

ANALYTICAL PROCEDURES USED IN FINANCIAL AUDIT FOR THE VALUATION OF PORTFOLIO PERFORMANCES – CASE OF FINANCIAL INVESTMENT COMPANIES

*Tatiana Dănescu¹
Ovidiu Spătăcean²*

ABSTRACT: Conducting financial audit engagements for Financial Investment Companies is based in a significant measure on the conception and performance of analytical procedures that assist the auditor in the process of elaborating general conclusions regarding the performances of the managed portfolios. In connection with the issue of construction a system of indicators for assessing the portfolio performances, we remark the approach from the perspective of portfolio managers, though it is not explored their usefulness as analytical procedures used in a financial audit engagement conducted in investment companies. The approach to scientific research has considered, mainly, the analysis of financial statements published³ by the five Financial Investment Companies in the period 2006-2008, the comparison of portfolio performances in correlation with the reported net asset value, as well as the inspection of trading reports issued by the market operator Bucharest Stock Exchange and analysis reports issued by the Romanian Association of Fund Managers.

Key words: Financial Investment Companies, financial assets, portfolio management, rate of return and risk correlation, analytical procedures, investment decision.

JEL code: M42

The necessity of issuing a system of key indicators for portfolio management

Current activities undertaken by the Financial Investment Companies consist of managing portfolios of financial assets having the structure of capital investments in different financial instruments such as stocks, bonds, bank deposits, deposit certificates and government securities. The construction of a set of indicators for the purpose of measuring portfolio performances for the Financial Investment Companies is subordinated to objectives that define investment strategy and policies, to improve gains related to the sales of stock investments, to increase dividend income related to shareholdings or interest income generated by fixed income instruments and to minimize losses arise from restructuring process by selling non-performing holdings.

Coordinates defining the necessity of elaborating a system of indicators to measure the effectiveness of capital investments managed by the Financial Investment Companies are based upon the following *aims*:

- fast access to information available for the public investors is subject to the degree of informational efficiency of capital markets;

If investors do not consider the information timely and do not react properly, they position themselves outside the market and may lose in relation to the fluctuations of trading prices.

¹ Petru Maior⁹ University of Tîrgu Mureş, tatiana_danescu@yahoo.com

² Petru Maior⁹ University of Tîrgu Mureş, spatacean_ioanovidu@yahoo.com

³ Annual reports published on Financial Investment Companies' official websites and on the market operator Bucharest Stock Exchange official website (www.bvb.ro).

- stock exchange analysis and portfolio management ensure, under the assumptions of efficient market conditions, increased earnings, at least by considerations relating to scale economies;

The cost of market analysis is no different when it refers to a small investment or a large investment, but gains may be significant in the second case, so an active market approach that characterizes institutional investors is imperious necessary.

- an active management style is required taking into account the risk-return criteria, due to the fact that, as a perception, the value of information gained is significantly reduced by the release in the market;

Yet, on the other hand, there is a type of information that has not a wider degree of dissemination (insider information), usually belonging to initiate persons. Institutional investors will overcome the lack of such information through analysis and market research.

- ensuring a balance between profitability and risk associated to financial assets by promoting investment policies of active management style, would create the premises of sustainable growth in value of the managed portfolio and the maximization of shareholders' wealth on a long-term basis.

Analytical procedures for valuating portfolio performances

In the context of the International Auditing Standards, the term "analytical procedures" consist of evaluations of financial information made by a study of plausible relationships among both financial and non-financial data. Analytical procedures include also those investigations, as they need, on the fluctuations or relationships that are discordant compared with other relevant information or which differ by a significant amount relative to the expected⁴. When analytical procedures identify fluctuations or relationships that are not consistent with other relevant information or which differ by a significant amount relative to the expected, the auditor should investigate such differences by questioning the leadership and obtaining adequate audit evidence relevant to the management responses and performing other audit procedures as they are necessary or not in the certain circumstances⁵.

