



Network for Studies on Pensions, Aging and Retirement

Netspar THESES

Pavel Yarema

Uncovering Individual Learning
about Risk Using Preferred
Outcome Distributions

MSc Thesis 2013-032

Rotterdam School of Management

Erasmus University Rotterdam

M.Sc. Business Administration (General Management)

**Uncovering Individual Learning about Risk Using Preferred
Outcome Distributions**

Master Thesis

Supervisor: Dr. Carlos Lourenço

Co-Reader: Dr. Dimitris Tsekouras

Author: Pavel Yarema

Student Number: 373103

Rotterdam, 27st November 2013

Acknowledgements

The task of writing the thesis would be much more difficult without the support of the kind people around me.

I would like to express my sincere gratitude to my thesis coach, Carlos Lourenço, for his inspiring ideas, suggestions, and, of course, patience at all times. The good advice and support of my co-reader, Dimitris Tsekouras, on both academic and personal level was invaluable.

I would as well like to thank my boss, Andrew Garschke, who has been tolerating my absence and my presence after sleepless nights more than I probably deserve.

My parents, flat-mates, friends, my girlfriend have all been suffering from my bad mood, lack of time and ignorance - I am owe them all a huge debt. I haven't seen many of them for a long time and I miss them a lot.

In spite of all ups and downs of the university life, I have enjoyed the time at Rotterdam School of Management. These have been wonderful 16 months that have flown by like a second. This time has almost come to an end, but with every end there is a new beginning.

Abstract

The way how humans act in an uncertain situation, especially when it involves potential monetary gains or losses, has been agitating minds of many economists, psychologists and mathematicians for the last half a century. Recent research suggests that by using a graphical representation it is possible to communicate about investment risks more efficiently. Bas Donkers, Carlos Lourenço, Daniel Goldstein and Benedict Dellaert have conducted a Distribution Strategy Game (Donkers et al, 2013) that uses the intuitive interface of the Distribution Builder to assess players' financial decisions under risk. The participants use the interface to construct their preferred outcome distributions, while being exposed to a limited budget. The current paper builds on the data gathered from 144 respondents that took part in the game. The analysis has been conducted to estimate the changes of players' strategy throughout the game, as well as to assess their behavior depending on the risk profile. The results show that the strategy of the players is affected by the state-of-the-world scenario, which is reflected in more cautious tactics in case of low returns. There have also been signs of strategy adjustments as the game progressed in order to maximize the financial outcomes. The participants were split into two distinctive profiles – risk-seeking and risk-averse – based on their relative performance, 83% of which remained in the same group for the whole game. It has been pointed out that the more unfavorable conditions are, the more risk-averse the players become.

Keywords

Distribution Builder; Preferred Outcome Distribution; Risk Aversion; Individual Learning; Decision-Making under Uncertainty

Contents

1. Introduction	4
2. Literature Review	5
2. 1. Decision-making under uncertainty	5
2. 2. Expected Utility Theory	6
2. 3. Risk Aversion and Probability Weighting Functions	6
3. Description of the Distribution Strategy Game and Distribution Builder	8
4. Data Analysis	10
4.1. Hypotheses formulation.....	10
4.2. General Analysis	13
4.3. Expected Values Comparison	16
4.3.1. Round 1 to 5. High Returns	16
4.3.2. Round 1 to 5. Low Returns	19
4.3.3. Round 6 to 10. Low Returns	20
4.3.4. Round 6 to 10. High Returns	22
4.3.5. Comparing Rounds 5 and 6	23
4.4. Risk Profile	25
4.4.1. Risk Profile Definition.....	25
4.4.2. Risk Profile Changes	28
5. Review	30
6. Future Research	31
7. Bibliography	32
8. Appendix.....	34

1. Introduction

The bursting US housing bubble, that led to the credit crunch of 2012, followed by take-over of Fannie Mae and Freddie Mac (Wallison et al, 2008), bankruptcy of Lehmann Brothers (Lehman Brothers, 2008) and General Motors (Bloomberg, 2009) has sent the stock prices into downfall and left many investors in despair. What is more, it echoed in a decline of economic activity, economic recession and, even though indirectly, in European sovereign debt crisis (BCG, 2011). These events have inevitably dwarfed consumers' confidence and economic activity, especially concerning long-term and low-risk investments - in pension funds, in particular.

The demographics that once helped Europe overcome the devastation after the Second World war, makes the situation even worse today: with the increasing life expectancy, low fertility and relatively low immigration (Christensen et al, 2009), many developed countries are encountering a problem of aging population. In their research on Aging and Pension Reforms around the world, Bonoli et al (2005) estimate that by 2040 the proportion of population over 65 years old in Germany and France will increase to 30.7% and 25.1% respectively, from less than 20% today. This substantial increase will rise the burden on countries' budgets and pension funds, making the problem of investing into future pension increasingly complicated.

Thus, there is no coincidence that research on financial products, their visual presentation as well as coping with financial risk and ambiguity are of tremendous importance these days. The current work will be based on the "Using Preferred Outcome Distributions to Estimate Value and Probability Weighting Functions in Decisions under Risk" research developed by Bas Donkers, Carlos Lourenço, Benedict Dellaert, and Daniel Goldstein.

2. Literature Review

In this section, we are going to examine the literature on decision making under uncertainty, expected utility theory, and risk aversion.

2. 1. Decision-making under uncertainty

Just as they do in the real life, the players have to make a certain amount of decisions under uncertainty. The literature on this topic is vast, but the research on ambiguity aversion, forming biases and the reasoning behind investment decisions is especially useful.

Camerer et al (1992) review the expected utility and subjective utility function and conclude that the latter is more suitable for analyzing ambiguity aversion. The difference between the Ramsey-de Finetti-Savage approach to subjective expected utility and the expected utility is that in the former the preferences among bets simultaneously reveal beliefs about probability of events and utilities of the consequences of events, whereas the latter assumes that events have known objective probabilities. It is vital in the subjective expected utility approach that the players bet only on the event that they think is going to occur. The authors point out that the aversion of ambiguity has been observed in various studies under different conditions. The implications of the ambiguity aversion include entrepreneurship, contracting, as well as the demand for ambiguity-reducing information.

Hodgkinson et al. (1999) have conducted two experiments on the final year undergraduate students to show how the causal mapping procedure can be used to overcome cognitive biases when tackling strategic decision problems. The findings show that the framing bias is an important factor in strategic decision making, the negative effects of which are likely to be limited by cognitive mapping. However, it is suggested that the mapping techniques should be used only as a way to evolve the present ways of thinking, since some of the biases might actually increase as the result of mapping.

De Bondt et al (1995) point out that overconfidence explains why portfolio managers trade so much, why pension funds hire active equity managers, and why even financial economists often hold actively managed portfolios. They also explain the success of contrarian strategies - which means investing in the way contrary to the common wisdom - depends on the combination of biased forecasts of future profit and misperceptions of risk.

For instance, if the company announces unusually high earnings, the effect of it will last for just three successive quarters and will be likely to be forgotten in the beginning of the next financial year and then even partially reversed. That makes selling bad earnings stocks and buying good earnings stocks quite a profitable business.

2. 2. Expected Utility Theory

The Donkers et al (2013) research utilizes the value function and the probability weighting function that have a huge advantage over the Expected Utility Theory and John von Neumann's conception of rationality. These important issues will be discussed shortly.

Fishburn (1989) gives a good retrospective on how the utility theory was developed and what the implications of it are. The axiom of completeness, transitivity, continuity, and independence are necessary for an agent to have a utility function. The expected utility hypothesis states that by maximizing the expected value of the agent's decisions, it is possible to predict the rationality of the agent. The work led to the development of monetary risk-aversion theory, even though it has later been criticized. For instance, by the fact that humans do not always act rationally or that the conception of rationality developed by von Neumann does not necessarily explain the real human's rationality.

Rabin (1999) analyzes the expected-utility framework from the point of view that the only explanation for risk aversion in it is that the expected-utility function is concave. The author points out that in the proposed framework any small risk aversion in smaller amount of money automatically means an extremely high risk aversion when the stakes are high.

2. 3. Risk Aversion and Probability Weighting Functions

The research on risk aversion has been vast, but the milestone of this topic are Kahneman and Tversky. Let us look at their research on prospect theory and risk-aversiveness.

In their paper, Kahneman and Tversky (1979), criticize the Expected Utility Theory that has been leading in the analysis of decision making under risk for a long time. The authors point out several inconsistencies of choices under risk with the utility theory. For example, the certainty effect, which means people value the outcomes that happen with certainty

more than those that have just some probability of happening. The other assertions include loss aversion and diminishing sensitivity. What the authors proposed was that rather than weighting the utilities of outcomes by their probabilities, to weight them by decision weights. And not to assign value to changes in wealth, but to assign it to the amount of gains and losses made. The outcomes thus are predicted by a value function that has three important features: loss aversion, diminishing sensitivity (the higher losses/gains - the lower the marginal value), and the fact that gains and losses are connected with the reference point, which the authors call reference dependence.

Tversky and Kahneman (1991) have elaborated on their previous research to choice under uncertainty and have also developed what they have called “a model of risk aversion in risk-less choice”. By applying the three characteristics of the value function to the risk-less choice situation, the authors were able to conclude that losing a certain amount of money have a bigger effect on the participants than gaining the same amount.

Schubert et al (1999) in their paper address a popular conception that women are generally more risk-averse than men, especially in respect of women’s performance at financial and insurance markets. In the experiment conducted among 32 undergraduates, it has been shown that even though women don’t make less risky financial decisions, their behaviour very much depends on the context. For instance, in the abstract gambles women are more risk-prone toward losses, whereas men tend to risk more toward gains. In context situations, however, there is no significant difference in decisions between women and men. Therefore, the authors conclude that if such difference does exist in experiments conducted by other authors, it might depend largely on the context and the opportunistic mindset of the participants.

Gehring et al (2002) provide a good explanation of the risk-aversion and back it up with medical and scientific proof. The participants of the experiment conducted by the authors had to perform a gambling task, while their brain activity was recorded and analyzed. A greater activity in participant’s brain was recorded when the decision made resulted in a loss instead of a gain. An interesting phenomenon was observed when the participants were asked to make second gambling choice in succession. It appeared that when the person is asked to make a choice made after previously losing, the activity in the brain that was still processing the loss resulted in a more risky, and often not a logical, decision.

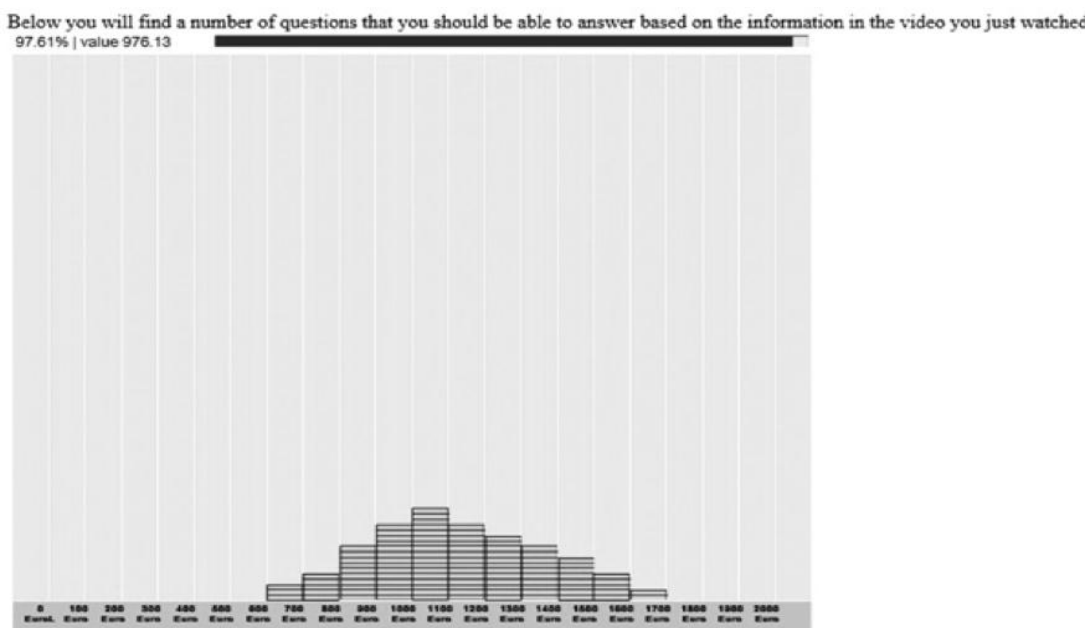
3. Description of the Distribution Strategy Game and Distribution Builder

Now we are going to describe a distribution strategy game in which the participants are asked to make a series of decisions that will eventually result in losses or gains.

In the distribution strategy game, the user is given a certain amount of money to invest, with a combination of probabilities and outcomes, which the player has to decide for himself. The cornerstone of the game is the Distribution Builder (Donkers et al, 2013) - a tool that allows the users to have a visual description of their preferred probability distribution, considering the financial limit they are not allowed to exceed. The user is supposed to move one hundred 1% probability markers to the outcome columns in such a way that from 99% to 100% of the budget is spent.

In order to describe stochastic states of the world, the authors implemented two different investment scenarios: a high returns scenario with a risk-free rate of 2% and a mean return of 6% and a low returns scenario with a mean return of 4%. The returns were assumed to be log-normally distributed, with a standard deviation of 18%. For the participants to experience both states of the world, they are requested to play five rounds for each scenario, which makes ten rounds of the whole game in total. It is important to notice that only the last – 5th – round is the final one and the previous ones are trial rounds.

To illustrate how the Distribution Builder looks like, one of the screenshots of the actual tool was taken from the Donkers et al (2013) paper.



The clear graphic presentation of the Distribution Builder, according to the authors, should trigger the following conclusions in the participants minds:

- not all investment outcomes have equal value;
- an individual's investments should be made with a limited budget;
- higher investment outcomes cost more;
- taking more risk can lead to higher return;

And, indeed, such approach has been proved to be effective. Johnson et al (2005) in their research on how constructing preferences can help make better decisions have analyzed the chemotherapy treatment preferences of the patients who have been recently diagnosed with Hodgkin's disease. There were two options available: the standard six-months-long but less intense therapy and a three-months-long and twice more intense therapy. By investigating into decision-making and building up on the previous research, they have come up with a conclusion that the formal models of preference assessment, when the individual is considered to have clear, thought-out analytical preferences might not work in this situation and, in fact, might not even work in much simpler situations like selecting a bottle of wine or choosing a drug for a migraine.

Another complication was the defaults and the environment in which such decisions were made.

A relatively simple answer to such a complicated scenario of choosing the therapy is a distribution builder which is mostly used for the financial products, but can indeed be applicable to a much wider variety of situations.

