

THE DETERMINANTS OF MUTUAL FUNDS PERFORMANCE IN RUSSIA

A. Abramov,

*Professor of the Department of Stock and Investments Market
The Higher School of Economics*

K. Akshentseva,

Russian Presidential Academy of National Economy and Public Administration

Abstract

Despite 19 years of the existence of mutual funds in Russia, their performance and effectiveness remain not deeply investigated subjects. The deficit of academic research has a negative influence on the investors' and regulator's attitude towards the collective investment market in Russia. In contrast to many other countries oriented on the development of internal stock market, collective investment in Russia does not yet play an active role in the mobilization of internal private savings.

This article intends to partially make up for the lack of knowledge about the economy of mutual funds in Russia. It presents the analysis of three measures of mutual fund performance in Russia: the share return, net flow and management company fee. The analysis is based on a unique dataset which contains information about characteristics of 755 mutual funds and covers a 13 year period of the existence of the collective investment sector in Russia. The mutual fund return is able to outperform inflation, return on government bonds and return on the 50/50 strategy. During the periods 2000-2013 and 2008-2013 the abnormal return, net flow and management company fee have followed the same regularity as their foreign counterparts. Thus, mutual funds are one of the most important players in the Russian financial market. We also showed that for the successful development of collective investment in Russia it is necessary to increase the scale of operations, cost management effectiveness and transparency.

Key words: mutual funds, excess returns, unit investment funds, performance of mutual funds, investment units, Russian securities market

Introduction

The history of mutual funds (MFs) covers more than one hundred years during which funds have played an active role in the world financial markets. A performance measurement of mutual fund portfolios has attracted a remarkable interest in economic and financial literature beginning with the seminal works of Sharpe (1966) and Jensen (1968). Since then a number of researchers have looked for the answers to whether mutual funds earn a better return than what investors can earn on their own, and whether fund managers have a superior ability to make better investments than other investors. Based on over four decades of mutual fund performance studies there now exists a strong consensus on the inability of mutual funds to beat the market after all relevant fees are deducted (Jensen, 1968; Malkiel, 1995; Barras et al., 2010; Blake and Timmermann, 1998), and any outperformance is more likely to be due to "luck" rather than "skill" (Fama and French, 2008; Fama and French, 2010; Kosowski et al., 2006).

Almost all of these studies focus on the U.S. and European markets as historical data is easily available. The studies have considered fund attributes as potential determinants of fund performance including size, age, fees, trading activity, flows, and past returns (Jensen, 1968; Sirri and Tufano, 1998; Zheng, 1999; Sapp and Tiwari, 2004; Chen et al., 2004; Blake and Timmermann, 1998).

Motivation to study international mutual funds, and especially emerging market funds, continues due to market frictions such as barriers to information flows, costs of information transmission, and cultural, legal and other institutional differences. A more recent study by Huij and Post (2009) finds that US mutual funds investing in emerging markets are able to generate returns that are sufficiently large to cover their expenses. They conclude by stating that emerging market funds

generally display better performance than US funds. But at the same time Białkowski and Otten (2011) show that in Poland MFs on average are not able to provide excessive return, which is in line with results from emerged markets. Ferreira et al. (2013) reveal that funds located in developed countries perform better.

This paper studies the relation between mutual fund performance, fund attributes and a management company's characteristics in the Russian collective investment market. The standard approach for evaluating mutual fund performance is to test it in comparison with an appropriate benchmark and assess the significance of abnormal returns from this model.

Such comparison is often made based on two widely spread approaches: calculating an excess return as a simple difference between it and a corresponding benchmark or using the 4-factor Charhart model (Carhart, 1997; Blake et al., 2014, Chen et al., 2004; Ferreira et al., 2013; Białkowski and Otten, 2011). The current research is based on the simple approach. We also made estimation based on the Charhart model but it did not add a significant value to our results.

Apart from the mutual fund share return we considered two other measures of MF performance: the net flow and management fee.

It is well established that inflows to mutual funds are strongly correlated with the past fund performance (Ippolito, 1992; Gruber, 1996; and Zheng, 1999). But besides “smart money” it is also important to determine which factors are the drivers of the process of issuance and redemption of shares.

One of the main concerns fueling the debate over mutual fund fees has been the degree to which investors are aware of the fees associated with fund investments. More recently, a study by Barber et al. (2005) has provided further evidence that investors face difficulties in understanding the effects of mutual fund fees on the quality of fund assets management. Due to the lack of transparency in the fee structure it would be interesting to receive an answer to the question which factors form the management company fee. A clearer understanding of the actual fees charged by fund managers could put pressure on managers to justify or to reduce fees (Geranio and Zanotti, 2005).

One of the questions examined in the existing literature on mutual funds costs is the determinants of fund operational expenses. Ferris and Chance (1987) conclude that the 12b-13 charges are a dead weight cost borne by shareholders. Malhotra and McLeod (1994) analyze equity fund expense ratio and find that expenses are increasing over time. Malkiel (1995) shows that investors would be better off buying low-expenses funds. Korkeamaki and Smythe (2004) reveal a relation between the management fee and fund age for Finnish funds. Geranio and Zanotti (2005) demonstrate that the amount of management fee depends on such characteristics as the fund size and type, type of financial intermediary, etc. The current research investigates whether such regularities appear in Russia.

The main added value of our study to the existing literature on mutual funds is the following. It provides evidence on the performance of emerging market funds, in contrast to studies that analyzed funds from the perspective of mature markets investing in emerging markets or developed markets. Our study is based on the unique dataset which was manually contracted based on publicly disclosed information about mutual funds and their management companies. We consider three different performance measures (the share return, net flow and management fee) for three categories of funds (equity and index funds, bond and money market funds, and blend funds). Our analysis reveals that in general the performance of Russian mutual funds is in line with their foreign counterparts but this industry in Russia has not still realized its potential.

The structure of the paper is as follows. Section 2 reviews the MF market characteristics in Russia. Section 3 provides the description of data and methodology used in the current research. The results are presented in Section 4, while Section 5 draws a conclusion.

Characteristics of the Russian mutual fund industry

In 2001-2013 institutional investors' assets value grew from \$36.8 trillion to \$92.6 trillion all over the world. Meanwhile the share of mutual funds increased from 31.5% in 2001 to 37.7% in 2013.

The situation in the Russian collective investment market is remarkably different in comparison with the major part of countries oriented on the development of the domestic financial market. In 2014 the asset value of open and interval mutual funds was only 106bn rubles, or 0.15% of GDP (Fig.1). This low level of relative development of mutual funds appeared only in 2008, which was the crisis year.

According to our estimation, Russia was on the 64th place from 67 ones based on the criterion of the relative fund size in GDP.

