

# ANALYSIS OF THE ROMANIAN MUTUAL FUND MARKET PERFORMANCE WITHIN PRE-CRISIS, CRISIS AND REVIVAL DURING 2008-2014

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## Abstract

*The study was developed in evaluating the performance of Romanian mutual funds highlighting the results of several selected key indicators. A comparative analysis was developed in order to define the benefits and risks assumed by these investment vehicles beside other available investment alternatives on the Romanian market within the last 8 years' horizon from 2007 to 2014. The aim of our research is to examine the classical rates performance measurement (Sharpe, Treynor and Jensen) and to get an overview of the hierarchy based over the domestic mutual funds market. In determining these rates, it was necessary to obtain coefficients of correlation and volatility, including standard deviation for each category of the mutual funds - equity funds, diversified funds and funds bond. We exclude from the analysis the money market funds as their yield is folded in relation to the exposure of monetary instruments included in the portfolio and which confers a relative stability.*

**Keywords:** investment market, financial instruments, volatility, risk, performance

**JEL code:** E22, G23, O11.

## Introduction

Assessing investment funds performance must take into account the interaction between investment funds and portfolio companies, and afterwards we can identify three categories of factors that might affect the results of investment funds as follows:

- the characteristics and the results of the company included in the portfolio;
- the investment strategy changes of the fund (amendment allocations, changes in the portfolio distribution, etc.);
- market conditions as external factors influence both for the company's portfolio and the management strategy of the fund.

Starting from investor motivation, any form of investment must be justified in terms of three criteria (Bailesteanu 1998): profitability, liquidity and safety. Since profitability is a basic measure of the performance (Filip 2008) that comes to define the added value derived from the value increase in the unit value of the fund assets, the other two elements complement the "magic triangle of investments" (Bailesteanu 1998).

Alignment of the three items is not guaranteed and conflicts may be occurred between them, such as:

- safety vs profitability - a high degree of safety is often associated with low profitability, while considerable results are obtained mostly with high risks;
- liquidity and profitability - requires a high liquidity diminished returns.

We find that the binomial profitability - risk cannot be dissociated and the onset of one of these elements is assured by the expense of the other, respectively, a level considered risk arises as the desire to obtain higher yields. Thus they were established in the literature a number of methods for measuring the performance of investments consisting of risk assessment as well as the evaluation of risk-adjusted returns.

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## Literature review and theoretical/conceptual framework

While managing portfolios the investment funds performance is related to assessing the effectiveness of the managed portfolios. (Fairly 1999) associated the following potential benefits derived from unit funds ownership:

- increasing mutual fund asset value (+  $\Delta\%$ ATN);
- dividends paid by the portfolio company for the relevant shareholding in the capital;
- capital gains earned by the investment fund after investment activity.

The option of choosing the best measures for assessing the performance of investment funds by the criterion of profitability - risk is a fundamental statement of performance measurement adequacy calculation.

Most research on explaining the performance of investment funds (Giles, Alexeeva & Buxton 2003) (Chan et al. 2009), (Sanchez & Sottorio 2009) (Haslem 2010) (Shi 2013) identified and agreed that following approaches express unitary the performance evaluation, according to the Table 1 structure.

**Table 1 Measures in assessing the investment funds performance**

<i>Standard indicators</i>	<i>Alternative indicators</i>
Sharpe rate Treyner rate $\alpha$ Jensen	Sortino rate (Sortino & Price, 1994) Entropy rate Modigliani squared rate ( $M^2$ ) Pederson-Satchell rate Omega index VaR și VaR conditional (CVaR) Non-parametric models (e.g. Data Envelopment Analysis) Multifactorial models (Fama & French, 1993; Carhart, 1997;)

Source: (Pedersen & Rudholm-Alfvín 2003), (Filip 2008), (Nițu 2009), (Luckoff 2010)

Due to the fact that the majority of the alternative methods are specific to the US fund market, we encounter difficulty in transposing them to the domestic market and we appreciate to use within the research the traditional rates to relate the performance evaluation (moreover due to the fact that local historical records are barely developed since 2000). At the same time, we recognize the shortcomings of traditional measures for assessing performance, but consider them appropriate to use such appreciation rates for the domestic investment fund market as long as these investment vehicles benefit from a diversified portfolio differentiated only by the degree of exposure in assets and a market risk near total risk the portfolio. Thus, this situation is equivalent to the application of the classical rates i.e. Sharpe, Treynor and Jensen rates.