Donkers et al (2013) point out that "the state price for each marker (state of the world) is then only dependent on the marker's relative position in the outcome distribution, not on its absolute outcome level or on the specific marker." So, the participants should be more concerned in the way how they are placing the markers and should have a certain strategy in doing so.

4. Data Analysis

The data from the Distribution Builder comes from 134 respondents that complete ten rounds of the game in total. Five rounds of a “low-return” game and five rounds of a “high-return” game, which makes ten rounds in total. The participants are aware of the fact that only the last, fifth round of each return scenario is in fact a real round, when they actually risk losing their money.

The data consists of the randomly selected values for each round as well as the amount of markers the players have positioned on the outcomes they selected. It looks like this:

139	nround	config	selectval	selectcol	nblocks0	nblocks1	nblocks2	nblocks3	nblocks4	nblocks5	nblocks6	nblocks7	nblocks8	nblocks9
140	1	setup_high	1100	12	0	0	0	1	0	0	0	0	32	0
141	1	setup_high	1000	11	0	0	0	0	0	0	0	0	0	7
142	1	setup_high	800	9	0	0	0	0	0	0	0	1	6	21
143	1	setup_high	1000	11	0	0	2	5	1	0	1	8	2	7
144	1	setup_high	1300	14	0	0	0	0	0	0	0	48	0	0
145	1	setup_high	2000	21	0	0	0	0	0	0	0	53	0	0
146	1	setup_high	900	10	0	0	0	0	0	0	0	0	0	8
147	1	setup_high	1300	14	0	0	0	0	0	0	0	32	0	0
148	1	setup_high	1500	16	0	0	0	0	0	1	17	7	3	2
149	1	setup_high	300	4	0	0	1	0	32	0	0	0	0	0
150	1	setup_high	500	6	0	1	0	1	0	2	12	7	7	6
151	1	setup_high	200	3	0	0	1	4	3	4	2	4	4	3
152	1	setup_high	800	9	0	0	0	0	0	1	10	0	6	8
153	1	setup_high	1000	11	0	4	0	0	0	0	42	0	0	0
154	1	setup_high	1100	12	0	0	0	0	0	0	0	0	5	7
155	1	setup_high	1100	12	0	0	0	1	4	1	3	4	4	4
156	1	setup_high	1900	20	0	0	0	0	0	0	0	0	52	0
157	1	setup_high	1000	11	0	0	0	9	0	0	0	0	0	0
158	1	setup_high	800	9	0	0	0	3	5	4	4	4	2	18
159	1	setup_high	900	10	0	0	0	0	0	0	0	0	0	0
160	1	setup_high	700	8	0	0	0	0	0	0	0	0	14	14
161	1	setup_high	2000	21	0	38	0	0	0	0	0	0	0	0

4.1. Hypotheses formulation

The fact that in the game two different investment scenarios are used - namely, high returns scenario (risk free rate 2%, mean return of 6%) and low returns scenario (risk free rate 2%, mean return 4%) - can have a moderating effect on the strategy of the participants. We will see if the results we get from the hypotheses testing can be explained by the risk-aversion theory and, on the top of that, we are going to divide the participants of the game depending on their risk profile and check whether their risk profile changes throughout the game.

The first thing to test is if the players are actually learning and adapting their strategy from round to round. We will test the way how the participants place their markers in the first round differs from the way how they place their markers in the fifth round.

Hypothesis 1:

There is no significant difference in the mean expected values between the first trial round and the real round: D1 → D5

Here we should recall that the players have indeed two real rounds in the whole game: round 5 and round 10, one of them is for the high-return and the other is for the low-return scenario. The players are told of what the differences between the scenarios and, most importantly, the returns in these scenarios are, so by the fourth round their strategy will be different. So, we will test previous hypothesis once again to account for the changed behavior of the players:

Hypothesis 2:

There is no significant difference in the mean expected values between the first trial round and the real round: D6 → D10

What is especially interesting is the difference between the rounds four and five. By the fourth round, a participant should have already tried out different strategies and chances are that he or she has come up with the acceptable (winning) strategy.

This leads to the next hypothesis:

Hypothesis 3:

There is no significant difference in the mean expected values between the last trial round and the real round: D4 → D5

Let us recall that the players begin their initial five rounds of the game with either a high- or low-return scenario and then change to the opposite one. So, it is very tempting to see if players are affected by the new scenario or they continue playing as before.

Hypothesis 4:

There is no significant difference in the mean expected values between the last round of the first part of the game and the first round of the second part of the game: D5 → D6

Apart from the hypotheses testing, we will try to answer the following research question.

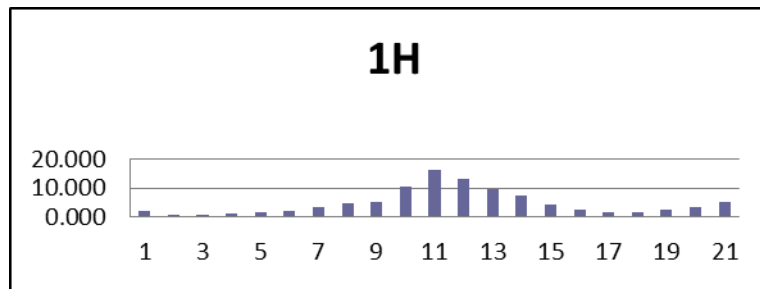
Research Question:

Do the first two rounds of the game define a strategy that the player follows for the rest of the game?

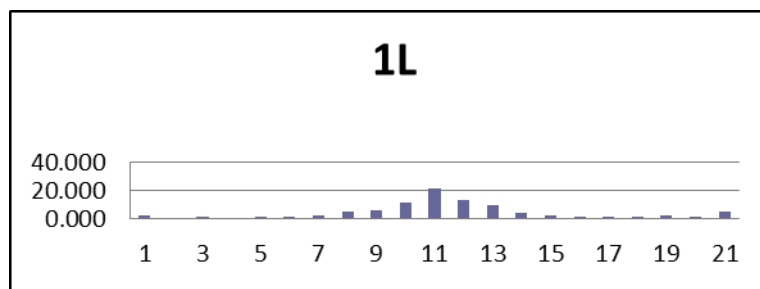
In order to answer it, all the players will be divided into two risk profiles – risk-seeking and risk-averse. Then it will be analyzed if the players can change their risk profiles in comparison with the other players from round to round.

4.2. General Analysis

The simplest approach is to compare the averages for each value across different rounds for both scenarios and see what the differences in the markers distribution are. This will tell us how people change their strategy on average and what difference it makes when they start from a scenario of a low or high return.

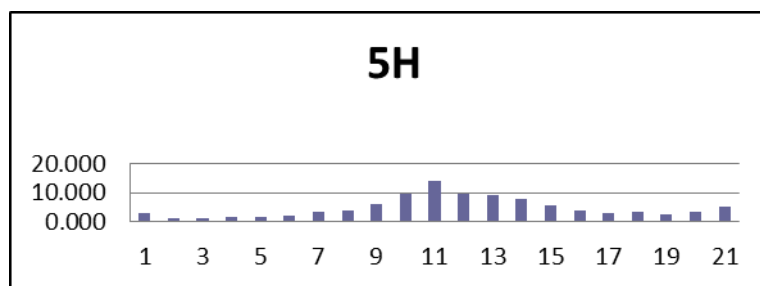


Here we can observe the differences in how the participants begin their game depending on the state of the world. If the returns are high, as in 1H, we can see that even though the players are mostly placing the markers on 11 and 13, they are still willing to gamble and bet on the higher values which correspond to the markers 15, 20, and 21.

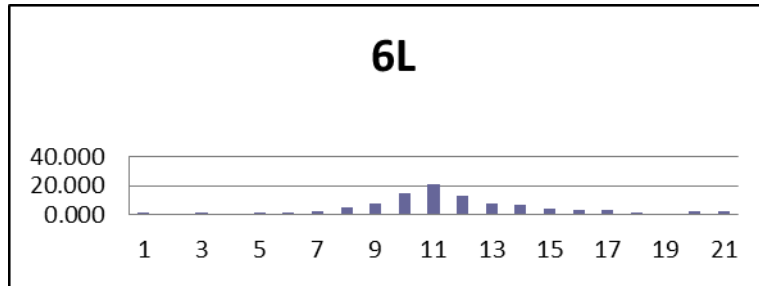


If the state of the world is low-return, like in 1L, the players tend to be more cautious. They place most of the markers at 11, playing on the safe side, or around it. They almost never go for the extremes, for instance, 21, as they do when the market conditions are better.

Now we will compare the behaviour of the same players in the neighbouring round 5 and six. First, let us begin with the players who started with high-returns scenario and continue with the low-returns scenario in round 6.

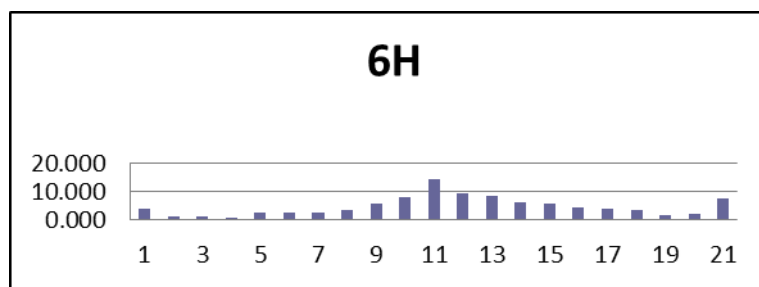
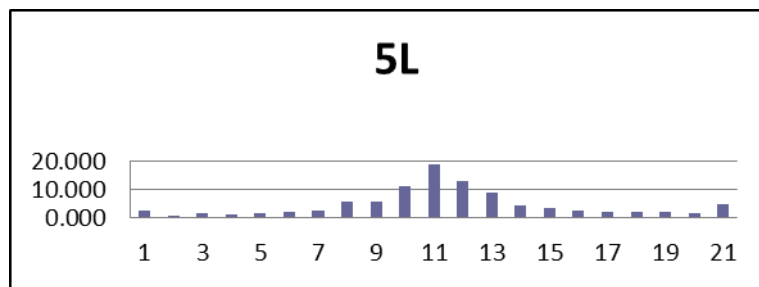


Round 5 very much resembles round 1 in the high-returns state of the world but for the fact that the participants decided to move some of the markers from position 11 and the extreme position to the values next to marker 11. They modified their strategy, trying to earn more on the one side, and diversify as much as they could on the other.



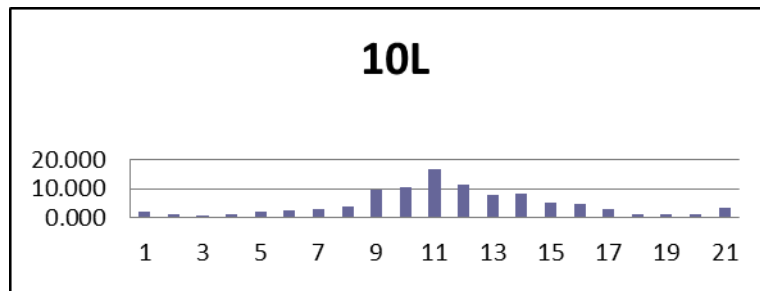
When the players commence with the round six, which is the first round in the new, more risky and less profitable, situation, they become extremely cautious. Almost all the markers are concentrated around the centre and very few are left at the extreme positions. The participants are aware of higher risks and lower returns and begin with making very accurate moves to assess the situation that new to them.

What happens when the players proceed from the last round with low returns to the first round with high returns?

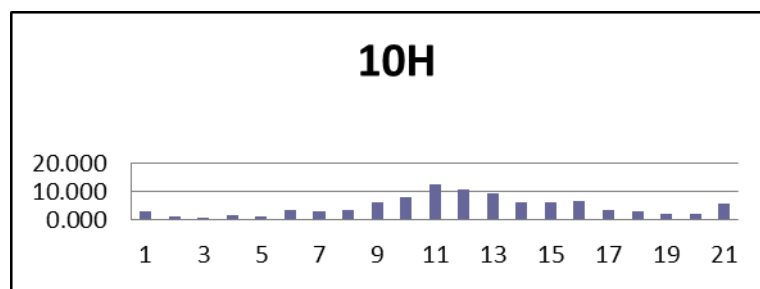


As we can see, quite the opposite. Fewer amount of markers is concentrated around the middle position as the participants start moving them around to the positions 14 to 21 in order to get better returns in the improved state of the world.

Let us look at the last and final round of the whole game, when the player should apply all their knowledge and experience to get the best results.



Once the players become accustomed to the game and the new situation, they start concentrating their markers around the middle position in the low returns state of the world, which very much resembles what we could see in the end of round 5 for the low returns. However, we can see that even in the low returns case, the players try to make the most of the situation and place a lot of markers not only on 11, but also on the position 13, 14 and 15, which makes it a riskier choice, because those markers have to be compensated on the positions 9 and 10.



In the meanwhile, the players who have begun the game in a low-returns scenario and made it to the last round in the improved conditions, are becoming even more risky than their colleague in the round 5 for the high returns. They are placing fewer markers on the safe 11 position and place a lot of the markers on the position 12 to 16 and quite a lot on the extreme position 21. In other words, they are trying to earn as much as possible, compensating for their results in the low-returns scenario.

4.3. Expected Values Comparison

Unfortunately, there is nothing more we can get if we look at the data this way. Hence, another approach is to use the Expected Value function to compare the behavior of each player in every round. Expected value is just the sum of values multiplied by their probabilities, which looks as follows:

$$E[X] = x_1p_1 + x_2p_2 + \dots + x_np_n$$

And indeed, we have the total amount of markers for every round – 100, we know exactly how many markers were assigned to the corresponding outcomes, so we can denote the EV function as follows:

$$EV = M_1 \cdot V_1/100 + M_2 \cdot V_2/100 + \dots + M_{21} \cdot V_{21}/100$$

where M_i - is the amount of markers for every value,

V_i - is the corresponding value

4.3.1. Round 1 to 5. High Returns

First we are going to use repeated measures ANOVA to compare the first five rounds for the players who started with the high returns game. The dependent variable is going to be Expected Value and the Rounds, from 1 to 5, is going to be the independent variable.

First we will check if the differences between means are statistically significant.

Tests of Within-Subjects Effects

Measure: EV

Source		Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Round	Sphericity Assumed	8327.594	4	2081.899	8.743	.000	.110
	Greenhouse-Geisser	8327.594	2.720	3062.155	8.743	.000	.110
	Huynh-Feldt	8327.594	2.838	2933.931	8.743	.000	.110
	Lower-bound	8327.594	1.000	8327.594	8.743	.004	.110
Error(Round)	Sphericity Assumed	67622.806	284	238.108			
	Greenhouse-Geisser	67622.806	193.086	350.221			
	Huynh-Feldt	67622.806	201.525	335.556			
	Lower-bound	67622.806	71.000	952.434			

Because our data did not comply with the assumption of sphericity, we use the Greenhouse-Geisser correction against this violation. At $F(2.720, 193.086) = 8.743$, $p < 0.0005$, so there is indeed a significant difference between the means at different rounds. Let us now look at where exactly the differences occur.

