
Russian market of collective investments analysis

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The article describes proposed by the authors methodology of analysis of the Russian mutual funds. The aim of this methodology is to find out how attractive they are to investors and if they are able to provide the possibility of obtaining higher returns with less risk than the market in general. The study determines what type of fund management (active or passive) is more optimal. It also explains the effectiveness of focusing on past performance of the funds for making future investments. In addition, the ability of the management companies to repeat their past results is analyzed. Moreover, it is shown if it makes sense to focus on management companies that achieved the best results in the past while making decisions about future investments. These and other results achieved in this article reveal the features of the Russian market of collective investments and allow investors to form more competent policy of mutual funds' investments. The methodology proposed by the authors is universal. Its application for the analysis of the other markets of collective investments will allow revealing their features.

Keywords: stock market, mutual funds, investment strategies, return on investment

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1 Introduction

Modern stock market provides investors with a wide range of financial instruments and products that allow increasing of equity capital. Such form of investment as mutual funds has acquired great popularity among investors worldwide. The mutual funds market has developed successfully and number of funds and their value of net assets tend to increase in many countries. The reason for such a development of the market of mutual funds is that they are one of

the most attractive, convenient and easy ways of investing for the majority of citizens. People do not need to have deep financial knowledge in order to use this tool. At the same time, the value of the investment unit is relatively small, that makes the investment option available for a wide range of people.

The general trend of development of the Russian market of mutual funds is observed, too. As elsewhere in the world, in this market, investors also face the problem of choosing the optimal fund. One of the first issues that investor should resolve while choosing a fund is to make a decision between actively and passively managed funds.

With active management, the investor transfers the right to dispose of their savings to managers. These special people periodically make transactions with the Fund for a commission by regularly changing the composition and structure of the investment portfolio in order to earn such a return that is greater than the market index. A classic example is a stock fund. In the case of a passive management, the composition and structure of the investment portfolio is consistent with the composition and structure of the securities, on the basis of which one of the common indexes is calculated. That is why such funds received the name of the index funds. In contrast to active strategies, role of managers lies in maintaining such compliance.

Another important factor that should be taken in the account when choosing between active and passive management is the attitude of the investor towards risk and expectations for return on the fund. Choosing actively managed fund, the investor expects higher returns, but is ready to go on greater market risk. More conservative investors prefer index funds that are not exposed to risks associated with active management. At the same time they do not allow obtaining a significantly different from the return of overall market.

Traditionally it is believed that with active management it is possible to achieve higher returns than with passive one. However, despite the fact that with this type of funds managers pay more attention to development of the investment strategy it does not always lead to results that are better than in case of passive management. Western scholars, analyzing the American stock market, at the end of last century came to the conclusion that on average, active funds cannot beat passive in the long term. For example, M. Gruber [Gruber, 1996] showed that in the period from 1985 to 1994 the average mutual fund was getting 65 basis points less return annually. R. Wermers [Wermers, 2000], analyzing the 20-year period (1975-1994 years), found that the yield of funds comprised of shares got results that were 1% below the capitalization-weighted market index CRSP (this without taking into account operating expenses and other transaction costs, which could inevitably reduce the final yield for the shareholders). Similar trends continue to be at the present stage of development of the stock market of the USA. According to standard & Poor's Indices Versus Active (SPIVA) for 2014, 86,44% of managers of large-cap funds failed to beat the S&P. A similar pattern is observed in the time horizon of 5 and 10 years.²

According to the analysis of specialized literature, the issue of which type of funds management is more effective, active or passive, remains opened for the

Russian market. On the one hand, this is due to the relative youth of this market. On the other hand the reason is in a lack of interest in academic community. However, without information about which type of fund it is more profitable to deposit money, it's extremely difficult for investors to make a competent decision. Nowadays, there is a clear bias towards actively managed funds in the Russian market of collective investments. In the period from 2005 to 2015, the net asset value (NAV) of index funds averaged only 7,5% relative to open-end stock funds. This suggests that investors expect higher returns on actively managed one. But is it really so? The response to this question is one of the goals of this study.

Another criterion of the investment fund choice considered in the study is the preference of a particular company – that is focusing on those that have shown the best results of trade in the past. This criterion is less obvious to investors because these indicators are not as readily available as the return of specific funds, they have to be calculated. However, if the investor sees among the leaders of last year the specific company, of course this affects his choice of fund to deposit money. Therefore, in this study it's also analyzed whether it is possible to use this criterion when selecting a fund and if it produces the best investment in a view of risk-return ratio.

The specificity of this research is that it aims to establish opportunities of getting higher return on a particular fund by using some criteria of choice. Although there are some empirical results in this area, it should be noted that all of them are built on year-by-year comparison of values of return for all funds in general. However, for the private investor such kind of analysis does not reveal whether he will be able to gain more profits by placing money in the best from his point of view mutual funds. This is due to the fact that existing studies typically ignore that investors make particular choice of the fund. Since in reality the investor does not deposit money in all available funds, individual results may be significantly different from the average values on the market.

