SWITCH-OUT AND SWITCH-IN: WHAT MOTIVATES THE DECISION MAKERS IN ITALIAN OCCUPATIONAL PENSION FUNDS?

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Abstract

To switch presumes two kinds of transactions carried out by the same person: on the one hand, the decision to exit an investment line (switch-out) and, on the other hand, the decision to enter into a new investment line (switch-in). What motivates the decision makers? This paper, considering a sample of Italian occupational pension funds, investigates the impact of short-term and long-term performance on the switch decision process and whether the same performance can lead investors to make opposite switch decisions. Some irrational behaviors are identified.

Keywords: Switch-in Decision, Switch-out Decision, Pension Funds

1. INTRODUCTION

In many situations, making a decision can be a complex task. There are some cases in which decisions are taken more superficially but there are some areas where the decisions taken may have a heavily positive or negative impact on people's welfare. It is the case, for example, of the choices made with reference to the pension funds enrolment; non-adequate decisions in this area can cause a drop in the standard of living during retirement years. In this field of study, Lippi (2014) shows that the workers enrolled to the Italian occupational pension funds are influenced by the menu design, i.e. the layout in which the various investment lines are presented to employees. Once the investment line is chosen, the worker enrolled may decide to exit its investment line and get into another investment line (so-called switch) but always remaining within the same occupational pension fund. Hence, to switch presumes two kinds of transactions carried out by the same person: on the one hand, the decision to exit an investment line (switch-out) and, on the other hand, the decision to enter into a new investment line (switch-in). Faced with this situation the question is: what motivates the decision makers? The first intuitive answer is the performance of the investment line the worker enrolled belongs to.

In fact, each year-end, the employees enrolled receive a communication from the occupational pension fund about the total amount collected in its own investment line and the past 1-year, 3-year and 5-year performance.

Bearing this situation in mind, the aims of this paper are:

a) to investigate whether the workers who have operated switches have been influenced by past performance and if the strongest influence on the decision made is exerted by short-term or long-term performance;

b) to examine whether the performance that lead some workers to exit an investment line (switch-out) could be attractive for others (switch-in).

The analysis presented in this paper considers the switch decisions made, during the years 2013, by the workers enrolled in a sample of Italian occupational pension funds. This context, according to the author, can be compared to a 'fish bowl' experiment with several advantages for capturing possible irrational behavior. First, the workers enrolled in the same pension fund have the same information about the past performance for each investment line belonging to each occupational pension fund; second, the workers enrolled in Italian occupational pension funds do not necessarily have financial knowledge; third, the members of Italian occupational pension funds who switch are faced with a restricted alternative menu because they cannot get out from their pension fund and they are only able to choose among the existing investment lines established by each pension fund statute; fourth, they are not supported by any financial advisor; finally, switches are free and they do not generate any liquidity or any fiscal benefit for the workers.

The paper is organized as follow: Section 1 presents a brief literature review; Section 2 presents the sample and the methodology; the main results and the discussion are presented in Section 3 while Section 4 concludes.

2. LITERATURE REVIEW

The so-called *Homo œconomicus* is a perfectly rational entity created by the classical economic theory with in the aim of explaining economic and financial situations but, in reality, human behaviour often tends to be irrational. This fact should be analyzed and possibly incorporated into economic models in order to then be able to manage the consequences or, better, to prevent judgment mistakes. Irrational behaviour is revealed through

empirical psychological evidence of individuals' ways of thinking in conditions of uncertainty (Kahneman and Tversky, 1979). A plethora of experiments (e.g. Thaler, 1991; Kahneman and Knetsch, 1992) specifically designed to describe how decisions are made in an economic and financial setting, confirm that the subjective perception of what is deemed fair in an economic transaction does not depend only on objective figures, but is always biased by a framework of reference (Kahneman and Tversky, 1984) affected by the magnitude of stimuli and the perceived subjective intensity of sensation (Deco et al., 2007). This is the 'framing effect' (Kahneman, 2003; Levin et al., 2002) whose influence on investors can cause, for example, a shift from 'risk-aversion' to 'risk-seeking' and viceversa (Kanheman and Tversky, 1979; Olsen, 1997a, 1997b).

