Electronic Supplementary Material: Instructions of the experiment[1]

Dear Participant!

We welcome you to this experimental session and kindly ask you to refrain from talking to each other for the duration of the experiment. If you have any questions regarding the procedure or the instructions of the experiments, contact one of the supervisors and your question will be answered privately.

Course of events during the session
This session consists of two experiments in which you can earn money independently. Before each experiment separate instructions are handed out.
Experiment 1 - Market experiment

- Instructions market experiment
- Explanation trading mechanism
- Trial periods (not relevant for your earnings)
- Experiment

Private payment

[1] Screenshots are taken from R1(\). History screens differ slightly as column 6 (labelled "Dividend per asset" in R1(\)) was not shown in regimes with random FVs (R4(tri) and R5($\mathcal{N}$)) and its labeling differed depending whether dividends and/or holding costs per asset was in effect.

Experiment 1 - Market experiment

General Information
This experiment is concerned with replicating an asset market where traders can trade the assets of a fictitious company for 15 consecutive periods.

Market Description
The market consists of ten subjects. Each trader gets an initial endowment of 40 assets and a working capital of 3600 Taler. At the beginning of the experiment the asset has a value of 45. Evaluating the asset at its initial value yields that each subjects' wealth adds up to 5400 Taler. In every period you can sell and/or buy assets, and your asset and Taler inventories are transferred to the next trading period, respectively. Each trading period automatically terminates after 2.5 minutes.

Text specific for regime R1(\)

Asset value
At the end of each trading period, every asset pays a dividend (profit) which is added to your Taler holdings. The dividend (for one asset) amounts either 0, +3 or +6 Taler, given equal probability. Thus, an asset's average dividend is 3 Taler for every period. So, the asset's value decreases by -3 Taler from period to period and assets are worthless after dividends are paid out at the end of period 15.

$$Value_k = Value_{k-1} - 3$$

You do not get any information about the dividend realization of the current period, i.e. you do not know the dividend payment for the current or the coming periods. You only know that the dividend either takes the values of 0, +3 or +6 (per asset) in each period. At the end of a period you will be informed about the dividend realization of the expired period. There is no interest for Taler holdings.
Suppose for example that there are 4 periods remaining in a market. In each period the expected dividend payment is 3 Taler for each asset. If you hold one asset for 4 periods, the total dividend paid on the unit over 4 periods is in expectation 4 * 3 = 12. Thus, the asset's value is 12.

Calculate Your Earnings
After 15 periods assets are bought back at their terminal value of 0 (value at the end of period 15). Thus, at the end of the experiments your total earnings equal your Taler holdings.

Your total earnings in this experiment are converted into Euro at a rate of

400 Taler = 1 Euro

Example
At the end of the experiment you own 50 assets and 6300 Taler. The terminal

value of the assets equals 0. Your earnings in Euro are calculated as follows:
Earnings in Taler: (50*0) + 6300 = 6300
Earnings in Euro: 6300/400 = 15.75 (rounded to integers: 16)

End text specific for regime R1(\)

Text specific for regime R2(—)

Asset value
In period zero (at the beginning of the experiment) the asset's value is 45. At the end of each trading period, every asset pays a dividend (profit) of 3 per asset, generates holding costs (expenses) of -3 Taler or generates neither a dividend nor holding costs with equal probability. Thus, on average an asset generates profits/expenses of 0 in every period. The asset's value changes by 0 Taler from period to period and assets have a terminal value of 45 at the end of period 15.

$$Value_k = Value_{k-1} + / - 0$$

You do not get any information about the dividend/holding cost realization of the current period, i.e. you do not know the dividend payment/holding costs for the current or the coming periods. You only know that the dividend/holding costs either take the values of -3, 0 or +3 (per asset) in each period. At the end of a period you will be informed about the dividend/holding cost realization of the expired period. There is no interest for Taler holdings.
Suppose for example that there are 4 periods remaining in a market. In each period the expected dividend payment/holding costs are 0 Taler for each asset. If you hold one asset for 4 periods, the total dividend payments/holding costs on the unit over 4 periods are in expectation 4 * 0 = 0. Thus, the asset's value is 45.

