

# Non-optimal index investing, including the Russian ETF<sup>1</sup> anomaly, and categorical thinking<sup>2</sup>

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*During the last twenty years, literature emerged investigating why an individual investor invests in index funds with higher commission while there are mutual funds tracking the same index and taking much lower commissions for the same work. Another strand of literature has explored why exchange-traded funds (ETF) have still not replaced identical index mutual funds. Recently Tarassov (2016a) documented the Russian ETF anomaly: investing in a western ETF using a Russian mutual fund instead of doing it directly, thus overpaying up to 36% of the invested capital if investing for ten years. This paper reports about further research exploring the possible reasons for the non-optimal index-investing phenomenon. The series of experiments and supporting tests (including those among high net worth individuals (HNWI)) demonstrate that the main reason lies in people's predisposition for categorical thinking or stereotyping: an individual investor puts these funds into the same category as actively managed funds so the commission of 2-3% does not raise any questions. The various indirect effort to assist the participants in changing their perception, or mental representation, of investment funds have a low or negligible effect. The experiment also demonstrated a very strong participant's dependence on framing.*

*JEL G02, G 11*

*Key words: ETF, index-investing, mental representations, framing, HNWI, behavioral finance, experimental economics*

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<sup>1</sup> ETF (Exchange-Traded Funds). The main difference from mutual funds: shares of an ETF are traded on a stock exchange like shares of any other listed company. Mutual funds' unit one may buy only once per day.

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## Introduction

The mutual fund “Sberbank Biotechnology”, which invests only into iShares Nasdaq Biotechnology ETF, was created at the end of May 2015. In August the same year, it joined the list of the TOP 5 largest Russian mutual funds (MFs).<sup>4</sup> The story of the next largest fund, “Raiffeisen USA”, which invests only in SPDR S&P 500 ETF TRUST, is also exceptional. It doubled its NVA (net asset value) during the winter 2014-2015. For the last two years (2014-2015), the group “funds of funds” has raised more money than any other funds category in Russia (Tab.1). At the same time, the great majority of these funds started investing only in one preselected ETF out of the World TOP 100 list (Tarassov, 2016a).

**Table 1. Open-ended Mutual Fund netflow, Russia (mln. rubles)**

Mutual fund category	2013	2014	2015
Equity	-3 909	-6 973	-5 588
Bonds	26 155	-33 985	3 707
Mixed	-2 254	1 086	3 856
Money market	370	597	-1 041
Index	-1 184	-1 116	-242
Fund of funds	-36	5 794	382

Source: National League of Management Companies, *nlu.ru*<sup>5</sup>, January 2016

The calculations show that investing for 10 years in ETF via Russian funds of funds an investor pays<sup>6</sup> up to 36% of the invested capital more than someone who invests in the same ETF directly (Table 2).

**Table 2. Extra payment as percent of the invested capital due to investing in an ETF via a MF rather than directly**

Investment period, years	1	5	10
Extra payments, % from invested capital	4-7%	14-18%	27-36%

Source: Tarassov (2016a)

So far, the non-optimal index-investing phenomenon has been considered in the literature in two directions: choosing an index fund with higher commissions, and continuing to invest in an index via a mutual fund rather than via an ETF. Figure 1 shows assets under management (AUM) of the ETFs and the index mutual funds in the USA.

<sup>4</sup> <http://www.nlu.ru/pifs-scha.htm>

<sup>5</sup> <http://www.nlu.ru/pifs-privlechenie.html>

<sup>6</sup> In commissions.

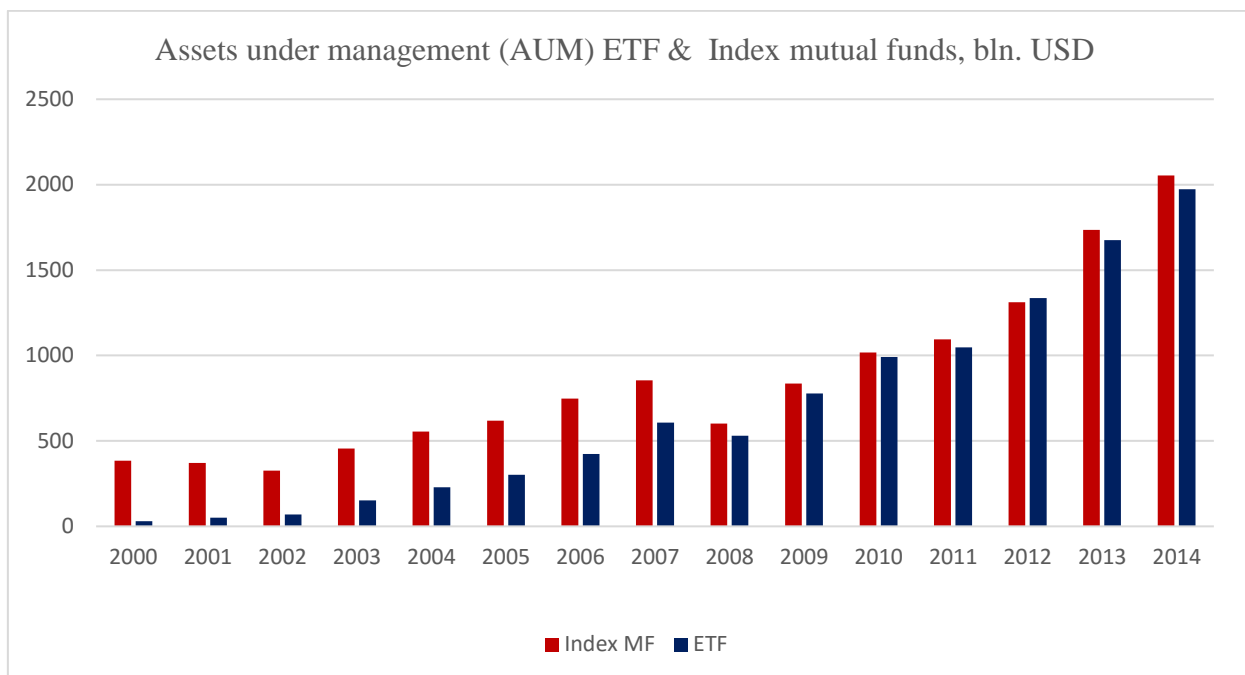


Figure 1. USA: AUM ETF & Index mutual funds, bln. USD.

Source: Deutsche Bank and Investment Company Institute (2015)

The commission dispersion among mutual funds investing in the same index is not smaller than the dispersion among actively managed funds. In 2007 US investors paid 206 mln. USD more than, if they had only chosen funds with the lowest commissions (Choi et al., 2010). Hortacsu and Syverson (2004) argues that the main reason for non-optimal behavior by index investing is search costs. However, the observed period in this research lasted up to 2000. Since then, internet searching has become much more popular. This important change has reduced search costs. Collins (2005) argues that index funds are not commodity products. They provide various additional services for the investors. However, Elton et al. (2004) published results of their empirical study that there is no correlation between new money inflow and the funds' services. On the other hand, Bergstresser et al. (2009) found a positive correlation between new money inflow and the level of sales compensation. Additionally, Boldin and Cici (2010) argues that "Index Fund Rationality Paradox" exist thanks to naïve group of individual investors who are influenced by brokers and financial advisors.

