INSTRUCTIONS

This is an experiment in the economics of interactive market decision making. The experiment has two parts. If you follow the instructions carefully, you might earn a considerable amount of money, which will be paid to you in cash right after the experiment is finished. The currency used in the experiment is called "ECU" which stands for "Experimental Currency Unit". All ECU will be converted to Czech crowns at the end of the experiment, at a rate of 5 ECU = 1 CZK.

PART 1

Your DECISION SHEET (see a separate piece of paper) prompts you for ten decisions. Please, look at your DECISION SHEET now. Each Decision is a paired choice between "Option A" and "Option B." You will record all ten choices in the final column by writing "A" or "B". Before you start making your choices, it is important that you understand how your choices will affect your earnings for this part of the experiment.

Here is a ten-sided die that will be used to determine payoffs; the faces are numbered from 1 to 10. After you have made all of your choices, we will throw this die twice, the first time to select one of the ten Decisions to be used, and the second time to determine your payoff for the option you chose for a given Decision. Even though you will make ten Decisions, only one of these will end up affecting your earnings, but you will not know in advance which Decision will be used. Obviously, each Decision has an equal chance of being used in the end.

Now, please look at the Decision 1 at the top of your DECISION SHEET. If the first toss of the die is 1, the Decision 1 will be used. If the second toss of the ten sided die is 1, which happens with probability 1/10, Option A pays 200 ECU, if the toss is 2-10, which happens with probability 9/10, Option A pays 150 ECU. Option B yields 375 ECU if the toss of the die is 1, and it pays 10 ECU if the toss is 2-10. The other

Decisions are similar, except that as you move down the table, the chances of the higher payoff for each option increase. In fact, for Decision 10 in the bottom row, the second toss of the die will not be needed since each option pays the highest payoff for sure, so your choice here is between 200 ECU or 375 ECU.

To summarize, you will make ten choices: for each row you will have to choose between Option A and Option B. When you are finished, we will come to your desk and throw the ten-sided die to select which of the ten Decisions will be used. Then we will throw the die again to determine your money earnings for the Option you chose for that Decision. Earnings for this choice will be added to your other earnings, and you will be paid all earnings in cash when we finish.

Are there any questions?

Now you may begin making your choices for Decisions 1-10. Please do not talk with anyone while we are doing this; raise your hand if you have a question.

DECISION SHEET Name: _____

	Option A	Option B	Expected Payoff Difference	Your Choice (write A or B)
Decision 1	1/10 of 200 ECU, 9/10 of 150 ECU	1/10 of 375 ECU, 9/10 of 10 ECU	108.5 ECU	
Decision 2	2/10 of 200 ECU, 8/10 of 150 ECU	2/10 of 375 ECU, 8/10 of 10 ECU	77 ECU	
Decision 3	3/10 of 200 ECU, 7/10 of 150 ECU	3/10 of 375 ECU, 7/10 of 10 ECU	45.5 ECU	
Decision 4	4/10 of 200 ECU, 6/10 of 150 ECU	4/10 of 375 ECU, 6/10 of 10 ECU	14 ECU	
Decision 5	5/10 of 200 ECU, 5/10 of 150 ECU	5/10 of 375 ECU, 5/10 of 10 ECU	-17.5 ECU	
Decision 6	6/10 of 200 ECU, 4/10 of 150 ECU	6/10 of 375 ECU, 4/10 of 10 ECU	-49 ECU	
Decision 7	7/10 of 200 ECU, 3/10 of 150 ECU	7/10 of 375 ECU, 3/10 of 10 ECU	-80.5 ECU	
Decision 8	8/10 of 200 ECU, 2/10 of 150 ECU	8/10 of 375 ECU, 2/10 of 10 ECU	-112 ECU	
Decision 9	9/10 of 200 ECU, 1/10 of 150 ECU	9/10 of 375 ECU, 1/10 of 10 ECU	-143.5 ECU	
Decision 10	10/10 of 200 ECU, 0/10 of 150 ECU	10/10 of 375 ECU, 0/10 of 10 ECU	-175 ECU	

PART 2

This part of the experiment will consist of 16 rounds. At the beginning of each round you will be given an endowment of 300 ECU, which you are free to spend or to keep. That part of the endowment which you do not spend will decline in value and you will be able to keep only three quarters of it. For example, if you spend 200 ECU and keep 100 ECU, at the end of the round, 100 ECU will be worth only $\frac{3}{4} \times 100 = 75$ ECU. If you have spent your entire endowment, you will be given the opportunity to take a loan of 600 ECU which, however, must be paid back at the end of each round. You are only allowed one loan per round. Money earned in previous rounds can not be used in the following rounds.