The decisions taken by investors can also be affected by the level of superficiality or accuracy guiding decision-making. Scholars distinguish between intuition and reasoning (Kahneman and Frederick, 2002; Frederick and Fishhoff, 1998; Sloman, 1996; Stanovich 1999; Stanovich and West, 2000; Kahneman, 2003). Operations performed intuitively are fast, automatic, mentally effortless, associative and difficult to control, while those performed by reasoning are slower, serial, mentally tiring and deliberately controlled, and it is therefore natural that the former often have the upper hand with respect to the latter.

In literature many studies has devoted attention to individual investors' behaviour, showing several mistakes they incur while investing (e.g. Chen et al., 2007). According to Barber and Odean (2000) overconfident investors tend to trade too much, thus lowering the net performance of their investment once transaction costs are taken into account. Barber and Odean (2001) find that men tend to be overconfident, while women are more calibrated. As a consequence, on average men trade more than women, and perform worse. Individual investors are net buyers of stocks that grab their attention either if they recently recorded extra-returns or abnormal volumes or if they were mentioned by the media (Barber and Odean, 2008). Illusion of control is a typical cause of overconfidence, and explains the evidence that past portfolio performance tends to increase individual investors' trading. Statman et al. (2006), with reference to the U.S. market, find that market-wide trading volume is related to the lagged monthly market returns. Kim and Nofsinger (2007) confirm the same results considering the Japanese market. Griffin et al. (2007) extend the same analysis to 46 countries. According to the authors many stock markets exhibit a strong positive relationship between turnover and past performance. This behavior is influenced by the so called extrapolation bias (Glaser and Weber, 2009) which leads investors to extrapolate past performances or market returns into the future. This is probably why past market returns also positively affect individuals' trading.

The hypotheses tested in this paper are:

H1: short-term performance have a stronger influence on switch (switch-out and switch-in) decisions;

H2: the same performance for the same investment line could influence opposite switch (switch-out and switch-in) decisions.

In the case of Hypothesis 1 being confirmed an irrational behavior is highlighted. In fact, a pension fund member should consider their own investment in a long-term situation as requested by the pension funds scheme. In the case of Hypothesis 2 being confirmed another type of irrational behavior is identifiable because the same percentage could be understood in a positive meaning, generating a switch-in, as well as in a negative meaning, generating a switch-out.

3. DATA SAMPLE AND ANALYSIS

3.1. Sample

According to a legislative modification in the Italian supplementary pension scheme, 2007 represents a year of strong discontinuity with the past. Hence, with the aim of considering the pension fund performance over a 3-year and 5-year period, this paper considers the switch decisions made during the years 2013. For each Italian occupational pension fund, we analyzed the balance sheets so as to collect information about the number of switch-out and switch-in for each investment line. Our sample is composed of 10 Italian occupation pension funds whose balance sheets present this information. Table 1 shows some details about our sample; one Italian occupational pension fund presents 2 investment lines; five present 3 investment lines and four present 4 investment lines. The Italian occupational pension funds inserted in the sample belong to the industry macro-sector; they are related to the chemical, telecommunication, energy, fashion and industry sector.

Table 1. Number of Italian occupational pension funds related to number of investment lines (2013)

Number of investment lines	*Number of occupational pension fund plans examined*
2	1
3	5
4	4

Source: data elaborated by the author based on Italian occupational pension fund balance sheets (2013)

In order to test our hypotheses for each investment line per each Italian occupational pension funds examined, we collect the performance related to the year before (t-1) and that related to the previous 3 years (t-3) and 5 years (t-5), that is to say the performance known by the members enrolled.

In each occupational pension fund, investment lines present different levels of risk, from no-risk (also called 'guaranteed line') to higher risk. In fact, according to the Pension Funds Supervision Commission (COVIP) guidelines, the 'guaranteed line' is the investment line without any risk, so the expected loss by members is zero; the 'very low risk line' is the investment line for which the expected annual loss by its members is maximum 10%; the 'low risk line' considers the possibility of maximum 30% expected loss per year; 'balanced' is the investment line for which the expected loss by its members is (maximum) from 30% and 50%; 'growth' is the investment line for which the expected loss could be even higher than 50% per year. We identify the investment line type from 0 (guaranteed line – no risk) to 4 (very high risk investment line - growth). Table 2 shows the number of switch-in and switch-out per investment line considering the number of investment lines in each occupational pension fund examined for the years 2013.