To assess the measures of mutual funds' performance the database considered was provided by the Association of Asset Managers Romania (abr. AAF), the Financial Supervision Authority (abr. ASF former CNVM) for the period 2007-2015, considering domestic fund categories - 74 active mutual funds on the Romanian market.

Methodically, we focused on analyzing the performance of each category of funds as benchmarks using comparable indicators in relation to their exposure in the market. In this respect, to assess the performance of the equity funds and diversified, we will consider that progress benchmarks indices BET and BET -FI. Instead, for low risk funds (i.e. money market and bonds funds), the most representative benchmark for their performance is the gain associated with an investment in a bank deposit capitalization for the period of calculation. Therefore, we used the average interest rate for 3-month deposit rate, the yield of government securities on 6 -months, treasury bills profitability, all calculated according to the Romanian Central Bank statistics.

Also, the performance analysis of local mutual funds considers assessing the indicators provided by the Association of Asset Managers Romania (abr. AAF) and by patterns of performance evaluation risk-adjusted (relative to rates Sharpe, Treynor and Jensen). For investors, the variables related to performance and risk funds are the most important criteria for the selection of any investment placement. The data analyzed are reported in monthly ranges of the last 10 years, i.e. 2007-2015. For issuing relevant comparisons between the evolution rates of return and risk associated with the local mutual funds, we considered the BET index in assessing the market volatility, monthly average interest rate of government bonds as a measure of the lowest risk rate and the inflation rate to assess changes in the value of the purchasing power of money. Data were retrieved and analyzed based on AAF, CNVM&ASF, National Bank of Romania and National Institute of Statistics records.

### Main results

While the study focuses on the period between 2007-2015, we considered opportune to breakdown the performance analysis over 3 sub-periods: 2007-2009, 2010-2012 and 2013-2015 - intervals corresponding to the onset of the global capital market crisis, financial crisis - the debt crisis period, as well as the revival period. Thus, the performance analysis is thorough observation into returns, volatilities and correlations between times of instability (2007-2013) and the period of economic recovery, aiming to identify possible interdependencies between profitability indicators calculated and overall economy. Derived records expose the following evidences for the risk-performance analysis of equity funds (abr. FDA), as presented in table 2.

**Table 2. Best 3 performances of FDA funds in Romania 2007-2015**

Time period	<i>Sharpe rate</i>	<i>Treynor rate</i>	<i>Jensen rate</i>
2007-2009	Active Dinamic Raiffeisen Prosper BT Maxim	Active Dinamic Raiffeisen Prosper BT Maxim	Active Dinamic Raiffeisen Prosper Certinvest Maximus
2010-2012	ERSTE Equity OTP Avansis Certinvest Maximus	ERSTE Equity OTP Avansis Certinvest Maximus	ERSTE Equity OTP Avansis Raiffeisen Prosper
2013-2015	ERSTE Equity BT Maxim Raiffeisen Actiuni	ERSTE Equity BT Maxim Raiffeisen Actiuni	ERSTE Equity BT Maxim Raiffeisen Actiuni
Overall period 2007-2015	Certinvest XT Index ERSTE Equity BT Maxim	Certinvest XT Index ERSTE Equity Raiffeisen Prosper	Certinvest XT Index ERSTE Equity Raiffeisen Prosper

