STOCK PRICE BUBBLES
or
"Are YOU Smarter than Isaac Newton?"

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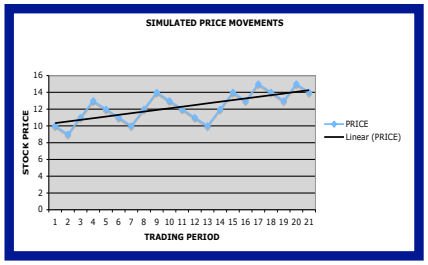
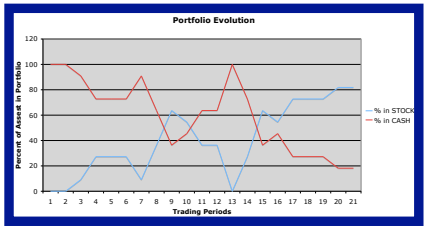
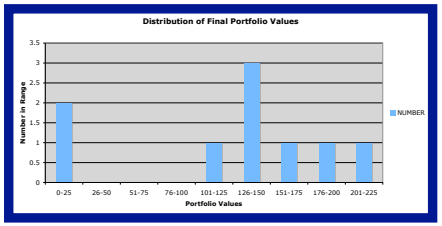
EXERIMENTAL RESULTS







EXPERIMENTAL DESIGN

MOTIVATION

Students have difficulty understanding the psychology of market bubbles. A simple classroom experiment involving playing cards has been helpful in enhancing student comprehension of how succeeding generations of investors can be caught up in the madness. This demonstration is suitable for courses in corporate finance, macroeconomics or behavioral economics. With proper preparation, it could also be used in principles of economics.

The history of economics contains many examples of investment "bubbles" that produced enormous but illusory wealth. Unfortunately, the wealth disappears when the bubble bursts and the market crashes. Examples include "Tulipmania" in 17th century Holland, the South Sea Bubble (which caught Sir Isaac Newton *twice*) and George Frederic Handel) and the recent housing bubble in the United States. People caught up in a bubble believe, despite knowledge of prior example that "this time is different." This belief is incorrect.

EXPERIMENT

Each student is given a hypothetical stake of $100 and may buy a fictional stock that is currently selling for $10 per share. The students keep track of their positions with worksheets. In round 1, students can choose to sell the stock or hold their cash. The instructor now randomly selects a card from a standard deck. If the card is black (a spade or a club) the stock price increases by $2; if red (a heart or a diamond) the price falls by $1.Students then decide to buy stock, sell any stock they have, or maintain their current position. For simplicity, students must be all in or all out except for any cash remainders after buying whole shares of stock. The game continues until the stock price goes to zero or an unobservable alarm goes off, at which point fictional bubble is deemed to have collapsed and the stock price is set to zero. A small prize may be given to the winner, i.e., the student with the largest portfolio when the alarm sounds.

IMPLEMENTATION

SAMPLE WORKSHEET

You have $100 that you may hold or use to buy stock. The stock is currently selling for $10.
After the new price is announced, you must decide if you will sell your shares or hold them.
If you sell your shares, you may purchase shares in a later round at the current price.
Record your decisions below.
You must hold all cash or all stock.
Round fractional stock purchases ***UP*** to the nearest whole share.

ROUND 1:
PRICE: BUY____ HOLD____ SELL____ STOCK VALUE =
CASH =

ROUND 2:
PRICE: BUY____ HOLD____ SELL____ STOCK VALUE =
CASH =

FUTURE EXPERIMENTS

Post experiment discussion centers on how students formulated their strategies and how they might have behaved differently. Later iterations involved less fear about crashing and more attempts to cash out at a higher level than one's classmates. Students got back in when they felt others were likely to have accumulated more cash. A version was also played that allowed students to keep both assets to avoid crashing to zero.

Future experiments will involve prior discussion of possible strategies for "beating the bubble" and allow investment in non-bubble assets as well as cash as well as an experiment with multiple assets when the bubble asset is not identified prior to the beginning of the experiment.