Pairwise Comparisons

Measure: EV

(I) Round	(J) Round	Mean Difference (I-J)	Std. Error	Sig. ^b	95% Confidence Interval for Difference ^b	
					Lower Bound	Upper Bound
1	2	-9.000*	3.047	.043	-17.828	-.172
	3	-9.514*	2.964	.020	-18.101	-.926
	4	-14.208*	3.236	.000	-23.583	-4.834
	5	-11.708*	3.203	.005	-20.989	-2.428
2	1	9.000*	3.047	.043	.172	17.828
	3	-.514	2.374	1.000	-7.392	6.364
	4	-5.208*	1.684	.028	-10.087	-.330
	5	-2.708	2.774	1.000	-10.747	5.330
3	1	9.514*	2.964	.020	.926	18.101
	2	.514	2.374	1.000	-6.364	7.392
	4	-4.694	2.036	.241	-10.594	1.205
	5	-2.194	1.761	1.000	-7.298	2.909
4	1	14.208*	3.236	.000	4.834	23.583
	2	5.208*	1.684	.028	.330	10.087
	3	4.694	2.036	.241	-1.205	10.594
	5	2.500	1.983	1.000	-3.244	8.244
5	1	11.708*	3.203	.005	2.428	20.989
	2	2.708	2.774	1.000	-5.330	10.747
	3	2.194	1.761	1.000	-2.909	7.298
	4	-2.500	1.983	1.000	-8.244	3.244

Based on estimated marginal means

*. The mean difference is significant at the .05 level.

b. Adjustment for multiple comparisons: Bonferroni.

There are a few interesting results we can observe here.

First, there is a difference in means between round 1 and all the other rounds, which implies that the participants are indeed changing their behavior after the initial round.

So, at $p = 0.005 < 0.05$ we deny the Hypothesis 1.

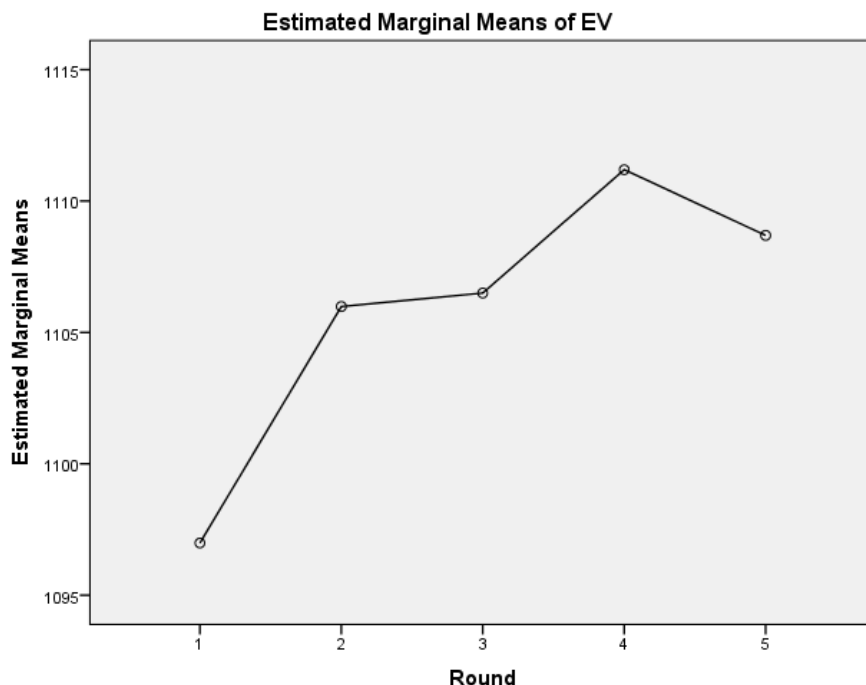
Second, the differences between rounds 2 and 3, 3 and 4, and 3 and 5 are insignificant, meaning that the alterations from round to round are very small. It would be wrong to assume that the expected value stays almost the same, because the difference between rounds 2 and 4 is significant.

The difference between the mean expected value between round 4 and 5 are not statistically significant at $p = 1$.

Hence, we confirm Hypothesis 3.

So, once the players make it to the round 4, they are not making any significant changes in round 5, relying on the strategy that has worked out for them in the previous rounds. In fact, if we look at the mean difference between rounds 4 and 5 we can observe a slight decrease of it. It may be explained by the fact that round 5 is the real round and the players are more cautious.

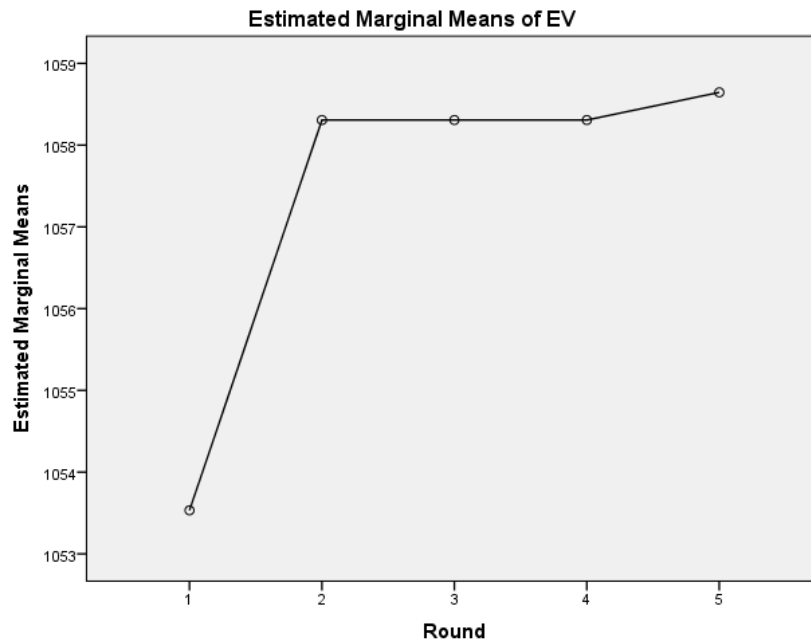
The profile plot indicates the observed differences in the means.



4.3.2. Round 1 to 5. Low Returns

Let us look at what happens when the players start with the low-return state of the world. We start with testing the significance between expected value means.

We again use the Greenhouse-Geisser correction. At $F(1.884, 114.910) = 3.202$, $p=0.047 < 0.05$ the differences should be statistically significant, even though very close to the margin of being not statistically significant.



This is exactly what we observe. As we can see from the graph above, the means remain almost stable from round 2 to round 5. The difference in expected value means between the rounds 1 and 2 is higher, but still not high enough from statistical point of view, with $p = 0.355$.

The results show us that the players are very cautious, being aware of the lower returns and more risk, and once they get started with their initial rounds they do not make alterations in their strategy that would result in the changes in the Expected Value.

This differs from the high-return scenario, where the players play around with the markers position, trying to earn more. In fact, the distribution of the markers in Approach 1 shows similar pattern: the distribution in low-return round 1 and 5 very much resemble each other.

4.3.3. Round 6 to 10. Low Returns

Just as in the previous cases the null hypothesis for the sphericity has been rejected, and the Greenhouse-Geisser correction is used. At $F(2.416, 171.516) = 3.687, p < 0.05$ the mean scores for the means of the expected value are statistically significant.

Now we can look at the differences between rounds.

Pairwise Comparisons

Measure: EV

(I) Round	(J) Round	Mean Difference (I-J)	Std. Error	Sig. ^b	95% Confidence Interval for Difference ^b	
					Lower Bound	Upper Bound
6	7	-1.903	.900	.380	-4.510	.704
	8	-4.236	1.834	.238	-9.551	1.079
	9	-3.958*	1.306	.034	-7.742	-.174
	10	-3.875	1.386	.067	-7.891	.141
7	6	1.903	.900	.380	-.704	4.510
	8	-2.333	1.704	1.000	-7.270	2.604
	9	-2.056	1.170	.832	-5.445	1.333
	10	-1.972	1.198	1.000	-5.443	1.498
8	6	4.236	1.834	.238	-1.079	9.551
	7	2.333	1.704	1.000	-2.604	7.270
	9	.278	1.291	1.000	-3.464	4.019
	10	.361	1.544	1.000	-4.113	4.835
9	6	3.958*	1.306	.034	.174	7.742
	7	2.056	1.170	.832	-1.333	5.445
	8	-.278	1.291	1.000	-4.019	3.464
	10	.083	.591	1.000	-1.628	1.795
10	6	3.875	1.386	.067	-.141	7.891
	7	1.972	1.198	1.000	-1.498	5.443
	8	-.361	1.544	1.000	-4.835	4.113
	9	-.083	.591	1.000	-1.795	1.628

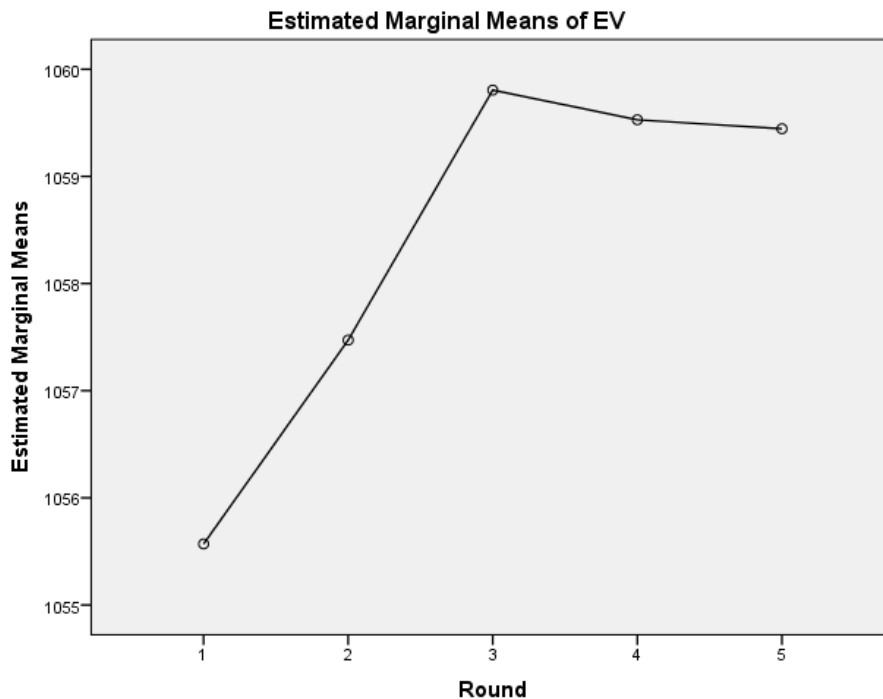
Based on estimated marginal means

*. The mean difference is significant at the .05 level.

b. Adjustment for multiple comparisons: Bonferroni.

At $p = 0.67 > 0.05$ we confirm the Hypothesis 2.

The only statistically significant difference is the between round 6 and 9. While the difference between rounds 6 and 10 formally is not, the rounds are 9 and 10 are very close, but the means of round 10 are lower, thus closer to round 6, which affects the p . This can be observed in the graph below as well.



What do these results show?

The players begin more cautiously, with the expected values lower than in the high returns scenario. They adjust their strategy from round to round, which results in the change of the expected value means, but from round 8 on, they leave their strategy almost unaltered, except for the fact that they prefer to position their markers closer to the safe middle return. This generally reflects what has been observed in the Approach 1 as well.

4.3.4. Round 6 to 10. High Returns

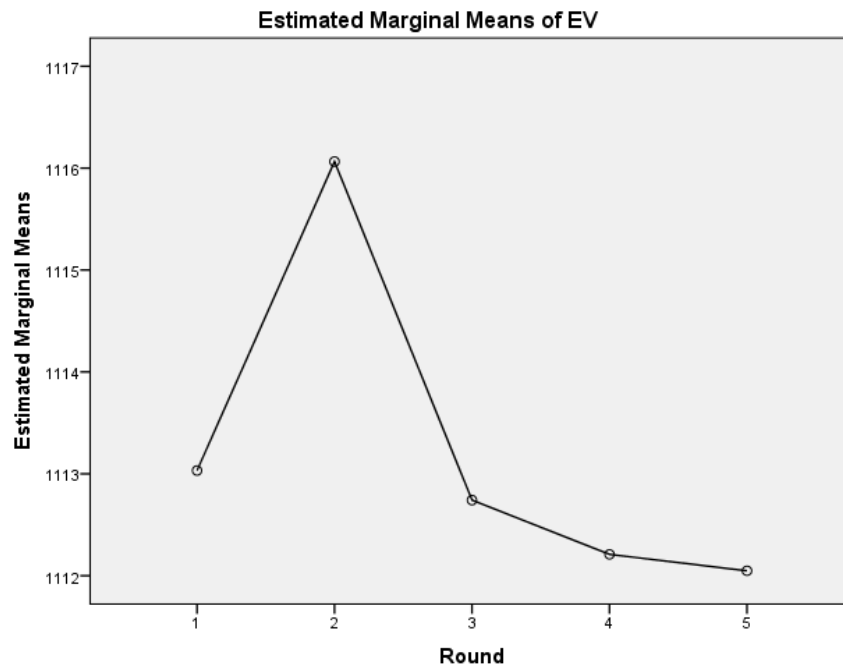
Let us test whether or not the difference between the expected value means is statistically significant.

Tests of Within-Subjects Effects

Measure: EV

Source		Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Round	Sphericity Assumed	666.406	4	166.602	.653	.625	.011
	Greenhouse-Geisser	666.406	1.655	402.665	.653	.495	.011
	Huynh-Feldt	666.406	1.695	393.084	.653	.498	.011
	Lower-bound	666.406	1.000	666.406	.653	.422	.011
Error(Round)	Sphericity Assumed	62230.794	244	255.044			
	Greenhouse-Geisser	62230.794	100.954	616.425			
	Huynh-Feldt	62230.794	103.415	601.757			
	Lower-bound	62230.794	61.000	1020.177			

As we can see, the $p > 0.05$, so there is no statistical significance between the means. Indeed, the means of the Expected Value remain almost unchanged from round to round.



If we compare it to the round with the low returns, where the difference between the means was small as well, we will see that the means in this case are higher, but the difference from round to round is much smaller. The distribution of the markers that was observed in Approach 1 remains almost unchanged from round 6 to round 10, which might

imply that the players who have started with the low returns scenario are generally more cautious and stick to the strategy that they presume have worked for them in the low-returns state of the world.