To solve this problem, the authors have created a methodology aimed at obtaining results with regard to the preferences of investors in choosing the fund in order to analyze mutual funds. This methodology has been applied on the Russian market to determine what type of fund is the best for investors - actively or passively managed, and whether it worth for investors to use this financial tools. In addition, it has also been shown, if the shareholder should focus on the choice of a particular management company to obtain higher yields. The obtained results allowed giving precise answers to the questions that were put. Despite the fact that this methodology has been applied to the Russian market, it can equally be applied to analyze any other national market and also for cross-country comparisons, which suggests its universality.

2 Used data

The annual values of return of the Russian mutual funds over the period from 2005 to 2015 were used in order to carry out the research. For the Russian market this is a maximum period of analysis, because, despite the fact that mutual funds as a segment of the market was formed in 1996, index funds began to appear only from January 2003. At the beginning of 2005 there were registered seven funds, only four of which started to work.

Annual data is more relevant to use for calculations than the monthly one because it is in line with the assessment of investment strategies and not the speculative one. Since all comparisons were performed for the future period, the year 2005 was used only as a base for calculations. The comparisons were performed between 2006 and 2015.

Analyzed data on yields already take into account commissions charged by the management company, the depositary and other entities in the management of the fund. As shown by additional analysis of the amount of discounts and allowances paid by the investor when entering and exiting the fund there are not any significant differences in this indicator for actively and passively managed funds on the Russian market, therefore the analyzed difference of yield between these types of funds was not adjusted for discounts and allowances.

The rankings of the return of equity and index funds (open and interval) provided by the portal investfunds.ru (Cbonds group) were used as a source of information.³

3 Selection criteria of the fund

Such form of collective investment as mutual funds focuses primarily on the ordinary, unskilled investors. Most of them do not have deep knowledge in Finance and they are not able to conduct high-quality, detailed analyses of investment (also portfolio) strategies. Therefore, the main criterion of choice of fund for them may be its performance during the past period. The rankings of mutual funds are accessible to the mainstream investor, so they can actively be used by them.

However, private investor, choosing a fund, focuses not only on its past performance. Another important criterion which is taken into account is the success of specific investment companies. Success factor can be divided into two components. The first one is objective. It can be determined on the basis of the rates of return on the company's funds in the previous period. Other factors are – the image of the management company, its fame, its advertising campaign and other factors. However, the use of these factors while making a choice on a management company is not directly related with the possibility of obtaining higher yields in the future. Regardless of what marketing policy of the company, its funds may be more or less successful. That mostly depends on the professionalism of its managers and their ability to beat the market.

On the other hand, it cannot be argued that marketing and branding factors are totally ignored by investors, because that would mean that they are trying to place their funds only in those funds and management companies, which have shown the highest yield in the past. Therefore, if the investor may use not only the last criterion of profitability but also some others it can be assumed that investors most often choose the funds that do not necessarily have the highest return. They choose among the top ten most profitable in the past funds. Moreover, they orientate on the company, which funds showed greater profitability overall, as a subsidiary factor.

3.1. Whether investors use past performance of the Fund in asset allocation?

In order to understand whether the fact that the fund is in the top ten of last year's profitability ranking is an important criterion and whether or not it is used as a key for investors when choosing a fund, the analysis of dynamics of the fundraising was held. Average values of the raised by actively and passively managed funds money over the period from 2005 to 2015 were calculated. The calculation was made separately for each of the type of funds for each year (n), and for those funds that were among the top ten profitability ranking last year (n+1) (PL. 1). This allowed us to assess whether the funds of the top ten last year ranking have attracted more money than all funds of each type on average.

Table 1 The average size of attracted money by actively and passively managed funds during 2005-2015, mln euro

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Average 2006- 2015
<i>Top-10 stock funds, n+1</i>		12,24	3,43	-3,35	-1,46	2,55	-0,3	-0,17	3,11	-6,28	-0,79	0,9
<i>All stock funds, n</i>	0,19	2,32	-0,09	-0,43	-0,39	-0,13	-0,08	-0,69	-0,27	-0,28	-0,45	-0,05
<i>Top-10 index funds, n+1</i>		3,58	0,14	0,24	-0,15	0	-0,04	-0,29	-0,15	0,17	-0,21	0,33
<i>All index funds, n</i>	0,31	1,88	0,41	0,15	-0,23	-0,28	0	-0,48	-0,46	-0,04	-0,13	0,08

According to the data represented in the table, the mean value of borrowed money by actively managed funds that are in the top ten ranking of profitability of last year equals 0.9 million euro. This is clearly more than the same indicator for all actively managed funds (-0.05 million). The same situation is observed for passively managed funds: fundraising of the top ten ranking of the previous year (0.33 million euro) is clearly greater than average fundraising of all passive funds (0,08 million euro). These results confirm that investors actively use the criterion of the fund's presence in the top positions of the last year ranking of profitability in the case of both types.

The average fundraising of index funds that are in the top ten by return of the previous year does not exceed the average value of borrowed funds for the current year too much. This is due to two factors. First is the fact that index funds own a smaller share of the Russian market of collective investments. Second is

that it makes sense to choose funds from the top ten with the highest return only in case of actively managed funds because index funds do not have a large spread of return and they are closer to the profitability of the market in general.

We can conclude that when investors select a specific fund to deposit their money they use the data on the return of the previous period. This corresponds to both types of the considered funds, but mostly for actively managed one. Therefore, the fact that fund is in the top positions (namely top-10) in the last year profitability ranking can be considered as the main criterion for the general mass of investors that choose in which fund to invest. This criterion will be used as the base for comparison of actively and passively managed funds.