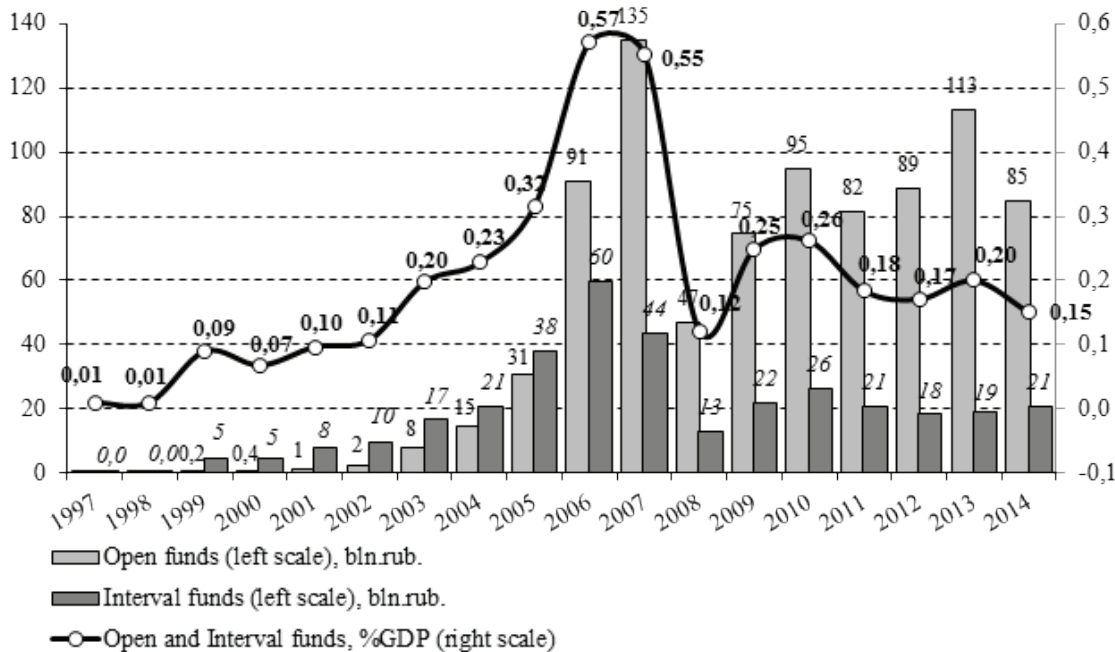


Figure 1: Dynamic of total net assets of Russian mutual funds

Although the mutual funds industry is still quite young in Russia, some regularity in profitability of such investments is fairly stable. The analysis of MFs characteristics has revealed that the average return of bigger funds (in terms of total net assets) is usually higher than that of lower capitalized funds. The weighted by net asset value average return of all open and interval mutual funds (calculated as 5- and 10-year CAGR) was significantly higher than the simple average return (Fig. 2). In 2008-2013 the weighted average return of all considered MFs was equal to 21.0%; in the same period the simple average return was only 17.1%. From 2004 to 2013 the 10-year average MFs return was 5.7% per annum higher in comparison with the simple average return which was equal to 8.2%. This means that in 5- and 10-year intervals higher capitalized mutual funds derived an additional return premium. A somewhat different pattern was observed in a 15-year interval from 1998 to 2013 when the weighted average return (20.1%) was lower than the simple average return (28.4%). It could be explained by anomalous conditions of 1999-2003 when small mutual funds received several times higher return compared to more capitalized funds.

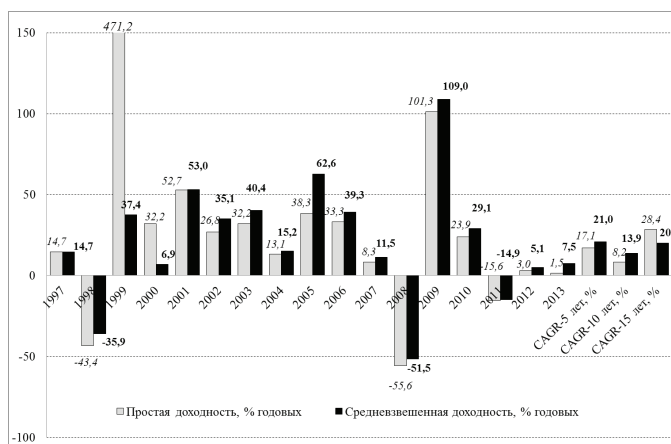


Figure 2: Simple and weighted average returns of open and interval MFs portfolios, % per annum

The analysis of a portfolio risk-structure reveals an expected regularity: the investment return of funds with riskier assets in portfolio is higher than returns of the funds which invest into assets with lower risk. In particular, the return of equity funds, as a general rule, exceeds analogous characteristic of blend, bond or money market funds. Mutual funds of mixed investments demonstrate higher return than their bond or money market counterparts.

In 2008-2013 the simple average return of riskier equity funds reached a 20.0% level, at the same time the returns of blend funds, bond and money market funds were only 14.6% and 9.9% correspondingly (Fig. 3). From 2004 to 2013 a 10-year average return of open and interval equity funds was at the level of 9.0% while average returns of mixed investments funds and funds which invest into fixed return assets were 7.3% and 6.2% correspondingly. As earlier, there is a different tendency on the larger horizon: a 15-year average return of equity funds reached 25.7%, which exceeded the average return of blend funds (21.1%) but was lower than the simple average return of bond and money market funds (33.4%).

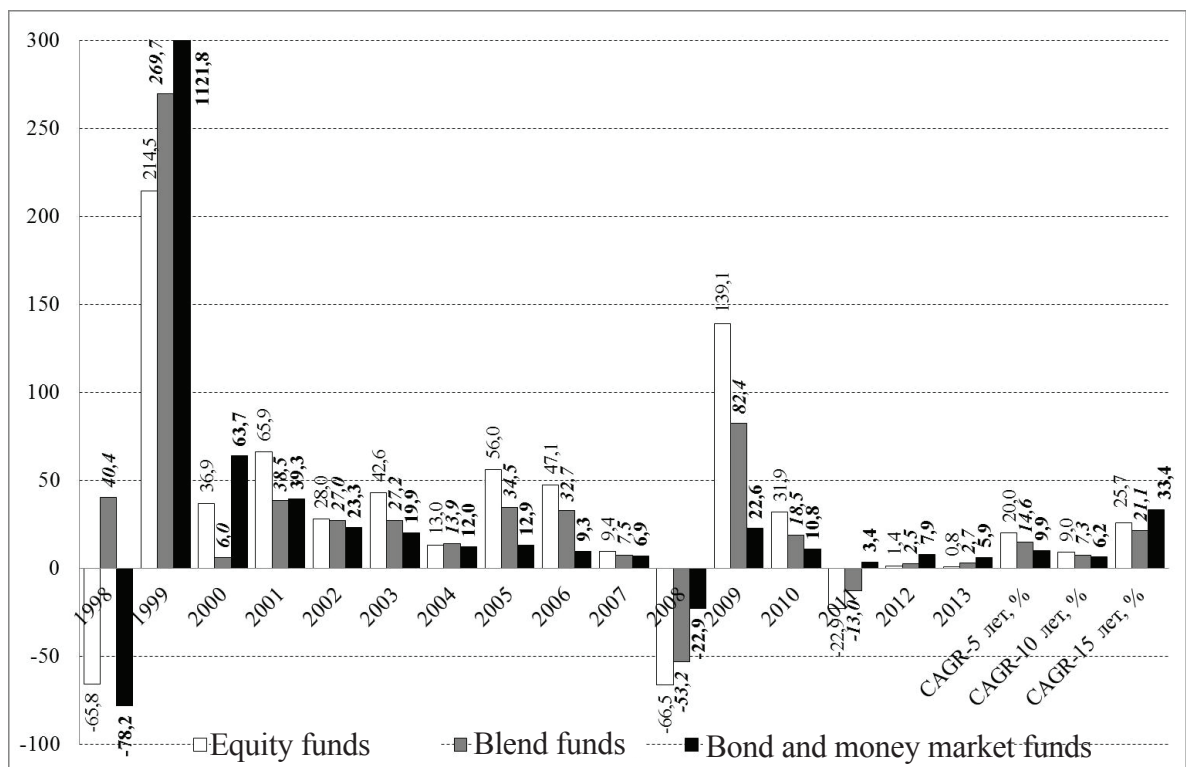


Figure 3: Simple and weighted average returns of different categories of mutual funds, % per annum

It is interesting to note that MFs which management companies are the members of the self-regulatory organization (SRO) “National League of Management Companies” (Russia) demonstrate a higher return on investment portfolio in comparison with similar mutual funds which management companies are not the members of that SRO. Such an increase in return is related to the fact that, in general, larger and more stable management companies with more capitalized mutual funds under the government are the SRO members. However, not the least of the factors is that an activity of management companies taking part in the self-regulatory process is usually more transparent and responsible to their shareholders.