4.3.5. Comparing Rounds 5 and 6

As it has been previously pointed out the game is divided into two parts – one with high returns scenario and the other with low returns scenario. The game is designed in such a way that one group of players start in the high-returns state of the world for the first five rounds and then continues in the low-returns case, while the other group proceeds with the game the other way around – first low-returns scenario, then high-returns.

While we have already analyzed how the expected value changes throughout the five rounds for each of the scenarios, there is still a missing link here. What happens between the rounds 5 and 6? Are the participants affected by the economic conditions under which they are playing or do they continue their strategy no matter what the state of the world is?

To test this, we are going to carry out paired sample t-tests with 95% confidence interval between the expected values of rounds 5 and 6 for both groups of players. First, we are going to analyze the players that started with the high-returns scenario for the first five rounds and then continued with the low returns.

	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
Pair 1 High_R5 - Low_R6	53.12500	35.50320	4.18409	44.78216	61.46784	12.697	71	.000

As we observe in the table, for the t-statistic $t = 12.697$, $p < 0.05$, which means there is a difference between the expected values in the rounds 5 and 6.

	Mean	N	Std. Deviation	Std. Error Mean
Pair 1 High_R5	1108.6944	72	39.37456	4.64034
Low_R6	1055.5694	72	23.32068	2.74837

The means of the Expected Value appear to be higher in the last round of the high returns scenario than in the first round of the low returns scenario, which shows that the players indeed do alter their behavior depending on what the economic conditions are. And the lower the returns, the lower the expected value appears to be.

Now let us test the same thing for the players how switch from the low-returns to the high-returns scenario.

Paired Samples Test

	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
Pair 1 Low_R5 - High_R6	-54.38710	38.42274	4.87969	-64.14464	-44.62955	-11.146	61	.000

At $t = -11.146$, $p < 0.05$, there is clearly a statistically significant difference between the means of Expected Values between the rounds 5 and 6.

Hence, we reject Hypothesis 4 for both high and low return scenarios.

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Low_R5	1058.6452	62	17.36503	2.20536
	High_R6	1113.0323	62	43.02228	5.46384

The expected value mean for the 5th round in low returns game is lower than the one for the 6th round in the high returns game, which follows immediately after. Being aware of the improved economic conditions, the players respond by placing more markers on the higher values, risking more and driving the expected values higher.

4.4. Risk Profile

In the previous analysis we looked at the difference from round to round, and this gave some insight into how the behavior of the players changes from round to round and how the economic condition modifies the players' bids. However, who exactly participated in the game made no difference to us, whether it was a melancholic student or an experienced financial broker. What really makes the players different from the point of view of a Distribution Builder is how risky they are. By defining the criteria of being risky, we are going to look on the data from the Distribution Builder from a new perspective and see how the behavior of the players changes based on this criteria.

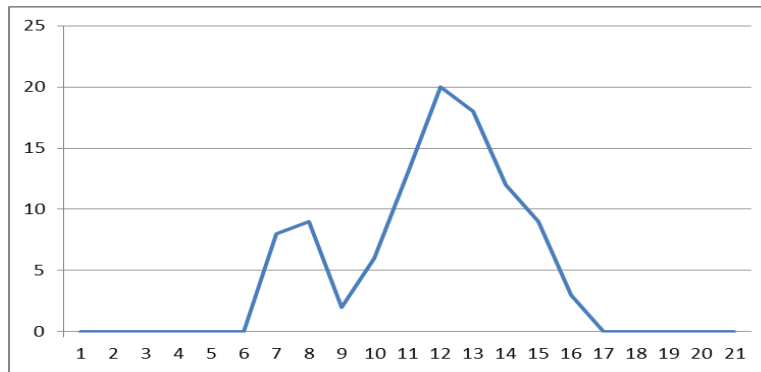
4.4.1. Risk Profile Definition

The logic behind this approach is fairly simple. In every round for each player the expected value has already been calculated and used in the previous analysis. We have observed that the expected value changes from round to round and the exact figure depends on the amount of markers placed on a specific outcome. For example, the expected value of a player who decides to place all the markers on the middle, \$1000, marker will be 1000. The more markers are placed on the higher outcomes, the higher the expected value becomes, but the riskier the game will be: because the markers on the high outcomes have to be compensated by placing the markers on the low outcome, the ones that are lower than \$1000. Hence, the chance of losing increases. So, the higher the expected value for a player, the more risk-seeking he is. And, of course, the lower the expected value, the more risk-averse the player is.

Now it is clear in principle, but how do we define whether or not the person is risk-averse? In order to do so, we calculate an average expected value across all the players for every round.

EV 70	1074	1099	1105	1106	1110
EV 71	1052	1064	1073	1089	1084
EV 72	1079	1105	1109	1122	1133
Average	1096.986	1105.986	1106.500	1111.194	1108.694

The next step is to divide the expected value of each person by the average expected value, for example: $EV\ 70 / Average = 0.979046$. It shows that the player 70 has the expected value of 97.9% of the average across all the participants in round 1.



If we look at the markers distribution, we will see that most of them are concentrated around the centre - safe – markers. This means that the player did not want to risk and place the markers on the extremes, but was satisfied with the lower returns, but lower chance of losing.

Now we can come up with the same estimation for every player. Below, the table for the first ten players in rounds one to five is shown.

Players	Round 1	Round 2	Round 3	Round 4	Round 5
Player 1	0.995455	1.033467	1.036602	1.032223	1.03455
Player 2	0.961726	0.960229	0.956168	0.950329	0.954276
Player 3	0.997278	1.080484	1.085404	1.080819	1.082354
Player 4	1.033741	1.003629	1.014912	1.006125	1.011099
Player 5	1.023714	1.063304	1.062811	1.053821	1.056197
Player 6	1.034653	0.996396	0.986896	0.982726	0.984942
Player 7	0.966284	1.009054	1.006778	1.008824	1.013805
Player 8	0.986339	0.984642	0.984184	0.980026	0.982236
Player 9	1.001836	0.993683	1.001356	1.028623	1.012001
Player 10	1.046504	1.010863	1.010393	1.006125	1.009295

The next step is to find a threshold at which the player can be identified as either risk-seeking or risk-averse. After series of trials, it was identified that the most accurate division of risk-aversiveness occurs if we define that the person is risk-averse if the ratio is $R < 1.000005$, otherwise the person is risk-seeking. Following this simple logic we can build a table with the risk profile for each player in every round. Again the table for the first ten players is shown below.

Players	Round 1	Round 2	Round 3	Round 4	Round 5
Player 1	RISK-AVERSE	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING
Player 2	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE
Player 3	RISK-AVERSE	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING
Player 4	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING
Player 5	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING
Player 6	RISK-SEEKING	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE
Player 7	RISK-AVERSE	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING
Player 8	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE
Player 9	RISK-SEEKING	RISK-AVERSE	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING
Player 10	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING

Now that we have come up with a criteria of identifying whether the player is risk-seeking or risk-averse, we can analyze the distribution of the players according to their risk profile.

High Returns	Round 1	Round 2	Round 3	Round 4	Round 5	Average
RISK-AVERSE	54%	56%	56%	54%	56%	55%
RISK-SEEKING	46%	44%	44%	46%	44%	45%
Low Returns						
RISK-AVERSE	60%	56%	56%	56%	58%	57%
RISK-SEEKING	40%	44%	44%	44%	42%	43%

From the table above, it is clear that in case of high-returns game the percentage of risk seeking people is higher on average than in the low-returns game – 45% and 43% respectively. In the first round, when the participants have no experience of using the Distribution Builder, the difference is even higher – 46% and 40% respectively. It is interesting that in case of high returns the percentage of risk-averse players increases almost steadily from round to round from 54% in the 1st round to 56% in the last round, whereas in the low-returns scenario the situation is the contrary, with the share of risk-averse players decreasing from the 1st to the last rounds from 60% to 58%. It might be a signal that in the high returns case the players are adjusting their strategy from a very optimistic one to a more realistic, whereas in the other case the players were too cautious

in the beginning and by the 5th round are trying to maximize their returns even at a higher chance of losing.

Now we are going to look at the situation in the last five rounds. The players in the low returns scenario are the ones who switched from the high returns in the first five rounds, and the ones in the high returns case used to be in the low returns in the beginning of the game.

Low Returns	Round 6	Round 7	Round 8	Round 9	Round 10	Average
RISK-AVERSE	58%	53%	51%	54%	51%	54%
RISK-SEEKING	42%	47%	49%	46%	49%	46%
High Returns						
RISK-AVERSE	58%	58%	53%	52%	56%	55%
RISK-SEEKING	42%	42%	47%	48%	44%	45%

The distribution of the risk-seeking and risk-averse people is almost the same in both scenarios, but the average in this case is deceiving. The distributions do change from round to round and in both cases the ratio of risk-seeking players is increasing. In spite of being in the worse conditions than in the previous round, the percentage of risk-seeking people is higher for the low returns scenario. While the limitations of the risk assessment mean that the risk profile is relative and can only be compared to the other players in the round, it is still possible to say that the players who start from the high-returns scenario, continue to be more risk-seeking throughout the whole game.

4.4.2. Risk Profile Changes

Having analyzed how risk the distribution of risk-averse and risk-seeking players changes from round to round, it is time to look at the risk profile from another perspective. Is the risk profile defined only for a certain round with the current approach or is it something that persists throughout several rounds?

To answer this question, we are going to compare the first and the last rounds of each part of the game and see if the profiles match. In order to have more objective results, the very first round of the game is considered to be the trial round, when the participants are getting acquainted with the game, and not taken into account. The sixth round, or the first round in the second part of the game when the state of the world changes, is still used because the players already know how to use the distribution builder. So, we compare the risk profiles

for rounds 2 and 5, and for rounds 6 and 10. Here is how it will look like for the first ten players.

Player s	Round 1	Round 2	Round 3	Round 4	Round 5	Profile (R2-->R5)	Risk Profile
Player 1	RISK-AVERSE	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	MATCH	RISK-SEEKING
Player 2	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	MATCH	RISK-AVERSE
Player 3	RISK-AVERSE	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	MATCH	RISK-SEEKING
Player 4	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	MATCH	RISK-SEEKING
Player 5	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	MATCH	RISK-SEEKING
Player 6	RISK-SEEKING	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	MATCH	RISK-AVERSE
Player 7	RISK-AVERSE	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	MATCH	RISK-SEEKING
Player 8	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	MATCH	RISK-AVERSE
Player 9	RISK-SEEKING	RISK-AVERSE	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	CHANGED	UNKNOWN
Player 10	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	MATCH	RISK-SEEKING

Now we are going to apply the same approach to each player in every round and then see in how many cases the profiles of the initial and the last round match.

	Rounds 1 to 5		Rounds 6 to 10		Average
	High Returns	Low Returns	Low Returns	High Returns	
Profile Match	83%	79%	88%	82%	83%

In the whole game, in 83% of the cases on average the risk profile between the first round analyzed and the last round match. The percentages for the second part of the game are higher, which can be explained by the fact that a player's behavior in comparison to the other players does not change so often when the game is already understood and the player has come up with an acceptable strategy. So, the answer to the Research Question will be that at least in 8 of ten cases it is possible to define the risk profile of the players for the last round and say if their strategy is going to be risky or not.

5. Review

The data from 134 respondents collected from the Distribution Builder has been analyzed. The results have shown that in general the behavior of the participants is affected by the returns scenario – in an unfavorable situation players are more cautious about placing the bets, the outcomes of which they are not sure about, and prefer such markers distributions that can minimize their losses rather than maximize their gains. This goes in line with the risk-aversion theory. In high returns scenario, the expected values are higher, which is caused by the fact that the participants are placing more markers on higher values, but the shape of the distributions remains similar.

The difference in the expected value averages between the rounds one and five exists in both return scenarios, but only in the high returns scenario it is statistically significant at the chosen confidence interval. This suggests that in the low returns case the players are not experimenting enough with the outcomes, preferring to play safe.

The expected values for the fourth and the fifth values do not differ as much as it was expected, which means that the participants did not make a big distinction between the trial and the last rounds. Perhaps in case of betting their own money on the financial market or in pension funds, the results would be different.

It appeared that the players indeed are influenced by the conditions under which the game is played, which results in the significant difference between rounds five and six. They seem to have learned that the strategy has to be modified from the previous rounds.

For the rounds six to ten, only in the low returns scenario the difference between the expected value means were significantly different. Because this is the same group of people, for which the statistically significant difference has been observed in the previous rounds, and this group was bigger, it leads to a conclusion that if the sample was bigger, the results could have been more promising. In the low returns scenario, the changes between rounds six and ten were not significant. This may again imply that the players have just become more cautious.

The risk profile analysis has shown that in general there is a higher percentage of risk-averse players in an unfavorable scenario than in high return scenario. It has also

indicated that most of the participants can be labeled with the risk profile already in the second round of the game, with 83% average accuracy.

6. Future Research

The data analysis as well as the above-mentioned hypotheses has provided an extensive and objective information on the players' risk-aversiveness, their behaviour and learning preferences. However, the results prediction is still a huge area for future development. There has been extensive research on learning, and Bayesian model can be utilized in order to achieve the results prediction.

One of the example of such an approach is a research by Narayan et al (2007). In their research on heterogenous learning and marketing communication of a new prescription erectile dysfunction drug, they investigate how different patients are reacting to the new drug and how their attitude changes once they learn more about it.

Narayan et al developed a learning model based on a hierarchical Bayesian framework using Monte Carlo simulations for estimation.

The similar approach can be used to predict the results of the distribution game.

7. Bibliography

- D. Kahneman, A. Tversky. 1979. Prospect Theory: An Analysis of Decision under Risk. *Econometrica* 47, 263-291.
- A. Tversky, D. Kahneman. 1991. Loss Aversion in Riskless Choice: A Reference-Dependent Model. *The Quarterly Journal of Economics*, vol. 106, No. 4, 1039-1061.
- R. Schubert, M. Brown, M. Gysler, H.W. Brachinger. 1999. Financial Decision-Making: Are women Really More Risk-Averse? *American Economic Review*, vol. 89, No. 2, 381-385.
- P. C. Fishburn. 1989. Retrospective of the Utility Theory of von Neumann and Morgenstern. *Journal of Risk and Uncertainty*, 2, 127-158.
- W. Edwards. 1954. The Theory of Decision Making. *The Johns Hopkins University Psychological Bulletin*, vol. 51, No. 4, 380-417.
- C. Camerer, M. Weber. 1992. Recent Developments in Modeling Preferences: Uncertainty and Ambiguity. *Journal of Risk and Uncertainty*, 5, 325-370.
- G. P. Hodgkinson, N. J. Bown, A. J. Maule, K. W. Glaister, A. D. Pearman. 1999. Breaking the Frame: An Analysis of Strategic Cognition and Decision Making under Uncertainty. *Strategic Management Journal*, Vol. 20, No. 10, 977-985.
- W. F. M. De Bondt, R. H. Thaler. 1995. Financial Decision-Making in Markets and Firms: A Behavioral Perspective. *Handbooks in Operations Research and Management Science*, vol. 9, 385-410.
- W. J. Gehring, A. R. Willoughby. 2002. The Medial Frontal Cortex and the Rapid Processing of Monetary Gains and Losses. *Science*, vol. 295, 2279-2282
- P. J. Wallison, C.W. Calomiris. 2008. The Last Trillion-Dollar Commitment: The Destruction of Fannie Mae and Freddie Mac. *American Enterprise Institute for Policy Research*.