Table 2. Number of switch-outs and switch-ins for each investment line per Italian occupational pension fund (year 2013)

Number of investment lines	*2 lines*			*3 lines*				*4 lines*						*Overall*					
Risk line	0	2	Sum	0	2	3	Sum	0	1	2	3	4	Sum	0	1	2	3	4	Sum
a) Switch-outs	4	26	30	308	497	181	986	793	3219	692	403	92	5199	1105	3219	1215	584	92	6215
b) Switch-ins	26	4	30	212	370	404	986	1219	594	2141	1167	78	5199	1457	594	2515	1571	78	6215
Balance (a-b)	-22	22	0	96	127	-223	0	-426	2625	-1449	-764	14	0	-352	2625	-1300	-987	14	0

Source: data elaborated by the author based on Italian occupational pension fund balance sheets year 2013

To prove the influence of short-term performance in switch decisions made by workers enrolled, we consider the years 2013 (t) caring out two tests. In Test n. 1 we consider as independent variables the short-term return (the year before t-1) and the long-term return (5 years before t-5) for each investment line; in Test n. 2 we add, as an independent variable, the medium-term return (3 years before t-3) for each investment line.

The regression analysis used in Test n. 1 is as follows:

$$switch-out_{t_i} = \alpha + \beta R_{t_i-1} + \gamma R_{t_i-5} + \varepsilon \quad (1)$$

$$switch-in_{t_i} = \alpha + \beta R_{t_i-1} + \gamma R_{t_i-5} + \varepsilon \quad (2)$$

Where switch-out and switch-in are, respectively, the number of members getting out and getting in during the year (t) 2013 for each investment line (i start from 0 to 4), α is a constant, R_{t-1} is the return of the previous year, R_{t-5} is the return of the previous 5 years, ε is error.

The regression analysis used in Test n. 2 is as follows:

$$switch-out_{t_i} = \alpha + \beta R_{t_i-1} + \delta_{t_i} R_{t_i-3} + \gamma R_{t_i-5} + \varepsilon \quad (3)$$

$$switch-in_{t_i} = \alpha + \beta R_{t_i-1} + \delta_{t_i} R_{t_i-3} + \gamma R_{t_i-5} + \varepsilon \quad (4)$$

Where switch-out and switch-in are, respectively, the number of members getting out and getting in during the year (t) 2013 for each investment line (i start from 0 to 4), α is a constant, R_{t-1} is the return of the previous year, R_{t-3} is the return of the previous 3 years, R_{t-5} is the return of the previous 5 years, ε is error.

We attempted to gather other kinds of information from the pension fund balance sheets examined in order to extend the analysis. For example, we tried to collect information about the cluster age of the switch maker so as to test the relationship between the switch tendency and worker age. Unfortunately this information is present only in one pension fund balance sheet examined. Also the total index cost for each investment line is not shown for year t but it is calculated over a period of two years. Hence, this information is not useful to our purpose.

The same two tests presented below are repeated and showed in Appendix as a robustness check adding the number of enrolled members per investment line risk as a dummy variable. The results presented in Appendix confirm the follow results.

4. MAIN RESULTS

4.1. Test n. 1 results

The regression (1) and (2) results, related to the year 2013 are shown in Table 3. Table 3 presents the results obtained when considering the impact of the return over the previous year (R_{t-1}) and the return over the previous 5 years (R_{t-5}) on the number of switch-outs and switch-ins in the year 2013 with reference to a sample of Italian occupational pension funds.

Table 3. Regression results

2013			
Investment line risk	*Independent variable*	*switch-outs*	*switch-ins*
0	R_{t-1}	31.97*** (7.074)	97.65*** (6.230)
	R_{t-5}	-118.5** (49.75)	-356.2*** (43.81)
	Constant	239.5* (121.2)	523.3*** (106.7)
	Observations	10	10
	R-squared	0.747	0.973
	Prob>F	0.0081	0.000
1	R_{t-1}	-179.1 (319.0)	-16.88 (185.5)
	R_{t-5}	-768.4 (860.1)	27.30 (119.3)
	Constant	4,643* (1,338)	140.9 (185.5)
	Observations	5	5
	R-squared	0.8734	0.111
	Prob>F	0.1266	0.8894
2	R_{t-1}	-142.0** (41.65)	-411.3** (166.6)
	R_{t-5}	73.57 (54.42)	384.7 (217.7)
	Constant	1,313* (390.5)	3,269* (1,562)
	Observations	9	9
	R-squared	0.6647	0.556
	Prob>F	0.038	0.087
3	R_{t-1}	-11.16 (14.45)	-41.95 (58.23)
	R_{t-5}	1.33 (26.36)	29.94 (106.3)
	Constant	204.7 (164.7)	650.9 (663.8)
	Observations	7	7
	R-squared	0.13	0.13
	Prob>F	0.757	0.758