3.2. Do investors deposit more money in those asset management companies, which funds have shown greater return in the previous period?

The same analysis of the total fundraising of each company was held in order to assess whether investors use the criterion of success of all the funds of a particular management company. The average values of the attracted money by actively managed funds were calculated for each company between 2005 and 2015. Index funds were not taken into account, because beating the market is not a goal for its managers and it is not a measure of their professionalism. As in the case of analysis of individual funds, the calculation was made separately for all companies for each year (n), and for those companies that showed top five best results in the profitability ranking in the last year ($n+1$) (table 2). It became possible to estimate, if the companies from the top five ranking of the last year raise more money than all companies on average.

Table 2 The average size of attracted money by asset management companies of actively managed funds during 2005-2015, mln euro

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Average 2006- 2015
<i>Top-5 management companies, n+1</i>		5,43	1,69	-0,79	-0,03	-0,35	0,04	-0,01	-0,12	-0,57	-0,26	0,5
<i>All management companies, n</i>	0,19	1,37	0,27	-0,13	-0,17	-0,06	-0,06	-0,31	-0,19	-0,01	-0,24	0,05

The data presented in table show that the average value of money raised by companies from the top five profitability ranking of last year amounted to 0,5 million euro. That is clearly more than the same indicator for all the companies as a whole (0,05 million rubles). This result confirms that investors of actively managed mutual funds are trying to deposit their money in those companies that were most successful last year (for example, when they select a specific fund from the top-10 ranking of the most profitable funds of the last period). Therefore, this criterion will be used as an auxiliary one to test whether or not it is necessary for investors to apply it.

4. The analysis of the yield of top ten actively and passively managed funds

It was found out that investors focus on funds that have shown the highest yield in the last period and deposit a greater amount of money in them. Then the question arises: is this criterion of selecting a fund feasible and does it allow obtaining a greater return on investment? And what type of fund is more preferable from the point of this criterion - actively or passively managed one?

To answer this question it is necessary to understand why investors tend to choose funds from the top ten profitability ranking shown in the last period. To do this, refer to figure 1, which presents data for annual average return for samples of the top 10 active and top 10 passively managed funds. It can be noticed

that every year actively managed funds from this top show higher returns than all funds of the same type. This tendency is not observed in case of passively managed funds. That is expected and can be explained by the fact that their task is to copy the index and, therefore, their yield is quite close to it. As for actively managed funds, they have much wider investment opportunities, so there are always those that will beat the overall market.

As a result, the average investor can assume that those funds, which are included in the top ten now, are the most successful overall, and investing in those funds can provide approximately the same super-profits in the future. So, without data about the trends of these funds in the future (if they can repeat the last result or not), investors tend to focus on those that currently show the highest yield.

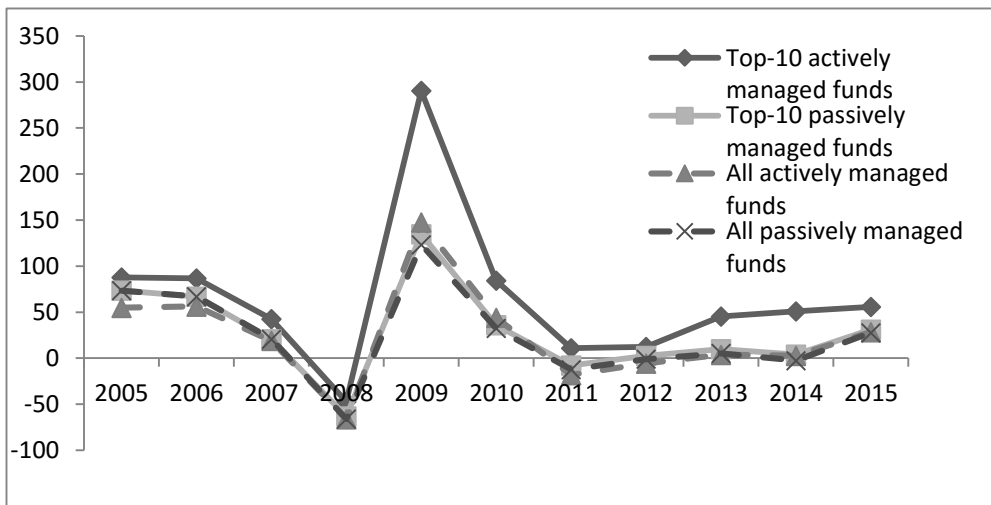


Figure 1 The average yield of actively and passively managed investment funds, %

Table 3 The average yield of top-10 actively and passively managed mutual funds, %

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Average
Actively Managed	87	43	-47	291	84	11	12	45	51	56	63,2
Passively managed	67	21	-63	135	36	-8	3	10	4	31	23,4

However, from an investment point of view, the current high value of return does not represent any guarantees of getting the same yield in the future. In this regard, the information about what level of yield funds from top ten of the current profitability ranking can provide in the future is the most valuable one. Such data will allow determining whether the use of such criteria as the presence of the fund in the top ten is appropriate in terms of obtaining a higher return on investment in the future. The comparison of actively and passively managed funds by this criteria can show which type of fund is more preferable for the investor and whether they are generally give results that exceed market indicators.