In their classical research of mutual funds activity Fama and French (2009) adduced a proof of the thesis that aggregate portfolio of all MFs, in general, does not create a positive “alpha”, i.e. an increase in the market return due to professionalism of investment managers. Usually, the industry average alpha is negative and is approximately in line with average management fees of mutual funds. From our point of view, the given conclusion is not an argument against mutual funds or professionalism of investment managers, but it allows for better understanding a value of their services for investors. Mutual funds do not generally deprive excessive profits from other categories of financial market participants, for example, private investors. Otherwise it would destroy the market itself as a phenomenon, closing it from the entering of newcomers. The main purpose of mutual

funds is to provide additional benefits for investors due to economies of scale, transferring functions of investment decision-making and monitoring to professionals, better portfolio diversification, etc. This does not exclude an additional use of elements of speculation or a game by investors, for instance, in the search for mutual funds with a higher return. However, the main destination of the funds is to make the process of profiting from the growth of the real economy and, therefore, from the growth of the fundamental value of investment assets, more effective for investors.

In 2013 10- and 15-year returns (CAGR) of mutual funds were outperformed by the main benchmark – MICEX index (Fig. 4). Over a 5-year period actively managed mutual equity funds brought a higher average return than MICEX index, but at the same time the index funds return was lower than that of benchmark. In 2008-2013 the excess (compared to MICEX index) average return of equity funds was equal to 2.8 percentage points (pct) but the same characteristic of index funds was -0.4pct. Over a 10-year period from 2004 to 2013 the excess return of equity funds was at the level of -3.6pct, while the excess return of index funds was -1.2pct. Over a 15-year interval from 1998 the excess return of equity funds was also negative (-3.3pct). Thus, it is unlikely that in future we should expect positive returns from equity and index funds over long intervals. However, an increase of professionalism of portfolio managers, reduction in costs of funds management and timely “remove” of outsiders from the market can make it possible to achieve a narrowing spread between the average returns of funds and benchmarks.

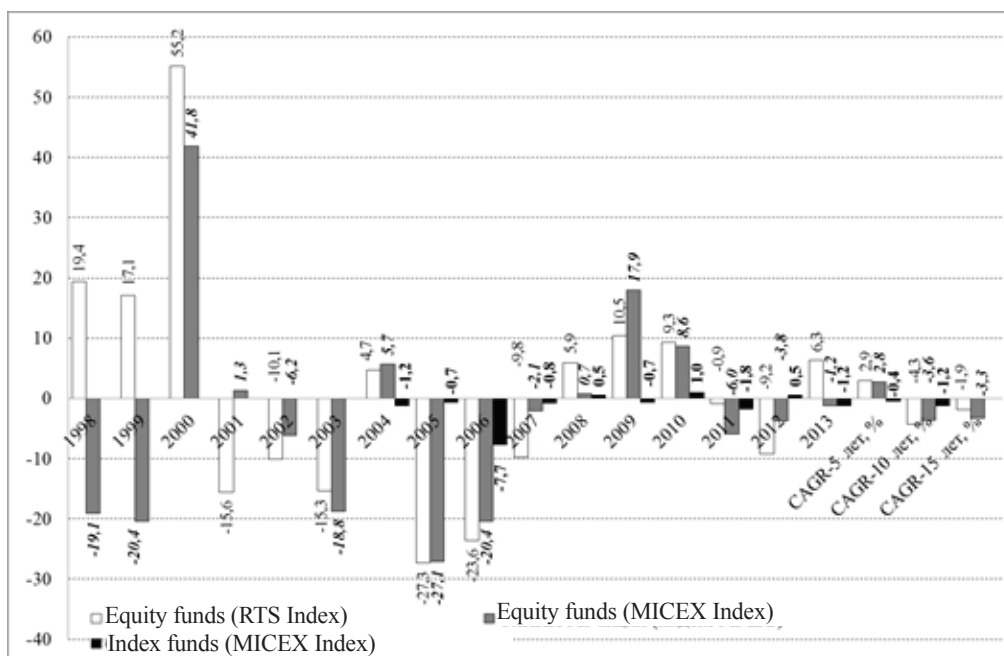


Figure 4: Excess returns of open and interval equity and index mutual funds, pct

The answers to the questions of whether, for example, the combined portfolio of all MFs outperforms inflation, whether all bond funds can give a higher return than government securities, or whether blend funds bring a higher return than the 50/50 strategy are less obvious. The answers to these questions are “yes”. In general, MFs have to outperform the inflation: it is the core of investment process. The government bonds return usually follows the inflation level. The classical structure of the mixed portfolio is “60% equity/40% bonds”, which should, as a rule, allow for exceeding the 50/50 strategy. At the moment the US mutual blend funds are using a 65/35 ratio (Investment Company Fact Book, 2014).

Over a 5-year horizon the aggregate open and interval MFs portfolio brought a positive real return in excess of inflation of 9.1pct; the excess return of bond and money market funds over the government bond return reached 1.7pct; blend funds received 0.8pct over the 50/50 strategy. In a 10-year period the real return of the aggregate portfolio was negative: a 1.0pct loss compared to inflation; a 1.3pct loss of bond and money market funds in comparison with the government bonds return; a 3.4pct loss of blend funds compared to the 50/50 strategy return (Fig. 5). Over a 15-year horizon from 1998 to 2013 the results were in favor of mutual funds: the aggregate MFs portfolio earned a 13.8pct real annual rate of return; bond and money market funds outplayed government bonds by 17.3pct; blend funds brought 1.9pct over the 50/50 strategy.