*Note: *** p<0.01, ** p<0.05, *p<0.1 (Standard errors in parentheses)*

Source: data elaborated by the author

4.2. Test n. 2 results

The regression (3) and (4) results, related to the year 2013 are shown in Table 4. Table 4 presents the results obtained when considering the impact of the

return over the previous year (R_{t-1}), the return over the previous 3 years (R_{t-3}) and the return over the previous 5 years (R_{t-5}) on the number of switch-outs and switch-ins in the year 2013 with reference to a sample of Italian occupational pension funds.

Table 4. Regression results

2013			
Investment line risk	***Independent variable***	***switch-outs***	***switch-ins***
0	R_{t-1}	33.75*** (7.431)	99.02*** (6.648)
	R_{t-3}	-72.42 (79.92)	-55.79 (71.50)
	R_{t-5}	-52.76 (88.38)	-305.6*** (79.06)
	Constant	214.2 (125.9)	503.7*** (112.7)
	Observations	10	10
	R-squared	0.777	0.975
	Prob>F	0.02	0.000
1	R_{t-1}	-326.4 (483.2)	-57.22 (27.36)
	R_{t-3}	355.8 (663.4)	97.40 (37.57)
	R_{t-5}	-877.6 (1,091)	-2.612 (61.79)
	Constant	4,747 (1,678)	169.4 (95.04)
	Observations	5	5
	R-squared	0.902	0.885
	Prob>F	0.393	0.423
2	R_{t-1}	-138.4* (57.85)	-481.1* (226.1)
	R_{t-3}	-10.57 (104.8)	205.4 (409.5)
	R_{t-5}	78.23 (75.34)	294.2 (294.4)
	Constant	1,312* (427.3)	3,276 (1,670)
	Observations	9	9
	R-squared	0.665	0.577
	Prob>F	0.115	0.19
3	R_{t-1}	-5.255 (53.37)	-13.60 (214.9)
	R_{t-3}	-8.682 (74.62)	-41.72 (300.5)
	R_{t-5}	3.593 (36.07)	40.81 (145.3)
	Constant	177.1 (303.5)	518.5 (1,222)
	Observations	7	7
	R-squared	0.134	0.135
	Prob>F	0.92	0.92

*Note: *** p<0.01, ** p<0.05, *p<0.1 (Standard errors in parentheses)*

Source: data elaborated by the author

5. DISCUSSION

The results shown in Table 3 (Test n. 1) stimulate an interesting debate. The statistically significant results are those related to the guaranteed line (Investment line risk=0; R-squared=0.747, Prob>F 0.0081; R-squared=0.973, Prob>F 0.000) and to the low risk line (Investment line risk=2, R-squared=0.6647, Prob>F 0.038; R-squared=0.556, Prob>F 0.087).

Starting from the guaranteed line, the results obtained are conflicting. On the one hand, if the more recent performance (R_{t-1}) is higher the number of switch-ins increase. According to the author this could be a logical and rational behavior even if it considers a short time horizon which is not adequate for a pension fund; on the other hand, if the more recent performance (R_{t-1}) is higher the number of switch-outs increase, and this is not rational behavior. The same performance leads the workers to make opposite switch decisions. Considering the long-term performance (R_{t-5}), Table 3 shows a negative and statistically significant impact on the number of switch-ins and on the number of switch-outs, that is to say the higher the long-term performance is, the fewer switch-out, and this could be rational behavior, but at the same time, the number of switch-ins decrease too, and this seems to be irrational behavior.