Another kind of the non-optimal behavior by index investing is doing it via MFs and not via the identical ETFs, that, in many cases, have various advantages. Poterba and Shoven (2002), Boehmer and Boehmer (2003), Kostovetsky (2003), Svetina (2010), Agapova (2010) demonstrated that an ETF in most cases shows a better performance than an identical index

mutual fund. In addition, the researchers underlined not only ETFs' lower commissions and lower tracking error of ETFs but also their "technical" advantages like buying/selling during the exchange open hours, possibilities of short selling and leveraged investments. On the other hand, the statistics show that a large amount of investors, apparently, is not interested in the advantages of ETFs (Fig. 1). Agapova (2010) argues that among index MF investors might be many tax-exempt people and those who value the service of conventional MFs.

Several possible rational explanations, specific for the Russian ETF anomaly, are briefly discussed in Tarassov (2016a). I show that additional MF services regarding tax declaration, or legal limitation to invest in foreign securities without qualified investor status (since 2015) have not enough impact to be considered as the major reasons for this anomaly.

In addition, Carlin (2009) argues that one of the reasons for sub-optimal investor behavior, in general, in retail financial market, might be obfuscation – adding complexity to a product as a response to increasing competition.

However, Choi et al. (2010), having conducted an experiment with MBA<sup>7</sup> and college students as well as office employees of Harvard University, demonstrates that investors do not make a rational choice even if search costs, any services, any product complexity and the direct influence of a sales person are excluded. The participants did not choose the index funds with lowest commissions even if they received the description of the index fund's working principles. The level of the participants' financial literacy was far above that of the average American investor. The authors did not aim to research of the phenomenon's reasons, although they discussed them briefly. One of their ideas was that one sentence, which could be found in many index fund prospectus, could have misled the participants: "the Adviser believes that employing certain active management strategies for a percentage of the Fund's assets, if successful, will result in net returns after expenses that may more closely approximate the return of the S&P 500 Index". The researchers, however, did not raise the question of why it is so easy to mislead an investor.

During the research, I investigated the *hypothesis* that one of main reasons for the non-optimal index-investing phenomenon is people's predisposition to categorical thinking / stereotyping that works thanks to heuristics (unconscious information's simplification process that exists due to the mental resources limitation and helps their optimization (Simon, 1955)). This paper reports about an experiment and tests that confirm this hypothesis. Additionally, the experiment shows that various indirect effort to assist the participants in changing their

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<sup>7</sup> It was their first year pre-orientation session.

perception, or mental representation, of investment funds have a low or negligible effect. The experiment also demonstrates a very strong participant's dependence on framing.

The problem of heuristics and cognitive limitations during the financial decision-making is well discussed by many authors (e.g. Cheng (2010)). Gilovich and Griffin (2002) presented the history of research into heuristics. Ackert et al. (2010) demonstrated through experiment that unconscious information's simplification process is typical for all kinds of investors, and do not depend on their professional level in finance nor on their declared level of risk acceptance. Hedesstrom et al. (2004) and Bailey et al (2011) described the most spread heuristics and biases, and how they influence investment in mutual funds.

In 2002 Kahneman and Frederick, when developing further the research, paid more attention to other two heuristics: categorical prediction by prototype heuristics and replacement of an object's feature by another typical for that category feature (heuristics attribute). Some years earlier Posner and Keele (1968) described the process of automatic inclusion into a category if its prototypes automatically come to the mind. Rosch and Mervis (1975) explained the mechanism of an object's inclusion into a category and attribute to him key features typical for that category. Medin & Murphy (1985) further developed the cognitive science regarding categorical thinking. They demonstrated that this process works also thanks to the theories / mental representations that a person already had in her mind.

Mullainathan et al. (2008) presented the economic model showing the mechanism whereby two weak points of categorical thinking are used by persuaders. The first is "transference, whereby individuals transfer the information content of a given message from the situation in a category where it is useful to those where it is not". The second is "framing, whereby objectively useless information influences individuals' choice of category. The model sheds light on informative advertising and product branding, as well as on some otherwise anomalous evidence on mutual funds advertising".

Furthermore, the paper is divided into seven sections. The first describes the main hypothesis and the experiments design. The second provides information about the results. The third section describes the participants and their motivation. Section four reports about three supporting tests, including those conducted with high net worth individuals (NHWI). The results interpretation and the discussion with participants are in section five. Additional results (framing effect) are described in section six. In conclusion, I included discussion and the suggestion for the next research before submitting the proposals for possible drastic regulation changes. Two important topics for this paper, a brief overview of the history and the current situation of the

index investing industry, and the ETF's history, working mechanism and literature review go beyond this article. Recently, the first one is covered by Bogle (2016) and the second one by Tarassov (2016c).

## **1. The experimental setup and the hypothesis**

January – Mai 2016.

### *1.1. The hypothesis*

During the experiment's preparation, I developed the hypothesis about the reason that is possibly most responsible for the existence of the non-optimal index-investing phenomenon.

***The main hypothesis:*** Because of people's predisposition to categorical thinking / stereotyping, individual investors put different types of investment funds in one category, without recognizing the principal difference between the index (passively managed) and the conventional (actively managed) funds.

### *1.2. The environment*

The goal was to create an investor friendly environment, however with exclusion of several features of the reality. In this way, possibly all rational, or "semi-rational", reasons for possible some non-optimal participants' decisions would be not applicable as explanations. Please see other paragraphs for details.

All participants had a high level of financial literacy and theoretical, or practical, proficiency in the fields of economics or finance. The participants had a brief set of information needed: a compact and simple explanation of the goal of an index fund and its core activity. The fact that shares of an ETF could be bought by anybody as shares of any company listed on a stock exchange were repeated twice. The issue of trust to the brand was eliminated as all financial products were taken only from highly reputable and known financial institutions. The products chosen had standard structure and had a simple straightforward brief description. None of the products promised any additional services. In this way, the factors like "obfuscation", "tricky framing", "small letters", and "some funds provide additional services" were minimized. The participants did not experienced any legal limitations, neither a sales person direct contact. The search costs were at the level of zero.

### *1.3. Design*

The experiment lasted around 30-40 minutes (the time was not limited). The participants received four pages. The language of the event was the native language of the participants – Russian. The complete set of instructions (translated into English) is given in Appendix 3.

On the *first page*, in order to check the overall financial literacy and to warm up the participants, I suggested a very brief five-question survey. I decided on the Standard & Poor's ratings services global financial literacy survey. While it is very short, the test covers the major important aspects. According to the results, only 38% of Russians gave three correct answers to this survey. In the USA, this number was 57%.<sup>8</sup>

On the *second page*, participants were asked to give their personal estimation of the potential risk and return (PRR) of ten financial products on the list. The key products of the list were:

Products 4 and 5: conventional MFs, investing in Biotechnology and Consumer sectors in the USA. Products 6 and 7: an index MF and an ETF, both tracking the S&P 500 index.

*The measurement idea:* if a participant estimates the PRR of the S&P 500 index funds lower than that of the sectoral conventional MFs, she might recognize the principal difference between conventional and index funds.