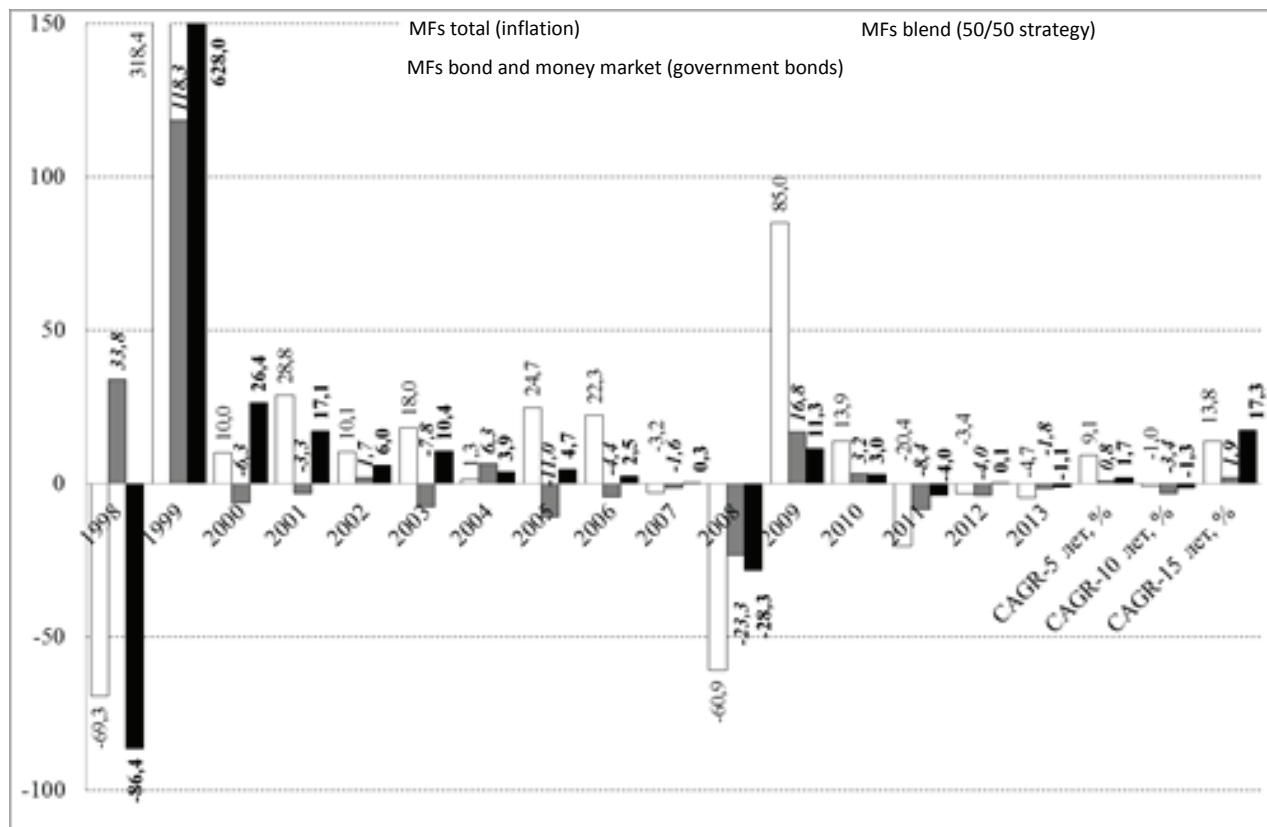


Figure 5: Excess returns of open and interval bond, money market and blend funds in comparison with different benchmarks, pct

Thus, so far portfolios of mutual funds considered above failed to regularly outperform the inflation, return on government bonds and return of 50/50 strategies. The same factors, which we marked out for the equity funds, can help to improve their long-term results: professionalism of portfolio managers, costs reduction and improvement of the practices of market selection of funds.

Data and methodology

For the analysis of Russian mutual funds activity the methodology of panel regression was chosen. The model equation has the following form:

$$y_{it} = \alpha + X'_{it}\beta + \vartheta_{it}, \quad i = 1, \dots, N; t = 1, \dots, T, \quad (1)$$

where i – fund id, t – year, β – $K \times 1$ -vector of coefficients, y_{it} – vector explained variable, $X'_{it} = (X_{1,it}, \dots, X_{k,it})$ – row-vector of a matrix of K explanatory variables (in our case it is variables describing the mutual funds), ϑ_{it} – random disturbance.

In order to analyze the effectiveness of the mutual fund it would be wrong to use a return on the portfolio as a single performance measure. It is also important to take into account how active the process of issuance and redemption of shares is and how much money it brings to a management company. Thus, as explanatory variables the following three measures were selected: (1) the excess return of mutual funds; (2) the net flow; (3) the management companies' fee.

As a measure of the excess return we took an excess in comparison with the return on MICEX index (for equity funds and index funds), with the fixed return of the government bond (for bond and money market funds) return and with the return on the 50/50 strategy (for blend funds). So, the return of the mutual fund is defined according to the formula:

$$R_{it} = \begin{cases} r_{it} - i_t, & \text{for equity and index funds} \\ r_{it} - b_t, & \text{for bond, money market, and blend funds} \\ r_{it} - p_t, & \text{for blend funds} \end{cases} \quad (2)$$

where r_{it} – return of i -th mutual fund in the year t , i_t – index return in the year t , b_t – return of the

government bond in the year t ; p_t – return on the 50/50 strategy. In return calculation we also included the four-factor Charhart formula, but this approach did not significantly improve our results.

To execute regression analysis a lot of data-collecting work has been done. Based on financial statements of mutual funds and the management company that publicly disclosed information we constructed a dataset which covers different characteristics of 755 open and interval funds. The gathered dataset contains data over a period from 2000 to 2013. We divided our dataset into three parts: the first group consists of 337 equity and index funds (for simplicity, they will further be called equity funds), the second group – 197 bonds and money market funds (further, bond funds) and the third – 221 blend funds. It is necessary to emphasize that in the final set there are funds which are “alive at the moment”. Thus, as of 2013 we considered 465 funds, where 221 funds are equity fund, 110 funds are bond funds and 108 - blend funds. More detailed information about fund characteristics considered is presented in Table 1.

Table 1

Fund characteristics descriptive statistic, final data-set (“alive” funds only)

	*	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Number of funds	A	9	12	15	16	32	56	78	121	185	200	201	206	218	220
	B	3	4	5	6	18	28	41	53	63	66	68	76	95	110
	C	2	8	15	15	31	52	59	75	86	92	96	99	106	108
Age (years)	A	0.1	0.1	0.2	0.3	0.4	0.7	1.0	1.5	2.4	3.3	4.1	5.1	6.0	7.0
	B	0.1	0.1	0.1	0.2	0.3	0.5	0.8	1.2	1.7	2.2	2.7	3.2	3.9	4.7
	C	0.0	0.1	0.3	0.4	0.7	1.1	1.7	2.3	3.1	3.9	4.8	5.7	6.7	7.6
Excess return, %	A	23.5	61.4	28.7	45.1	13.2	56.5	46.8	10.2	-67.0	141.9	31.6	-22.3	2.0	1.0
	B	59.2	40.8	25.7	22.3	12.3	14.8	10.8	7.3	-27.1	29.9	12.5	0.1	6.0	1.5
	C	8.4	27.2	23.7	27.4	13.5	36.7	31.9	8.6	-52.5	80.9	20.4	-13.0	2.7	4.0
Annual-average TNA, mln rubles	A	440.8	309.3	434.8	372.3	384.4	357.0	600.4	572.0	362.8	246.3	333.2	318.9	235.0	188.1
	B	29.8	40.8	67.3	64.2	80.9	115.2	197.2	225.1	218.4	144.4	154.7	233.8	263.1	386.9
	C	231.7	111.2	145.5	105.7	151.3	185.4	356.2	496.1	362.6	176.3	192.6	177.9	138.9	110.0
Management company fee, mln rubles	A	15.9	10.0	15.2	11.7	11.9	11.8	18.3	18.4	11.9	7.8	11.1	10.7	7.9	6.1
	B	0.4	0.3	0.7	0.7	0.9	1.4	2.7	3.7	3.3	2.2	2.3	3.2	3.7	4.9
	C	6.2	3.0	5.2	2.8	3.4	4.7	9.5	14.7	10.9	5.2	5.7	5.3	4.2	3.3
Registrar fee, mln rubles	A	5.2	3.2	4.9	1.8	1.7	1.6	1.9	1.4	0.7	0.5	0.4	0.3	0.3	0.2
	B	0.1	0.1	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2
	C	0.2	0.7	0.7	0.4	0.4	0.4	0.5	0.6	0.5	0.3	0.3	0.3	0.2	0.2
Depository fee, mln rubles	A	1.9	1.3	2.1	1.3	1.3	1.1	1.6	1.4	0.9	0.7	1.0	0.8	0.7	0.5
	B	0.3	0.2	0.5	0.3	0.2	0.3	0.5	0.5	0.5	0.4	0.4	0.5	0.5	0.7
	C	2.5	0.9	1.0	0.5	0.6	0.6	0.9	1.2	1.1	0.6	0.6	0.5	0.4	0.4
Auditor fee, mln rubles	A	0.5	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
	B	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
	C	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Main costs, mln rubles	A	24.8	15.7	22.2	15.0	15.5	14.8	22.1	21.6	13.8	9.3	12.7	12.4	9.2	7.1
	B	1.1	0.9	1.9	1.4	1.6	2.2	3.7	4.9	4.4	3.0	3.0	4.2	4.8	6.1
	C	9.1	5.2	8.1	4.0	4.7	5.9	11.5	17.3	13.3	6.4	6.8	6.4	5.0	4.0
Other costs, mln.rubles	A	1.2	0.1	0.2	0.1	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.4	0.3	0.3
	B	0.2	0.1	0.2	0.1	0.1	0.1	0.2	0.3	0.2	0.1	0.1	0.2	0.2	0.3
	C	0.1	0.2	0.5	0.2	0.3	0.2	0.4	0.6	0.6	0.3	0.2	0.2	0.2	0.1
Net flow, mln rubles	A		-12.7	-58.6	73.7	61.1	48.4	221.7	-3.8	-23.6	-36.2	-14.3	-10.5	-52.4	-21.7
	B		7.5	-21.0	48.9	24.0	107.7	75.3	40.9	-73.8	-15.9	58.4	77.2	119.0	219.6
	C		13.9	-54.4	45.8	69.4	39.1	212.6	47.8	-97.0	-55.0	-23.0	-10.6	-35.9	-21.1
Portfolio turnover, % per year	A								267.2	262.9	264.0	173.0	227.1	242.3	209.1
	B								256.4	235.7	165.5	133.6	151.2	130.0	117.0
	C								712.0	575.4	363.1	291.3	335.7	282.8	223.5