Test n. 2 also takes into consideration a medium-term performance (R_{t-3}) in the analysis; the conclusions are similar compared to Test n. 1 results. In this case, considering the results presented in Table 4, only the guaranteed line presents significant results (Investment line risk=0; R-squared=0.777, Prob>F 0.02; R-squared=0.975, Prob>F 0.000). While the short-term performance (R_{t-1}) remains statistically significant and with the same direction of Test n.1, the medium-term performance (R_{t-3}) seems to have no impact on the decision process of switch makers. The long-term performance (R_{t-5}) seems to remain statistically significant with reference to the switch-in decisions highlighted the same irrational behavior identified in Test n. 1 conclusions: the higher the long-term performance is, the lower the number of switch-ins.

Bearing the obtained results in mind, it is possible to argue that hypothesis 1 (H1) seems to be confirmed for the guaranteed line and for the low risk line, short-term performance has the strongest influence on switch decisions both in the case of switch-in as well as in the case of switch-out. For the guaranteed line and for the low risk line, hypothesis 2 (H2) seems to be confirmed: the same performance for the same investment line seems to be able to influence opposite switch decisions.

6. GENERAL CONCLUSION

Many studies highlight that individual investors make several mistakes while investing. This paper contributes to this field examining a specific topic: the switch decision made by the workers enrolled in a sample of Italian occupational pension funds in the years 2013.

It is a well known fact that the pension fund investment horizon is a long-term one; for this reason the decision of exiting or to entering an investment line should be driven by long-term performance. The aim of this paper is, firstly, to test the influence of short-term performance on switch decisions (switch-in and switch-out) and, secondly, to test whether the same performance can lead investors to make opposite switch decisions. We carried out two kinds of test: the first, considers the investment line performance of the previous year (short-term return) and the performance of the last 5 years (long-term performance); the second adds the last 3-year investment line performance (medium-term performance). The main results obtained, in particular with reference to the no-risk line (guaranteed line) are similar. This paper shows that short-term performance has a strong influence on switch decisions with reference to the guaranteed line and the low risk line. This could be a worker's mistake of judgment. At the same time, the results presented in this paper seem to demonstrate that

the same performance can drive the workers enrolled in opposite switch behavior with reference to the guaranteed line and low risk line.

Bearing in mind Test n. 1 Test n. 2 results we can suppose that the guaranteed line is a particular line which generates two conflictual situation in the mind of the worker: on the one hand, it guaranteed the total amount collected and invested but, on the other hand, it performs less than other investment lines generating the sensation to be faced with a loss opportunity (so called regret) in the investors. For this reason, according to the framing effect, the worker is stimulated to enter in or to exit from this investment line related to a subjective perception of the same performance. The question we could explore in further research is: can irrational switches have a negative impact on the wealth level after retirement?

7. APPENDIX

With a view to demonstrating the robustness of the analysis presented in this paper, we repeated Test n. 1 (Test n. 1bis) and Test n. 2 (Test n. 2bis) adding a dummy variable related to the number of members enrolled for each investment line risk. In particular, the logarithm of the number of members enrolled is calculated for each investment line risk and is created a dummy variable (size) to identify whether the investment line analyzed is over or under the mean. Table 5 presents some descriptive statistics of this variable.

Table 5. Descriptive statistics of dummy variable (size)

2013			
Investment line risk	***Min***	***Max***	***Mean***
0	7.328	12.087	8.788
1	8.334	10.963	10.012
2	8.694	12.020	10.218
3	5.398	9.641	8.350
4	8.734	8.734	8.734

Source: data elaborated by the author

The regression analysis used in Test n. 1bis is modified as follows:

$$switch-out_{t_i} = \alpha + \beta R_{t_i-1} + \gamma R_{t_i-5} + ksize_i \varepsilon \quad (5)$$

$$switch-in_{t_i} = \alpha + \beta R_{t_i-1} + \gamma R_{t_i-5} + ksize_i \varepsilon \quad (6)$$

Where switch-out and switch-in are, respectively, the number of members getting out and getting in during the year (t) 2013 for each investment line (i start from 0 to 4), α is a constant, R_{t-1} is the return of the previous year, R_{t-5} is the return of the previous 5 years, size is the dummy variable and ε is error.