However, *the main purpose of this page* was to create an environment of sufficient, non-complex, information and an additional warm up effect in the hope that the participants, before coming to page three (the key page of the experiment), recognize that the PRR of an index fund is lower than that of a conventional sectoral fund. For each of the index funds (both mutual and exchange-traded), I added a brief description: “The fund promises to reflect the leading American stock index, S&P 500. It means that the fund's goal is to have in its portfolio the shares of companies in the same proportion, as these companies are included in index.” Another ETF (product 8) had the following description: “the fund invests in gold futures in the way that changes in its share price reflect changes in the price gold. This is an exchange-traded fund (ETF) (synthetic, as the fund does not buy the product in a physical sense).” The word “futures” and the additional phrase in the descriptions of both ETFs (products 7 and 8) that “an ETF shares are traded on a stock exchange, and everyone can buy them as any other security” should help the participants to make a more objective choice on the next page.

There were five other products on the list. Products 1 and 3: a bank deposit in Switzerland and a bank deposit with state guarantee in Russia. If a participant estimates the PRR

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<sup>8</sup> www.FinLit.MHFI.com

of one of them (or both) lower than that of all other products, she understands the task correctly<sup>9</sup>. Products 2 (an apartment for rent), 9 (“shares of one very large corporation, for example Apple”), and 10 (own business) were put in order to make the questionnaire more natural and interesting for participants.

There were two versions of the *third page* that consisted of a list of seven investment funds each. The list in *Variant A* was produced based on the return rating. The word “performance / return” dominated the table. The list in *Variant B* was produced based on the Net Asset Value (NAV) rating. The words “performance / return” were rarely seen on the page. The funds were listed in descending order. All funds were from very well known highly reputable financial institutions. In this way I tried to minimize the “trust issue“ and “previous fund’s performance influence”. In addition, I planned to test this influence by creating two variants.

On the list in Variant A there were two conventional equity MFs. Three funds were index MICEX MFs. One fund was a fund of funds that invests in other Russian MFs. Another one was a fund of funds that invests only in the world’s largest ETF - SPDR S&P500. On the list in Variant B there were four conventional funds, one index fund and two funds each investing in a single ETF: one in ETF SPDR S&P 500 and the other in PowerShare DB<sup>10</sup> Gold ETF.

The participants were asked to choose from the list on the next (*fourth*) page one goal and the core activity of the fund to pursue its major goal. I listed five possible funds’ goals and activities. In the right column, the participants were asked to put their personal estimation from 1 (minimum) to 10 (maximum) of what level of effort (including the pressure of permanent decision making) and skills (LES) the fund management needs to execute their goals. Secondly, the students were asked to write the commission as a percent of their invested capital that they would agree to pay each fund’s team for their work, if she would invest in the fund.

*The measurement ideas:*

1. If a participant estimates LES of an index fund, tracking the same index as equal (or close to each other), but lower than that of any of the actively managed funds, she might understand the principal difference between an index and a conventional fund.

2. If this participant shows the willingness to pay the same (or similar) commissions to all index funds, but these commissions are lower than that she is ready to pay for the actively managed funds, it is an additional sign that the participant might understand the principal difference between an index and a conventional fund.

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<sup>9</sup> Currently the interest of USD bank deposits are around 0.1-1% (also in Russia).

<sup>10</sup> DB -Deutsche Bank.



3. If a participant estimates LES of the funds that invest in one preselected ETF lower than LES of other funds on the list, she might recognize the differences between various types of funds.

4. If a participant uses n.5<sup>11</sup> for the purpose and n.1<sup>12</sup> for the core activity descriptions of the index funds, while using n.1<sup>13</sup> for purpose description of the conventional funds, she might understand the principal difference between an index and a conventional fund.

Alternatively, participants may develop their own criteria to divide the funds in different types.

## **2. Quantitative results of the experiment**

*Page one.* All participants answered all questions of the global survey of Financial Literacy correctly.

*Page two.* All participants estimated the PRR of a bank deposit as the lowest among other financial instruments listed. That means they understood the tasks.

- 53 out of 137 estimated the PRR of the S&P 500 index funds lower than that of the conventional sectoral funds.

*Page three.*

- 39 out of 137 estimated the LES of the index funds lower than that of the conventional MFs.
- 37 (almost the same people as above) out of 137 intended to pay lower commissions to all index funds than to the actively managed funds on the list.
- However, there was no one who used both n.5 for the purpose and n.1 for the core activity descriptions of the index funds, while using n.1 for purpose description of the conventional funds.
- 3 out of 137 estimated the LES of the funds which invest only in one preselected ETF lower than that of other MFs. Only these three persons wanted to pay the lowest commission to these funds than to any other funds. However, 2 of them did not estimate PRR of the index funds lower than PRR of the sectoral conventional MFs on page two.

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<sup>11</sup> To provide the client with an easy way to invest in a broad market in the same proportion as companies are included in the index that tracks this market.

<sup>12</sup> Constantly follow the companies which are included in the index and balance the portfolio (buy or sell the shares of those companies) so that the price changes of the fund's unit (shares) mirror exactly the changes of the index.

<sup>13</sup> To achieve the best possible return with a high level of diversification inside a declared risk frame.

- It was impossible to recognize any other pattern showing that participants might have developed other criteria to divide the funds into different types.

These results demonstrate that most people perceive all funds as a homogenous category without recognizing the core difference between an index and a conventional MF, and that many people would invest in an ETF via a MF, thereby paying typical commission for actively managed fund, without noting any contradiction.

There was no significant difference among different groups, programs, financial experience, ages or gender. The results of both variants also showed no significant difference. The detailed table with main outcomes are in Appendix 2.

### **3. The participants and their motivation**

The experiment was mostly conducted with the groups of master's (23 – 35 years old) and bachelor's degree (19 - 20 years old) students at HSE and NES (two of the leading Russian Universities in the field of financial economics). There were six groups. In total, 137 persons, including 7 HNWI, participated in the experiments. In addition, 311 persons, including 189 HNWI participated in three supporting tests.

#### *3.1. The experiment*

The first group consisted of bachelor's degree students at their end of the third year in economics (54 participants). This group was a unique student gathering. To enter this group a high school graduate had either to be among several winners of the Russian national contest in economics for high school pupils or to pass the Russian SAT<sup>14</sup> with 100% score (the first 0.1% of high school graduates). Another group (number (n.) 5) consisted of masters in finance (MiF) students and several Alumni with candidates to the program in the same proportion (21 participants). The majority of them work in the financial industry (although mostly not in the stock exchange industry). This group is very practically orientated and belongs to the same educational institution as group one, where the great majority of professors have PhDs in Finance from the western countries. The other two groups (n. 2 and n.3) (47 students together) were third year students in financial economics. The SAT score level of their high school results may be slightly lower than that of group one but is still one of the highest in Russia. The participants of group n. 4 were at the end of the first year of their master in financial engineering (8 students).

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<sup>14</sup> Russian high school final test that is used to be accepted in a University.