Fund members assets turnover, % per year	A									44.7	55.5	49.9	76.0	34.9	23.6
	B									103.3	163.3	164.9	133.5	92.0	89.3
	C									15.5	10.5	16.0	68.4	13.1	10.2
Capital and reserves of management company, mln rubles	A		31.2	42.8	203.0	240.7	316.3	487.2	537.8	303.6	497.8	545.0	577.4	831.8	1083.4
	B				56.3	64.9	81.8	110.0	203.9	226.6	240.4	230.5	235.5	601.8	570.2
	C				54.8	60.9	75.8	92.0	128.9	115.5	147.7	181.9	223.5	218.8	256.1
Net profit of management company, mln rubles	A		6.9	12.6	59.2	78.0	139.7	234.8	65.7	4.1	82.3	71.7	46.2	68.5	211.8
	B				0.6	1.1	8.2	15.1	14.0	-23.6	30.4	41.9	-2.8	23.8	15.9
	C				8.4	2.6	11.2	20.1	21.9	0.1	27.8	36.1	19.1	18.7	43.3
Revenues of management company, mln rubles	A		21.7	46.0	278.1	1062.2	805.9	863.3	3474.7	1380.2	522.5	440.1	444.5	736.7	975.1
	B				13.4	63.4	49.7	64.9	80.5	61.7	72.8	105.4	88.9	88.0	100.5
	C				715.9	700.9	459.6	254.2	1126.3	349.7	160.4	561.8	1080.8	1065.8	1388.5

*- A-rows contain information about index and equity funds; B-rows contain information about bond and money market funds; C-rows contain information about blend funds.

Table 1 presents the group (equity, bond or blend funds) annual average characteristics of the funds considered. In this table only significant (as shown below) indicators are included. It is important to note that the number of funds in both groups has considerably increased during the last 13 years: from 9, 3 and 2 funds in 2000 to 221, 110 and 108 funds in 2013 (equity, bond and blend funds) correspondingly.

The analysis of the whole period is complicated due to the small number of funds at the beginning of the period (only few funds started their activity in the year of 2000 or earlier). Therefore, we decided to analyze fund activity based on two different periods: the first one covers years of 2000-2013; the second one includes data over the period of 2008-2013. Such a twofold analysis allows us to confirm the adequacy of estimation obtained for the long period but with fewer observations.

Prior to the panel model analysis we have checked for the outliers and replaced the missing values (where possible) for the median values of the corresponding characteristics over each year.

It is worth noting that MFs in Russia – equity, bond and blend funds – are quite young: average ages of funds in 2013 were 7.0, 4.7 and 7.6 years correspondingly. In this case, the average net asset value of bond funds is higher but they pay lower compensation to the management company. But at the same time costs of the main activities of equity funds are higher than those of bond funds.

Net flows of equity and blend funds are negative on average, but bond funds show the positive value of this indicator during almost the whole period. Management companies of equity funds demonstrate a higher net profit, capital and reserve value in comparison with management companies of bond and blend funds.

For the estimation normalized indicators were used for the periods 2000-2013 and 2008-2013. We also checked for correlation between independent variables and did not find any two variables with high correlation which could affect our estimation results. The Wald test implementation shows an overall significance of estimations.

Mutual fund performance and investment potential

Determinants of MFs excess return

The first step of our analysis is the consideration of the factors describing mutual fund activity which are related with the excess return of the funds. The main results of our analysis are presented in Table 2. Some of the identified patterns are discussed in more detail below.

One of the most interesting patterns identified is the negative relation between the period and share return for all groups of funds. The positive relation could show the professionalism of funds' managers, but the opposite one demonstrates that any kind of outperformance occurred is more likely to be due to "luck" rather than "skill", which is in line with the US market research (Fama and French, 2008; Fama and French, 2010; Kosowski et al., 2006).

The next important fund characteristic is age. As it was noted by Ferreira et al. (2013), young funds demonstrate better abilities to choose promising objects of investments in comparison with older ones. We revealed this pattern for bond and equity funds. But now a significant influence of age was found for blend funds. A specific explanation of such a pattern in the Russian financial market is likely to be the “embroidering” strategy of young fund returns.

The fund size has a negative effect on performance due to diseconomies of scale at the fund level (in line with Berk and Green, 2004; Ferreira et al., 2013) for all three groups of funds. One of the causes of negative relation between the fund size and return is the growing cost of share liquidity level maintenance (Chen et al., 2004).

Both costs indicators (those of total costs and other costs) relate negatively with the fund abnormal return. The influence of total costs is only significant for assets funds; at the same time, other costs play a more important (in terms of significance) role for bond funds.

Russian mutual funds demonstrate the “smart money effect” described by Gruber (1996), Zheng (1999), Sapp and Tiwari (2004), Chan et al. (2014). This effect assumes that the excess return of funds depends on the current year net flow, i.e. while purchasing shares investors are able to select funds with higher yield. In our opinion, this effect is explained to a greater extent by the theory of Sapp and Tiwari (2004). Their theory suggests that within a year shareholders follow the “momentum” strategy, investing into the funds which show the best results and stay the same in the next year. Russian equity funds demonstrate the existence of “the smart money effect”. On the other hand, bond and blend funds returns relate negatively with the net flow of the previous period. One can observe here the opposite effect of smart money. Such a relation may be explained by the fact that the smart money effect is only observed within the year. The correlation between the current excess return and net flow of the previous period has a different explanation. After a failure of a fund during the current year, in the next period managers of the fund seek higher profitability compared to their competitors using various ways, including manipulation.

As part of the independent variable set, a dummy variable, indicating the existence of foreign assets in the fund portfolio, was considered. As one can see from Table 2, the abnormal return is higher if in the equity fund portfolio there are foreign assets. A simple explanation of this fact is the possibility of better diversification when foreign assets are used.

Apart from mutual fund characteristics we also considered some characteristics of the management company: the revenue, capital and net profit. For all the categories of funds a higher profitability of the management company leads to a higher return. Net profit could serve as an indicator of good/bad quality of managers.

Somewhat unexpected was the effect of the management company revenue and capital on the fund’s performance. Here diseconomies of scale at the management company level appear (the same effect as with the fund size).

A common result for all the funds is the independence of their return from belonging to one or another group of financial intermediaries. In fact, the response to the question “How effective in the portfolio management are bank holding companies, brokers, non-residents, specialized management companies, management companies of large non-financial holding companies and management companies of insurers” was received.

Thus, for example, for bond funds belonging to a bank increases the fund return. At the same time, blend funds of an insurance company provide a lower return. For equity funds no such pattern were identified.

Summarizing the results, we can conclude that in general the Russian fund return behavior is in line with the previous research based on the analysis of the developed market. There are some differences between factors which affect different fund categories, for instance, the influence of current or previous net flows.