To obtain this data, values of average yields for the funds included in last year top ten profitability ranking were calculated for each year of the considered period. The calculation was made separately for active and passively managed funds (table 4). The data shows what level of return investors could expect, if they had to pick funds from dozen of the most profitable last year funds during this time period.

Table 4 The average yield of actively and passively managed mutual funds, %

<i>Year, n</i>	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	<i>Average 2006-2015</i>
<i>n+1, top-10, actively managed</i>		60	26	-70	95	73	-13	3	22	0	19	21,5
<i>n+1, top-10, passively managed</i>		80	20	-67	126	34	-15	2	5	-5	30	20,9
<i>n, all actively managed</i>	55	56	19	-66	148	44	-18	-6	4	3	28	21,1
<i>n, all passively managed</i>	74	67	21	-66	123	32	-12	-1	5	-3	28	19,4
<i>The yield of MICEX index</i>	83	68	12	-67	121	23	-17	5	2	-7	26	16,5

As table 4 shows, the average for top ten actively managed funds exceeds top ten passively managed just by 0.6%. Such excess returns, especially for the Russian market with high volatility, cannot be considered as significant. Despite the fact that managers pay much more attention to the development and implementation of investment strategies of actively managed, it does not result in significantly greater excess in yield. This situation is well illustrated by figure 2.

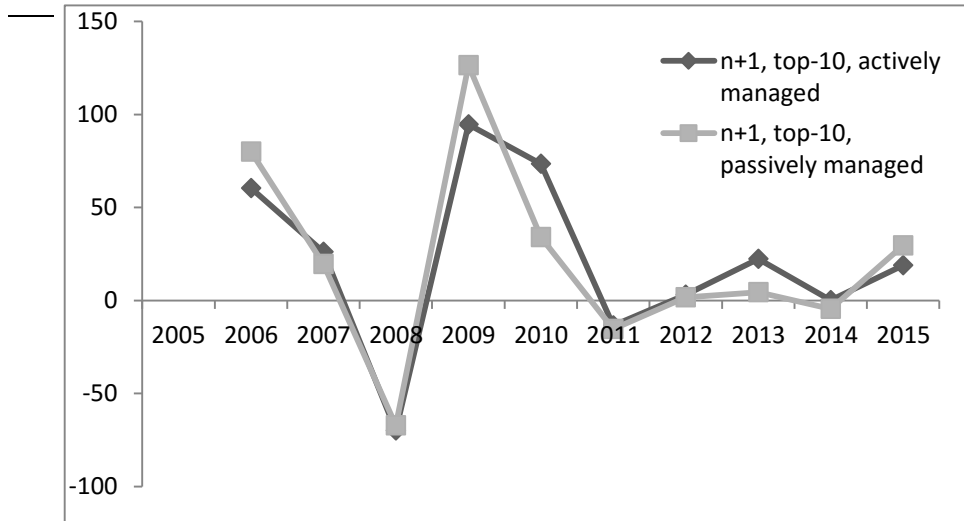


Figure 2 The average yield of actively and passively managed mutual funds of last year top-10 profitability ranking, %

The figure 2 shows that the average returns of actively and passively managed funds of last year top-10 profitability ranking are almost at the same level. Moreover, the unexpected fact is that in post-crisis 2009, on the back of strong growth of the market, index funds have dominated in relation to actively managed ones. This suggests that investing in the most profitable actively managed funds before the beginning of the strong growth of the market cannot provide a higher yield even when there is the best for mutual funds market situation.

As a result, we can conclude that it is virtually impossible to provide significantly higher yields by investing in actively managed funds which showed the highest yield last year in comparison with the investing in the best passively managed funds. That is why the selection of the best actively managed or passively managed funds of the past period are roughly equivalent from the viewpoint of obtaining higher yields in the future.

5. Should investors choose funds from the profitability ranking of the last year in order to get higher return relative to all the funds and the market as a whole?

The calculations allow to make another important comparison: if top ten most profitable funds of the last year provide a greater return relative to all

funds of the same type for each year and if investors should focus on last year's funds, that are in the top position of this kind of ranking, when they select a fund for investment. As can be seen from the table 2, the average yield of the top ten best funds of last year is a little higher than the one for all the funds overall (for actively managed (0.4%) and for funds with passive management (1.5%). However, such a marginal benefit, especially for the actively managed funds, in which case the right choice is the most important, does not suggest, that it is possible to make a clear improvement of investment results by applying this criterion. Most probably, they are approximately equal to the average values for each type of fund and are not able to provide investors with getting fundamentally higher yields.

If we compare results with the returns of the market as a whole (with MICEX index), we can note that the average return of the top ten best funds of last year is clearly higher for both actively (5.0%) and passively (4.4%) managed funds. At the same time, it can be seen that the average yield on actively and passively managed funds is higher than the one for the market (4.6% and 2.9%, respectively). That is why, we can conclude that if investor wants to obtain yield that is higher than the one for the whole market, investment in mutual funds is expedient and may be of interest to them. However, the use of the criterion of investing in funds that showed the highest yield in the previous period does not significantly improve the results, especially for actively managed funds in which case it was mostly expected.

