

Experiment Information

Mike Shin

January 7, 2018

1 Brief Description

The experiment is a game where subjects have to make two decisions: 1) forecast what the stock price will be and 2) choose whether to participate in the stock market or not. Their forecasts and participation decision also affect the price.

2 Page Description

Subjects will see 3 pages which will be repeated for N rounds.

2.1 Page 1: Forecast Price

The first page will show a chart with the history of past prices along with a history of player i 's forecasts. There will also be a table with the same information and a box that asks player i to guess what they think the price will be two periods ahead.

2.2 Page 2: Participation

The second page will show a chart with the history of the participation rate. There will also be a table with the same information along with the history of player i 's participation decisions. There will be a radio dial that asks if they want to participate in the stock market this period or not.

2.3 Page 3: Results

The third page will show the price for that period, the participation rate, and subject i 's payoff which is determined by the forecasting error (which is price in period t minus their

forecast of prices in period t which was made the period before)

3 In-depth Instructions

Here are the instructions that the participants will see if you need a better understanding of the timing.

The stock price has to be predicted **two** time periods ahead. At the beginning of the experiment, you have to predict the stock price in the first **two** periods along with a participation decision for the first period, that is you have to give predictions for time periods 1 and 2. After all participants have given their predictions for the first two periods and participation decision for period 1, the stock market price in the first period will be revealed and based upon your forecasting error, your earnings for period 1 will be given. After that you have to give your prediction for the stock index in the third period. After all participants have given their predictions for period 3 and their participation decisions for period 2, the stock market index in the second period will be revealed and, based upon your forecasting error your earnings for period 2 will be given. This process continues for N periods.

To forecast the stock price p_t (which is done at time $t - 1$, the available information thus consists of:

- past prices up to period $t - 2$
- past predictions up to period $t - 1$
- past earnings up to period $t - 2$

4 Problems

There are two major problems. There is also a minor problem of the earnings boxes not showing information. I think I commented them out but there should also be two boxes in the ForecastPrice page that shows total earnings and the earnings last period. If you can fix that as well that would be great.

4.1 Problem 1: Individual Data on HighChart

I can't make it so that HighChart shows the history of past prices along with subject i 's past forecasts. Each player should see a chart with the history of prices along with their own history of forecasts. Hence the chart should be different for all participants. The HighChart for the Participation page I think is fine. It doesn't need to display individual histories.

4.2 Problem 2: Timing of Forecasts

So far the timing of the experiment is not how I want it to be. I first need an initial page (probably titled FirstForecasts) where subjects are not shown a history and make forecasts for periods 1 and 2. Then there should be a next page without a history that asks if they want to participate in period 1. Once that is done, the results should show the price for period 1, participation rate for period 1, and earnings based on forecasting error (price in period 1 - forecast of price for period 1).

In period 2, the ForecastPrice page should show a chart with price for period 1 and the forecast for period 1 along with a table for the same information. Then the box should ask for a forecast for prices in period 3. The next page Participation should show a chart with the participation rate in period 1 along with a table that has the participation rate and the subject's participation decision. A radio dial should ask whether they want to participate in period 2. Finally the Results page should show the price for period 2, the participation rate for period 2, and earnings based on forecasting error (price in period 2 - forecast of price for period 2). Then repeat all this for N periods.