EXPERIMENTAL ECONOMICS

LAB REPORT #6 by Group #_

*Due Tuesday, April 1 in print at the beginning of our class. Late submissions will **NOT** be accepted.*
*Please answer as **brief** as possible and as long as necessary. Print on **both sides**.*

In this experiment, we simulated an **asset market** with **26 traders** endowed each with **$225.00** in cash and **6** shares of an asset that could be bought or sold. The market consisted of **12 trading periods**.

At the beginning of a trading period, the market maker was a computer program that determined a market-clearing price. Ask prices that were too high (above the clearing price) and bid prices that were too low (below the clearing price) were rejected. All transactions were at the **same** "market-clearing" price.

Each share held at **the end of a period** (including the last one) paid a dividend of **$1.20** or **$1.60** each with a probability of **0.5**. At the end of the final period (after dividends were paid) each share was redeemed for **$14.00**.

THEORETICAL QUESTIONS

1. How much would a rational trader pay per share in period 1 assuming all other traders are also rational?
2. Was the fundamental value (FV) of a traded asset increasing (scenario 1), decreasing (scenario 2) or constant (scenario 3) over the 12 periods?
3. Without changing the shares' dividends, how could the experimenter generate the other two scenarios?

EMPIRICAL QUESTIONS

Both the corresponding data file and the experimental instructions for participants are uploaded on Fenix.

4. Fill in the following table and plot the time series of the market price and the FV over all 12 periods in a graph with the periods on the X-axis and the price/value in $ on the Y-axis:

Period	Market price	Fundamental value
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		

5. Add a column to the above table and indicate for each period (A, B, or C) to which of the three categories below it belongs?
   A. Positive Bubble: Market price > 1.05 × FV

   B. No bubble: $1.05 \times \text{FV} \geq$ Market price $\geq 0.95 \times$ FV

   C. Negative bubble: Market price < 0.95 × FV

6. Fill in the following table. Defining the level of mispricing as $|Market\ Price - FV|$ for a given period, why would the Variance of shares held by trader in that period be at least as good of a predictor for mispricing in that period as the total number of shares in the market in that period? Based on correlational analysis, is the Variance of shares held also a better predictor for mispricing in our dataset than the total quantity of shares traded in that period?

Period	**Mispricing** $\lvert Market\ Price - FV \rvert$	**Quantity of shares in the market**	**Variance of shares held by traders**	**Quantity of shares traded by all traders**
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				

Choose **one additional** exercise of the exercises below:

7. Which of the additional tasks (ink bomb task 1, ink bomb task 2, cognitive task) was the best predictor for total earnings in the experiment?
8. Comparing the number of the boxes checked in the two *ink bomb risk preference elicitation tasks* at the beginning and the end of the experiment, on average how would you judge the effect of the experiment on your revealed risk preferences?
9. Following Cohen's (1988) interpretation of a correlation coefficient $r < 0.1$ as no effect, $0.3 > r \geq 0.1$ as small effect, , $0.5 > r \geq 0.3$ as moderate effect, and $r \geq 0.5$ as large effect, how would you rate the consistency of elicited risk preferences (based on the number of boxes checked) across the two ink bomb tests?