6. Is selecting funds from the first ten in the ranking a correct criterion?

Earlier on the basis of the volume of attracted funds was shown that investors rely on the most profitable top ten of last year when choosing a fund. But over the course of additional calculations, it was found that on the second ten the average size of fundraising was slightly higher than for each type of funds in general. Therefore it was interesting to assess whether the yield of the top ten funds exceeds the yield of the second and third dozens. That is, whether it makes sense for investors to consider the funds more widely, when they focus on the past performance, and to make choices among funds with lower positions, not just from the first ten.

As the standard deviation of the yield of passively managed funds is low, the calculations were made only for active funds in order to answer this question. The results are presented in the table below.

Table 5 The average yield of the second and the third ten of actively managed funds of the last year ranking, %

<i>Year, n</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>	<i>2011</i>	<i>2012</i>	<i>2013</i>	<i>2014</i>	<i>2015</i>	<i>Average</i>
<i>Second ten</i>	57	18	-69	112	66	-15	-2	17	-3	23	20,4
<i>Third ten</i>	59	14	-64	120	55	-28	-5	15	5	29	20,0

According to the data of table 5, the yield of the second ten actively managed funds of the last year (20,4%) is on average 1.1% lower than the one of the first (21,5%). In case of the third (20,0%) ten, the difference is already equal to 1,5%. Therefore, the choice of funds from the top ten still makes sense and can provide some prevalence on yield to investors. Then the focus on funds of the top ten (not twenty or thirty) can be justifiable. Moreover, to obtain greater than on all actively managed funds yield (21,1%), investors should try to choose funds from the top ten only, since neither the second, nor the third do not provide a greater return in the future. But if we compare with the average yield of all passively managed funds (19,4%), it may be noted that the first, second, and third dozen of actively managed funds from profitability ranking of the last year are able to provide a higher return.

Since the average number of actively managed funds on the Russian market was equal to 168 from 2005 till 2015, the first 30 funds account for a one-fifth (approximately 18%) of their total number. The calculations suggest that even by choosing the funds from the best 18% it is possible to get higher than the average for all index funds in general yield.

At the same time, investments in the top ten actively managed funds of the last year ranking can provide only a relatively small excess of returns compared to passively managed, especially compared to the average value for them. Then we can conclude that the significant advantage of the top ten actively managed funds over index (almost 40 pp – table 3) is almost completely lost. Let's analyze in more details to establish the causes of this situation.

7. The stability of the actively managed funds in top-10 profitability ranking

It was shown that period in comparison to passively managed funds and all actively managed funds in general the top ten actively managed funds are not able to provide significantly higher yield in a future. The same situation is ob-

served for the second and third dozens. The funds that are the most profitable in the current period were not in the top thirty of the last year (have not got to 18% last year profitability ranking). As a result, it is not possible to guess which fund will provide a return that is higher than index funds and any other actively managed funds in the next year. The search area of such funds is even impossible to reduce to top 30 the most profitable in the current period.

What happens to the best funds in the next period of time? Table 6, which presents the results on the percentage of funds moving out of the top ten in the overall ranking of profitability for the next period of time, gives the answer to this question. The data from the table allow us to assess the sustainability of the funds within the top ten and the range of their future returns. It shows what percentage of actively managed funds remains in the top ten by profitability in the next period, how many moves in each next ten (till fifth one) and how many drops below the fifth dozens of ranking.

Table 6 How actively managed funds change their positions in the overall ranking (for the period from 2006 to 2015), %

<i>Year</i>	<i>Funds re- maining in top-10</i>	<i>Funds moved to 2nd 10 of the ranking</i>	<i>Funds moved to 3rd 10 of the ranking</i>	<i>Funds moved to 4th 10 of the ranking</i>	<i>Funds moved to 5th 10 of the ranking</i>	<i>Funds fell below the 50th posi- tion</i>
2006	10%	20%	20%	20%	30%	0%
2007	30%	10%	0%	40%	10%	10%
2008	0%	10%	0%	0%	10%	80%
2009	0%	0%	0%	0%	10%	90%
2010	60%	10%	0%	10%	10%	10%
2011	10%	10%	10%	10%	0%	60%
2012	10%	30%	20%	0%	10%	30%
2013	30%	10%	10%	20%	10%	20%
2014	10%	0%	0%	10%	10%	70%
2015	0%	0%	0%	0%	10%	90%
<i>Average</i>	16%	10%	6%	11%	11%	46%

As it can be seen from the table, the stability of the actively managed funds that are in the highest positions of the profitability ranking is small. The probability that the fund will hold in the top ten, is quite small since only 16% of funds retain their positions for the next year. It is much more likely that the fund will

move from the top ten to the lower positions of the ranking - to the fifth dozen (38%) and even more likely (46%) that it will be a position below fifth dozens.