The students were very motivated. Among the younger students, the experiment was run only during the elective finance courses (e.g. stock markets). I was invited as a guest speaker to talk about mutual funds. For the financial engineering group, I organized a seminar about “Private Wealth Management”. For MiF, I organized a seminar “critical thinking and career”<sup>15</sup>. Those who were not interested were not obliged to attend. The students knew about my visit in advance and could look on the website of the Wealth Management Institute in Moscow, that I manage. At the beginning of seminars for the bachelor’s students, I suggested a warm-up / revision test (the four-page questionnaire described in 1.2) to introduce the topic to be discussed. The students were informed that the test did not need any special knowledge and could be completed by reading all the material attentively. The test was not anonymous. With agreement from the professors, I announced that the results may influence their final grade of the course but that, in order to prevent a stressful environment, any poor results would be disregarded. According to my experience, this way may increase the responsibility level among the best Russian university students better than the possibility to gain a minor material compensation. The gap between rich and poor is one of the largest in Russia. Many students have enough financial resources to be free from any activity that they consider not interesting or not useful for them. Other students, on the other hand, use any opportunity to gain additional knowledge that may help them to escape from the material level of their families.

For MiF students the test was suggested as an example of a critical thinking test used by a corporate training center to evaluate financial analysts. In addition, I mentioned that the test might be similar to an example of the GMAT critical reasoning section. Many of the participants consider applying for world leading MBA or PhD programs. Before the test, we spoke ca. 20 minutes about the latest trends in HR policies that started focusing even more on candidates’ critical thinking / cognitive abilities. During the experiment, a blank slide only with words “Critical thinking” was shown.

In addition to the students, 7 HNWIIs agreed to meet me during their weekends and holidays to go through the experiment and the subsequent discussion. All of them invest in MFs, however, via private bank departments of various Russian and foreign banks. None of them is involved in financial service business, and none has any understanding of ETFs.

### *3.2. The supporting tests*

The first supporting test was organized during a behavioral economics course for 12 master program students.

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<sup>15</sup> It was not unusual, as I am regularly invited to this, in my opinion, leading MiF post-experience program in Russia, to provide a career trainings.

The second test was organized among two groups. The first group consisted of 110 third year students majoring economics. 47 of them were the same students who participated in the experiment (group n. 2 and 3). The experiment with these two groups was organized two months later so that any possible test participation influence was eliminated. The second group consisted of 47 VIP clients of a Moscow bank. A low-level bank employee asked 47 HNWI clients, who know her well, to fill the questionnaire while waiting to be served and return anonymously. All participants had enough savings to be qualified investors.<sup>16</sup> The group consisted mainly of men in the age range 40-55 years old. All participants declared that they have mutual fund investment experience or they understand the mechanism and its purpose. The majority of the group were the owners of small and medium sized companies and the high-level managers of large corporations. In Appendix 1, I describe the basic principles (according to my personal experience) of conducting an experiment with NHWIs, in general, and the peculiarities of this test.

The participants of the third supporting test were other HNWI clients of another large Russian bank (member of a European banking group). As the interviews were conducted in order to start developing their personal financial strategy, and client paid separately for this service, there was a high probability that the participants were motivated. A half of these clients invested in MFs. A third of clients were also clients of leading European banks. More than a half of them were entrepreneurs. Around a quarter was managers of large companies. No one was involved in business related to security trading. More than 90% of these clients were men.

## **4. Set up and results of the supporting tests**

### *4.1. Supporting test one*

March 2016. The test lasted ten minutes. Participants were asked to show their understanding of the core difference between a conventional (actively managed) mutual fund and index (passively managed) one” by completing the following phrase. “While actively managed funds have the major goal to..... , index (passively managed) funds have the goal to ...” Afterwards they were asked to try to find a contradiction (if one exists) in the phrase: “active management allows a better index tracking”.

*The main goal of this questionnaire was to check the following hypothesis:*

The majority of people, even with high level of financial literacy, are not able to formulate the core difference between two types of funds even after having received the

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<sup>16</sup> Since April 2015 in order to invest abroad an investor need to get status “qualified investor”. The person need have either 6 mln. ruble in financial assets or to have a particular education or experience.

question “what the possible core difference might be between actively and passively managed funds?”

*Results of test one:*

No participants were able to give an answer that could be interpreted as correct.

This result confirms the hypothesis of this test.

#### *4.2. Supporting test two*

February – March 2016. The test lasted ten minutes. I asked two groups to fill a brief questionnaire (4.2.1.).

*The main goals of this questionnaire was to check the following two hypotheses:*

1. People are ready to pay commissions to the fund management because of their perception that the fund managers permanently follow the markets searching for the most / least potentially profitable securities and for the right moments when to buy / to sell them, and they have more time, education and experience to do this.
2. Almost no one would invest in the MF that invests further in one preselected ETF if she realizes a substantial difference in expenses comparing to investing in that ETF directly, even if this MF provides any additional services like accounting, tax reporting etc.

##### *4.2.1. Hypothesis 1 and the results<sup>17</sup>*

Participants were asked to answer eight questions. The questions two and three tested the hypothesis 1:

2. Supposed you decided to invest in a mutual fund. You agree to pay the work of the fund’s team because yourselves you:

2.1. do not have enough time to permanent search for the most / least potentially profitable securities and the best moment to buy / to sell them?

- a. Yes, I do not have enough time for this.
- b. No, I have enough time for this.

2.2. do not have enough knowledge and / or experience for this?

- c. Yes, I do not enough knowledge and experience for this.

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<sup>17</sup> Only results of the second test did not surprise me in opposite to the experiment and the first test.

d. No, I have enough knowledge and experience for this.

3. Are you ready to pay the fund commissions if the fund management is not occupied with permanent search for the most / least potentially profitable securities and the best moment to buy / to sell them?

e. Yes, I am ready.

f. No, I am not ready.

47 VIP clients out of 47 chose “a”, answering the questions 2.1, “c”, answering the questions 2.2, and “f”, answering the question 3.

This result confirms the first hypothesis. People are ready to pay commissions to fund management because they perceive that the fund managers permanently follow the markets searching for the most / least potentially profitable securities and for the right moments when to buy / to sell them, and they have more time, education and experience to do this.

#### *4.2.2. Hypothesis 2 and results*

In order to test the second hypothesis I asked the participants whether they, investing one million for five years, would be ready to buy the MF units, which invests in an ETF, paying 150 000 in commissions if they could buy shares of this ETF directly, paying 10 000 in commissions. Another question was similar but with the reminder, that buying this foreign ETF via this Russian MF they are liberated from any additional contact with tax authorities and declaration procedure.

No one of VIP clients were ready to buy the MF units even it provides this additional service.

The group of 110 student demonstrated similar result<sup>18</sup>. This result confirms the second hypothesis. Almost no one would invest in the MF that invests further in one preselected ETF if the she realizes a substantial difference in expenses comparing to investing in that ETF directly, even if this MF provides any additional services like accounting, tax reporting etc.

#### *4.3. Supporting test three*

2006 – 2010. As the third supporting test, I provide the results of profound interviews with 142 HNWI clients that I personally conducted before starting to develop their personal financial strategies. The interviews took place in the period from 2006 until 2010 when I used to be the Head of Wealth Management of one of the Russian banks. One of the discussions result might be

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<sup>18</sup> On the question, whether participants could describe how an index fund works all VIP client as well as the great majority of the students responded negatively.

interpreted that no one out of these 142 persons understood the core difference between a passively and actively managed funds. According to them, equity funds may differ in target they invest in, in style (aggressive or conservative), in quality of the management and in financial institution behind the funds. Some funds may follow an index, investing only in the companies that are included in it. All funds strive to deliver a maximum return. The benchmark that investors wish to outperform by investing in any fund was a bank deposits (and in times of real estate boom (2006 – 2007), for some clients it was a speculation performance with an apartment as well). This opinion is in line with opinions that I hear from MBA students other Universities when I am invited to teach.

