVESTMENT FUND (AIF). SIF MOLDOVA CASE STUDY**

**Costel Ceocea**

Vasile Alecsandri University of Bacau  
costel.ceocea@ub.ro; cceocea@sifm.ro

### **Abstract**

*Risk management has become a primary objective in the management decision. Particularly, in case of investment processes, the focus on risk management is becoming more pronounced, as a reaction to the increase in the complexity of financial products and processes of analysis, decision and implementation of investment projects. Currently, it is in progress the implementation of the European legislation in the field of investment funds, with a significant orientation towards the regulation of risk management models / processes. In this context, capitalizing the constant concern of the management for effective administration of the risk, SIF Moldova has structured and implemented a risk management model based on capital adequacy that includes quantifiable prudential indicators as objective support which is essential in optimizing the investment decision. As in the secondary legislation that is specific to AIF / AIFM it is not proposed and described a standard method of risk management and it is not stipulated a set exposure limits, it was decided to develop a model for risk management in accordance with the requirements of AIFM legislation by applying the principles stipulated in the banking norms.*

### **Keywords**

management; risk; capital; investment; assets; prudential indicators; EU legislation

### **JEL Classification**

F15; F50; O10

### **Reference models in risk management stipulated in EU legislation and taken over into the national legislation**

In specific terms used in the stock market, we shall refer to the risk management of investment funds called Alternative Investment Funds (AIF) or Alternative Investment Funds Managers (AIFM), a category in which SIF Moldova will also be included and whose experience may be a case study.

Basically, an investment fund from AIF / AIFM category must develop a risk management system that identifies and evaluates each financial risk to which it is exposed in its current activity and which aims in particular that the solvency ratio from its own funds (*the permanent resources free of any burden which can, at any time, to absorb any loss caused by the concretization of any financial risk*) and the capital requirements (*related to the losses that can occur in case such risks are materialized*) to be above certain levels considered prudent. It is also requested a prudent level for a number of liquidity indicators. From the complementary perspective of banking legislation, a risk management model has two forms: one standard (as described in legislation) and one advanced - built by the financial entity and proposed for approval to the supervisory body. In this framework it can be designed and operated a hybrid risk management system, requesting the compliance with a set exposure limits (*as it is*

*currently stipulated in the applicable regulations*) and the registration of prudent levels of the prudential indicators (*solvency ratio, liquidity ratio*).

### **Premises of developing a risk management model in the case of Societatea de Investiții Financiare Moldova SA (framed as AIF / AIFM)**

As in the secondary legislation that is specific to AIF / AIFM it is not proposed and described a standard method of risk management and it is not stipulated a set exposure limits, it was decided to develop a model for risk management in accordance with the requirements of AIFM legislation by applying the principles stipulated in the banking norms.

On these coordinates and considering that SIF Moldova is an investment fund that holds stakes in several companies (subsidiaries, associated companies and participations) and whose main objective is the application of some investment strategies through the participations held, it results, naturally, that the company is exposed to a large extent to the solvency risk.

On the other hand, given that the most of the holdings are long-term investments and that it is not used the leverage, there were determined internal quantitative limits for the financial risks attached to the assets of the portfolio.

By calculating and reporting the capital requirements it is obtained a comprehensive picture of the risk profile of the company's activities and a perspective on the systemic risks that the company is showing for the financial sector or the real economy.

### **Risk Management Model based on capital adequacy**

To determine the risk profile of SIF Moldova there are proposed the following indicators and minimum / maximum limits:

#### **Liquidity Risk Quantification**

**Liquidity Coverage Ratio (LCR gross)** = *The value of high liquidity assets that may be valued within 30 days / current liabilities (including the shareholder dividends) with a maximum maturity of 30 days*

**Minimum limit proposed:** > or = 1,2

**Liquidity Coverage Ratio (LCR net)** = *The value of high liquidity assets that may be valued within 30 days / current liabilities (without shareholder dividends) with a maximum maturity of 30 days*

**Minimum limit proposed:** > or = 12

*LCR has as objective the cover of the liquidity needs on a time horizon of 30 days under a combined crisis scenario (institution and market)*

In the highly liquid assets there were included two asset classes:

- **Class A – assets that generate immediate liquidity** (cash, current accounts, treasury bonds, bank deposits)
- **Class B – assets that generate reserve liquidity** (equities and bonds traded on the main markets)

**Rules for determining the value of listed shares that may be valued at the market in maximum 30 days (20 trading days):**

- Selection of the issuers traded on the main trading markets (which were traded in a number of days representing at least 80% of all trading days of the period taken into consideration);
- Consideration a volume of maximum 25% of the average daily amount of shares which were traded on the regulated market (in accordance with the limit stipulated in Article 5 paragraph (2) of the EC Regulation no. 2273 / 2003);
- Calculation of the market value of the maximum volume that can be traded at the closing price from the date of the calculation and application of a decrease in value of maximum 20%.