Only four rounds will be relevant for the payoff. These paying rounds will be chosen randomly. You, however, will not know which four rounds are paying rounds until after the experiment is finished.

There will be six different events, labelled A, B, C, D, E and F. You can use your endowment and loan to bet on one or more of these events by buying corresponding event tickets. Only money bet on the winning event brings a return. Information about how the winning event is chosen and the signal you will receive about it will be provided below. Your payoff for each round will be determined by the amount of tickets bought by each subject in the following manner:

Your payoff = money on hand (part of endowment or loan not spent)

+ profit

− loan payback (if you take the loan)

where profit $= \frac{\text{Total ECU from all ticket sales}}{\text{Total number of winning tickets sold}} \times$Number of winning tickets that you hold

$\frac{\text{Total ECU from all ticket sales}}{\text{Total number of winning tickets sold}}$ is referred to as "**Odds**".

If "Odds A" is for example 5:1 it means, that every ECU invested into the event A pays back 5 ECU if A is the winning event. In other words, if you have 7 tickets A, Your profit is Odds A $\times$ Number of winning tickets that you hold; i.e. $5 \times 7 = 35$.

Consider an example with three different events labelled A, B, and C. Suppose that the tickets are sold at a price of 1 ECU each. Suppose further that you purchase no A-tickets, three B-tickets and one C-ticket. Suppose other people buy three A-tickets, six B-tickets (making a total of nine B-tickets sold, three to you and six to others), and five C-tickets. Thus, considering all sales of all types, ticket sales total to 18 tickets or 18 ECU.

EVENT	1 tickets you purchased	2 total number of event tickets sold	3 total ECU from all ticket sales	4 payoff per event ticket (odds)	5 your profit if the event occurs
A-tickets	0	3	18	18/3=6	6∗0=0
B-tickets	3	9	18	18/9=2	2∗3=6
C-tickets	1	6	18	18/6=3	3∗1=3
Total		18			

The table illustrates the payoff calculations. The sale of the 18 tickets produced revenue from ticket sales of 18 ECU. All of the money from ticket sales is contributed to the payoff. The total payoff is distributed to the holders of winning tickets. Since there were 3 A-tickets sold each of the three winning tickets would be paid 6 ECU if A occurs; i.e. "Odds A" is 6:1. You hold none of them so your profit would be zero. If event B occurs the 18 ECU is distributed to the 9 winning tickets. Each winning ticket gets 2 ECU and since you purchased 3 tickets your profit would be 6 ECU if event B occurs.

If the C event occurs you hold one of the six winning tickets so you would receive 3 ECU.

A hypothetical accounting example: assume that you are given an endowment of 50 ECU plus an opportunity to take a loan of 30 ECU. In this example you buy 25 A-tickets, 20 B-tickets, then you take a loan and buy 15 C-tickets. Further, assume that overall 50 A-tickets, 75 B-tickets and 25 C-tickets are sold. Now, complete the table on the next page:

EVENT	1 tickets you purchased	2 total number of event tickets sold	3 total ECU from all ticket sales	4 payoff per event ticket (odds)	5 your profit if the event occurs
A-tickets	25	50	150	150/50=3	25∗3=75
B-tickets	20	75	150		
C-tickets	15	25	150		
Total		150			

Further, calculate, what is your payoff after this round **if the winning event is B**:

Your payoff = money on hand (part of endowment or loan not spent) + profit − loan =