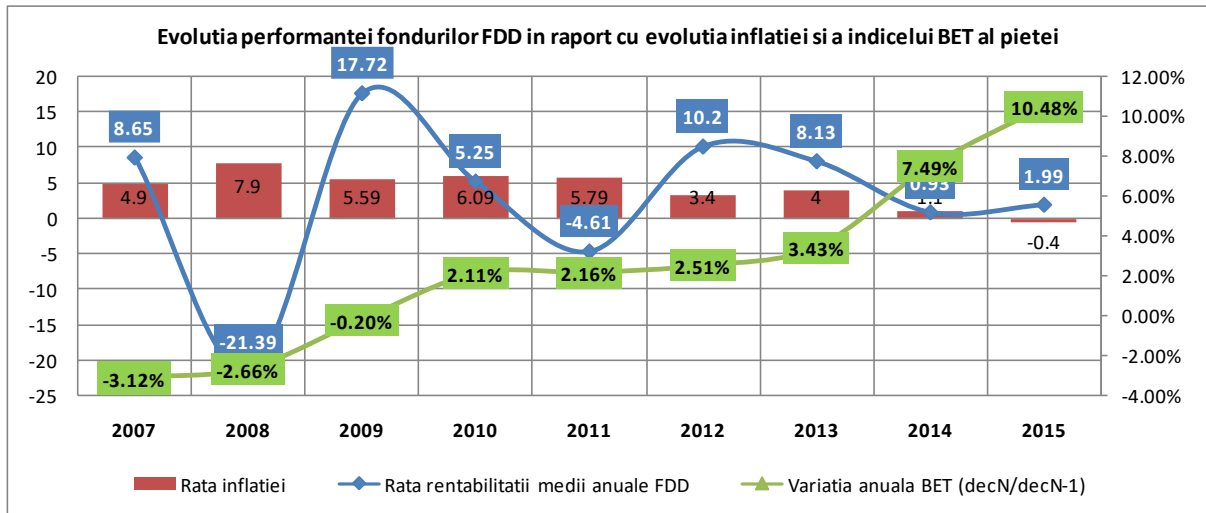
Source: author's own processing

According to the high exposure in shares, equity funds have generated results below the market average until 2012 except ERSTE Equity Romania fund which has improved its profitability- risk scores from 2010-2012, registering positive values for all three calculated rates. Period 2013-2015 outlines the relaunch of equity market, e.g. 6 of the 10 funds included in the analysis leading to positive rates of performance. Thus, the records of Sharpe rate, Treynor and Jensen rates unitary define the top three equity funds with returns in excess of the assumed risk, namely: (1) ERSTE Equity Romania fund, (2) BT Maxim and (3) Raiffeisen Actiuni.

Considering the balanced funds performance analysis, for the past 3 years we see that in the most cases they have followed the benchmark (i.e. the yield of the bank deposit rate of 13%) which represents a minimum in terms of a conservative approach. In contrast, only part of the diversified funds have exceeded the best performing funds with low risk over the past 3 years, e.g. Carpatica Global, Erste Balanced RON and Raiffeisen Benefit.

Figure 2 shows the diversified or balanced fund (abr. FDD) performance evolution against the market dynamics (represented by the annual change in BET) and inflation.

Herewith we observe as well the W dynamics in 2007-2012 range, being strongly influenced by the global financial crisis (2007-2009) and its enlargement towards the debt crisis in the next period (2010-2012).



Source: author's own processing

**Figure 2. FDD performance evolution vs inflation rate and benchmark rate**

During the financial market turmoil, investors' preference for low-risk instruments has created opportunities for bond funds which proposed the highest average returns across the analyzed investment horizon. If the average annual return on mutual funds was 3.88% on a long term investment (8 years), bond funds had to remunerate the subscription to these instruments at 6.91%. The same positive spread has been proposed by medium-term and short term, with an annual average rate of return of 7.16% (5 years' investment), of 5.86 % (3 years investment) and 5.43% (for the last year 2014 / 1 year investment), higher than the suggested rate of other collective investment undertakings, all surpassing even the remunerative rate of the traditional bank deposits of 2.90 % (2014). Thus, we find that for bond funds the most attractive yields (see Table 3) were generated by Horizon funds, OTP Bonds and BCR Clasic for long-term investments (8 years). Zepter Bonds and Raiffeisen Benefit supplement the performing funds with an average annual return of about 10% for 5 years' investments.