As was shown above, Russian mutual funds can outperform a corresponding benchmark but mostly due to “luck” rather than to professionalism of managers.

Tables 2-4 show the coefficient estimations which are significant for at least one of the examined subsamples. The factors that were not included in the table did not show a significant effect on the examined indicators. It is worth noting again that the analysis based on the whole period is complicated due to the small number of funds which were in the market before 2008. However, as can be seen from Table 2, the signs of the coefficients are basically the same for both subsamples and all groups of funds; it can be considered as a robustness test of estimated coefficients.

Table 2

Regression results: excess return as a dependent variable						
Excess return	(1) Assets 2000-2013	(2) Assets 2008-2013	(3) Bond 2000-2013	(4) Bond 2008-2013	(5) Blend 2000-2013	(6) Blend 2008-2013
Previous year fund share abnormal return	-1.1191*** (0.0260)	-1.1818*** (0.0297)	-1.0757*** (0.0724)	-1.4491*** (0.0625)	-1.0184*** (0.0791)	-1.2827*** (0.0699)
Fund age	-0.0043*** (0.0004)	-0.0026*** (0.0006)	-0.0039*** (0.0006)	-0.0008* (0.0004)		
Year average TNA	-0.1516*** (0.0465)	-0.2274* (0.1180)	-0.6019*** (0.2298)	-0.6799*** (0.2436)		-0.8231** (0.3284)
Current net flow	0.1938*** (0.0509)	0.0257 (0.2984)				
Other costs	-0.1831*** (0.0576)	-0.3293*** (0.0837)				0.2274** (0.1100)
Foreign assets in portfolio	0.0100*** (0.0027)	0.0211*** (0.0045)				
Management company capital	-0.1073*** (0.0380)	-0.0907 (0.0573)	-0.1457* (0.0815)	-0.0775*** (0.0202)	-2.6671*** (0.8181)	-1.5817*** (0.5249)
Management company profit	0.2301* (0.1269)	0.5752*** (0.2196)	3.5727** (1.5312)	3.5258** (1.5646)	5.2515*** (1.3833)	4.8841*** (1.5540)
Fund type	-0.0084 (0.0052)	-0.0083 (0.0094)	0.0056** (0.0025)	0.0087 (0.0061)		
Management company revenues		-1.2107*** (0.2799)	-15.8268* (8.2751)			-0.0516 (0.0357)
Total costs			-1.0025** (0.4312)	-1.2436*** (0.4593)	-0.1116 (0.1040)	
Previous year net flow			-0.3539*** (0.1160)	-0.3709*** (0.1233)	-0.1654 (0.1506)	-0.7164*** (0.1977)
Portfolio turnover				-0.4617* (0.2577)		-0.1780*** (0.0411)
Intercept	0.0141*** (0.0051)	-0.0067 (0.0104)	-0.0297*** (0.0070)	-0.0612*** (0.0069)	-0.0126*** (0.0019)	-0.0338*** (0.0043)
Financial intermediary: positive effect			Bank	Bank Special		
Financial intermediary: Negative effect					Insurance	Insurance Special
Observations	2925	1350	1632	816	1332	666
R ²	8.74%	8.83%	11.6%	14.14%	9.44%	12.98%

Note: Standard deviation in brackets

Columns (1), (2) show the results of estimation for equity and index funds; columns (3), (4) present results for bond and money market funds; columns (5),(6) – blend funds . Columns (1), (3), (5) contain estimation coefficients for the period 2000-2013 years; columns (2), (4), (6) cover the period 2008-2013 years.

Significance level * 10%, ** 5%, *** 1%

Determinants of fund flows

The next indicator of mutual funds' performance in the Russian market is the net flow of fund shares, which characterizes the value of inflow-outflow of the fund shares.

When buying shares for a mutual fund, investors can choose from a hundred of funds, far more than any investor can carefully consider. Most investors have no formal training in what factors to weigh when selecting a fund. One of the important indicators of the mutual fund quality is the share return. But considering only this indicator is not enough to understand why one fund is more attractive than another and has a remarkably higher net flow.

As mentioned by Barber et al. (2005), academic finance advises investors that low fees are preferable to high fees, that past returns are poor predictors of future returns in the long run, and that there is little, or no, evidence that active managers can outperform indices. Thus, investors would be better off choosing any well-diversified mutual fund with low fees (e.g., an index fund). In our research we decided to consider what else affects the mutual fund flow.

The literature on mutual funds has long recognized that investors respond to the mutual fund performance and has documented a robust, positive relation between net fund flows and past fund performance (e.g., Ippolito, 1992; Chevalier and Ellison, 1997; Sirri and Tufano, 1998; Berk and Green, 2004¹). As can be seen from Table 3, a strongly significant relation between these two fund characteristics exists for equity and blend funds.

We have not revealed the existence of convexity in the area of losses of the Russian mutual fund sales function. However, during the crisis shareholders often demonstrate inclination to irrational behavior, preferring not to sell but to buy shares of the mutual funds which have a negative return.

Table 3 also provides clear evidence that the fund flow depends on the fund age. Young funds pursue a more aggressive policy to acquire new investors, more advertisements in media, special offers, etc. Thus, more investors generate a higher fund netflow.

In Table 3 it can be seen that there exists a negative relation between the fund flow and total costs for all the funds. This is consistent with the evidence of Sirri and Tufano (1998) and Barber et al. (2005) that low expenses may attract investors.

It is interesting to note that higher other costs and a higher depository fee lead to a higher net flow of mutual funds. It could be explained by the fact that in that case a higher cost and higher depository fee could facilitate fund share registration and increase the corresponding flow. If we consider auditor and registry fees, there is no stable relation for these two factors for different fund categories.

The management company fee value positively related with the fund flow of equity and blend funds in the long period (2000-2013). Investors can expect that a higher management fee is a sign of better management quality and a higher level of management skill. Thus, funds with a higher management company fee could be more attractive for investors and have a higher net flow.

The presence of foreign securities in the portfolio of equity increases the net flow of the fund. A better diversification of portfolio and expectation of a more stable return due to that can increase the fund net flow.

Considering the affiliation of management companies to a particular group of financial intermediaries (banks, brokers, non-residents, specialized management companies, non-financial companies and insurers) one may note that for different categories of funds belonging to different groups is related with the net flow differently. For bond funds, for example, it is more effective to be in collaboration with a bank or large corporation.

Summing up, one can see that regularities in the Russian mutual investment market are in line with the same in developed countries.

1. According to Berk and Green (2005), the net flow of mutual funds is a function of the prior period excess return of mutual funds (sales function). This function in the area of losses is convex. The convexity of sales function reflects irrationality of the behavior of mutual funds' investors consisting in the fact that with the growth of funds' losses withdrawals are not carried out as quickly as one could expect for a rational investor's behavior.