## **5. Discussions with participants and interpretation**

### *5.2. Discussions with participants after the first test and the experiment*

The subsequent discussion provoked the assumption that students were surprised by the questions about the funds' goals. Many of them stated that "it is obvious that all funds have the same purpose – to make money for themselves and for their clients", or that "all funds have the same goal and similar level of work load, even if they have some light particularities." The great majority, estimating the LES of the funds, did not use both numbers 1 and 10,. Most of them used several numbers around 3 and 8 or 6 and 10 only.

Some participants answered my question about the most important difference between index and conventional MFs by saying that it is written, that "an index fund tracks<sup>19</sup> an index. It means that this fund invests in companies that are included in the index while the funds with names without the word "index" may invest in companies that are both inside and outside of the index".

After my brief presentation about the core difference between these funds, the "temperature of the dispute" confirmed the idea that one needs a serious mental effort in order to change a mental representation that people have already in mind. Some people tried to defend their position that there are many evidence that the goal of an index fund is to achieve the best possible return on investment – for example, because "these funds report their return and these funds are in the performance rating together with all other funds. Logically, they try to move up in the rating." There are many papers demonstrated that previous funds' performance play major role in the investment decisions of individual investors (e.g. Ivković, Z. & Weisbenner, S.,

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<sup>19</sup> To track, to reflect, to mirror are the verbs that have the same meaning in Russian in the context of MFs.

2009). The majority of participants in Choi et al. (2010) experiment also answered that previous performance of the funds was the major factor for their investment decisions.

After the discussions about the difference between an index and a conventional mutual fund, I continued with the Russian ETF anomaly topic. I asked the groups once again why they think people invest in MFs instead of buying securities by themselves. There was always only one answer: “people believe that the fund managers have more experience, knowledge and time to follow market permanently by searching for the most / least potentially profitable securities and for the right moments to buy / to sell them.” After having clarified this, I showed the tables with rating, commissions and brief descriptions of several funds that invest only in one preselected ETF. However, without additional direct leading questions no one admitted that investing in an ETF via a MF, paying a “standard MF commission”, had any contradictions.

## *5.2. Interpretation*

In general, the answers of participants could be interpreted so that the majority of questions confused them as in their opinion “all funds have the same goal and similar level of work load, even if they have some light particularities.”

Even if around a quarter of participants gave a sign (by estimating the LES and the fees) that they might understand the major difference between the index and actively managed funds, they were not able to formulate the funds’ main goals and core activities, or, even to choose them from a list in a consistent way. Most of them used different goals and descriptions for the funds of the same category. There were no one who used both n.5<sup>20</sup> for the purpose and n.1<sup>21</sup> for the core activity descriptions of the index funds, while using n.1<sup>22</sup> for purpose description of the conventional funds. This demonstrates the high probability that a large part of those who made the right quantitative choice (PRR, LES and fees) did it by guess. The LES and proportion of the commissions, that other three quarters of participants were ready to pay to funds management for their skills and effort, additionally confirmed that the great majority of the participants did not recognize a substantial difference in the management skills and effort needed to execute the goals of these three fund categories. These three quarters of participants put different fees, as well as the LES, for the funds of the same category or put the same fees for the funds of different categories.

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<sup>20</sup> To provide client with easy way to invest in a broad market in the same proportion as companies are included in the index that tracks this market.

<sup>21</sup> Constantly follow the companies which are included in the index and balance the portfolio (buy or sell the shares of those companies) so that the price changes of the fund’s unit (shares) mirror exactly the changes of the index.

<sup>22</sup> To achieve the best possible return with a high level of diversification inside a declared risk frame.



Overall, the results of this experiment demonstrate enough proof that confirm the *main hypothesis*.

Most people perceive investment funds as one homogenous category. The great majority of people, even with a general financial and economics education, are not able to recognize the difference between the funds whose major goal is to track an index (index funds) and the funds whose goal is to achieve the best possible return by given risk and diversification level (conventional mutual funds). It does not work even if people, before answering the questions, read the description that the index funds' goal is to mirror an index by having in its portfolio the companies' shares in the same proportion, as they are included in the index that this fund tracks.

Most people have the following *mental representation* of this category: all investment funds are created to achieve the best possible return. In order to pursue their mission, funds constantly search for the most / least potentially profitable companies and the right moments to buy / to sell them. Therefore, most investors could not imagine that there are other investment fund types that are not created to achieve a return, but just to provide a service (or convenient way for investing in an index). The fact that these funds are called passively managed or index funds possibly provides people with additional information but not the information that could change their mind. Even the first very correct phrases of funds' description like "the fund invests in ETF SPDR S&P 500 that tracks the dynamic of the S&P 500 index" or "the main goal of the fund is maintaining the fund's structure corresponded to the MICEX index structure" cannot help people to change this mental representation. Neither the previously given description of an index fund's purpose nor how they manage to pursue it helps the situation. Even the absence of the word "return / performance" does not influence people's perception of funds.

Based on Posner and Keele (1968), Rosch and Mervis (1975), Medin and Murphy (1985), Kahneman and Frederick (2002), Mullainathan et al. (2008) we can suppose the existence of the following heuristics mechanism. When an individual receives an offer to invest in a new fund his mind attributes to this product the feature typical for whole prototype – "permanent search for the most / least potentially profitable securities and for the moment when to buy / to sell them". In this way, this product automatically is included in an existing category – investment funds. The mind "defends" its decision and not let easily to adapt the idea that there are investment funds that do not have these goals and activities. In other words, we can conclude that the main reason of the non-optimal index-investing phenomenon is people's predisposition to categorical thinking / stereotyping existing thanks to simplifying heuristics.

## **6. Additional results of the experiment. Framing effect.**

The experiment did not have the purpose to demonstrate a framing effect. However, it would be not correct not to report about the results.

1. 39 persons out of 57, who did the Variant A (%), attributed higher LES to the fund n.7 than to any other index funds. This fund (Ingostrach<sup>23</sup> index MICEX) had the lowest return among all seven funds on the list. However, its description started with the words “Aggressive index fund .....” Among these 39 persons, 24 put the same level of LES for all index funds except this one.

2. 36 out of 70, who did Variant B (NVA), attributed the highest or second highest LES to the fund n.5. The description of fund n.5, “Raiffeisen Gold”, is as following: “The portfolio of the fund includes the ETF\*’units, that focus on dynamic of the index that is calculated based on the gold price futures with various durations. \*PowerShare DB Gold (DB\*\* - Deutsche Bank, added by the researcher”). I found that without my comments (\*\*), the description was confusing enough. The management company used even the words “ETF units” instead of “ETF shares” apparently to minimize the associations with possibilities to buy shares directly on a stock exchange. However, despite my addition and the fund’s friendly description on the page two (as the product 8), the words “futures with various durations” apparently impressed, and words “ETF units” confused, a large part of the participants.