**Table 3. FDO performances in Romania, 2007-2014**

Top	FO- TOP 10 performante / Bottom 10							
	Randament mediu 2007-2014 (8 ani)		Randament mediu 2010-2014 (5 ani)		Randament mediu 2012-2014 (3 ani)		2014 (ultimul an)	
	Fond	Randame	Fond	Randame	Fond	Randame	Fond	Randame
1	Orizont	11.90	Orizont	11.51	Zepter Obligatiuni	10.47	Raiffeisen Benefit	8.01
2	OTP Obligatiuni	8.44	Zepter Obligatiuni	10.47	Raiffeisen Benefit	9.54	ING International Romanian Bond Fund	7.36
3	Bcr Clasic	7.97	Raiffeisen Benefit	9.54	Certinvest Tezaur	7.10	ERSTE Bond Flexible RON	6.19
4	Certinvest Obligatiuni	7.26	OTP Obligatiuni	8.44	ERSTE Bond Flexible RON	7.09	Carpatica Obligatiuni	6.08
5	Certinvest Tezaur	7.20	ERSTE Bond Flexible RON	8.27	ING International Romanian Bond Fund	6.75	OTP Obligatiuni	5.27
6	ERSTE Bond Flexible RON	6.99	Certinvest Obligatiuni	7.26	OTP Obligatiuni	6.31	Stabilo	4.87
7	Vanguard Protector	6.97	BT Obligatiuni	7.17	Certinvest Obligatiuni	6.15	BT Obligatiuni	4.83
8	BRD Obligatiuni	6.95	Certinvest Tezaur	7.10	BT Obligatiuni	5.91	Certinvest Obligatiuni	4.74
9	Stabilo	6.83	BRD Obligatiuni	6.30	Stabilo	5.41	Erste Bond Flexible Romania EUR (Alte Fonduri)	4.09
10	Fortuna Gold	6.64	ING International Romanian Bond Fund	6.08	BRD Obligatiuni	4.86	BRD Obligatiuni	3.79
11	Raiffeisen Benefit	6.38	Stabilo	6.00	Carpatica Obligatiuni	4.12	Zepter Obligatiuni	0.00
12	BT Obligatiuni	6.21	Carpatica Obligatiuni	4.12	Erste Bond Flexible Romania EUR (Alte Fonduri)	2.04	Certinvest Tezaur	0.00
13	ING International Romanian Bond Fund	6.08	Erste Bond Flexible Romania EUR (Alte Fonduri)	2.04	ERSTE Money Market RON	0.00	ERSTE Money Market RON	0.00
14	Zepter Obligatiuni	4.68	ERSTE Money Market RON	0.00	FDI FIX INVEST	0.00	FDI FIX INVEST	0.00
15	Carpatica Obligatiuni	4.12	FDI FIX INVEST	0.00	Orizont	0.00	Orizont	0.00
16	Erste Bond Flexible Romania EUR (Alte Fonduri)	2.04	Bcr Clasic		Bcr Clasic		Bcr Clasic	0.00
17	ERSTE Money Market RON	0.00	Vanguard Protector		Vanguard Protector		Vanguard Protector	0.00
18	FDI FIX INVEST	0.00	Fortuna Gold		Fortuna Gold		Fortuna Gold	0.00

Source: author's own processing using AAF statistics

Bond funds (abr. FDO) show a strong correlation to money market instruments (coupon rate of government bonds, the attributed rate for treasury bills and the rate for bank deposits) (Table 4), for which the performance is in excess of 80 % of these rates. Recognized as fixed income investment instruments, bond funds give better stability compared to equity funds and balanced ones.

**Table 4. Determinants of FDO performance**

Correlation coefficients of FDO against indicators	Value
Government bond remuneration rate	0.894915
Treasury certificates remuneration rate	0.986529
Banking interest rate (12M)	0.955762
Annual variation BET index (decN/decN-1)	-0.7628

Source: author's own processing

We note, however, that these funds are inversely correlated with the stock market (correlation coefficient of -0.7628), respectively market instability does not dictate the evolution of bond funds performance in the local market. Under these conditions, the unitary value of the net assets is more stable in the case of fixed income funds (bonds) compared to equities and diversified funds, giving investors regular income under a reduced risk of investing.