Calculate Your Earnings
After 15 periods your assets are bought back at their terminal value of 45 (value at the end of period 15). At the end of the experiments your total earnings equal the asset's terminal value multiplied by your asset holdings plus your Taler holdings.

Your total earnings in this experiment are converted into Euro at a rate of

400 Taler = 1 Euro

Example
At the end of the experiment you own 50 assets and 4050 Taler. The terminal value of the assets equals 45. Your earnings in Euro are calculated as follows:
Earnings in Taler: (50*45) + 4050 = 6300
Earnings in Euro: 6300/400 = 15.75 (rounded to integers: 16)

End text specific for regime R2(—)

Text specific for regime R3(/)

Asset value
In period zero (at the beginning of the experiment) the asset's value is 45. At the end of each trading period every asset generates holding costs (expenses) which are deducted from your Taler holding. The holding costs (for one asset) are either 0, -3 or -6 Taler, given equal probability. Thus, on average the asset generates holding costs of -3 in every period. So, the asset's value increases by 3 Taler from period to period and assets have a terminal value of 90 at the end of period 15.

$$Value_k = Value_{k-1} + 3$$

You do not get any information about the holding cost realization of the current period, i.e. you do not know the holding costs for the current or the coming periods. The only thing you know is that the holding costs are either 0, -3 or -6 (per asset) in each period. At the end of a period you will be informed about the holding cost realization of the expired period. There is no interest for Taler holdings.
Suppose for example that there are 4 periods remaining in a market. In each period the expected holding costs are 3 Taler for each asset. If you hold one asset for 4 periods, the total dividend paid on the unit over 4 periods is in expectation 4 * 3 = 12. Thus, the asset's value is 78.

Calculate Your Earnings
After 15 periods assets are bought back at their terminal value of 90 (value at the end of period 15). At the end of the experiment your total earnings equal the asset's terminal value multiplied by your asset holdings plus your Taler holdings.

Your total earnings in this experiment are converted into Euro at a rate of

400 Taler = 1 Euro

Example
At the end of the experiment you own 50 assets and 1800 Taler. The terminal value of the assets equals 90. Your earnings in Euro are calculated as follows:
Earnings in Taler: (50*90) + 1800 = 6300
Earnings in Euro: 6300/400 = 15.75 (rounded to integers: 16)

End text specific for regime R3(/)

Text specific for regime R4(tri)

Asset value
The asset does not pay dividends and there is no interest for Taler holdings. In period zero (at the beginning of the experiment) the asset's value is 45 but it changes in each period. The changes in value are determined by a random device, which decides with equal probability (one third) whether the value decreases by 3, remains unchanged or increases by 3. On average, the asset's value remains unchanged but changes from period to period of +3 or -3 can be expected in two thirds of the periods. At the end of the experiment the

value will be between 0 (if the asset's value decreases 15 times) and 90 (if the asset's value increases 15 times). At the end of each trading period you are informed about the asset's value of the elapsed period.

$$Value_k = Value_{k-1} + (-3, 0, +3)$$

Suppose for example that the value in period 1 is 42, which you will know at the end of period 1. In period 2 the value (starting from 42) might decrease by 3, remain constant or increase by 3 with equal probability. It thus might take the values of 39, 42, or 45. The value for period two will be announced at the end of period 2.

Calculate Your Earnings
After 15 periods assets are bought back at their terminal value (value at the end of period 15). At the end of the experiments your total earnings equal the asset's terminal value multiplied by your asset holdings plus your Taler holdings.

Your total earnings in this experiment are converted into Euro at a rate of

$$400 \text{ Taler} = 1 \text{ Euro}$$

Example
At the end of the experiment you own 50 assets and 3200 Taler. The terminal value of the assets equals 60. Your earnings in Euro are calculated as follows: Earnings in Taler: (50*60) + 3200 = 6200 Earnings in Euro: 6200/400 = 15.50 (rounded to integers: 16)

At the end of the experiment you own 50 assets and 3200 Taler. The terminal value of the assets equals 39. Your earnings in Euro are calculated as follows: Earnings in Taler: (50*39) + 3200 = 5150
Earnings in Euro: 5150/400 = 12.88 (rounded to integers: 13)

End text specific for regime R4(tri)

Text specific for regime R5($\mathcal{N}$)