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INFORMATION ABOUT EVENTS

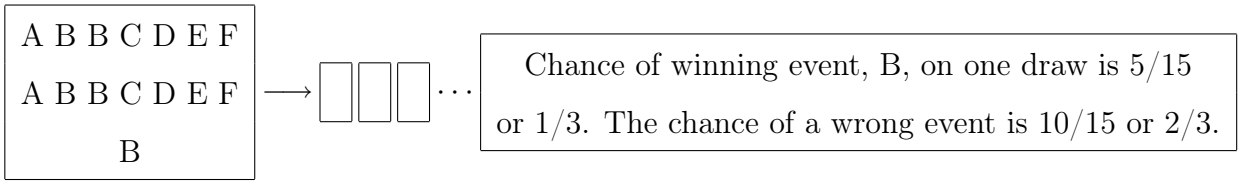
Selection of winning event: The winning event is chosen at random. Which of the events wins will be announced after the end of each round. Each of the six events is equally likely. Each round it is as if one of each letter is placed in an urn and one of them drawn at random.

A B C D E F $\longrightarrow$ B

In this example the random draw is B. The chance that it is any particular letter is 1/6. It is important to note that the draw of an event is independent across rounds. The letter is returned to the urn after the draw, so the history of draws holds no implications of what future draws might be. It is just as likely that the draw every round is exactly the same letter as is any other sequence of draws.

Private signal: Each individual will be privately given clues about the winning event. The clues are determined independently for each individual by the following procedure. Once the winning event is determined a new urn is created with five letters of the winning event and two letters from each of the other events. Three random draws with replacement are conducted and the results are given to a participant.

The urn contains five of the winning event letters (for example B) and ten letters of wrong events (A, C, D, E, F). The chance of the winning event drawn on any one draw is 1/3 for the winning event and 2/3 for a wrong event (2/15 for each of the five wrong events).



The three draws together contain more information.

During the experiment you will be provided with probabilities for all events A, B, ..., F on the screen of your computer. These numbers are the best representation of the information contained in your personal clues and in general these will be different from the clues and the information of other people.

For example your signal can result in the following probability of winning for each event: A - 49.0%, B - 19.6%, C - 7.8%, D - 7.8%, E - 7.8%, F - 7.8%, while the probabilities of another participant can be for example A - 23.8%, B - 9.5%, C - 9.5%, D - 23.8%, E - 23.8%, F - 9.5%, and so on.

You should note, however, that the information distributed within all the participants is more than that of any one individual. Since each individual has three independent draws, there are three times the number of individuals draws in total. This is a bigger sample and thus more information than any isolated individual has. However, this information is not sufficient to determine the winner with absolute certainty.

Structure of each round:

• There will be 1 trial round (which does not affect your earnings and is only intended to make you familiar with the software) and 16 rounds

• Time in seconds will be displayed on your screen. The duration of each round is 120-300 seconds - the time of duration is chosen randomly and independently for each round and is unknown

• After the true event is drawn, private information is drawn for each individual and is displayed on his/her screen

• Price of each event ticket is 1 ECU, once you buy it you can neither return it nor resell it

• Round Endowment = 300 ECU (that part which is not spent declines in value and you will be able to keep only three quarters of it)

• Round Loan = 600 ECU (must be returned at the end of each round)

• At the end of each round the true event and the payoff for a given round will be announced

Are there any questions?

Now, please answer the questions below:

1. How many loans can you get within one round?

2. When does the loan have to be repaid?

3. If you do not buy any tickets in one round, what will be your payoff for this round? Please, answer this question in both ECU and CZK.

4. Now, imagine that you spend your endowment, and loan if necessary, for tickets purchases. Can you be sure that your payoff in this round will be at least as large as the payoff specified in the previous question? Please, provide a short explanation for your answer (2-3 sentences).

5. Imagine, that the odds for events A and B are OddsA = 2:1 and OddsB = 10:1. According to you, which of the following is correct?

(a) Event A is more likely to be the winning event than event B.

(b) Event B is more likely to be the winning event than event A.

Please, provide a short explanation for your answer (2-3 sentences).

6. Imagine that your payoff in the first round is 125 ECU. Are you allowed to spend this money for ticket purchases in the second round?