Analytical procedures are designed to analyze the existing correlations, the trends of informational elements analyzed, estimating thus the reasonableness of the transactions and account balances, by using comparisons and various indicators. They are applied beginning with the sequence of planning the audit but also in the final reviewing stage, for the purpose of highlighting the high risk domains, for which the auditor then use more detailed procedures (substantive tests). Conducting analytical procedures involves: determining the scope, forecasting information, comparing information, analyzing results, comparing and determining significant deviations, particularly those unexpected and making changes in audit program.⁶

To assess the quality of the management activities related to a portfolio of financial assets, the following indicators may be used as analytical procedures for valuating portfolio performance, as they are characterized by a highly level of informational relevancy⁷:

(a) *Rate of return on investment transactions*: gives an insight into the profitability of conducting transactions with financial instruments in a period examined. Calculation formula is

⁴ ISA 520 *Analytical procedures*, paragraph 4.

⁵ ISA 520 *Analytical procedures*, paragraph 7.

⁶ T. Dănescu, *Financial audit techniques and procedures*, Irecson Publishing House, Bucharest, 2007, pp. 138-139.

⁷ L. Popa, D. Doruc, *Measurement of performances in the particular case of a portfolio managed by SIF Banat Crișana* and D. Turcaș, M. Urs, Management indicators for a portfolio of financial assets at *SIF Banat Crișana* in the volume of scientific papers issued by Banat-Crișana Financial Investment Company and West University of Timișoara, *Studies and researches communicated at the 3rd Scientific Session "The Capital Market"*, West University Publishing House, Arad, 2005 pp. 178-194.

based on elements quantifying financial efforts and effects associated with acquisition and disposal of equity investments, as it follows:

$$R_r = \frac{(V + D_{ob}) - (C_h + C_t)}{(C_h + C_t)} \times 100, \quad (1)$$

where:

R_r – rate of return on investment transactions;

V – revenues from financial assets (held or sold);

D_{ob} – interest revenues;

C_h – expenses related to disposal of financial assets;

C_t – expenses related to fees and trading commissions.

Comparing the results obtained for the five Financial Investment Companies, shows that this indicator can vary significantly, depending on the specific investment objectives and the administration policies, as shown in Table. 1.

Table no. 1

Rate of return on investment transactions– accrual accounting approach⁸
(RON)

Specification	SIF Banat Crişana			SIF Moldova		
	31.12.2006	31.12.2007	31.12.2008	31.12.2006	31.12.2007	31.12.2008
Revenues from available for sale financial assets	62.369.217	62.000.540	79.565.545	32.828.453	36.187.198	46.282.258
Revenues from financial assets at fair value through profit or loss	0	0	0	0	0	0
Revenues from disposal of financial assets	54.052.762	73.230.681	19.224.303	47.700.647	55.518.113	51.135.627
Interest revenues	4.912.938	6.126.617	6.056.633	6.012.774	3.790.782	4.938.017
Expenses related to disposal of financial assets	15.332.404	24.301.153	9.215.803	12.516.902	19.558.152	15.872.442
Expenses related to fees and trading commissions	2.310.807	2.830.851	2.657.610	1.881.634	2.426.194	2.479.020
Rate of return on investment transactions	587,71	421,00	783,04	501,05	334,38	457,75
Specification	SIF Transilvania			SIF Muntenia		
	31.12.2006	31.12.2007	31.12.2008	31.12.2006	31.12.2007	31.12.2008
Revenues from available for sale financial assets	34.479.186	39.604.326	45.881.197	35.824.557	38.630.819	44.993.616
Revenues from financial assets at fair value through profit	0	0	0	2.085.151	1.803.383	3.837.206

⁸ Primary data source: annual financial statements of Financial Investment Companies, published on official websites: <http://www.banat-crisana.com> (SIF Banat Crişana), <http://www.sifm.ro> (SIF Moldova), <http://www.transif.ro> (SIF Transilvania), <http://www.sifmuntenia.ro> (SIF Muntenia), <http://www.sifolt.ro> (SIF Oltenia).