The regression analysis used in Test n. 2bis is modified as follows:

$$switch\_out_{t_i} = \alpha + \beta R_{t_i-1} + \delta_{t_i} R_{t_i-3} + \gamma R_{t_i-5} + ksize_i \varepsilon \quad (7)$$

$$switch\_in_{t_i} = \alpha + \beta R_{t_i-1} + \delta_{t_i} R_{t_i-3} + \gamma R_{t_i-5} + ksize_i \varepsilon \quad (8)$$

Where switch-out and switch-in are, respectively, the number of members getting out and getting in during the year (t) 2013 for each investment line (i start from 0 to 4), α is a constant, R_{t-1} is the return of the previous year, R_{t-3} is the return of the previous 3 years, R_{t-5} is the return of the previous 5 years, size is the dummy variable and ε is error.

7.1. Test n. 1bis results

The regression (5) and (6) results are shown in Table 6. This table presents the results obtained considering the impact of the return on the previous year (R_{t-1}), the return on the previous 5 years (R_{t-5}) and the dummy variable related to the fund's size per each investment line on the number of switch-outs and switch-ins in the year 2013 with reference to a sample of Italian occupational pension funds.

Table 6. Regression results

2013			
Investment line risk	***Independent variable***	***switch_out***	***switch_in***
0	rend2013	46.19***	95.62***
		(9.137)	(10.40)
	ultimi5	-89.00*	-360.4***
		(43.82)	(49.89)
	size	-195.2*	27.79
		(96.01)	(109.3)
	Constant	101.6	542.9***
		(121.4)	(138.2)
	Observations	10	10
	R-squared	0.850	0.973
	Prob>F	0.0069	0.0000
1	rend2013	-17.34	-43.77
		(420.3)	(50.62)
	ultimi5	-1,374	127.9
		(1,264)	(152.2)
	size	-813.7	135.3
		(1,084)	(130.6)
	Constant	6,306	-135.5
		(2,683)	(323.2)
	Observations	5	5
	R-squared	0.919	0.571
	Prob>F	0.3574	0.7698
2	rend2013	-124.9***	-380.2*
		(30.64)	(175.5)
	ultimi5	34.69	313.7
		(41.90)	(240.0)
	size	171.6**	313.3
		(66.62)	(381.6)
	Constant	1,169***	3,007
		(285.9)	(1,638)
	Observations	9	9
	R-squared	0.856	0.609
	Prob>F	0.015	0.1651
3	rend2013	-5.040	-23.30
		(14.82)	(65.23)
	ultimi5	19.51	85.38
		(29.74)	(130.9)
	size	112.7	343.7
		(97.01)	(427.0)
	Constant	18.74	83.82
		(224.9)	(989.7)
	Observations	7	7
	R-squared	0.400	0.284
	Prob>F	0.6265	0.7665

*Note: *** p<0.01, ** p<0.05, *p<0.1 (Standard errors in parentheses)*

Source: data elaborated by the author

7.2. Test n. 2bis results

The regression (7) and (8) results are shown in Table 7. This table presents the results obtained

considering the impact of the return on the previous year (R_{t-1}), the return on the previous 3 years (R_{t-3}), the return on the previous 5 years (R_{t-5}) and the dummy size related to the fund's size on the number of switch-outs and switch-ins in the year 2013 with reference to a sample of Italian occupational pension funds.

Table 7. Regression results

2013			
Investment line risk	***Independent variable***	***switch_out***	***switch_in***
0	rend2013	46.97***	90.91***
		(10.70)	(10.76)
	ultimi3	18.41	-111.5
		(91.82)	(92.35)
	ultimi5	-103.2	-274.6**
		(85.31)	(85.80)
	size	-212.1	130.2
		(134.5)	(135.2)
	Constant	96.10	576.2***
		(135.3)	(136.1)
	Observations	10	10
	R-squared	0.851	0.979
	Prob>F	0.026	0.000
2	rend2013	-124.2**	-454.4
		(42.89)	(237.8)
	ultimi3	-2.125	221.3
		(76.99)	(426.9)
	ultimi5	35.65	213.9
		(58.30)	(323.3)
	size	171.5*	323.6
		(74.57)	(413.5)
	Constant	1,169**	3,006
		(319.6)	(1,772)
	Observations	9	9
	R-squared	0.856	0.634
	Prob>F	0.056	0.304
3	rend2013	56.61	182.5
		(56.97)	(282.0)
	ultimi3	-84.29	-281.4
		(75.41)	(373.3)
	ultimi5	54.47	202.1
		(42.36)	(209.7)
	size	193.2	612.4
		(117.8)	(583.2)
	Constant	-381.7	-1,253
		(418.4)	(2,071)
	Observations	7	7
	R-squared	0.631	0.442
	Prob>F	0.6023	0.8045