3. The great majority: PRR of the single share  $\leq$  PRR of a minimum one MF, even if on the previous page 100% of participants answered: “investing in several securities is less risky than to invest in only one.” The name of this single company was “Apple” and the name of one sectoral MF, which people found the most risky, was “Biotechnology.” Only 12 persons out 137 recognized that PRR of one security (even that of Apple)  $>$  PRR of sector conventional MFs  $>$  PRR index funds. After I changed (for one of the groups) the “Biotechnology” fund on “Pharmaceutical” one, and added “including Coca-cola” to the consumer goods fund and “including BASF” to the pharmaceutical fund, the results did not changed. May be the phrase “very large company” was the reason. I did not write that sectoral funds invest in “very large companies”. The further search for exact reason for that effect lies beyond this paper. The “better framing” was may be one of the reasons why participants finished the test 5-10 minutes, in general, earlier than other groups. Or, may be, it was due to their self-confidence as it was the oldest and the most experienced group.

## **Conclusion, discussion and the natural extension of the research**

The experiment demonstrates that:

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<sup>23</sup> One of the leading insurance companies in Russia

1. The majority of people with broader financial and economic education, or with intensive financial experience, are not able to recognize the core difference between funds whose major goal is to track an index (an index fund) and funds whose goal is to achieve best possible return by given risk and diversification level (a conventional mutual fund). It did not work even if these people have just read the brief descriptions of the funds. The use of the words “actively managed” and “passively managed” in the questionnaire did not help the participants either.

2. The majority of people with broader financial and economic education are not able to recognize the contradiction in the fund’s description that says that the fund’s purpose is to invest only in one preselected security (ETF). It did not work even if the people have just read the description what an exchange trade fund is, and that its shares could be bought directly by anyone on a stock exchange as the shares of any other companies. It happens despite the people, after having received the question why people buy mutual fund units instead of investing in companies stock directly, generally answer: “people think that fund managers are more educated, trained and experienced to follow the market and to search for the most / least potentially profitable securities and for the best moments to buy / to sell them. Additionally, fund managers can do it around the day in opposite to ordinary people”.

Furthermore, the research shows that most people perceive investment funds as one homogenous category. Based on the existing research (Kahneman & Frederick, 2002; Posner & Keele, 1968; Rosch & Mervis, 1975; Mullainathan et al., 2008; Medin & Murphy, 1985), it happens thanks to people’s predisposition to categorical thinking / stereotyping. Apparently, most individual investors have the following *mental representation* of the “investment fund category”: all investment funds are created to achieve the best possible return inside the declared risk constraints. In order to pursue the goal fund managers permanently search for the most / less potentially profitable securities and the best moments to buy / to sell them. Constructing on the above-mentioned research, we can suppose the existence of the following heuristics mechanism: while an individual receives an offer to invest in a new fund, his mind includes this product in existing category – investment funds. Automatically the mind gives to the new product the attribute typical for whole prototype – “permanent search for the most / least potentially profitable securities and for the best moment to buy / to sell them”. The mind “defends” its decision and not let easily to adapt the idea that there are investment funds that do not have these goals and activities. The fact that these funds are called passively managed or index funds could not change their mind. Even the first very correct phrases of funds’ description like “fund invests in ETF SPDR S&P 500 that tracks the dynamic of the S&P 500 index” or “main goal of the fund is maintaining the fund’s structure corresponded to the MICEX index structure” cannot help people

to change this mental representation. Neither the previously given description of an index fund's purpose and how they manage to pursue it does not influence the perception of the funds. The funds' list without return numbers might have slightly more chance to help people to estimate the situation correctly; however the statistics results about this effect are too negligible. Apparently, it is difficult to help people to recognize the major difference between an index fund and conventional one following the best possible existing practices in the financial industry, or, even by increasing the level of disclosure.

Additionally, the experiment demonstrates that the majority of people are very sensible to different kinds of wording, or framing, in fund descriptions. They fail to recognize the same type of funds, if the fund short description slightly differs from the descriptions of the funds that they recognized already as one type of funds (e.g. "aggressive index fund"). The phrase that a gold "ETF tracks an index that is constructed by using gold futures" also had an important impact on the participants' decision process. Regarding the LES, the great majority did not put the fund, investing in this ETF, in the same LES category as the fund, investing in the ETF that tracks S&P 500. The participants mostly estimated LES of the first fund higher than LES of the second one. Significant part of people estimated the LES of the gold ETF even as the highest or second highest among all funds on the list.

I assumed that it is obvious that for individual investors with less financial education and experience, it is even more difficult to minimize the effects of framing and mental models in regards to index funds. According to the authors of World Bank report *Mind, Society, and Behavior* (2015), mental models include categories, concepts, identities, prototypes, stereotypes, causal narratives, and worldviews.

Müller and Weber (2010) argue that, if people recognize the difference between funds, those with high level of financial literacy prefer actively managed funds, due to their self-confidence to choose a right fund to beat the market. It is another reason to provide support to those who is not so confident neither sophisticated enough. Based on the experiment's results and other papers in this field (e.g. Choi, 2010), I think it is time to make a quite radical suggestion as a topic for the next research - to test the idea of organizing index fund descriptions and related marketing practices in the same manner as it is organized for some consumer products in various countries.

For example:

1. Stop calling the index funds with the word "fund". The words "vehicle for investing in an index", or "index tracking vehicle" are the first suggestions.

2. Stop creating return rating for index funds, and, logically, stop including them into return rating together with other fund categories.
3. Make a clear cut between index funds and the funds whose goal is to beat the market. It is better to include index MFs together with ETFs, and not together with all MFs as it is now in many ranking provider websites.
4. Stop calling the index fund management fee with the expression “management fees” as it is not the same “management” as an actively managed fund does. The first suggestion is “commission for assistance for investing in an index”, or “expenses for investing in an index”.
5. Not allow the existence of any other expenses related to these funds so that it becomes possible to construct very objective expenses rating. Apparently, if to do so, there will be no way for surprise that many funds have other significant commissions that in various countries are not included in expenses rankings. It is misleading to produce an expenses ranking if most funds have additional front and back loads, which depend on amount of the capital invested and on how long an investor holds the MF units before selling them back. If it not possible, then it might make sense to make a column with total maximum expenses that include all additional possible maximum fees and commissions.
6. Taking into consideration how various words influence people (e.g. the impact of the phrase “aggressive index funds”), it is recommendable not to allow any description of “index tracking vehicle” anymore. Instead, it might be better to have a direct link to the index website (even for smart-beta ETFs), or index description. The ranking of indexes may look more objective than ranking of funds nowadays. Another way would be to limit the use of words like “management”, ‘performance’ “active”, “aggressive” – anything that could interpreted other than providing a convenient way to invest in index without any active management. However, if the index fund description stays allowed, the industry may constantly invent words that will mislead (even in a fair way) individual investors who, as result, will forget that index funds have only one purpose – to reflect an index.

Thus, the ranking of the index investing vehicles, united in groups around the indexes they track, may consist of: no name of the vehicle, but the name of institution behind, the previous tracking errors, NVA, index-investing assistance commission. The columns with the form of the fund, mutual or exchange-traded, whether the fund follows synthetic or physical replication, how the fund distributes dividends, would also add value to the consumer.