Regression results: net flow as a dependent variable

	(1)	(2)	(3)	(4)	(5)	(6)
Net flow	Assets 2000-2013	Assets 2008-2013	Bond 2000-2013	Bond 2008-2013	Blend 2000-2013	Blend 2008-2013
Fund age	-0.0011*** (0.0002)	-0.0007*** (0.0002)	-0.0007*** (0.0003)	-0.0013* (0.0007)	-0.0008*** (0.0002)	
Year average TNA	1.4874*** (0.5242)		1.1643*** (0.1311)	1.9304*** (0.5394)	0.3718** (0.1626)	-0.7014*** (0.1041)
Previous year fund share abnormal return	0.0670*** (0.0143)	0.0438*** (0.0119)	-0.0200 (0.0311)	0.0015 (0.0235)	0.0833** (0.0325)	0.0332** (0.0162)
Management company fee	9.9154*** (1.8460)				4.9065* (2.5191)	
Special registry fee	1.1930*** (0.2691)			-4.1702*** (1.0216)	1.1318** (0.4567)	
Special depository fee	1.2235*** (0.2312)	0.2719*** (0.0584)	0.7153*** (0.1566)		0.5555** (0.2630)	0.1498*** (0.0452)
Special auditor fee	0.0688* (0.0374)		-0.3660*** (0.1221)	-0.5991*** (0.2095)	-0.0659** (0.0318)	
Other costs	0.2704** (0.1061)		0.7826** (0.3781)		0.2644*** (0.0922)	0.1279*** (0.0210)
Total costs	-13.5380*** (2.1765)	-0.4548*** (0.0606)	-2.6487*** (0.9105)		-5.7102** (2.7189)	
Foreign assets in portfolio	0.0033*** (0.0011)	0.0024** (0.0010)				
Management company revenues		-0.1487** (0.0636)	1.8319** (0.9284)			-0.0050** (0.0024)
Management company profit		0.0451** (0.0175)				0.1182 (0.0783)
NML member			-0.0033* (0.0017)	-0.0067* (0.0037)		
Previous year net flow				-0.8242* (0.4341)	0.0648 (0.0402)	
Portfolio turnover				-0.5692** (0.2521)		
Fund type						-0.0028* (0.0015)
Intercept	0.0019*** (0.0005)	0.0013 (0.0009)	-0.0001 (0.0018)	-0.0017 (0.0028)	0.0023*** (0.0006)	0.0005 (0.0015)
Financial intermediary: positive effect			Bank Corporation	Bank Corporation		
Financial intermediary: Negative effect		Broker Nonresident			Corporation Special	Broker Special
Observations	2925	1350	1768	816	1332	666
R ²	54.32%	53.11%	62.51%	61.32%	56.15%	54.12%

Note: Standard deviation in brackets

Columns (1), (2) show the results of estimation for equity and index funds; columns (3), (4) present results for bond and money market funds; columns (5),(6) – blend funds. Columns (1), (3), (5) contain estimation coefficients for the period 2000-2013 years; columns (2), (4), (6) cover the period 2008-2013 years.

Significance level * 10%, ** 5%, *** 1%

Determinants of the management company fee

The last but not the least indicator of the effectiveness of mutual funds is the management company fee.

The advantage of investing in mutual funds compared to bank deposits is generally lower costs to investors of such funds compared to banks' customers. Management companies do not need to keep a costly branch network with high security requirements. In addition, the management of clients' assets does not imply guarantees of repayment, urgency and dearness of these funds in comparison with banks which are forced to provide these guarantees. As a result, bank spreads calculated as the difference between loan and deposit¹ rates are generally significantly higher than the level of expenses of mutual funds²

The comparison of bank spreads and relative costs of open and interval mutual funds shows that in 2000-2013, in contrast with fast decreasing bank costs, expenses paid from the assets of mutual funds decreased significantly slower (Fig. 7).

On average, bank spreads decreased from 17.9% in 2000 to 3.9% in 2013 (78.2% reduction). The simple average expense rate, covered by mutual funds' assets, decreased from 5.2% of annual average TNA in 2000 to 3.9% in 2013 (25.0% reduction).

During the same period the weighted by TNA average rate of expenses covered by assets of mutual funds decreased from 5.2% to 2.7%. As a result, since 2011 the average size of bank spreads has become even less than the average MFs costs calculated as a simple average. The indicator of the weighted average cost of mutual funds still remained below the bank spreads, i.e. the costs of larger funds are still lower than bank spreads. Of course, the high rates of banks' costs reduction was to some extent generated by the introduction of state guarantees for the safety of bank deposits of individuals, the growth of refinancing from the central bank, which helps to reduce credit costs, decreasing of inflation rate and other factors. However, this does not change the main conclusion that in recent years management companies have paid less attention to the reduction of management costs compared with the efforts of the banking sector.

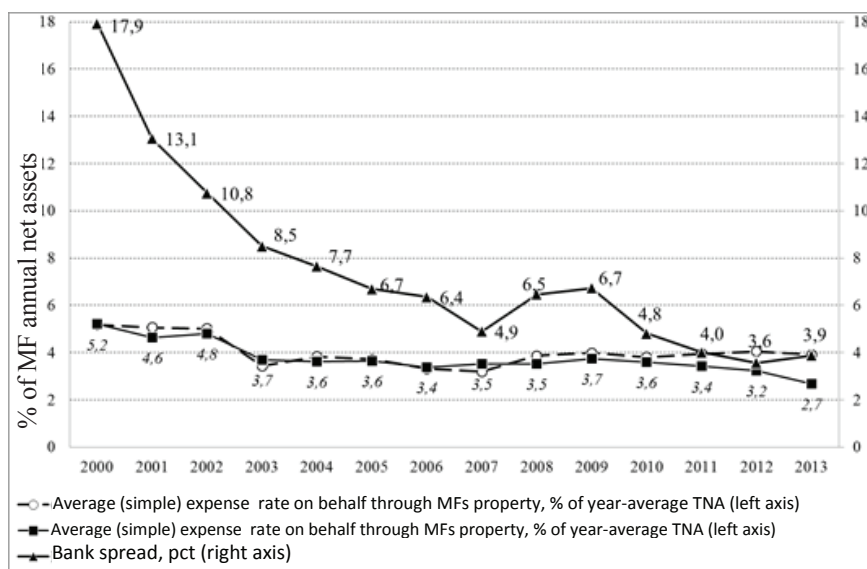


Figure 7: Comparison of bank spreads and mutual funds management costs

During the period of the growth of MFs assets in 2000-2007 there was a positive trend of management costs reduction (Fig. 8). The average rate of overall MFs management costs decreased from 5.2% in 2000 to 3.2% in 2007 (38.5% reduction). During the same period the average value of management companies' fee decreased from 2.8% to 2.2%, i.e. by 21.4%. However, under the impact of the crisis total MFs management costs increased, reaching 3.9% in 2013, i.e. an increase by 21.9% compared

1. It is calculated as a difference between the average rate of bank loans to individuals for up to 1 year and the average rate of bank deposits of individuals for up to 1 year, including demand deposits.

2. The ratio of the total cost paid from the assets of mutual funds during the reporting period (in our case - 1 year) and the average annual value of TNA of funds for the same period of time.

to 2007. During the same period the average MFs management companies' fee reached 2.6%, which means an 18.2% increase compared to 2007.

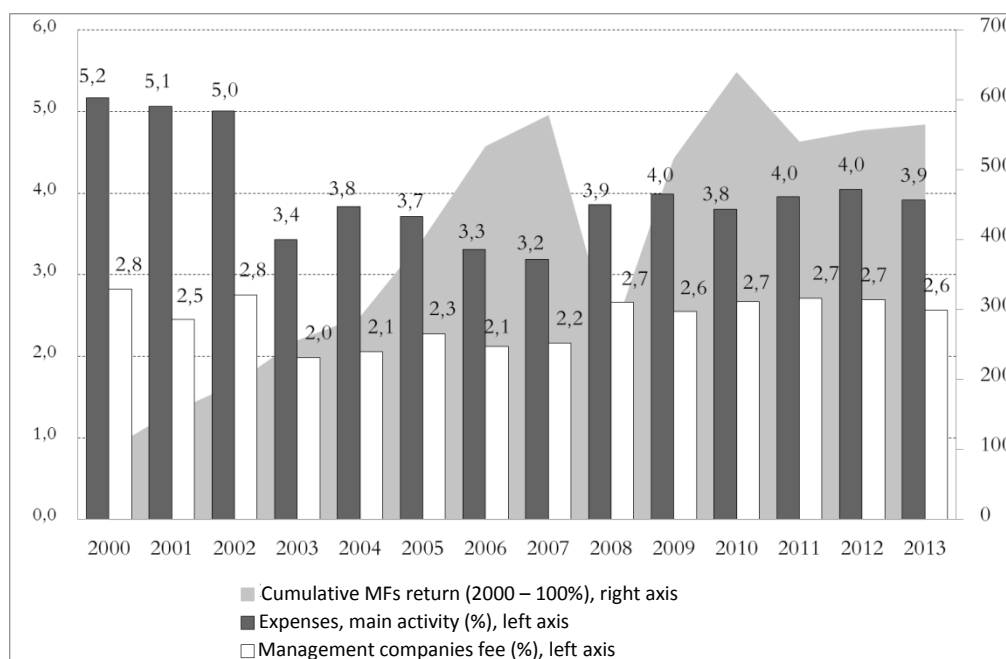


Figure 8: Cumulative return of open and interval MFs and average management expenses rate (% of annual average TNA)