- K. Christensen, G. Doblhammer, R. Rau, J.W. Vaupel. 2009. Ageing populations: the challenges ahead. *TheLanceNet*, vol. 374.
- G. Bonoli, T. Shinkawa. 2005. Aging and Pension Reform Around the World. Evidence from 11 Countries. *Edward Elgar Publishing Limited*
- A. Tait, T. Voepel-Lewis, B. Zikmund-Fisher, A. Fagerlin. (2010). The effect of format on parents' understanding of the risks and benefits of clinical research: a comparison between texts, tables, and graphics. *J. Health Community*, pp. 487–501.
- A. Fagerlin, B.J. Zikmund-Fisher, P.A. Ubel. 2011. Helping Patients Decide: Ten Steps to Better Risk Communication. *Journal of the National Cancer Institute*, vol. 103, pp. 1-8.
- S. Narayanan, P. Manchanda. 2007. Heterogeneous Learning and the Targeting of Marketing Communication for New Products. *Chicago Booth*, vol. 6.
- E. Johnson, M. Steffel, D. Goldstein. 2005. Making Better Decisions: From measuring to Constructing Preferences. *Health Psychology*, vol. 24, pp. 17-22.

Websites:

Bloomberg, 2009. GM files bankruptcy to spin off more competitive firm. Retrieved on 11 September 2013 from:

<http://www.bloomberg.com/apps/news?pid=newsarchive&sid=a4brqCWwvYXY>

Lehman Brothers, 15/09/2008. Lehman Brothers Press Release. Retrieved on 19 September 2013 from:

http://www.lehman.com/press/pdf_2008/091508_lbhi_chapter11_announce.pdf

BCG, 2011. Collateral Damage Back to Mesopotamia? The Looming Threat of Debt Restructuring. Retrieved on 07 September 2013 from:

<http://www.bcg.at/documents/file87307.pdf>

8. Appendix

SPSS Data

Repeated Measures ANOVA, High, Rounds 1-5

General Linear Model

Within-Subjects Factors

Measure: EV

Round	Dependent Variable
1	Round1
2	Round2
3	Round3
4	Round4
5	Round5

Descriptive Statistics

	Mean	Std. Deviation	N
Round1	1096.99	42.285	72
Round2	1105.99	42.972	72
Round3	1106.50	42.546	72
Round4	1111.19	39.347	72
Round5	1108.69	39.375	72

Multivariate Tests^a

Effect	Value	F	Hypothesis df	Error df	Sig.	
Round	Pillai's Trace	.236	5.251 ^b	4.000	68.000	.001
	Wilks' Lambda	.764	5.251 ^b	4.000	68.000	.001
	Hotelling's Trace	.309	5.251 ^b	4.000	68.000	.001
	Roy's Largest Root	.309	5.251 ^b	4.000	68.000	.001

Multivariate Tests^a

Effect	Partial Eta Squared
Round	.236
	.236
	.236
	.236

- a. Design: Intercept
- Within Subjects Design: Round
- b. Exact statistic

Mauchly's Test of Sphericity^a

Measure: EV

Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Epsilon ^b
					Greenhouse-Geisser
Round	.296	84.521	9	.000	.680

Mauchly's Test of Sphericity^a

Measure: EV

Within Subjects Effect	Epsilon	
	Huynh-Feldt	Lower-bound
Round	.710	.250

Tests the null hypothesis that the error covariance matrix of the orthonormalized transformed dependent variables is proportional to an identity matrix.^a

- a. Design: Intercept
- Within Subjects Design: Round
- b. May be used to adjust the degrees of freedom for the averaged tests of significance. Corrected tests are displayed in the Tests of Within-Subjects Effects table.

Tests of Within-Subjects Effects

Measure: EV

Source		Type III Sum of Squares	df	Mean Square	F	Sig.
Round	Sphericity Assumed	8327.594	4	2081.899	8.743	.000
	Greenhouse-Geisser	8327.594	2.720	3062.155	8.743	.000
	Huynh-Feldt	8327.594	2.838	2933.931	8.743	.000
	Lower-bound	8327.594	1.000	8327.594	8.743	.004
Error(Round)	Sphericity Assumed	67622.806	284	238.108		
	Greenhouse-Geisser	67622.806	193.086	350.221		
	Huynh-Feldt	67622.806	201.525	335.556		
	Lower-bound	67622.806	71.000	952.434		

Tests of Within-Subjects Effects

Measure: EV

Source		Partial Eta Squared
Round	Sphericity Assumed	.110
	Greenhouse-Geisser	.110
	Huynh-Feldt	.110
	Lower-bound	.110
Error(Round)	Sphericity Assumed	
	Greenhouse-Geisser	
	Huynh-Feldt	
	Lower-bound	

Tests of Within-Subjects Contrasts

Measure: EV

Source	Round	Type III Sum of Squares	df	Mean Square	F	Sig.
Round	Linear	5899.613	1	5899.613	15.236	.000
	Quadratic	1821.453	1	1821.453	7.556	.008
	Cubic	12.013	1	12.013	.143	.707
	Order 4	594.516	1	594.516	2.477	.120
Error(Round)	Linear	27491.488	71	387.204		
	Quadratic	17115.904	71	241.069		
	Cubic	5976.887	71	84.182		
	Order 4	17038.527	71	239.979		

Tests of Within-Subjects Contrasts

Measure: EV

Source	Round	Partial Eta Squared
Round	Linear	.177
	Quadratic	.096
	Cubic	.002
	Order 4	.034
Error(Round)	Linear	
	Quadratic	
	Cubic	
	Order 4	

Tests of Between-Subjects Effects

Measure: EV

Transformed Variable: Average

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Intercept	440263213.878	1	440263213.878	57998.620	.000	.999
Error	538955.722	71	7590.926			

Estimated Marginal Means

Round

Estimates

Measure: EV

Round	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
1	1096.986	4.983	1087.050	1106.923
2	1105.986	5.064	1095.888	1116.084
3	1106.500	5.014	1096.502	1116.498
4	1111.194	4.637	1101.948	1120.441
5	1108.694	4.640	1099.442	1117.947

Pairwise Comparisons

Measure: EV

(I) Round	(J) Round	Mean Difference (I-J)	Std. Error	Sig. ^b	95% Confidence Interval for Difference ^b	
					Lower Bound	Upper Bound
1	2	-9.000*	3.047	.043	-17.828	-.172
	3	-9.514*	2.964	.020	-18.101	-.926
	4	-14.208*	3.236	.000	-23.583	-4.834
	5	-11.708*	3.203	.005	-20.989	-2.428
2	1	9.000*	3.047	.043	.172	17.828
	3	-.514	2.374	1.000	-7.392	6.364
	4	-5.208*	1.684	.028	-10.087	-.330
3	5	-2.708	2.774	1.000	-10.747	5.330
	1	9.514*	2.964	.020	.926	18.101
	2	.514	2.374	1.000	-6.364	7.392
	4	-4.694	2.036	.241	-10.594	1.205
4	5	-2.194	1.761	1.000	-7.298	2.909
	1	14.208*	3.236	.000	4.834	23.583
	2	5.208*	1.684	.028	.330	10.087
	3	4.694	2.036	.241	-1.205	10.594
5	5	2.500	1.983	1.000	-3.244	8.244
	1	11.708*	3.203	.005	2.428	20.989
	2	2.708	2.774	1.000	-5.330	10.747
	3	2.194	1.761	1.000	-2.909	7.298
	4	-2.500	1.983	1.000	-8.244	3.244

Based on estimated marginal means

*. The mean difference is significant at the .05 level.

b. Adjustment for multiple comparisons: Bonferroni.

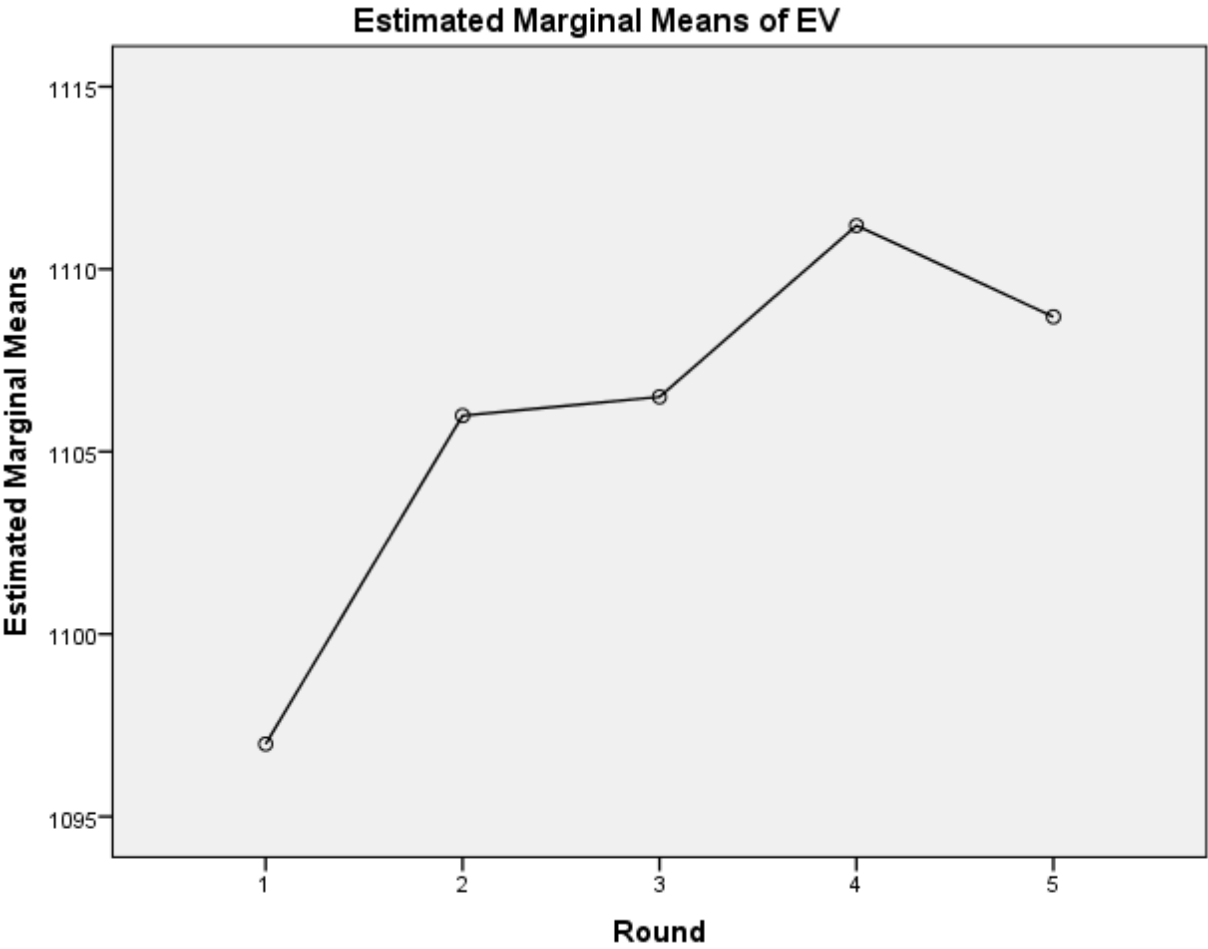
Multivariate Tests

	Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Pillai's trace	.236	5.251 ^a	4.000	68.000	.001	.236
Wilks' lambda	.764	5.251 ^a	4.000	68.000	.001	.236
Hotelling's trace	.309	5.251 ^a	4.000	68.000	.001	.236
Roy's largest root	.309	5.251 ^a	4.000	68.000	.001	.236

Each F tests the multivariate effect of Round. These tests are based on the linearly independent pairwise comparisons among the estimated marginal means.

a. Exact statistic

Profile Plots



Repeated Measures ANOVA, Low, Rounds 1-5

General Linear Mode

Within-Subjects Factors

Measure: EV

Round	Dependent Variable
1	Round1
2	Round2
3	Round3
4	Round4
5	Round5

Descriptive Statistics

	Mean	Std. Deviation	N
Round 1	1053.53	18.930	62
Round 2	1058.31	18.127	62
Round 3	1058.31	18.127	62
Round 4	1058.31	18.127	62
Round 5	1058.65	17.365	62

Multivariate Tests^a

Effect		Value	F	Hypothesis df	Error df	Sig.
Round	Pillai's Trace	.083	2.705 ^b	2.000	60.000	.075
	Wilks' Lambda	.917	2.705 ^b	2.000	60.000	.075
	Hotelling's Trace	.090	2.705 ^b	2.000	60.000	.075
	Roy's Largest Root	.090	2.705 ^b	2.000	60.000	.075

Multivariate Tests^a

Effect	Partial Eta Squared
Round	.083
Pillai's Trace	.083
Wilks' Lambda	.083
Hotelling's Trace	.083
Roy's Largest Root	.083

a. Design: Intercept

Within Subjects Design: Round

b. Exact statistic

Mauchly's Test of Sphericity^a

Measure: EV

Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Epsilon ^b
					Greenhouse-Geisser
Round	.000	.	9	.	.471

Mauchly's Test of Sphericity^a

Measure: EV

Within Subjects Effect	Epsilon	
	Huynh-Feldt	Lower-bound
Round	.485	.250

Tests the null hypothesis that the error covariance matrix of the orthonormalized transformed dependent variables is proportional to an identity matrix.^a

a. Design: Intercept

Within Subjects Design: Round

b. May be used to adjust the degrees of freedom for the averaged tests of significance. Corrected tests are displayed in the Tests of Within-Subjects Effects table.