Developing further this topic, it is also important to produce a friendlier format for the individual investors regarding actively managed funds. May be it makes sense to group the funds' rankings around the benchmarks / indexes they strive to outperform<sup>24</sup>, and to add the columns how they did it previously. In other words, it is about two performances: one of the index and another that of the fund above the index instead of showing the absolute return of the funds.

If the index fund rankings are organized in this way, the active managers could start charging larger commission for their skills and effort. Cremers et al. (2016) prove that the higher market share of index funds in a country, the less are commissions of the actively managed funds. It is not an easy choice for an individual investor if she sees on the same page the commission of 0.05% for one fund and 2-3% for another. The clear cut between these two vehicles, and therefore the absence of index funds in the same ranking, allows the talented managers to charge more. Additionally, the most successful and talented managers might be happy if the list of thousands of funds will be liberated from those who constantly show the under benchmark performance and bring disappointment to the individual investors and decrease trust in the mutual fund industry abilities in general. Agnew and Szykman (2005), and Cronqvist and Thaler (2002) argue that too bright choice of MFs leads to lack of interest of the potential investors. The support for initiating a broad research for such revolutionary changes could come from the industry participants who really believe that they add value to investors based on their talents, skills and effort, and care about the actual and potential individual investors' trust to the financial industry in general, and to the MF industry and the stock market in particular.

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<sup>24</sup> In USA, since 1998 SEC has required each fund to report its benchmark in its prospectus. However, some funds could intentionally pick up misleading benchmarks to increase their chance of beating them by a large margin (Sensoy, 2009).

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**Appendix 1. The peculiarities of an experiment conducted among HNWI, taking into account some main features of that group of people<sup>25</sup>:**

1. The time perception of an experiment / questionnaire has to be very short (no more than 10-15 minutes);
2. Small financial or other material rewards are not effective as they may be for less wealthy persons;
3. There is no much sense to invite HNWIs for in advance announced experiment. In order to conduct brief questionnaire or experiment it is recommendable to use other reunion reasons, relevant for them. Even executive education platform is not enough objective as in some countries, e.g. emerging markets with large first generation entrepreneurs proportion where the majority of such people never participate in any courses. Those who participate often have a particular mental setting that may differ from that of the majority.
4. HNWI usually fill a questionnaire with full attention as the way to demonstrate some respect to the person who asked them to do it.

***Additional peculiarities of conducting the support test one:***

1. There is little chance to conduct this questionnaire within the bank that is an important player in mutual fund market. The person who sees the questions stops investing in ETF via mutual fund. Additionally, she may decide to review her investment strategy after realizing how much commissions exactly she pays. (The same experience happened to participants of the first discussion).
2. It is not easy to get support from financial institution's management. Any activities that do not assist direct or indirect sales are not desirable. It is understandable: bank has substantial real estate and personal cost (especially in VIP areas). Logically, they may be devote only for direct or indirect profit gaining activities and not for experiments that may disturb it.

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<sup>25</sup> Almost all Russian HNWI are the first generation entrepreneurs or corporations' high-level executives. One of their characteristics is the well-trained automatic mental capabilities not to pay attention to not important for them information. Usually they fully ignore it or delegate to employees. It costs them exceptional concentration to analyze information that immediately received the mark not to be useful or relevant to them.

**Appendix 2. Quantitative results of the experiment.** In order to have quantitative results of the main measurements I developed the following methodology.

*Page two.* Participants, who answered that the potential level of the risk and return (PRR) of holding shares of one company (product 9) > PRR of holding both conventional MFs (products 4 and 5) units that invests in one industry sector > the PRR of holding the index funds (products 6 and 7) units that invests in broad market (S&P 500), have 2 points. If participants consider the PRR of holding shares of one company (in our case those of Apple)  $\leq$  PRR of holdings of any fund, while they still estimate that PRR of the index funds (6 and 7) < PRR of the conventional funds (4 and 5) they have 1 point.

	Combinations of possible answers	points attributed
RS2	$9 > 4 \text{ and } 5 > 6 \text{ and } 7$	2
RS1	$9 \leq 4 \text{ and } 5 > 6 \text{ and } 7$	1
RS0	Otherwise	0

*Page three.* Participants who believe that the needed level of skills and effort (LES), including the pressure to take decisions permanently etc., for a mutual fund management that invests only in one preselected security < LES of an index fund < LES of a conventional fund, have 2 points. Those who could recognize only that LES of an index funds < LES of a conventional fund have 1 point. Otherwise, participants receive 0 points.

Variant A. Conventional MFs – 1, 4, 6; Index MFs – 2, 5, 7; MF invests in one ETF - 3

Combinations	points attributed
LES2 1 and 4 and 6 > 2 and 5 and 7 > 3	2
LES1 1 and 4 and 6 > 2 and 5 and 7 and 3	1
LES0 Otherwise	0

Variant B. Conventional MFs – 3, 4, 6, 7; Index MFs – 1; MFs invest in one ETF – 2, 5

Combinations	points attributed
LES2 3 and 4 and 6 and 7 > 1 > 2 and 5	2
LES1 3 and 4 and 6 and 7 > 1 and 2 and 5	1
LES0 Otherwise	0

Combinations / Women (W) or men (M)	Group 1		Groups 2 and 3		Group 4		Group 5		HNWI
	W	M	W	M	W	M	W	M	M
<b>Total = Page 1 correct</b>	<b>28</b>	<b>26</b>	<b>19</b>	<b>28</b>	<b>2</b>	<b>6</b>	<b>8</b>	<b>13</b>	<b>7</b>
No points	12	9	11	16		3	6	7	
P2 - 1 point	7	6	5	3	1			1	4
P3 NVA - 1 point	1	2		3			1	1	
P3 % - 1 point	1	2	1	3					
P2 - 2 points	3					1	1		
<b>P3 NVA - 2 points</b>		<b>1</b>		<b>1</b>					
P2 - 1 point + P3 NVA - 1 point		3	1			1		2	1
P2 - 1 point + P3 % - 1 point	2		1	1					
P2 - 2 points + P3 NVA - 1 point	2	2			1	1		2	2
P2 - 2 points + P3 % - 1 point		1							
P2 - 1 point + <b>P3 NVA - 2 points</b>				<b>1</b>					

## Appendix 2. The experiment.

1

Please choose the right answer.

1. Suppose you have some money. Is it safer to put your money into one business or investment, or put your money into multiple businesses or investments?
2. Suppose over the next 10 years the prices of things you buy double. If your income also doubles, will be you able to buy less than you can buy today, the same as you can buy today or more than you can buy today?
3. Suppose you need to borrow \$100. Which is the lowest amount to pay back: \$105 or \$100 plus 3%?
4. Suppose you put money in the bank for two years and the bank agrees to add 15 percent per year to your account. Will the bank add more money to your account the second year than it did the first year, or will it add the same amount of money both years?
5. Suppose you had \$100 in a saving account and the bank adds 10 % per year to the account. How much money would you have in the account after five years if you do not remove any money from your account? More than \$150, \$150, or less than \$150?