Asset value
The asset does not pay dividends and there is no interest for Taler holdings. In period zero (at the beginning of the experiment) the asset's value is 45 but it changes in every period. The changes in the value are determined by a random device, which draws a number from a normal distribution with mean 0 and standard deviation 2.5. On average, the asset's value remains unchanged but changes from period to period by more than +/- 2.5 can be expected in one third of the periods. At the end of each trading period you are informed about the value of the elapsed period.

$$Value_k = Value_{k-1} + \text{randomly drawn number}$$

Suppose for example that the value in period 1 is 46.30, which you will know at the end of period 1. In period 2 the value (starting from 46.30) might increase

or decrease with equal probability (random process with standard deviation of 2.5). The value for period two will be announced at the end of period 2.

Calculate Your Earnings
After 15 periods assets are bought back at their terminal value (value at the end of period 15). At the end of the experiments your total earnings equal the asset's terminal value multiplied by your asset holdings plus your Taler holdings.

Your total earnings in this experiment are converted into Euro at a rate of

400 Taler = 1 Euro

Example
At the end of the experiment you own 50 assets and 3200 Taler. The terminal value of the assets equals 62. Your earnings in Euro are calculated as follows:
Earnings in Taler: (50*62) + 3200 = 6300
Earnings in Euro: 6300/400 = 15.75 (rounded to integers: 16)

At the end of the experiment you own 50 assets and 3200 Taler. The terminal value of the assets equals 41. Your earnings in Euro are calculated as follows:
Earnings in Taler: (50*41) + 3200 = 5250 Earnings in Euro: 5250/400 = 13.13 (rounded to integers: 13)

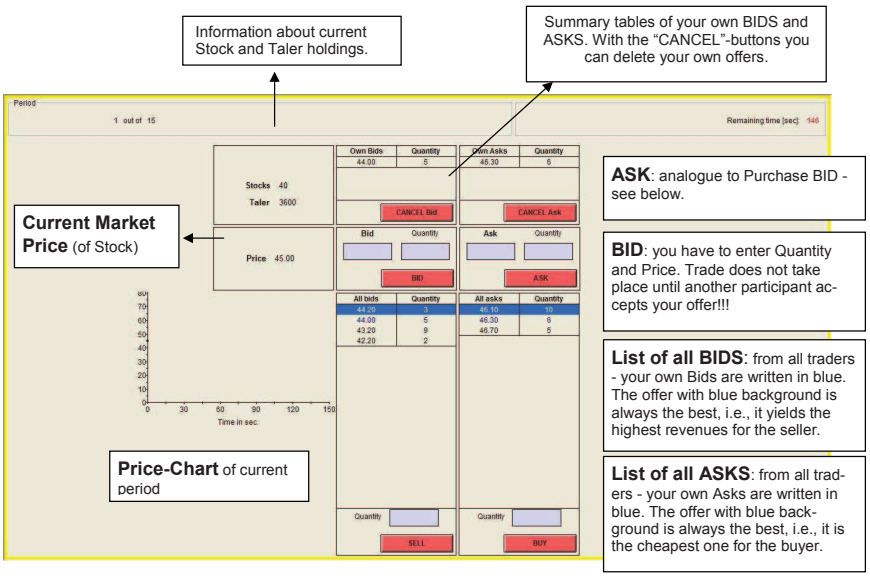
End text specific for regime R5($\mathcal{N}$)

Asset trading
Trade is accomplished in a double auction, i.e., each trader can appear as buyer and seller at the same time. You can submit limit orders to buy/sell the asset ranging from 0 to a maximum of 999 Taler (with at most two decimal places). With every limit order you make, you have to enter the number of assets you intend to trade as well. Note that your Taler and asset inventory cannot drop below zero.
Prices are solely determined by demand and supply of the traders within the market. If you buy assets, your Taler holding is diminished by the respective expenditures (price * volume). Inversely, if you sell assets, your Taler holding will be increased by the respective revenues (price * volume).

Important information

- No interest is paid for Taler holdings.
- Each trading period lasts for 150 seconds.
- The main experiment ends after 15 periods.
- Use the full stop (.) as decimal place.

Trading screen: By means of the following figure, the procedure of trading (buying and selling) will be illustrated.



History screen: appears after each trading period (for 15 seconds), providing you with information of past period.