Tests of Within-Subjects Effects

Measure: EV

Source		Type III Sum of Squares	df	Mean Square	F	Sig.
Round	Sphericity Assumed	1176.323	4	294.081	3.202	.014
	Greenhouse-Geisser	1176.323	1.884	624.450	3.202	.047
	Huynh-Feldt	1176.323	1.942	605.779	3.202	.046
	Lower-bound	1176.323	1.000	1176.323	3.202	.079
Error(Round)	Sphericity Assumed	22412.477	244	91.854		
	Greenhouse-Geisser	22412.477	114.910	195.043		
	Huynh-Feldt	22412.477	118.452	189.212		
	Lower-bound	22412.477	61.000	367.418		

Tests of Within-Subjects Effects

Measure: EV

Source		Partial Eta Squared
Round	Sphericity Assumed	.050
	Greenhouse-Geisser	.050
	Huynh-Feldt	.050
	Lower-bound	.050
Error(Round)	Sphericity Assumed	
	Greenhouse-Geisser	
	Huynh-Feldt	
	Lower-bound	

Tests of Within-Subjects Contrasts

Measure: EV

Source	Round	Type III Sum of Squares	df	Mean Square	F	Sig.
Round	Linear	648.316	1	648.316	4.745	.033
	Quadratic	348.502	1	348.502	1.861	.178
	Cubic	162.079	1	162.079	4.745	.033
	Order 4	17.425	1	17.425	1.861	.178
Error(Round)	Linear	8334.484	61	136.631		
	Quadratic	11423.212	61	187.266		
	Cubic	2083.621	61	34.158		
	Order 4	571.161	61	9.363		

Tests of Within-Subjects Contrasts

Measure: EV

Source	Round	Partial Eta Squared
Round	Linear	.072
	Quadratic	.030
	Cubic	.072
	Order 4	.030
Error(Round)	Linear	
	Quadratic	
	Cubic	
	Order 4	

Tests of Between-Subjects Effects

Measure: EV

Transformed Variable: Average

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Intercept	346622064.516	1	346622064.516	271178.152	.000	1.000
Error	77970.684	61	1278.208			

Estimated Marginal Means

Round

Estimates

Measure: EV

Round	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
1	1053.532	2.404	1048.725	1058.340
2	1058.306	2.302	1053.703	1062.910
3	1058.306	2.302	1053.703	1062.910
4	1058.306	2.302	1053.703	1062.910
5	1058.645	2.205	1054.235	1063.055

Pairwise Comparisons

Measure: EV

(I) Round	(J) Round	Mean Difference (I-J)	Std. Error	Sig. ^a	95% Confidence Interval for Difference ^a	
					Lower Bound	Upper Bound
1	2	-4.774	2.221	.355	-11.242	1.694
	3	-4.774	2.221	.355	-11.242	1.694
	4	-4.774	2.221	.355	-11.242	1.694
	5	-5.113	2.347	.333	-11.950	1.724
2	1	4.774	2.221	.355	-1.694	11.242
	3	.000	.000	.	.000	.000
	4	.000	.000	.	.000	.000
3	5	-.339	1.763	1.000	-5.474	4.797
	1	4.774	2.221	.355	-1.694	11.242
	2	.000	.000	.	.000	.000
	4	.000	.000	.	.000	.000
4	5	-.339	1.763	1.000	-5.474	4.797
	1	4.774	2.221	.355	-1.694	11.242
	2	.000	.000	.	.000	.000
	3	.000	.000	.	.000	.000
5	5	-.339	1.763	1.000	-5.474	4.797
	1	5.113	2.347	.333	-1.724	11.950
	2	.339	1.763	1.000	-4.797	5.474
	3	.339	1.763	1.000	-4.797	5.474
	4	.339	1.763	1.000	-4.797	5.474

Based on estimated marginal means

a. Adjustment for multiple comparisons: Bonferroni.

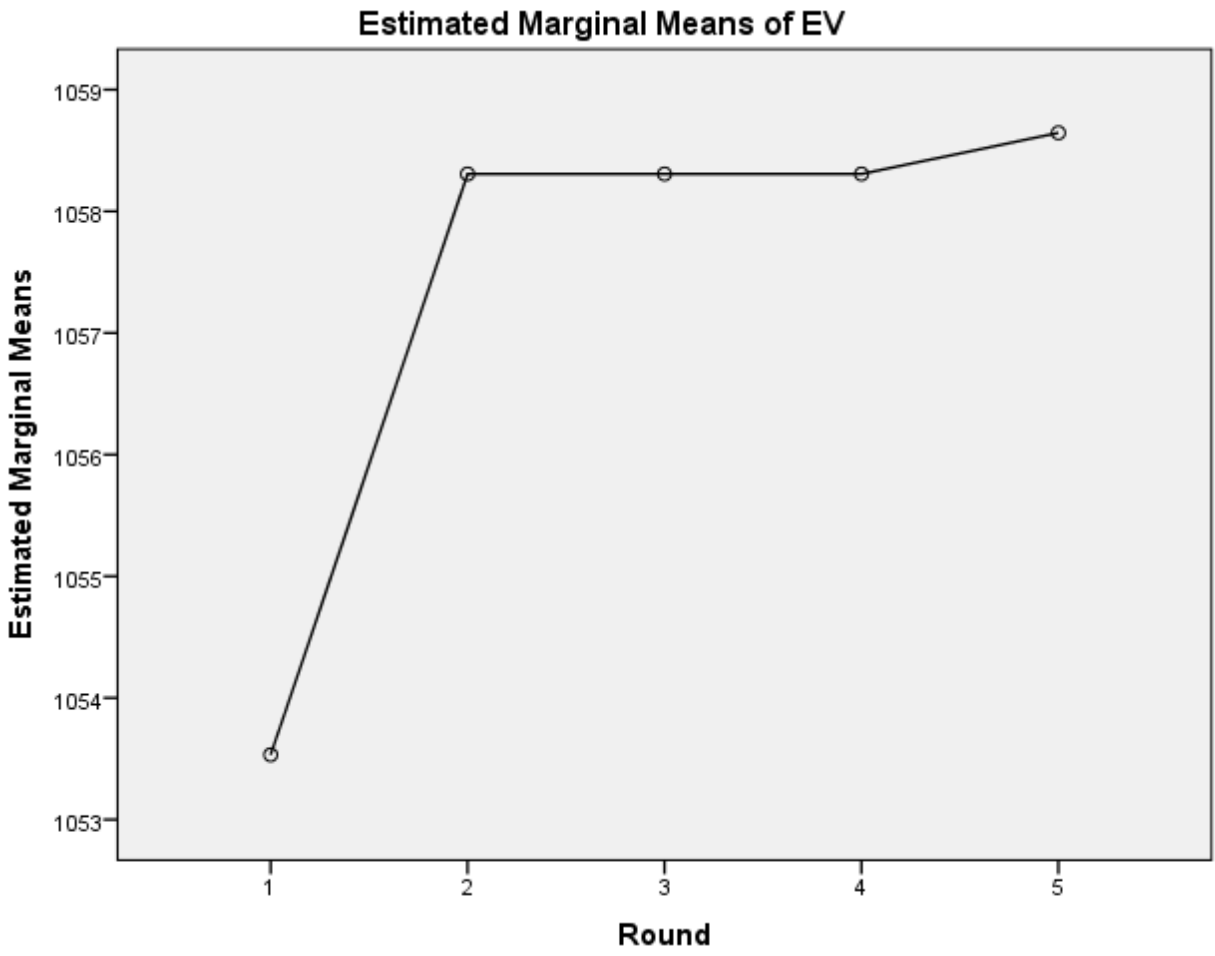
Multivariate Tests

	Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Pillai's trace	.083	2.705 ^a	2.000	60.000	.075	.083
Wilks' lambda	.917	2.705 ^a	2.000	60.000	.075	.083
Hotelling's trace	.090	2.705 ^a	2.000	60.000	.075	.083
Roy's largest root	.090	2.705 ^a	2.000	60.000	.075	.083

Each F tests the multivariate effect of Round. These tests are based on the linearly independent pairwise comparisons among the estimated marginal means.

a. Exact statistic

Profile Plots



Repeated Measures ANOVA, Low, Rounds 6-10

General Linear Model

Within-Subjects Factors

Measure: EV

Round	Dependent Variable
1	Round6
2	Round7
3	Round8
4	Round9
5	Round10

Descriptive Statistics

	Mean	Std. Deviation	N
Round 6	1055.57	23.321	72
Round 7	1057.47	22.758	72
Round 8	1059.81	22.181	72
Round 9	1059.53	20.704	72
Round 10	1059.44	20.487	72

Multivariate Tests^a

Effect	Value	F	Hypothesis df	Error df	Sig.	
Round	Pillai's Trace	.121	2.334 ^b	4.000	68.000	.064
	Wilks' Lambda	.879	2.334 ^b	4.000	68.000	.064
	Hotelling's Trace	.137	2.334 ^b	4.000	68.000	.064
	Roy's Largest Root	.137	2.334 ^b	4.000	68.000	.064

Multivariate Tests^a

Effect	Partial Eta Squared	
Round	Pillai's Trace	.121
	Wilks' Lambda	.121
	Hotelling's Trace	.121
	Roy's Largest Root	.121

a. Design: Intercept

Within Subjects Design: Round

b. Exact statistic

Mauchly's Test of Sphericity^a

Measure: EV

Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Epsilon ^b
					Greenhouse-Geisser
Round	.168	123.979	9	.000	.604

Mauchly's Test of Sphericity^a

Measure: EV

Within Subjects Effect	Epsilon	
	Huynh-Feldt	Lower-bound
Round	.627	.250

Tests the null hypothesis that the error covariance matrix of the orthonormalized transformed dependent variables is proportional to an identity matrix.^a

a. Design: Intercept

Within Subjects Design: Round

b. May be used to adjust the degrees of freedom for the averaged tests of significance. Corrected tests are displayed in the Tests of Within-Subjects Effects table.

Tests of Within-Subjects Effects

Measure: EV

Source		Type III Sum of Squares	df	Mean Square	F	Sig.
Round	Sphericity Assumed	950.733	4	237.683	3.687	.006
	Greenhouse-Geisser	950.733	2.416	393.561	3.687	.020
	Huynh-Feldt	950.733	2.507	379.251	3.687	.019
	Lower-bound	950.733	1.000	950.733	3.687	.059
Error(Round)	Sphericity Assumed	18309.267	284	64.469		
	Greenhouse-Geisser	18309.267	171.516	106.749		
	Huynh-Feldt	18309.267	177.988	102.868		
	Lower-bound	18309.267	71.000	257.877		

Tests of Within-Subjects Effects

Measure: EV

Source		Partial Eta Squared
Round	Sphericity Assumed	.049
	Greenhouse-Geisser	.049
	Huynh-Feldt	.049
	Lower-bound	.049
Error(Round)	Sphericity Assumed	
	Greenhouse-Geisser	
	Huynh-Feldt	
	Lower-bound	

Tests of Within-Subjects Contrasts

Measure: EV

Source	Round	Type III Sum of Squares	df	Mean Square	F	Sig.
Round	Linear	692.272	1	692.272	7.387	.008
	Quadratic	222.893	1	222.893	3.234	.076
	Cubic	.401	1	.401	.016	.899
	Order 4	35.167	1	35.167	.498	.482
Error(Round)	Linear	6653.528	71	93.712		
	Quadratic	4893.536	71	68.923		
	Cubic	1753.299	71	24.694		
	Order 4	5008.905	71	70.548		

Tests of Within-Subjects Contrasts

Measure: EV

Source	Round	Partial Eta Squared
Round	Linear	.094
	Quadratic	.044
	Cubic	.000
	Order 4	.007
Error(Round)	Linear	
	Quadratic	
	Cubic	
	Order 4	

Tests of Between-Subjects Effects

Measure: EV

Transformed Variable: Average

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Intercept	403248283.669	1	403248283.669	188055.870	.000	1.000
Error	152245.331	71	2144.300			

Estimated Marginal Means

Round

Estimates

Measure: EV

Round	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
1	1055.569	2.748	1050.089	1061.050
2	1057.472	2.682	1052.124	1062.820
3	1059.806	2.614	1054.593	1065.018
4	1059.528	2.440	1054.662	1064.393
5	1059.444	2.414	1054.630	1064.259

Pairwise Comparisons

Measure: EV

(I) Round	(J) Round	Mean Difference (I-J)	Std. Error	Sig. ^b	95% Confidence Interval for Difference ^b	
					Lower Bound	Upper Bound
1	2	-1.903	.900	.380	-4.510	.704
	3	-4.236	1.834	.238	-9.551	1.079
	4	-3.958*	1.306	.034	-7.742	-.174
	5	-3.875	1.386	.067	-7.891	.141
2	1	1.903	.900	.380	-.704	4.510
	3	-2.333	1.704	1.000	-7.270	2.604
	4	-2.056	1.170	.832	-5.445	1.333
3	5	-1.972	1.198	1.000	-5.443	1.498
	1	4.236	1.834	.238	-1.079	9.551
	2	2.333	1.704	1.000	-2.604	7.270
	4	.278	1.291	1.000	-3.464	4.019
4	5	.361	1.544	1.000	-4.113	4.835
	1	3.958*	1.306	.034	.174	7.742
	2	2.056	1.170	.832	-1.333	5.445
	3	-.278	1.291	1.000	-4.019	3.464
5	5	.083	.591	1.000	-1.628	1.795
	1	3.875	1.386	.067	-.141	7.891
	2	1.972	1.198	1.000	-1.498	5.443
	3	-.361	1.544	1.000	-4.835	4.113
	4	-.083	.591	1.000	-1.795	1.628

Based on estimated marginal means

*. The mean difference is significant at the .05 level.

b. Adjustment for multiple comparisons: Bonferroni.