2

6. Please estimate (in your opinion) the Risk level and potential return on each financial instrument below (from 1 to 10). Risk (RS): 1 = the lowest level; 10 = the highest level. Return (RT) potential: 1 = the minimum return; 10 = the maximum possible return.

	<b>Financial instument</b>	<b>RS</b>	<b>RT</b>
<b>1</b>	Bank deposit in Switzerland		
<b>2</b>	An apartment in Paris with guaranteed rental return (guaranteed by insurance company with highest rating) The apartment is managed by an agency that does virtually everything: receiving apartment from construction company, searching for tenant, rental arrangements, eventual reparations, paying all possible taxes and duties. The agencies business is licensed. You do not even need to spend anything for trips to your apartments.		
<b>3</b>	Bank deposit in Moscow. Guaranteed by the government.		
<b>4</b>	Fund invests in biotechnology USA		
<b>5</b>	Fund invests in consumer goods sector USA.		
<b>6</b>	Fund promises to reflect the leading American stock index, S&P 500. It means that the fund's goal is to have in its portfolio the shares of companies in the same proportion, as these companies are included in index. This is an index mutual fund. You may buy or sell its units once a day.		
<b>7</b>	Fund promises to reflect the leading American stock index, S&P 500. It means that the fund's goal is to have in its portfolio the shares of companies in the same proportion, as these companies are included in index. This is an index exchange-traded fund (ETF). Everybody can buy or sell the shares of the fund in the same manner as she buys or sell shares of any other companies.		
<b>8</b>	Fund invests in gold futures in the way that changes in its share price reflect changes in the price gold. This is an exchange-traded fund (ETF) (synthetic, as the fund does not buy the product in a physical sense). Everybody can buy or sell the shares of such funds in the same manner as she buys or sell shares of any other companies.		
<b>9</b>	The shares of a large corporation, (e.g. Apple).		
<b>10</b>	Own business		

### 3A

7. Please, as stated in the **detail instruction on the NEXT PAGE**, chose ONE CORE PURPOSE and ONE CORE ACTIVITY of each fund from the list on the next page.

In the right columns please put the **share (%)** of invested capital which you would be ready to pay every year for the each fund's team work (effort, inputs and skills) if you invested.

To the left side of the right column please put your personal estimation of the **level of fund's management skills and effort** (including pressure to take permanent decisions) needed in order to execute their goals (please use the numbers **from 1 to 10** (minimum = 1, maximum = 10)). *The list of the funds is created based on the mutual fund return rating of the National Asset Management League.*

<b>Mutual fund</b>	<b>Return 2015, %</b>	<b>Fund description as that on the first page on fund' website or on investfunds.ru (Cbonds) where company has opportunity to describe their funds</b>	<b>Core purpose of the fund</b>	<b>Core activity</b>	<b>The level of skills and effort needed (1-10)</b>	<b>Management fees (%)</b>
1.Aton – active management	9,04	Fund strives to invest in the strongest shares in economic growth period and government bonds during the period of stagnation.				
2.VTB – MICEX index	8,62	The goal of the investing is to obtain the financial result most closely to the performance / return on the MICEX index at any given moment.				
3.Sberbank USA	8,39	Investors has opportunity to diversify and to gain with the possible growth of American stocks. Fund invests in ETF SPDR S&P 500 that tracks the dynamic of the S&P 500 index.				
4.MDM – world of shares	7,48	Achieving the best long-term return by accepting the risks of short-terms shares' price changes.				
5.BKS – MICEX index	7,10	Transparency – Maintaining the funds structure that corresponds to the MICEX index structure.				
6.MDM – world of funds	6,81	Achieving the best return thanks to the risks diversification among the most reliable and most performing management teams / funds.				
7.Ingostrach – MICEX index	6,00	Aggressive index fund strives to make long-term investment in companies that form CIMEX index.				

### 3B

7. Please, as stated in the **detail instruction on the NEXT PAGE**, chose ONE CORE PURPOSE and ONE CORE ACTIVITY of each fund from the list on the next page.

In the right columns please put the **share (%)** of invested capital which you would be ready to pay every year for the each fund's team work (effort, inputs and skills) if you invested.

To the left side of the right column please put your personal estimation of the **level of fund's management skills and effort** (including pressure to take permanent decisions) needed in order to execute their goals (please use the numbers **from 1 to 10** (minimum = 1, maximum = 10)). *The list of the funds is created based on the mutual fund NVA rating of the National Asset Management League.*

Mutual fund	NVA, mln. rubles	Fund description as that on the first page on fund' website or on investfunds.ru (Cbonds) where company has opportunity to describe their funds	Core purpose of the fund	Core activity	The level of skills and effort needed (1-10)	Management fees (%)
1.VTB – MICEX index	657,6	The goal of the investing is to obtain the financial result most closely to the performance / return on the MICEX index at any given moment.				
2.Sberbank USA	651,5	Investors has opportunity to diversify and to gain with the possible growth of American stocks. Fund invests in ETF SPDR S&P 500 that tracks the dynamic of the S&P 500 index.				
3. Raiffeisen consumer goods	559,7	The fund's strategy is to invest in companies that focus on the fast growing domestic demand.				
4. Sberbank active managemnt	540,3	The fund's goal is long-term return by active portfolio management. The funds invests mostly in domestic shares and derivatives.				
5. Raiffeisen gold	522,1	The portfolio of fund includes the ETF*'units, that focus on dynamic of the index that is calculated based on the gold price futures with various durations. <i>*PowerShare DB Gold (DB - Deutsche Bank: added by the researcher.)</i>				
6. Sberbank energy	519,5	The fund focus on long-term return thanks to investing in companies of energy and infrastructure sectors.				
7. VTB shares	380,9	The fund focus on long-term return thanks to investing in Russian companies with the highest growth potential.				



**8. Please choose ONE answer which best describes the CORE PURPOSE of each fund that it less possible to achieve by using other financial tools. If you believe, there is no phrase in the list that best corresponds to the major purpose of a particular fund please write down your suggestion under number 6 and/or 7 and put one number in the corresponding field for each fund on the previous page.**

1 – To achieve the best possible return with a high level of diversification inside a declared risk frame.

2 – To achieve the best level of saving client's money.

3 – To support clients with the best possible reporting.

4 – To provide clients with the best possible diversification.

6-

7-

5 – To provide client with easy way to invest in broad market in the same proportion as the companies are included in the index that tracks this market.

**9. Please choose ONE answer which best describes the CORE activity for each fund which assists best to pursue its goal. If you believe, there is no phrase in the list that best corresponds to the major activity of a particular fund please write down your suggestion under number 6 and/or 7 and put one number in the corresponding field of each fund on the previous page.**

1 – Constantly follow the companies which are included in the index and balance the portfolio (buy or sell the shares of those companies) so that the price changes of the fund's unit (shares) mirror exactly the changes of the index.

2 – Constantly search for the most / least potentially profitable securities and the best moment to buy / to sell them.

3 – Constantly search for the most / least potentially profitable funds and the best moment to buy / to sell their units.

4 - Constantly search for the most / least potentially profitable companies that are included in MICEX index and the best moment to buy / to sell their shares.

5 - Constantly search for the most / least potentially profitable companies that are included in S&P 500 index shares and the best moment to buy / to sell them.

6 –

7 –