This fact reflects very well the poor predictability of markets and the instability of even professional asset managers results. Especially strong changes were observed in the periods of decline (2008) and growth (2009) of the market. Broken out in 2007 mortgage crisis in the USA and the crisis of the energy market, served as the basis for a significant price drop on the Russian stock market, resulting in a maximum drop of MICEX index (MICEX) in 2008 amounted to 74%. Then, as the stabilization of the situation on the market started, the index started its reverse recovery, mostly in 2009. According to the data of table 6, it was the most difficult for managers to maintain high results when there were large market fluctuations, resulting in a significant changing of funds' positions in the profitability ranking. So, in 2008, 80% of the funds moved lower than fifth dozens, in 2009 the number raised up to 90%. A similar situation occurred during the market decline in 2011, when 60% of the funds fell below the fifth dozens of ranking. There was a clear trend in 2014-2015, when the Russian market was high volatized and almost all the funds that were in the top ten last year, moved to the next lower fifth.

Because of such substantial next year movements of funds from last year's top ten ranking, it is impossible to provide significantly better returns in the future period than all the funds in general. This indicator does not allow selecting those funds that are able to generate a return significantly above the average for all. And there is not any sense for investors to be guided by it, as the funds that comprise it at the moment, can significantly change their positions inside the ranking of profitability.

If the investor wants to ensure himself in getting higher yields at the expense of this criterion, it is necessary to pay attention to the fact that it is essentially to produce deeper diversification by investing equal amounts in all funds in the top ten. That is the only way to receive higher returns on average. Otherwise, if investor selects only one or a small number of funds from last year's first ten, then significant movements of funds out of it can lead to the fact that the result is considerably different from the one that was expected.

8. Comparison of top-5 most profitable management companies with all the others

As investors look for management companies, which funds showed the highest return in the last period, and place a greater amount of money in them, it is necessary to check whether the use of this criterion when selecting a fund is feasible and allows to obtain a greater return on investment. Special calculations were made for this, the results of which are presented in table 7. Such five asset management companies were taken, all funds of which have shown highest yield. In relation to 64 average total number of companies for the period between 2005 and 2015, five management companies represent almost 8% of this num-

ber that is quite similar to the situation with the choice of dozens of the best funds (6% of 168) characterizes the top of the profitability ranking.

Making year-to-year comparison, it can be noted that the companies from the first five the most profitable ranking allow investors to get a much greater return than the average for all management companies (exceed by 34.3%). In principle, it is not surprising, because in case of active management the companies, which funds' profitability will be significantly above average, can always be found. However, the same as in the case of selecting specific funds, there is a problem for investors to guess the company which funds will become the best next year in order to invest in them this year. As already mentioned, investor can use only past returns of company's funds when trying to determine which companies will be the best next year. Therefore, from the investing point of view, it is much better to see the size of average yield that is possible to get if select the funds of the management companies with the best last year results.

Such a comparison has clearly shown that this criterion does not allow obtaining higher yield than all companies in general show. The average yield (11,1%) that is got by using this criterion is 4,3 pp lower than the average for all management companies (15,4%).

Table 7 The yield of management companies, %

		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Average
Top 5 companies	<i>n</i>	90	79	25	-43	278	48	-10	17	16	38	49	49,7
	<i>n+1</i>		46	9	-64	66	43	-22	0	11	-3	24	11,1
All the companies		57	46	8	-65	129	28	-22	1	-1	1	29	15,4
Difference			0	1	1	-63	15	0	-1	12	-3	-5	-4,3

As a result, it must be better to not to use the last year yield indicator on the funds of a specific management company when choosing the fund for investing. As in the case of funds, there is no repeatability of last year management results. The yield on funds of the company that was in top-5 last year is below the average for all companies next year. These results suggest that professional asset managers of investment funds fail to show consistent positive results that are above the average and their results will still be below the general level.

Unfortunately, it is impossible to make an accurate comparison of which criterion is more successful in the research – selection from dozens of the best last year funds or selection of funds from the five companies. This is because of the fact that not all the companies provide statements, and that is why these companies were excluded from the calculations. Therefore, the data is incomplete (although the number of excluded companies is fairly small). However, since last

year's dozen allows beating all the funds of the appropriate type and last year's top five management companies do not, there is a high probability that it is possible to assume that the first criterion is better.

9. The comparison of actively and passively managed funds from the perspective of the risk-return ratio

In the earlier analysis of actively and passively managed funds we have used only the year-by-year percentage change of yield. However, in the conditions of dynamically changing it is also necessary to take into account investment risks associated with obtaining yield that is below the expected level due to adverse movements of financial assets' prices. Therefore, in order to assess more precisely what type of fund is most suitable for investment, additional indicators, based on the risk and return ratio were used.

Traditionally, these comparisons are based on such measures as the Sharpe ratio and the coefficient of variation. Both of these coefficient show, which return per unit of risk the asset brings. The higher the value of coefficient on the asset the more investor will get for the accepted risk, and therefore the better is the asset risk-return ratio. In this case, the Sharpe ratio, in contrast to the coefficient of variation, shows if the high risk of an asset is covered by the higher yield minus the risk-free rate, and whether it is more profitable to invest in riskless assets. Values of these coefficients calculated for actively and passively managed funds, as well as the standard deviation of the returns are presented in the table below. In this case, the risk-free rate equals the average yield on 1-year Russian government bonds, which was 6.0% for the period (2005-2015), (this is the short-term government bonds, so they are commonly used as the risk-free rate).