The starts of the investment funds in the post-crisis period (after 2009), the local money market funds have generated higher net gains on bank deposits, becoming the principal catalyst that has supported the development of the mutual funds industry (Dumitriu 2015). Thus, in the last year, the average earnings brought by bank deposits was about 3.32%, while the most representative money market mutual funds - Certinvest Prudent and ERSTE Money Market RON obtained yields of about 5% (e.g. 5.31% -June 2014 - Prudent Certinvest, 4.93% - the period January to March 2014 for ERSTE Money Market RON).

Within the analyzed period, the money market funds have achieved higher returns over inflation and better results than traditional bank deposits in 2009 and 2010.

**Table 5. FDM results between 2007-2014**

Top	FM- TOP 10 performante / Bottom 10							
	Randament mediu 2007-2014 (8 ani)		Randament mediu 2010-2014 (5 ani)		Randament mediu 2012-2014 (3 ani)		2014 (ultimul an)	
	Fond	Rm	Fond	Rm	Fond	Rm	Fond	Rm
1	Bancpost Plus	11.14	Bancpost Plus	24.37	Raiffeisen Ron Plus	7.18	ERSTE Money Market RON	3.87
2	Certinvest Tezaur	7.78	Raiffeisen Monetar	9.67	Certinvest Tezaur	7.07	Certinvest Prudent	2.68
3	BRD Simfonia 1	7.67	Bcr Monetar	8.72	Bcr Monetar	6.97	Raiffeisen Ron Plus	na
4	Raiffeisen Ron Plus	7.33	Certinvest Tezaur	7.78	OTP ComodisRO	6.54	Certinvest Tezaur	na
5	Bcr Monetar	6.88	OTP ComodisRO	7.76	BRD Simfonia 1	5.60	Bcr Monetar	na
6	OTP ComodisRO	6.72	Raiffeisen Ron Plus	7.33	IFond Monetar	4.58	OTP ComodisRO	na
7	Raiffeisen Monetar	6.12	BRD Simfonia 1	6.89	Certinvest Prudent	4.41	BRD Simfonia 1	na
8	Fortuna Gold	5.58	Fortuna Gold	5.58	Fortuna Gold	4.14	IFond Monetar	na
9	Certinvest Prudent	4.41	Certinvest Prudent	4.41	ERSTE Money Market RON	2.31	Fortuna Gold	na
10	IFond Monetar	2.47	IFond Monetar	2.47	Raiffeisen Ron Flexi	0.01	Raiffeisen Ron Flexi	na
11	ERSTE Money Market RON	2.31	ERSTE Money Market RON	2.31	YOU INVEST Active EUR	0.00	YOU INVEST Active EUR	0.00
12	Raiffeisen Ron Flexi	0.01	Raiffeisen Ron Flexi	0.01	Bancpost Plus		Bancpost Plus	0.00
13	YOU INVEST Active EUR	0.00	YOU INVEST Active EUR	0.00	Raiffeisen Monetar		Raiffeisen Monetar	0.00

Source: author's own processing using AAF statistics

With lower exposure to risk, these types of funds were preferred by investors during the economic crisis, proposing rates of return of up to 24.37 % during the financial crisis (Table 5).

### Final remarks

Considering the potential fulfilment and the restoration of the investment climate stability, we believe that investors will return to the temptations obtain higher earnings by shifting their actions and changing their position towards equities and equity funds.

We expect that the market will see investors' movement from collective investment towards low risk investment vehicles and gradually diversified to stock funds. Alike (Moses 2015) considers that the main determinants of investors shifting toward risk and are increasing their

interest in financial planning. As the level of financial education will increase, customers of investment funds will be able to accurately define performance expectations and risks that may occur. Consequently, it is assessed that the risks taken will rise, and implicitly will develop those investment funds assessed for higher risks (i.e. equity and diversified funds).

This research approach is significant as there were fewer studies that have included the local industry on the map of the global investment funds market. It becomes one of the studies that observes the main development areas of the national investment funds industry. As well, the research outlines the industry's redimensioning trends and sets a pillar for the local literature.

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