or loss						
Revenues from disposal of financial assets	93.184.141	131.774.066	90.816.065	75.143.698	59.670.381	112.929.190
Interest revenues	3.291.283	8.351.457	4.476.000	52.315	574.959	118.837
Expenses related to disposal of financial assets	36.911.646	31.449.534	17.346.042	435.392	1.183.014	103.705
Expenses related to fees and trading commissions	3.289.484	4.804.293	4.106.636	15.989.251	17.549.849	20.496.525
Rate of return on investment transactions	225,75	395,75	558,07	588,63	437,45	685,81
	SIF Oltenia			Research results and the role for audit activity: Using this rate as an analytical procedure reflects to the auditor the quality of asset management decisions, helping in drawing general conclusions about the overall strategy, investment objectives and management style adopted in each Financial Investment Company. Financial Investment Companies realized investment operations characterized by a high level of profitability, average rate of return in the 2006-2008 period being 531.52%. In relation to this indicator, SIF Oltenia emerges compared to other investment companies, the average level recorded for this indicator being 665.45%. Susceptible close in value are SIF Banat Crisana (597.25%) and SIF Muntenia (570.63%). Poor performances in portfolio management have been recorded for SIF Moldova (431.06%) and SIF Transilvania (393.19%).		
Specification	31.12.2006	31.12.2007	31.12.2008			
Revenues from available for sale financial assets	42.475.288	47.394.282	83.139.643			
Revenues from financial assets at fair value through profit or loss	0	0	0			
Revenues from disposal of financial assets	87.063.780	128.824.758	27.730.349			
Interest revenues	3.456.229	4.416.306	2.097.336			
Expenses related to disposal of financial assets	16.483.595	31.669.982	10.820.887			
Expenses related to fees and trading commissions	879.969	1.268.277	682.812			
Rate of return on investment transactions	665,94	448,41	882,01			

(b) *The weight of listed companies in the portfolios managed:* reflect the portfolio quality in terms of liquidity and the possibility of assessing in market values of equity investments. High value of this indicator qualifies for a prudent and efficient portfolio management, at least in terms of reducing investment risk. The relationship for determining the indicator is:

$$P\% = \frac{N_{sl}}{N_{sp}} \times 100, \quad (2)$$

where:

P% – weight of listed companies in total companies selected in portfolios;

N_{sl} – number of listed companies or value of stocks held in listed companies;

N_{sp} – total number of companies in portfolio or total value of stock portfolio.

Using tests carried out on information reported for portfolio structures related to the five Financial Investment Companies, data obtained were pooled in Table no. 2.

Table no. 2

Weight of listed companies in total portfolios managed by Financial Investment Companies⁹.

Specification	SIF Banat Crişana			SIF Moldova		
	31.12.2006	31.12.2007	31.12.2008	31.12.2006	31.12.2007	31.12.2008
Number of listed companies	209	143	134	135	129	117
Total number of companies in portfolio	434	368	341	279	264	243
<i>Weight of listed companies (%)</i>	<i>48,16</i>	<i>38,86</i>	<i>39,30</i>	<i>48,39</i>	<i>48,86</i>	<i>48,15</i>
Specification	SIF Transilvania			SIF Muntenia		
	31.12.2006	31.12.2007	31.12.2008	31.12.2006	31.12.2007	31.12.2008
Number of listed companies	188	143	128	79	86	80
Total number of companies in portfolio	324	303	276	269	240	236
<i>Weight of listed companies (%)</i>	<i>58,02</i>	<i>47,19</i>	<i>46,38</i>	<i>29,37</i>	<i>35,83</i>	<i>33,90</i>
Specification	SIF Oltenia			Research results and the role for audit activity: According to ISA 520 <i>Analytical procedures</i> , the auditor can use this indicator as an analytical procedure for an entity in given circumstance, in relation to other entities of comparable size in the same activity sector. The purpose is to obtain an understanding of the objectives associated with portfolio management strategy. The evolution of this indicator shows diverging trends: decrease in case of SIF Banat-Crisana and SIF Transilvania, and increase for SIF Muntenia. For SIF Oltenia and SIF Moldova is remarkable a conservation of the weight of in listed companies in total portfolio.		
	31.12.2006	31.12.2007	31.12.2008			
Number of listed companies	77	74	65			
Total number of companies in portfolio	211	191	178			
<i>Weight of listed companies (%)</i>	<i>36,49</i>	<i>38,74</i>	<i>36,52</i>			