*Note: *** p<0.01, ** p<0.05, *p<0.1 (Standard errors in parentheses)*

Source: data elaborated by the author

REFERENCES

1. Barber, B., and Odean, T. (2000), "Trading is hazardous to your wealth: The common stck investment performance of individual investors", Journal of Finance, (55), pp. 773-806.
2. Barber, B., and Odean, T. (2001), "Boys will be boys: gender, overconfidence and common stock investment", The quarterly journal of economics, 116, pp. 261-292.
3. Barber, B., and Odean, T. (2008), "All that glitters: The effect of attention and news on the buying behavior of individual and institutional investors", Review of Financial Studies, 21, pp. 785-818.
4. Chen, G., Kim, K.A., Nofsinger, J.R., and Rui, O.M. (2007), "Trading performance, Disposition effect, Overconfidence, Representativeness bias, and Experience of emerging market investors", Journal of Behavioral Decision Making, 20, pp. 425-451
5. Deco, G., Scarano, L., and Soto-Faraco, S. (2007), "Weber's law in decision making: integrating behavioral data in humans with a neurophysiological model", The journal of neuroscience, 27(42), pp. 192-200.
6. Frederick, S., and Fischhoff, B. (1998), "Scope (in)sensitivity in elicited valuations", Risk, decision, and policy, 3(2), pp. 109-123.
7. Glaser, M., Weber, M. (2009), "Which past returns affect trading volume?", Journal of Financial Markets, 12, pp. 1-31.
8. Griffin, M.A., Neal, A., and Parker, S.K. (2007), "A New Model of Work Role Performance: Positive Behavior in Uncertain and Interdependent Contexts", Academy of Management Journal 50(2), pp. 327-347
9. Kahneman, D. (2003), "Maps of bounded rationality: psychology for behavioral economics", The American economic review, 93(5), pp. 1449-1475.
10. Kahneman, D., and Frederick, S. (2002), Representativeness revisited: attribute substitution in intuitive judgment. In T. Gilovich, D. Griffin, and D. Kahneman, Heuristics and Biases, New York: Cambridge University Press.
11. Kahneman, D., and Knetsch, J. (1992), "Valuing public goods. The purchase of moral satisfaction", Journal of environmental economics and management, 22, pp. 57-70.
12. Kahneman, D., and Tversky, A. (1979), "Prospect theory: an analysis of decision under risk", Econometrica, 47, pp. 263-291.
13. Kahneman, D., and Tversky, A. (1984), "Choices, values and frames", American psychologist, 39.
14. Kim, K.A., and Nofsinger, J.R. (2005), "Institutional Herding, Business Groups, and Economic Regimes: Evidence from Japan", The Journal of Business, Vol. 78, n. 1
15. Levin, P., Gaeth, G., and Schreiber, J. (2002), "A new look at framing effects: distribution of effect sizes, individual differences, and independence of types of effects", Organizational Behavior and Human Decision Processes, Vol. 88, n. 1, pp. 411-429.
16. Lippi, A. (2014), "Does menu design influence retirement investment choices? Evidence from Italian occupational pension funds", Judgment and Decision Making, Vol. 9 n. 1, pp. 77-82.
17. Olsen, R. (1997a), "Investment risk: the experts' perspectives", Financial analysts journal, Vol. 53, n. 2, pp. 62-66.
18. Olsen, R. (1997b), "Prospect theory as an explanation of risky choice by professional investors: some evidence", Review of financial economics, Vol. 6 n. 2, pp. 225-233.
19. Sloman, S. (1996), "The empirical case for two system of reasoning", Psychological Bulletin, 119, pp. 3-22.
20. Stanovich, K. (1999), Who is rational? studies of individual differences in reasoning. Erlbaum, Mahwah.
21. Stanovich, K., and West, R. (2000), "Individual differences in reasoning. Implications for the rationality debate", Behavioral and brain sciences, 23, pp. 645-655.
22. Statman, M., Thorley, S., and Vorkink, K. (2006), "Investor overconfidence and trading volume", The Review of Financial Studies, Vol. 19, n. 4, pp. 1531-1565.
23. Thaler, R. (1991), Quasi Rational Economics. Russell Sage Foundation