One of the problems associated with the remuneration of the MFs management company is the opacity of its composition. This fee consists of two parts with different functional purposes: remuneration directly for the management of portfolios of mutual funds and costs of sales and marketing of fund shares. According to legislation, mutual funds in the US disclose the management company fee for the portfolio management and administration¹ as a percentage of annual average value of fund assets; and so-called “12b-1 fee” as a source of funds for marketing and sales of MFs shares. Probably, in Russia it would be worth dividing the management company fee into two parts as well to improve its transparency.

Considering the determinants of the management company fee (Table 4), first of all, there should be noted the existence of a stable relationship between the management company fee and the result of its activities in respect of return on investment (both current and previous). We can see that a better fund return leads to lower management funds. It can look like a surprising result but it is fully in line with the model of Gil-Bazo and Ruiz-Verdu (2008) who argue that worse-performing funds set fees that are greater or equal to those set by better-performing funds because high-quality funds may be able to differentiate themselves by setting low fees.

One can find that both year average total net assets and net flow are positively related with the management company fee. Some previous research argues that large funds usually charge a lower fee (Geranio and Zanotti, 2005) due to the presence of economies of scale. The opposite interaction in the Russian market could be addressed to a relative low size of Russian funds in comparison with their foreign counterparts, so economies of scale cannot realize their potential. If we consider total costs, we see that their higher level is reflected in higher management costs which may be explained by the greater complexity of the governance of such a fund. All other costs as well as a fee of registrar, depositary, and auditor are negatively related to the remuneration of the management company.

There exist several more significant coefficient estimations, but we see that they are not robust to different periods.

Table 4 also provides an answer to the question concerning financial intermediaries. Only for bond funds there exists a stable positive effect of being part of a broker and special financial intermediary group.

1. In this case the administration includes services associated with accounting and the valuation of net assets.

Thereby, we revealed the importance of economies of scale to be realized to decrease the management fee. Funds of the better quality offer a lower management fee to the clients, while funds with high costs have a higher management fee. This again emphasizes the importance of cost reduction.

Table 4

Regression results: management company fee as a dependent variable

	(1)	(2)	(3)	(4)	(5)	(6)
Management company fee	Assets 2000-2013	Assets 2008-2013	Bond 2000-2013	Bond 2008-2013	Blend 2000-2013	Blend 2008-2013
Year average TNA	0.0020*** (0.0006)	0.0004** (0.0001)	0.0012** (0.0005)	0.0008** (0.0004)	0.0024*** (0.0008)	0.0024*** (0.0008)
Current net flow	0.0002** (0.0001)	0.0001*** (0.0000)	0.0002** (0.0001)		0.0005*** (0.0001)	0.0005*** (0.0001)
Fund share abnormal return	-0.0000** (0.0000)		-0.0005*** (0.0000)	-0.0002*** (0.0000)	-0.0001*** (0.0000)	-0.0001*** (0.0000)
Previous year fund share abnormal return	-0.0001*** (0.0000)		-0.0005*** (0.0002)	0.0006*** (0.0001)	-0.0007*** (0.0002)	-0.0007*** (0.0002)
Special registry fee	-0.1544*** (0.0001)	-0.1549*** (0.0001)	-0.1506*** (0.0016)	-0.1533*** (0.0012)	-0.1543*** (0.0007)	-0.1543*** (0.0007)
Special depository fee	-0.0899*** (0.0002)	-0.0899*** (0.0001)	-0.0889*** (0.0005)	-0.0891*** (0.0004)	-0.0901*** (0.0003)	-0.0901*** (0.0003)
Specal auditor fee	-0.0045*** (0.0001)	-0.0045*** (0.0000)	-0.0044*** (0.0003)	-0.0047*** (0.0004)	-0.0042*** (0.0001)	-0.0042*** (0.0001)
Other costs	-0.0398*** (0.0001)	-0.0399*** (0.0000)	-0.0391*** (0.0004)	-0.0393*** (0.0003)	-0.0397*** (0.0001)	-0.0397*** (0.0001)
Total costs	1.1549*** (0.0007)	1.1569*** (0.0002)	1.1500*** (0.0028)	1.1528*** (0.0022)	1.1543*** (0.0009)	1.1543*** (0.0009)
Previous year net flow	0.0003*** (0.0001)				0.0004*** (0.0001)	0.0004*** (0.0001)
Management company revenues	0.0001*** (0.0000)		0.0620*** (0.0212)			
Portfolio turnover		0.0001*** (0.0000)				
Shareholder assets turnover		0.0001* (0.0001)		0.0001*** (0.0000)		
Intercept	-0.0000*** (0.0000)	0.0001*** (0.0000)	-0.0000 (0.0000)	0.0000*** (0.0000)	-0.0000* (0.0000)	-0.0000* (0.0000)
Financial intermediary: positive effect		Broker Non- resident	Broker Bank Special	Broker Special		
Financial intermediary: Negative effect					Special	Special
Observations	2700	1350	1768	816	1332	1332
R ²	83.12%	84.15%	78.45%	76.39%	83.21%	82.89%

Note: Standard deviation in brackets

Columns (1), (2) show the results of estimation for equity and index funds; columns (3), (4) present results for bond and money market funds; columns (5),(6) – blend funds. Columns (1), (3), (5) contain estimation coefficients for the period 2000-2013 years; columns (2), (4), (6) cover the period 2008-2013 years.

Significance level * 10%, ** 5%, *** 1%

Conclusion

Although the mutual investment industry in Russia continues to evolve, the attractiveness of mutual funds is still not high enough for investors, which does not allow funds to realize their potential by using

economies of scale. The last year financial crisis markedly affected the mutual fund industry in Russia and led to a significant decrease in total net assets of mutual funds.

When compared to the benchmarks, mutual funds' shares show higher efficacy than the short-term strategy with the MICEX index. However, long-term investments continue to be outperformed by Index. The consideration of such important benchmarks as inflation, return on government securities and the 50/50 strategy return shows that different types of funds should outperform the relevant benchmarks and can do that (over a 5-year horizon in 2013 funds generated a positive excess return).

The analysis of the factors related to the excess return, net flow of mutual funds and management company fee has shown that Russian mutual funds and their investors largely follow the same rules as their foreign counterparts. This again emphasizes the importance of such a player for the Russian financial market and demonstrates that in Russia there exist all necessary prerequisites for the successful development of that area.

We could not find remarkable differences in influence of the factors on fund performance in equity, bond and blend funds. As we showed above, all three considered characteristics (return, net flow, management fee) are important performance measures of all categories of mutual funds. We also determined which fund characteristics could be a good predictor of fund performance development. However, management companies do not put much effort (compared to banks) to reduce management costs, and the structure of its remuneration remains opaque to investors.

In line with some previous research of mutual fund performance in developed countries we showed that outperformance which mutual funds can demonstrate comes not from the professionalism of managers but from "luck" in Russia. Thus, professionalism of managers, cost reduction and improvement of transparency are the factors that may, if used, largely encourage efficiency of Russian mutual funds.

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