Increasing the value of this indicator involves positive effects on quality of portfolios managed by the Financial Investment Companies, at least regarding the existence of a trading price that may be an accurate estimator for the true fair value of financial assets held in portfolio. This entails significant implications on how the process of recognition and valuation of capital investments in the financial statements is conducted, influencing investors' perceptions upon financial position and performance reported by the Financial Investment Companies, perception measured by the trading price evolutions.

(c) *Turnover for a portfolio of financial assets*: seeks to quantify the volume of transactions over a certain period of time, relative to the average net asset market value, providing information about both the liquidity of financial assets that make up the portfolio, and of asset-management

⁹ Primary data source: periodic reports concerning net assets of Financial Investment Companies available on the official website of Romanian Fund Managers Association <http://www.aaf.ro>.

business, for the goal of restructuring portfolio and improving performance. The calculation formula is the following one:

$$R_p = \frac{I_v + A_{if}}{V_p} \times 365, \quad (3)$$

where:

R_p – portfolio turnover;

I_v – cash flows from disposal of financial investments;

A_{if} – acquisitions of financial instruments;

V_p – average net asset market value.

Table no. 3
Turnover for portfolios managed by Financial Investment Companies¹⁰
(RON)

Specification	SIF Banat Crişana			SIF Moldova		
	31.12.2006	31.12.2007	31.12.2008	31.12.2006	31.12.2007	31.12.2008
Cash flows from disposal of financial investments	54.943.414	83.383.615	52.143.447	48.265.702	55.160.268	41.386.467
Acquisitions of financial instruments	53.928.808	79.648.515	80.325.426	48.040.858	68.901.698	44.841.998
Average net asset market value	1.290.115.780	1.787.126.714	1.599.308.820	1.157.206.940	1.623.157.462	1.412.551.919
Portfolio turnover (days/rotation)	30,80	33,30	30,23	30,38	27,90	22,28
Specification	SIF Transilvania			SIF Muntenia		
	31.12.2006	31.12.2007	31.12.2008	31.12.2006	31.12.2007	31.12.2008
Cash flows from disposal of financial investments	93.184.141	133.774.066	95.705.300	84.524.063	88.007.339	154.494.511
Acquisitions of financial instruments	43.097.385	154.676.613	111.490.863	60.724.101	71.379.915	100.847.518
Average net asset market value	1.367.659.979	2.254.920.858	2.196.833.884	1.139.380.197	1.844.076.382	1.815.940.968
Portfolio turnover (days/rotation)	36,37	46,69	34,43	46,53	31,55	51,32
Specification	SIF Oltenia			Research results and the role for audit activity:		
	31.12.2006	31.12.2007	31.12.2008			

¹⁰ Primary data source: annual financial statements of Financial Investment Companies, published on official websites: <http://www.banat-crisana.com> (SIF Banat Crişana), <http://www.sifm.ro> (SIF Moldova), <http://www.transif.ro> (SIF Transilvania), <http://www.sifmuntenia.ro> (SIF Muntenia), <http://www.sifolt.ro> (SIF Oltenia); periodic reports concerning net assets of Financial Investment Companies available on the official website of Romanian Fund Managers Association <http://www.aaf.ro>.

