

Appendix: Subjects' Instructions

A1. Negative Frame

Subjects' Instructions.

WELCOME.

This experiment is a study of group and individual investment behavior. The instructions are simple. If you follow them carefully and make good investment decisions you may earn a considerable amount of money.

The money you earn will be paid to you, in cash, at the end of the experiment. A research foundation has provided the funds for this study.

MAKING CASH EARNINGS FROM YOUR INVESTMENT RETURN

In this experiment you will make a series of 10 investment decisions. For each investment decision you will be placed in a group with five other subjects. Your investment returns will depend on the investment decision that you and the other four members of your group make.

Each investment decision you make will result in an *investment return*. Your investment return from each decision will be turned into *cash earnings*. In particular, your investment return will equal your earnings in the experiment. For example, if your investment return from one investment decision is 95, your earnings will be \$.95, and if your investment return is 65, then your earnings will be \$.65.

In the following pages, we will describe how your investment returns are determined.

THE INVESTMENT OPPORTUNITIES

You have been assigned to a group of 5 people. Each of you will be given an investment account with 60 tokens in it.

You will be choosing how to divide your tokens between two investment opportunities:

1. The Individual Exchange

Every token you invest in the Individual Exchange will yield you a return of one. However, each token you invest in the individual exchange will reduce the earnings of the other players by one half cent each. This is best illustrated with some examples.

Example. Suppose you invested 60 tokens in the Individual Exchange. Then you would get a return of 60 from this exchange. However, each of the four other members of your group would have their earnings reduced by 30 each.

Example. Suppose you invested 30 tokens in the Individual Exchange. Then you would get a return of 30 from this exchange. However, each of the four other members of your group would have their earnings reduced by 15 each.

Example. Suppose you invested 0 tokens in the Individual Exchange. Then you would get no return from this exchange. Likewise, the other four members of your group would not have their earnings reduced.

It will also be true that when the other members of your group invest in the Individual Exchange, then your earnings will be reduced by $1/2$ times their investment in the Individual exchange. This is illustrated below:

Example. Suppose that the other four members of your group invested a total of 100 in the Individual Exchange. Then this would reduce your earnings by 50.

Example. Suppose that the other four members of your group invested a total of 90 tokens in the Individual Exchange. Then this would reduce your earnings by 45.

Example. Suppose that the other four members of your group invested no tokens in the Individual Exchange. Then this would not reduce your earnings at all.

2. The Group Exchange

Every token you invest in the Group Exchange yields a return of $1/2$ for you. The other members of your group are not affected by your investment in the Group Exchange.

Example. Suppose that you decided to invest no tokens in the Group Exchange. Then your return from the Group Exchange would be 0.

Example. Suppose that you invested 30 tokens in the Group Exchange. Your return from the Group Exchange would be 15.

Example. Suppose that you invested 50 tokens in the Group Exchange. Your return from the Group Exchange would be 25.

Automatic Earnings

In addition to the earnings you accumulate from the Individual Exchange and the Group Exchange, you will also get automatic earnings each round. These automatic earnings will not depend on any decisions you make, and will be the same each round. Your automatic earnings will be 120 each round. Hence, your total earnings each round will be your earnings from the Individual Exchange plus your earnings from the Group Exchange plus 120 in automatic earnings.

THE INVESTMENT DECISION

Your task is to decide how many of your tokens to invest in the Individual Exchange and how many to invest in the Group Exchange. You are free to put some tokens into the Individual Exchange and some into the Group Exchange. Alternatively, you can put all of them into the Group Exchange or all of them into the Individual Exchange.

YOUR INVESTMENT ACCOUNT

You and every other member of your group will have 60 tokens in your investment account each decision round. The total number of tokens in each group in every decision round is 300.

STAGES OF INVESTMENT

There will be 10 decision rounds in which you will be asked to make investment decisions. At the end of each round your earnings will be recorded by the experimenter. After the last round you will be paid the total of your earnings from all 10 rounds.

At the beginning of each round you will be given a fresh investment account with 60 tokens. You will also be given an INVESTMENT DECISION FORM. You are to record your decision using this form. Be sure that your investment in the Individual Exchange plus your investment in the Group Exchange equals 60, i.e. the number of tokens in your account. You must make your investment decisions *without* knowing what the others in your group are deciding.

Do not discuss your decision with any other participant!

The experimenter will collect the form when you have filled it out. The experimenter will then calculate your return from the Individual and Group Exchanges, and calculate your cash earnings. This information will be conveyed to you on an EARNINGS REPORT.

IMPORTANT NOTICE: The Earnings Report tells you the total investment in the Group Exchange, your investment return, and your cash earnings. Your Earnings Report does not tell you the investment decisions or earnings of the other members of your group. **YOUR INVESTMENT DECISIONS AND EARNINGS ARE CONFIDENTIAL.**

YOUR GROUP

The composition of your group will be changing *every* decision round. After each decision round you will be **reassigned** to a **new group** of 5 participants. The 5 group members will never have been members of the same group in the past.

At no point in the experiment will the identities of the other members of the group be made known to you, nor will your identity be made known to them.

YOUR CASH EARNINGS

Remember, your cash earnings from each investment decision will equal your investment return. For instance, if you earn 100 from your investment decision, your earnings will be \$1.00. If you earn 50 from your investment decision, your earnings will be \$.50.

GOOD LUCK!

You may begin by completing the first Investment Decision Form.

A2. Positive Frame

The positive frame instructions are identical to the negative frame, except for pages 3 and 4, which are provided below.

THE INVESTMENT OPPORTUNITIES

You have been assigned to a group of 5 people. Each of you will be given an investment account with a 60 tokens in it.

You will be choosing how to divide your tokens between two investment opportunities:

1. The Individual Exchange

Every token you invest in the Individual Exchange will yield you a return of one. The other members of your group are not affected by your investment in the Individual Exchange.

Example. Suppose you invested 60 tokens in the Individual Exchange. Then you would get a return of 60 from this exchange.

Example. Suppose you invested 30 tokens in the Individual Exchange. Then you would get a return of 30 from this exchange.

Example. Suppose you invested 0 tokens in the Individual Exchange. Then you would get no return from this exchange.

2. The Group Exchange

Your return from the Group Exchange will depend on the *total number of tokens* that you and the other four members of your group invest in the Group Exchange. The more the *group* invests in the Group Exchange, the greater the return to *each member of the group*.

Every token invested in the Group Exchange yields a return of $1/2$ for *each* member of the group, *not just the person who invested it*. The process is best explained by a number of examples:

Example. Suppose that you decided to invest no tokens in the Group Exchange, but that the four other members invested a total of 100 tokens. Then your return from the Group Exchange would be 50. Everyone else in your group would also get a return of 50.

Example. Suppose that you invested 30 tokens in the Group Exchange and that the other four members of your group invested a total of 90 tokens. This makes a total of 120 tokens. Your return from the Group Exchange would be 60. The other four members of the group would also get a return of 60.

Example. Suppose that you invested 50 tokens in the Group Exchange, but that the other four members of the group invest nothing. Then you, and everyone else in the group, would get a return from the Group Exchange of 25.

As you can see, every token invested in the Group Exchange will yield a return of one half for *every* member of the group, not just the person who invested it. *It does not matter who invests tokens in the Group Exchange. Everyone will get a return from every token invested—whether they invest in the Group Exchange or not.*