Table 8 Indicators of market risk for mutual funds

	<i>Actively managed</i>	<i>Passively managed</i>
<i>The Sharpe ratio for the top-10, n+1</i>	0,32	0,28
<i>The Sharpe ratio for the top-10, n</i>	0,64	0,34
<i>The Sharpe ratio for all funds</i>	0,34	0,36
<i>CV for the top-10, n+1</i>	0,46	0,39
<i>CV for all funds</i>	0,45	0,48
<i>Standard deviation for the top-10, n+1</i>	47,1	53
<i>Standard deviation for all funds</i>	54,2	50,4

As the data show, investments in the last year's top ten of actively funds bring higher annual return (21,5% against 20.9% in passively managed) and a smaller standard deviation of return (47,1% vs. 53,0%, respectively). Therefore, from the point of view of the Sharpe ratio and the coefficient of variation they have an advantage over passively managed. However, this advantage is rather low: in case of the Sharpe ratio, it is only 0.04 and the coefficient of variation is 0.07. Therefore, although there is some prevalence, it cannot be argued that it is significant. Moreover, it is clearly observed that the advantage of the top ten actively managed funds over the first ten passively managed (year n) is getting almost completely lost if we invest in them in the following year (n+1). The advantage in case of the Sharpe ratio falls from 0.3 to 0.04 and in case of the yield – from 39,8 to 0,6 (table 3 and 4). That is why the first ten of actively managed funds will not show higher yield in comparison to passively managed funds next year. Investors should not rely on this criterion when choosing the type of investment fund.

It can be noted that there is some advantage only in the case of investments in last year's top ten actively managed funds (0,32) compared to all funds of this type in general (0,27). It is formed due to the fact that the standard deviation of last year's top-10 actively managed funds(47,1%) is clearly lower than for all funds of this type (56,1%), and the average yield (21,5%) is higher than that of all actively managed funds overall (21,1 %). Although in this case the advantage is quite small again.

Moreover, if we compare these indicators with yield and standard deviation for the overall market (respectively 16,5% and 50.3% on MICEX), we can see that a lower standard deviation for the investments in the top ten of last year's profitability ranking (47,1%) clearly corresponds to a higher yield (21,5%) than that of the MICEX index. As a result, the prevalence according to the Sharpe ratio in case of investing in the top ten of last year's ranking of actively managed funds

looks more substantial when we compare it to the market as a whole (from 0,21 to 0,32).

Table 9 Summary indicators of risk and return for actively managed funds

	<i>Average return</i>	<i>Standard deviation</i>	<i>Sharpe ratio</i>
<i>Top-10, n</i>	63,2%	88,9%	0,64
<i>Top-10, n+1</i>	21,5%	47,1%	0,32
<i>All funds</i>	21,1%	56,1%	0,27
<i>The excess of the top ten (n) over all funds</i>	42,1%	32,8%	0,37
<i>The excess of the top ten (n+1) over all funds</i>	0,4%	-9%	0,05
<i>MICEX index</i>	16,5%	50,3%	0,21
<i>The excess of the top ten (n) over MICEX index</i>	46,7%	38,6%	0,43
<i>The excess of the top ten (n+1) over MICEX index</i>	5%	-3,2%	0,11

As a general result it can be noted that significant repeatability of the results of last year's top ten actively managed funds is not observed. As shown by the calculations presented in the summary table 9, good results of the top ten funds for the year n , are related to such indicators of risk and return, which are not repeated by the same funds the following year $(n+1)$. Thus, the excess return over the average for all actively managed funds falls from 42.1% to 0.4%. And excess of the Sharpe ratio drops from 0.37 to 0.05. This clearly shows that there is a very low probability that the results of top-10 will repeat next year from the risk and return point of view. Residual excess is extremely small, and is not similar to indicators, that characterize the top ten for each year n . (In this case, a higher standard deviation of return for the top ten at year n should not be considered as a negative factor, since it can be partially explained by the high positive yield, not negative).

At the same time, there is a little improvement of indicators in case of investing in last year's top-10 in comparison with the choice of fund among all observable, therefore this criterion of inclusion of the fund in last year's top ten can be rec-

ommended to investors. However, it is difficult to expect significant improvement of results from usage of it.

10. Focusing on the best management companies when choosing a fund for investment: risk and return analysis

We have described the investment results obtained if the selection criterion is fund's performance in last year's most profitable funds ranking. However, as it was mentioned earlier, investors can also focus on another criterion – the success of management company. The reason to use it is the assumption that the same companies, which showed the best results last year, may show higher results than asset managers from the other companies next year. It was demonstrated above that in practice it is not confirmed. Investors should not rely on this criterion when selecting a fund, if they want to obtain higher yield. However, risk and return indicators have been calculated for this case too (table 10). In general, the results confirmed earlier results: there is not recurrence of past results, shown by the top five companies.

Table 10 Summary indicators of risk and return for companies in case of actively managed funds

		<i>Average return</i>	<i>Standard deviation</i>	<i>Sharpe ratio</i>
<i>Top-5 companies</i>	<i>n</i>	49,7%	86,9%	0,50
	<i>n+1</i>	11,1%	37,2%	0,14
<i>All management companies</i>		15,4%	50,3%	0,19

Thus, the excess return of the top five companies above average in all management companies (34,3%), drops sharply and becomes negative (-4,3%). The same is observed for the Sharpe ratio – the excess of 0,36 drops to a negative value (-0,05). This clearly shows that there is no repeatability of the results achieved by the top five management companies next year from the point of risk-return ratio. The results of investments on the basis of this criterion are even worse than the results of all the management companies in general. Despite the lower value of standard deviation of return (37,2% vs. 50,3%), a higher risk for all management companies is compensated by a higher yield (15,4% vs. 11,1%).