Cash flows from disposal of financial investments	87.125.256	128.979.244	27.828.268	Applying this analytical procedure, the auditor documents conclusions about the extent of trading activity relative to the market value of financial assets that make up the portfolio of Financial Investments Companies. The conclusions thus obtained can be used for understanding and assessing the operational and financial risks affecting the business of such entities, in that, normally, a low value reflects an increase in frequency for investment trading operations over a certain period of time and consequently higher risks. In this approach, there is a high level of intensity of market operations for SIF Oltenia, SIF Moldova and SIF Banat-Crisana, where the average value for this indicator is 26.85 days/rotation, 27.81 days/rotation, respectively 31.44 days/rotation.
Acquisitions of financial instruments	61.265.669	120.033.244	58.372.093	
Average net asset market value	1.720.628.961	2.462.992.633	2.091.175.126	
Portfolio turnover (days/rotation)	31,48	36,90	15,05	

(d) Risk remuneration coefficient: shows, on average, how many return units are assigned for a unit of risk by investing in the portfolio over a period of time, after the following calculation method:

$$K_r = \frac{R_{p\%}}{\sigma_{port\%}^2} \quad (4)$$

where:

K_r – risk remuneration coefficient;

$R_{p\%}$ – portfolio rate of return;

$\sigma_{port\%}^2$ – portfolio risk.

Table no. 4

Remuneration coefficient for portfolios managed by the Financial Investment Companies.¹¹

Specification	SIF Banat Crişana			SIF Moldova		
	31.12.2006	31.12.2007	31.12.2008	31.12.2006	31.12.2007	31.12.2008
Portfolio rate of return (%)	21,84	34,04	-47,86	34,38	6,21	-54,53
Portfolio risk (%)	3,87	6,70	8,28	8,67	5,57	11,11
Remuneration coefficient	5,64	5,08	n.a.	3,97	1,11	n.a.
Specification	SIF Transilvania			SIF Muntenia		
	31.12.2006	31.12.2007	31.12.2008	31.12.2006	31.12.2007	31.12.2008
Portfolio rate of return (%)	24,28	36,04	-40,13	-0,29	81,28	-32,26
Portfolio risk (%)	5,71	5,47	12,99	3,42	10,13	4,47
Remuneration coefficient	4,25	6,59	n.a.	n.a.	8,02	n.a.
Specification	SIF Oltenia			Research results and the role for audit		

¹¹ Primary data source: Annex no. 17 of NSC Rule no. 15/2004 regarding the authorization and functioning of asset management companies, collective investment bodies and custodians: Reports for AOPC established by memorandum of association – situation of detailed investments.

	31.12.2006	31.12.2007	31.12.2008	activity:
Portfolio rate of return (%)	16,77	30,45	-55,83	For issuing conclusions about the portfolio performances obtained by the Financial Investment Companies in relation to the risks undertaken, the auditor can use this analytical procedure based on rates of return and risk measures for the companies selected in the analysing process. In the proposed model there were considered financial instruments issued by companies that are traded and have a higher weight of 2% in the total portfolio for each Financial Investment Company.
Portfolio risk (%)	8,47	4,85	10,66	
Remuneration coefficient	1,98	6,28	n.a.	

Conclusions

Selecting a general reference criterion for assessing the portfolio performances related to Financial Investment Companies is a prerequisite to adjust future performance targets. In current practice, portfolio managers often relate to the reference interest rate upon which is based the rate of return that characterizes financial assets with medium-low risk (government securities, deposit certificates, government bonds, etc.). Another landmark in evaluating portfolio performance is a general or a sector market index. If the evolution of portfolio profitability is lower in relation with a stock index, portfolio management activity is characterized by low efficiency, the passive strategy being a more advantageous administration alternative. In essence, each portfolio manager seeks higher returns in comparison to the market.

From the perspective of the financial auditor, analytical procedures based on indicators of portfolio performance review for the Financial Investment Companies can be applied effectively as risk assessment procedures at the stage of obtaining knowledge and understanding the entity and its environment, in order to assess risks of material misstatement of the financial statements.

Research findings and the role in auditing activities related to portfolio performances obtained by Financial Investment Companies has been reflected for each type of analytical procedure proposed to be used in audit work.

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