The resulting value for the indicator “Liquidity Coverage Ratio” will be tested by applying stress variables (e.g. decrease in stock exchange quotations, increase of the debts - dividends for shareholders or unanticipated fines, etc.)

**Net Stable Funding Ratio (NSFR)** = *Value of temporary resources (e.g.: unclaimed dividends) / Total value of assets (from the balance sheet)*

**Maximum threshold proposed: < or = 10%**

*The two ratios (LCR and NSFR) have as objective the increase of the company's resistance to liquidity crisis situations on short-term but also on long-term and are designed to reduce / limit the risk of cash flow of the company.*

**Liquid Asset Ratio (portfolio liquidity)** = *Value of liquid assets / Total value of assets (from net asset)*

**Minimum threshold proposed: > or = 60%**

**Quantifying the market risk (by comparing the potential losses from the market risk with its own funds)**

**Risk Position** = *Value of capital requirements for assets exposed to the risk position / amount of own funds.*

**Minimum threshold proposed: > or = 5%**

**Maximum threshold proposed: < or = 25%**

**Applicable rule:**

It was associated the risk position to the exposure in assets of type:

- equities listed on a main market, which were traded in a number of days representing at least 50% of the total number of trading days in a year;
- fund units at listed open investment funds (OIF) and at listed closed-end investment funds (CIF).

**Foreign Exchange Risk** = *Value of capital requirements for assets exposed to the foreign exchange risk / Amount of own funds.*

**Maximum threshold proposed: < or = 5%**

**Risk of long-term interest rate** = *Value of capital requirements for assets exposed to the risk of long-term interest rate / Amount of own funds*

**Maximum threshold proposed: not applicable**

**Commodity risk** = *Value of capital requirements for assets exposed to the commodity risk / Amount of own funds*

**Maximum threshold proposed: not applicable**

**Quantifying the credit risk (by comparing the potential losses from the credit risk with its own funds):**

**Credit risk (creditworthiness of the issuer / creditworthiness of the debtor)** = *Value of capital requirements for assets exposed to the credit risk / Amount of own funds*

**Maximum threshold proposed: < or = 50%**

**Applicable rule:**

It was associated the credit risk to the exposure in assets of type:

- equity securities (unlisted shares and shares listed on a secondary market);
- debt securities (municipal bonds, unlisted or not-traded , corporate bonds);
- exposures in fund units at unlisted closed-end investment funds (CIF);
- trade receivables.

There were applied the risk weights provided in Regulation 575/2013; at the exposures in venture capital companies (Catalyst) and in private equity companies (Agribusiness, Real Estate, Opportunity) there were given 150% risk weight on exposures with an extremely high risk.

**Quantifying the concentration risk**

**Large exposures to an issuer/debtor** = *Value of the exposure per an issuer/debtor / Total value of assets*

**Legal limit: 10%; the threshold may be increased up to 40% with the condition that the amount of the exposures that exceed 10% not to exceed together 80% of the total assets (Article 118, letter b) of Regulation 15/2004)**

**Large exposures to a sector** = *Value of exposure to a sector / Total value of assets*

**Maximum threshold proposed: < or = 60%;**

**Counterparty risk**

**Counterparty risk** = *Value of capital requirements for assets exposed to the counterparty risk / Amount of own funds*

**Maximum threshold proposed: not applicable**

## Operational Risk

**Operational Risk** = Value of capital requirements related to the operational risks (including the professional liability) / Amount of own funds

**Maximum threshold proposed: < or = 5%**

## Risk panel

As an example, on the basis of the public data available from the Financial Statements and Net Asset Statement, it has been determined the value of the risk indicators at the date of December 31, 2015.