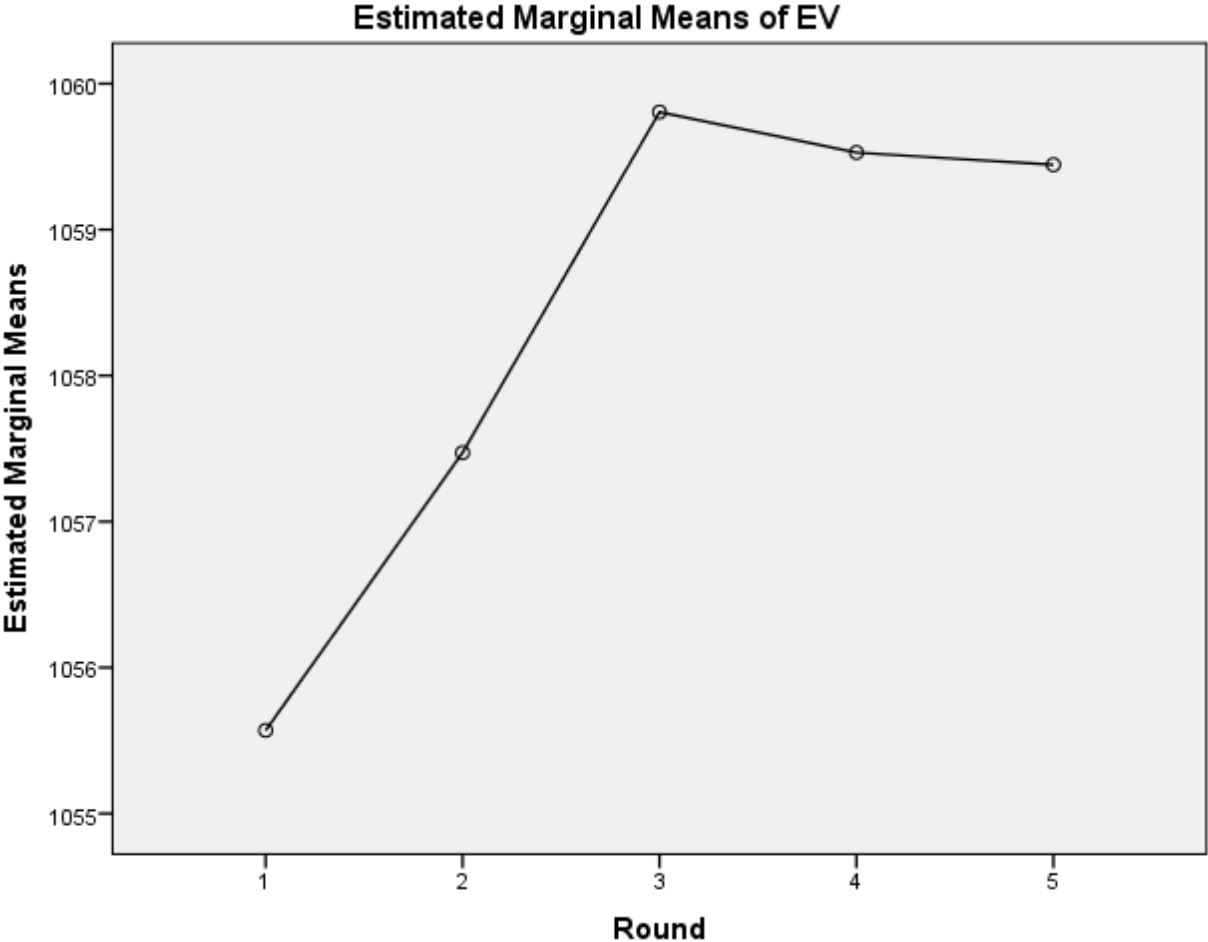
Multivariate Tests

	Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Pillai's trace	.121	2.334 ^a	4.000	68.000	.064	.121
Wilks' lambda	.879	2.334 ^a	4.000	68.000	.064	.121
Hotelling's trace	.137	2.334 ^a	4.000	68.000	.064	.121
Roy's largest root	.137	2.334 ^a	4.000	68.000	.064	.121

Each F tests the multivariate effect of Round. These tests are based on the linearly independent pairwise comparisons among the estimated marginal means.

a. Exact statistic

Profile Plots



Repeated Measures ANOVA, High, Rounds 6-10

General Linear Model

Within-Subjects Factors

Measure: EV

Round	Dependent Variable
1	Round6
2	Round7
3	Round8
4	Round9
5	Round10

Descriptive Statistics

	Mean	Std. Deviation	N
Round 6	1113.03	43.022	62
Round 7	1116.06	43.675	62
Round 8	1112.74	40.056	62
Round 9	1112.21	40.002	62
Round 10	1112.05	40.174	62

Multivariate Tests^a

Effect		Value	F	Hypothesis df	Error df	Sig.
Round	Pillai's Trace	.062	.956 ^b	4.000	58.000	.439
	Wilks' Lambda	.938	.956 ^b	4.000	58.000	.439
	Hotelling's Trace	.066	.956 ^b	4.000	58.000	.439
	Roy's Largest Root	.066	.956 ^b	4.000	58.000	.439

Multivariate Tests^a

Effect		Partial Eta Squared
Round	Pillai's Trace	.062
	Wilks' Lambda	.062
	Hotelling's Trace	.062
	Roy's Largest Root	.062

- a. Design: Intercept
Within Subjects Design: Round
- b. Exact statistic

Mauchly's Test of Sphericity^a

Measure: EV

Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Epsilon ^b
					Greenhouse-Geisser
Round	.013	256.625	9	.000	.414

Mauchly's Test of Sphericity^a

Measure: EV

Within Subjects Effect	Epsilon	
	Huynh-Feldt	Lower-bound
Round	.424	.250

Tests the null hypothesis that the error covariance matrix of the orthonormalized transformed dependent variables is proportional to an identity matrix.^a

- a. Design: Intercept
Within Subjects Design: Round
- b. May be used to adjust the degrees of freedom for the averaged tests of significance. Corrected tests are displayed in the Tests of Within-Subjects Effects table.

Tests of Within-Subjects Effects

Measure: EV

Source		Type III Sum of Squares	df	Mean Square	F	Sig.
Round	Sphericity Assumed	666.406	4	166.602	.653	.625
	Greenhouse-Geisser	666.406	1.655	402.665	.653	.495
	Huynh-Feldt	666.406	1.695	393.084	.653	.498
	Lower-bound	666.406	1.000	666.406	.653	.422
Error(Round)	Sphericity Assumed	62230.794	244	255.044		
	Greenhouse-Geisser	62230.794	100.954	616.425		
	Huynh-Feldt	62230.794	103.415	601.757		
	Lower-bound	62230.794	61.000	1020.177		

Tests of Within-Subjects Effects

Measure: EV

Source		Partial Eta Squared
Round	Sphericity Assumed	.011
	Greenhouse-Geisser	.011
	Huynh-Feldt	.011
	Lower-bound	.011
Error(Round)	Sphericity Assumed	
	Greenhouse-Geisser	
	Huynh-Feldt	
	Lower-bound	

Tests of Within-Subjects Contrasts

Measure: EV

Source	Round	Type III Sum of Squares	df	Mean Square	F	Sig.
Round	Linear	210.195	1	210.195	.356	.553
	Quadratic	57.291	1	57.291	.267	.607
	Cubic	280.466	1	280.466	2.104	.152
	Order 4	118.454	1	118.454	1.439	.235
Error(Round)	Linear	35985.305	61	589.923		
	Quadratic	13091.494	61	214.615		
	Cubic	8132.034	61	133.312		
	Order 4	5021.961	61	82.327		

Tests of Within-Subjects Contrasts

Measure: EV

Source	Round	Partial Eta Squared
Round	Linear	.006
	Quadratic	.004
	Cubic	.033
	Order 4	.023
Error(Round)	Linear	
	Quadratic	
	Cubic	
	Order 4	

Tests of Between-Subjects Effects

Measure: EV

Transformed Variable: Average

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Intercept	384169772.916	1	384169772.916	50836.845	.000	.999
Error	460971.884	61	7556.916			

Estimated Marginal Means

Round

Estimates

Measure: EV

Round	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
1	1113.032	5.464	1102.107	1123.958
2	1116.065	5.547	1104.973	1127.156
3	1112.742	5.087	1102.569	1122.914
4	1112.210	5.080	1102.051	1122.368
5	1112.048	5.102	1101.846	1122.251

Pairwise Comparisons

Measure: EV

(I) Round	(J) Round	Mean Difference (I-J)	Std. Error	Sig. ^a	95% Confidence Interval for Difference ^a	
					Lower Bound	Upper Bound
1	2	-3.032	3.164	1.000	-12.249	6.184
	3	.290	4.033	1.000	-11.456	12.036
	4	.823	4.041	1.000	-10.948	12.593
	5	.984	3.951	1.000	-10.524	12.492
2	1	3.032	3.164	1.000	-6.184	12.249
	3	3.323	2.750	1.000	-4.686	11.331
	4	3.855	2.779	1.000	-4.238	11.948
	5	4.016	2.562	1.000	-3.448	11.480
3	1	-.290	4.033	1.000	-12.036	11.456
	2	-3.323	2.750	1.000	-11.331	4.686
	4	.532	.930	1.000	-2.177	3.241
	5	.694	.979	1.000	-2.157	3.544
4	1	-.823	4.041	1.000	-12.593	10.948
	2	-3.855	2.779	1.000	-11.948	4.238
	3	-.532	.930	1.000	-3.241	2.177
	5	.161	.624	1.000	-1.656	1.979
5	1	-.984	3.951	1.000	-12.492	10.524
	2	-4.016	2.562	1.000	-11.480	3.448
	3	-.694	.979	1.000	-3.544	2.157
	4	-.161	.624	1.000	-1.979	1.656

Based on estimated marginal means

a. Adjustment for multiple comparisons: Bonferroni.

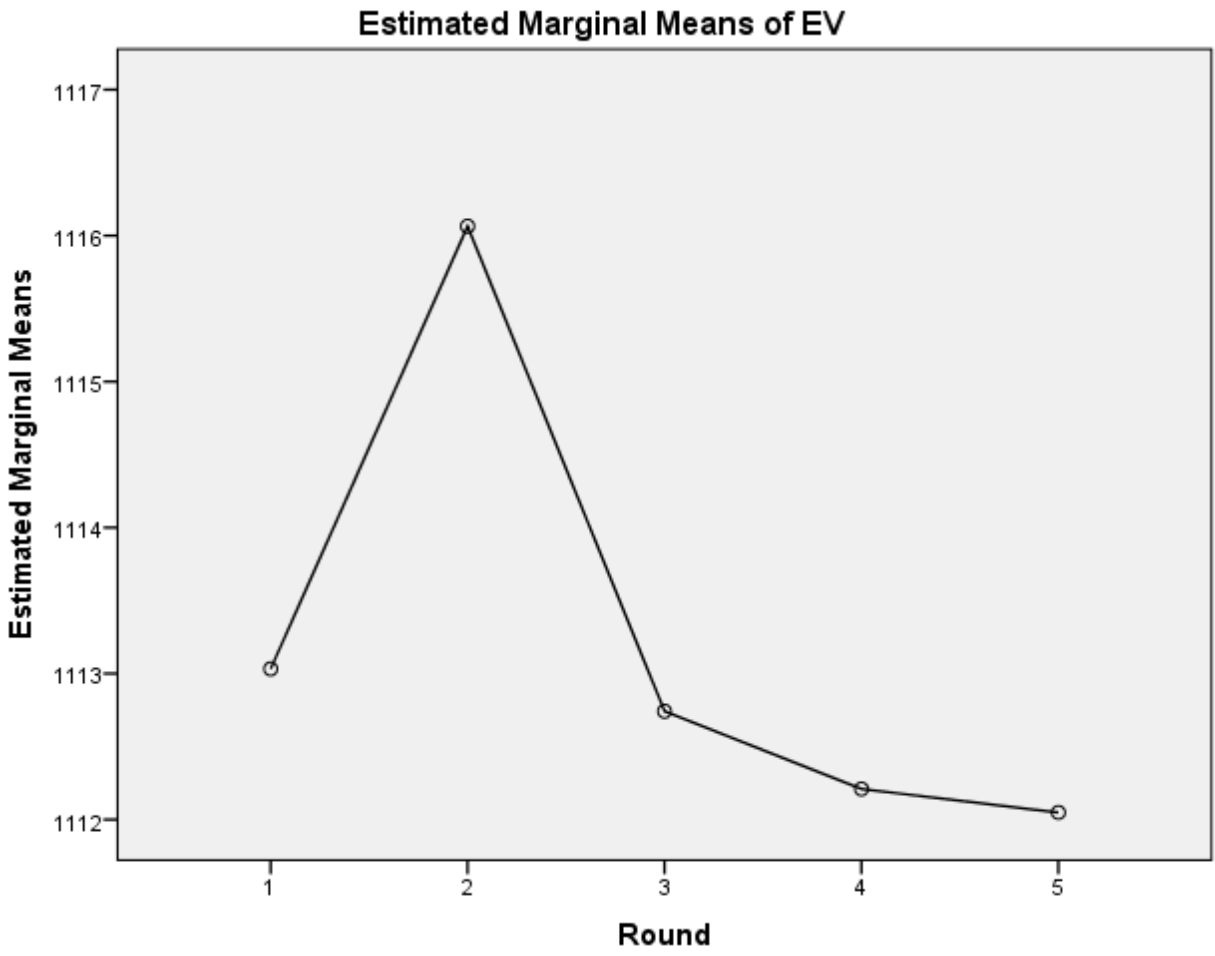
Multivariate Tests

	Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Pillai's trace	.062	.956 ^a	4.000	58.000	.439	.062
Wilks' lambda	.938	.956 ^a	4.000	58.000	.439	.062
Hotelling's trace	.066	.956 ^a	4.000	58.000	.439	.062
Roy's largest root	.066	.956 ^a	4.000	58.000	.439	.062

Each F tests the multivariate effect of Round. These tests are based on the linearly independent pairwise comparisons among the estimated marginal means.

a. Exact statistic

Profile Plots



Round 5 High Returns with Round 6 Low Returns

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	High_R5	1108.6944	72	39.37456	4.64034
	Low_R6	1055.5694	72	23.32068	2.74837

Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	High_R5 & Low_R6	72	.454	.000

Paired Samples Test

		Paired Differences			
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference
					Lower
Pair 1	High_R5 - Low_R6	53.12500	35.50320	4.18409	44.78216

Paired Samples Test

		Paired Differences	t	df	Sig. (2-tailed)
		95% Confidence Interval of the Difference			
		Upper			
Pair 1	High_R5 - Low_R6	61.46784	12.697	71	.000

Round 5 Low Returns with Round 6 High Returns

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Low_R5	1058.6452	62	17.36503	2.20536
	High_R6	1113.0323	62	43.02228	5.46384

Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	Low_R5 & High_R6	62	.453	.000

Paired Samples Test

		Paired Differences			
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference
					Lower
Pair 1	Low_R5 - High_R6	-54.38710	38.42274	4.87969	-64.14464

Paired Samples Test

		Paired Differences	t	df	Sig. (2-tailed)
		95% Confidence Interval of the Difference			
		Upper			
Pair 1	Low_R5 - High_R6	-44.62955	-11.146	61	.000