11. Results

It can be concluded that top ten profitability ranking of the last year and the previous results shown by management companies are quite important criteria for investors that choose a particular fund to deposit their money. Investors, expecting that successful results of management will be repeated in the future, are willing to invest in such funds much more money. But as the calculations shown, the choice of funds from the top-10 of last year does not allow to obtain significant advantages in terms of yield and risk-return ratio. Investors should not expect that these funds will repeat high results in the future: next year the results will be approximately equal to the total average for a particular type of fund management.

The comparison of actively and passively managed funds in case of investing in the most profitable funds of the last year and all funds overall has shown a very small advantage of actively managed funds. Although in this case this advantage is very small, so these forms of investments can be considered almost equal on the Russian market. But in general, it is caused not so much by choosing funds from the top 10, as by the fact that in general actively managed funds show better results than the market index. The orientation on top 10 funds of the last year can provide only a slight improvement. In general, the use of this criterion would not make the results of the investor worse, but at the same time would not improve them significantly. When investor uses last year performance of the funds, he will still get approximately the same return on investment as if he made a random selection from all available funds, both active and passive.

At the same time, investing in mutual funds still provide some advantage in comparison with the returns of the overall market, that is why ordinary investors can be recommended to use them. But in this case it is necessary to apply a broader diversification of investments by investing equal shares in a certain amount of funds. This is needed due to extremely low stability of the results of fund management, so they change their positions in the ranking year by year. Since the range of their annual income is very considerable, it is better to invest in all ten funds from the ranking in order to obtain results that characterize this top. As well as in case of investing in other funds, it is necessary to apply a broader diversification to ensure the possibility of obtaining returns greater than the market as a whole. When investing in a small number of funds there is a high risk that the yield will be significantly lower than the overall market.

If the investor decides to use the Russian mutual funds, it should focus not on the best management companies, but on the best last year funds, because in the first case, investors can receive the return which is below the average for all companies. As it turned out, although the sustainability of the results of the best funds is very small, still it is greater than the sustainability of results of the best management companies.

It can be concluded that in general fund managers cannot beat the market consistently and provide repeatable results. Obtaining the super-profit on the fund that exceeds the profit of the market overall can be considered as a random

event. It happens because in case of high volatility of the stock market and a lot of different investment strategies, such fund that beats the market can always be found. Inability of the managers to ensure repeatability of the results confirms the randomness of this process and indicates the impossibility to orient on the past performance of the market of mutual funds in order to get fundamentally better results than all funds in general.

The methodology of the analysis of mutual funds market that is described in this work is universal and can be applied to any other the national market. This will allow obtaining similar conclusions, so investors can better understand the nature of investments in national mutual funds.

Endnotes

- ¹ SPIVA U.S. Scorecard Year-End 2014 / S&P Dow Jones Indices, 2015. URL: <http://www.spindices.com/documents/spiva/spiva-us-year-end-2014.pdf>.
- ¹ Mutual funds rankings according to their yield [electronic resource]: Data Portal Investfunds group Cbonds], URL: <http://pif.investfunds.ru/funds/rate.phtml> (31.12.2016).

References

- BERZON N.I. - ARSHAKOVSKIY A.J. - BUJANOVA E.A. - KRASILNIKOV A.S. (2009), *Stock market*, Vita-Press.
- BERZON N.I. - VOLODIN S.N. (2010), *Valuation of financial assets on the criterion of 'risk-return' considering the duration of the investment*, HSE Economic Journal n. 3.
- BURENIN A.N. (2008), *Portfolio management*, NTO Academician S.I. Vavilov.
- SADKOVA ZH.A. (2006), *Mutual funds as a factor of economic growth*, Vestnik DVO RAN.
- CARHART, M. (2007), *On persistence in mutual fund performance*, Journal of Finance, n. 1.
- DAVIS J.L. (2001), *Mutual fund performance and manager style*, Financial Analysts Journal, n. 1.
- GRUBER M. (1996), *Another puzzle: the growth in actively managed mutual Funds*, Journal of Finance, vol. 51, n. 3.
- HOLMES, M. (2007), *Improved study finds index management usually outperforms active management*, Journal of Financial Planning, n. 1.
- JEGADEESH, N. - TITMAN S. (1993), *Returns to buying winners and selling losers: Implications for stock market efficiency*, Journal of Finance, n. 1.
- KREMNIETZER K. (2012), *Comparing active and passive fund management in emerging markets*, University of California, Berkeley, Economics Department. Senior Honors Thesis.
- MCGUIGN, TH.P. (2006), *The difficulty of selecting superior mutual fund performance*, Journal of Financial Planning, n. 2.
- SORENSEN E.H. - MILLER K.L - SAMAK V. (1998), *Allocating between active and passive management*, Financial Analysts Journal, n.5.
- WERMERS, R. (2000), *Mutual fund performance: an empirical decomposition into stock-picking talent, style, transactions costs, and expenses*, The Journal of Finance, n. 4.