Risk type / Risk indicator	Value at Dec. 31, 2015	Quantitative limits risk exposure - proposal	
		Minimum threshold	Maximum threshold
<b>LIQUIDITY RISK</b>			
<i>Highly liquid assets</i>	<b>149.053.707</b>		
Class A – assets that generate immediate liquidity (current accounts, cash, deposits, government bonds – with maturities up to 30 days)	67.626.058		
Class B – assets that generate reserve liquidity (listed shares that may be valued in a period of 30 days, with a decrease in stock exchange quotation of maximum 20%)	81.427.649		
<i>Current liabilities with a maximum maturity of 30 days (gross)</i>	45.672.219		
<i>Current liabilities with a maximum maturity of 30 days (net)</i>	3.278.058		
Liquidity Coverage Ratio (LCR gross) 30 days	<b>3.26</b>	<b>&gt;= 1.2</b>	
Liquidity Coverage Ratio (LCR net) 30 days	<b>45.47</b>	<b>&gt;= 12</b>	
<i>Temporary resources (e.g. unclaimed dividends)</i>	42.379.571		
<i>Total assets (from balance sheet)</i>	1.095.944.764		
Net Stable Funding Ratio (NSFR)	<b>3.87%</b>		<b>&lt;= 10%</b>
<i>Liquid assets</i>	<b>1.223.713.152</b>		
Current accounts	592.961		
Cash	12.460		
Deposits with maturity up to 365 days	90.961.057		
Listed shares, fund units at listed Open Investment Funds and listed Closed-end Investment Funds	1.132.146.674		
<i>Total assets (from net asset)</i>	<b>1.545.061.332</b>		
Liquid Asset Ratio (portfolio liquidity)	<b>79.20%</b>	<b>&gt;= 60%</b>	
<b>MARKET RISK</b>			
Capital requirement for market / position risk	182.732.091		
Own funds	860.609.495		
Market / Position Risk Indicators	<b>21.23%</b>	<b>&gt;= 5%</b>	<b>&lt;= 25%</b>

<b>Capital requirement for market / foreign exchange risk</b>	0		
<b>Own funds</b>	860.609.495		
<b>Market / Foreign Exchange Risk Indicators</b>	<b>0.00%</b>		<= 5%
<b>CREDIT RISK</b>			
<b>Capital requirement for credit risk</b>	300293.988		
<b>Own funds</b>	860.609.495		
<b>Credit Risk Indicator</b>	<b>34.89%</b>		<= 50%
<b>CONCENTRATION RISK (LARGE EXPOSURES)</b>			
<b>Concentration risk per issuer (e.g. Banca Transilvania)</b>	<b>39.33%</b>		<= 40%
<b>Concentration risk per sector (e.g. financial)</b>	<b>46.74%</b>		<= 60%
<b>COUNTERPARTY RISK</b>			
<b>Capital requirement for the counterparty risk</b>	0		
<b>Own funds</b>	860.609.495		
<b>Counterparty risk indicator</b>	<b>0.00%</b>		
<b>OPERATIONAL RISK</b>			
<b>Capital requirement for operational risk, including the coverage of professional liability</b>	29.442.445		
<b>Own funds</b>	860.609.495		
<b>Operational risk indicator</b>	<b>3.42%</b>		<= 5%

### **Determination of the solvency ratio of SIF Moldova**

The solvency ratio, respectively the own funds ratio represents the own funds expressed as a percentage of the total risk exposure.

According to Article 92, paragraph (1) of EU Regulation no. 575 / 2013, the requirement for the value of total own funds rate in the banking system is 8%.

For SIF Moldova, the calculated solvency ratio (without the deduction from the own funds of the holdings in financial institutions and of the qualified participations) at the date of Dec 31, 2015 is of 29.15%, *indicating a comfortable capital adequacy.*

### **Conclusion**

In general picture of the managerial decision, the focus on risk management is becoming more pronounced, as a reaction to the increase in the complexity of financial products and processes of analysis, decision and implementation of investment projects. On this background, we are witnessing the dynamics of the specific legislation related, which records an up-date of the analysis models nationwide by aligning with the European provisions in the field. Particularly, at the moment it is in progress the implementation of the European legislation in the field of investment funds, with a significant orientation towards the regulation of risk management models / processes. This is the framework in which it is enrolled the analysis made by Societatea de Investitii Financiare Moldova, which led to a first risk management model based on capital adequacy. Imminent entry (May 2016) of SIF Moldova in the process of approval / authorization by the regulator (FSA) with regards to the status of Alternative

Investment Fund (AIF) may lead to the refinement of the model proposed to ensure an effective management of risks associated with the investment processes.

### **References**

AIFM secondary legislation: FSA Regulation no. 10/2015 and EU Regulation 231/2013.

Ceocea Costel (2010), *“The risk in management activity”*, Economica Publishing, Bucharest, ISBN 978-973-709-503-9.

Ceocea Costel (2014), *“Theory and practice of management decision”*, Economica Publishing, Bucharest, ISBN 978-973-709-717-0.

EU Regulation no. 231/2013;

EU Regulation UE 575/2013.

Law no.74/2015 on alternative investment funds.