Risk Profile

High Returns. Round 1 to 5

Player s	Round 1	Round 2	Round 3	Round 4	Round 5	Profile (R2-->R5)	Risk Profile
Player 1	RISK-AVERSE	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	MATCH	RISK-SEEKING
Player 2	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	MATCH	RISK-AVERSE
Player 3	RISK-AVERSE	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	MATCH	RISK-SEEKING
Player 4	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	MATCH	RISK-SEEKING
Player 5	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	MATCH	RISK-SEEKING
Player 6	RISK-SEEKING	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	MATCH	RISK-AVERSE
Player 7	RISK-AVERSE	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	MATCH	RISK-SEEKING
Player 8	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	MATCH	RISK-AVERSE
Player 9	RISK-SEEKING	RISK-AVERSE	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	CHANGED	UNKNOWN
Player 10	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	MATCH	RISK-SEEKING
Player 11	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	MATCH	RISK-SEEKING
Player 12	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	MATCH	RISK-SEEKING
Player 13	RISK-SEEKING	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	MATCH	RISK-AVERSE
Player 14	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	MATCH	RISK-SEEKING
Player 15	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	MATCH	RISK-AVERSE
Player 16	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	MATCH	RISK-SEEKING
Player 17	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-AVERSE	CHANGED	UNKNOWN
Player 18	RISK-SEEKING	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	MATCH	RISK-AVERSE
Player 19	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	MATCH	RISK-SEEKING
Player 20	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	MATCH	RISK-AVERSE
Player 21	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	MATCH	RISK-AVERSE
Player 22	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	MATCH	RISK-SEEKING
Player 23	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	MATCH	RISK-AVERSE
Player 24	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	MATCH	RISK-SEEKING
Player 25	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	MATCH	RISK-AVERSE
Player 26	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	MATCH	RISK-SEEKING
Player 27	RISK-SEEKING	RISK-SEEKING	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	CHANGED	UNKNOWN
Player	RISK-	RISK-	RISK-	RISK-	RISK-	MATCH	RISK-

Player 59	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	MATCH	RISK-AVERSE
Player 60	RISK-SEEKING	RISK-AVERSE	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	CHANGED	UNKNOWN
Player 61	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	MATCH	RISK-SEEKING
Player 62	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	MATCH	RISK-AVERSE
Player 63	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	MATCH	RISK-AVERSE
Player 64	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	MATCH	RISK-AVERSE
Player 65	RISK-SEEKING	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	MATCH	RISK-AVERSE
Player 66	RISK-AVERSE	RISK-SEEKING	RISK-SEEKING	RISK-AVERSE	RISK-SEEKING	MATCH	RISK-SEEKING
Player 67	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	MATCH	RISK-AVERSE
Player 68	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	MATCH	RISK-AVERSE
Player 69	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	MATCH	RISK-AVERSE
Player 70	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-SEEKING	CHANGED	UNKNOWN
Player 71	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	MATCH	RISK-AVERSE
Player 72	RISK-AVERSE	RISK-AVERSE	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	CHANGED	UNKNOWN

Profile Match 83%

RISK-AVERSE	54%	56%	56%	54%	56%
RISK-SEEKING	46%	44%	44%	46%	44%

Low Returns. Round 1 to 5

Player s	Round 1	Round 2	Round 3	Round 4	Round 5	Profile (R2-->R5)	Risk Profile
Player 1	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-AVERSE	CHANGED	UNKNOWN
Player 2	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	MATCH	RISK-SEEKING
Player 3	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	MATCH	RISK-SEEKING
Player 4	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	MATCH	RISK-AVERSE
Player 5	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	MATCH	RISK-AVERSE
Player 6	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	MATCH	RISK-AVERSE
Player 7	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	MATCH	RISK-AVERSE
Player 8	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	MATCH	RISK-SEEKING
Player 9	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	MATCH	RISK-AVERSE
Player 10	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-AVERSE	CHANGED	UNKNOWN
Player 11	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	MATCH	RISK-AVERSE
Player 12	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-AVERSE	CHANGED	UNKNOWN
Player 13	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-SEEKING	CHANGED	UNKNOWN
Player 14	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	MATCH	RISK-SEEKING
Player 15	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	MATCH	RISK-SEEKING
Player 16	RISK-AVERSE	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-AVERSE	CHANGED	UNKNOWN
Player 17	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	MATCH	RISK-AVERSE
Player 18	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-AVERSE	CHANGED	UNKNOWN
Player 19	RISK-SEEKING	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	MATCH	RISK-AVERSE
Player 20	RISK-SEEKING	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	MATCH	RISK-AVERSE
Player 21	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	MATCH	RISK-AVERSE
Player 22	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	MATCH	RISK-SEEKING
Player 23	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	MATCH	RISK-AVERSE
Player 24	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	MATCH	RISK-AVERSE
Player 25	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	MATCH	RISK-SEEKING
Player 26	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	MATCH	RISK-SEEKING
Player 27	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	MATCH	RISK-AVERSE
Player 28	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	MATCH	RISK-SEEKING
Player 29	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	MATCH	RISK-SEEKING

Player 30	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	MATCH	RISK-AVERSE
Player 31	RISK-AVERSE	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	MATCH	RISK-SEEKING
Player 32	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-AVERSE	CHANGED	UNKNOWN
Player 33	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	MATCH	RISK-AVERSE
Player 34	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-SEEKING	CHANGED	UNKNOWN
Player 35	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-SEEKING	CHANGED	UNKNOWN
Player 36	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	MATCH	RISK-SEEKING
Player 37	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	MATCH	RISK-AVERSE
Player 38	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	MATCH	RISK-AVERSE
Player 39	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	MATCH	RISK-AVERSE
Player 40	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	MATCH	RISK-AVERSE
Player 41	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	MATCH	RISK-AVERSE
Player 42	RISK-AVERSE	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	MATCH	RISK-SEEKING
Player 43	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	MATCH	RISK-AVERSE
Player 44	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	MATCH	RISK-SEEKING
Player 45	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	MATCH	RISK-AVERSE
Player 46	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	MATCH	RISK-AVERSE
Player 47	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	MATCH	RISK-SEEKING
Player 48	RISK-SEEKING	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-SEEKING	CHANGED	UNKNOWN
Player 49	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	MATCH	RISK-AVERSE
Player 50	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	MATCH	RISK-SEEKING
Player 51	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	MATCH	RISK-AVERSE
Player 52	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	MATCH	RISK-AVERSE
Player 53	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-SEEKING	CHANGED	UNKNOWN
Player 54	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	MATCH	RISK-AVERSE
Player 55	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	MATCH	RISK-SEEKING
Player 56	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	MATCH	RISK-SEEKING
Player 57	RISK-AVERSE	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	MATCH	RISK-SEEKING
Player 58	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-SEEKING	CHANGED	UNKNOWN
Player 59	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	MATCH	RISK-AVERSE
Player	RISK-	RISK-	RISK-	RISK-	RISK-	MATCH	RISK-

60	SEEKING	SEEKING	SEEKING	SEEKING	SEEKING		SEEKING
Player 61	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	MATCH	RISK-AVERSE
Player 62	RISK-AVERSE	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-AVERSE	CHANGED	UNKNOWN

Profile Match 79%

RISK-AVERSE	60%	56%	56%	56%	58%
RISK-SEEKING	40%	44%	44%	44%	42%

Low Returns. Round 6 to 10

Player s	Round 1	Round 2	Round 3	Round 4	Round 5	Profile (R2-->R5)	Risk Profile
Player 1	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	MATCH	RISK-SEEKING
Player 2	RISK-AVERSE	RISK-SEEKING	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	MATCH	RISK-AVERSE
Player 3	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	MATCH	RISK-SEEKING
Player 4	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	MATCH	RISK-SEEKING
Player 5	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	MATCH	RISK-SEEKING
Player 6	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	MATCH	RISK-SEEKING
Player 7	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	MATCH	RISK-SEEKING
Player 8	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	MATCH	RISK-AVERSE
Player 9	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	MATCH	RISK-AVERSE
Player 10	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	MATCH	RISK-AVERSE
Player 11	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	MATCH	RISK-SEEKING
Player 12	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	MATCH	RISK-SEEKING
Player 13	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	MATCH	RISK-AVERSE
Player 14	RISK-AVERSE	RISK-AVERSE	RISK-SEEKING	RISK-AVERSE	RISK-SEEKING	CHANGED	UNKNOWN
Player 15	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	MATCH	RISK-AVERSE
Player 16	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	MATCH	RISK-SEEKING
Player 17	RISK-SEEKING	RISK-SEEKING	RISK-AVERSE	RISK-SEEKING	RISK-SEEKING	MATCH	RISK-SEEKING
Player 18	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	MATCH	RISK-AVERSE
Player 19	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	MATCH	RISK-SEEKING
Player 20	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	MATCH	RISK-AVERSE
Player 21	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	MATCH	RISK-SEEKING
Player 22	RISK-AVERSE	RISK-AVERSE	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	CHANGED	UNKNOWN
Player 23	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	MATCH	RISK-AVERSE
Player 24	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	MATCH	RISK-SEEKING
Player 25	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	MATCH	RISK-AVERSE
Player 26	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	MATCH	RISK-SEEKING
Player 27	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	MATCH	RISK-SEEKING
Player 28	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	MATCH	RISK-AVERSE
Player	RISK-	RISK-	RISK-	RISK-	RISK-	MATCH	RISK-

Player 60	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	MATCH	RISK-AVERSE
Player 61	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	MATCH	RISK-AVERSE
Player 62	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	MATCH	RISK-AVERSE
Player 63	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	MATCH	RISK-AVERSE
Player 64	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	MATCH	RISK-AVERSE
Player 65	RISK-AVERSE	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	CHANGED	UNKNOWN
Player 66	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	MATCH	RISK-SEEKING
Player 67	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	MATCH	RISK-AVERSE
Player 68	RISK-SEEKING	RISK-SEEKING	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	CHANGED	UNKNOWN
Player 69	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	MATCH	RISK-AVERSE
Player 70	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	MATCH	RISK-SEEKING
Player 71	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	MATCH	RISK-SEEKING
Player 72	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	MATCH	RISK-SEEKING

Profile Match 88%

RISK-AVERSE	58%	53%	51%	54%	51%
RISK-SEEKING	42%	47%	49%	46%	49%

High Returns. Round 6 to 10

Player s	Round 1	Round 2	Round 3	Round 4	Round 5	Profile (R2-->R5)	Risk Profile
Player 1	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	MATCH	RISK-AVERSE
Player 2	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	MATCH	RISK-AVERSE
Player 3	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	MATCH	RISK-SEEKING
Player 4	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	MATCH	RISK-SEEKING
Player 5	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	MATCH	RISK-AVERSE
Player 6	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	MATCH	RISK-AVERSE
Player 7	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	MATCH	RISK-AVERSE
Player 8	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	MATCH	RISK-SEEKING
Player 9	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	MATCH	RISK-AVERSE
Player 10	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	MATCH	RISK-AVERSE
Player 11	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	MATCH	RISK-AVERSE
Player 12	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	MATCH	RISK-AVERSE
Player 13	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-AVERSE	CHANGED	UNKNOWN
Player 14	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	MATCH	RISK-SEEKING
Player 15	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	MATCH	RISK-SEEKING
Player 16	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	MATCH	RISK-SEEKING
Player 17	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	MATCH	RISK-AVERSE
Player 18	RISK-AVERSE	RISK-AVERSE	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	CHANGED	UNKNOWN
Player 19	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	MATCH	RISK-SEEKING
Player 20	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	MATCH	RISK-AVERSE
Player 21	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	MATCH	RISK-AVERSE
Player 22	RISK-AVERSE	RISK-AVERSE	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	CHANGED	UNKNOWN
Player 23	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	MATCH	RISK-SEEKING
Player 24	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	MATCH	RISK-SEEKING
Player 25	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	MATCH	RISK-SEEKING
Player 26	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	MATCH	RISK-SEEKING
Player 27	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	MATCH	RISK-AVERSE
Player 28	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	MATCH	RISK-SEEKING
Player 29	RISK-SEEKING	RISK-AVERSE	RISK-AVERSE	RISK-SEEKING	RISK-AVERSE	CHANGED	UNKNOWN

Player 30	RISK-AVERSE	RISK-AVERSE	RISK-SEEKING	RISK-SEEKING	RISK-AVERSE	MATCH	RISK-AVERSE
Player 31	RISK-AVERSE	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	CHANGED	UNKNOWN
Player 32	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	MATCH	RISK-SEEKING
Player 33	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	MATCH	RISK-AVERSE
Player 34	RISK-SEEKING	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	CHANGED	UNKNOWN
Player 35	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	MATCH	RISK-AVERSE
Player 36	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	MATCH	RISK-SEEKING
Player 37	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	MATCH	RISK-AVERSE
Player 38	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	MATCH	RISK-AVERSE
Player 39	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	MATCH	RISK-AVERSE
Player 40	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	MATCH	RISK-SEEKING
Player 41	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	MATCH	RISK-AVERSE
Player 42	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	MATCH	RISK-SEEKING
Player 43	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	MATCH	RISK-SEEKING
Player 44	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	MATCH	RISK-AVERSE
Player 45	RISK-AVERSE	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	CHANGED	UNKNOWN
Player 46	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	MATCH	RISK-SEEKING
Player 47	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	MATCH	RISK-SEEKING
Player 48	RISK-AVERSE	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	CHANGED	UNKNOWN
Player 49	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	MATCH	RISK-AVERSE
Player 50	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	MATCH	RISK-SEEKING
Player 51	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	MATCH	RISK-AVERSE
Player 52	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	MATCH	RISK-AVERSE
Player 53	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	MATCH	RISK-AVERSE
Player 54	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	MATCH	RISK-SEEKING
Player 55	RISK-SEEKING	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	CHANGED	UNKNOWN
Player 56	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	MATCH	RISK-AVERSE
Player 57	RISK-AVERSE	RISK-AVERSE	RISK-SEEKING	RISK-SEEKING	RISK-SEEKING	CHANGED	UNKNOWN
Player 58	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	MATCH	RISK-AVERSE
Player 59	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	MATCH	RISK-AVERSE
Player	RISK-	RISK-	RISK-	RISK-	RISK-	MATCH	RISK-

60	AVERSE	AVERSE	AVERSE	AVERSE	AVERSE		AVERSE
Player 61	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	MATCH	RISK-AVERSE
Player 62	RISK-SEEKING	RISK-SEEKING	RISK-AVERSE	RISK-AVERSE	RISK-AVERSE	CHANGED	UNKNOWN

Profile Match 82%

RISK-AVERSE	58%	58%	53%	52%	56%
RISK-SEEKING	42%	42%	47%	48%	44%

Across all rounds

High Returns	Round 1	Round 2	Round 3	Round 4	Round 5	Average
RISK-AVERSE	54%	56%	56%	54%	56%	55%
RISK-SEEKING	46%	44%	44%	46%	44%	45%
Low Returns						
RISK-AVERSE	60%	56%	56%	56%	58%	57%
RISK-SEEKING	40%	44%	44%	44%	42%	43%

	Rounds 1 to 5		Rounds 6 to 10		Average
	High Returns	Low Returns	Low Returns	High Returns	
Profile Match	83%	79%	88%	82%	83%