Section 5: Behavioral Finance Part I

By Watcharida Boonthaveepat

Introduction, Winner's curse and Bubble

Finance as you know it

- Terms you have grown to know and love:
  - Efficient Markets Hypothesis
  - Rational Choice Paradigm
  - CAPM
  - No Arbitrage Principle

- All lie at the foundation of modern asset pricing and portfolio theory

Efficient Markets

- One version of efficient markets
- Efficient markets have the following properties:
  - All participants have access to the same information.
  - All participants have the same "opinions" about how to value securities using that information
  - All participants have access to unlimited liquidity

Efficient Markets (2)

Consequences of efficient markets:

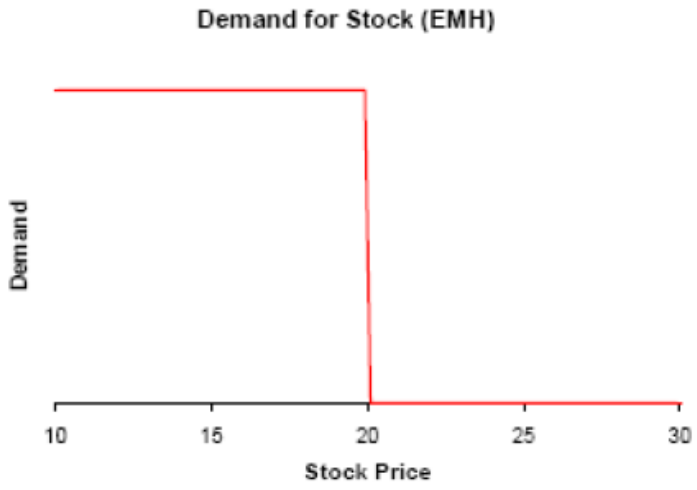
- There can only be one price for every security
- If the asset is overpriced, even by a penny, the asset will be massively shorted
- If the asset is underpriced, even by a penny, the asset will be massively purchased
- Prices will immediately correct themselves

Efficient Markets (3)

- Another version of efficient markets:
  - There are informed and uninformed investors
  - There are sophisticated and unsophisticated investors
  - There are rational and irrational investors
  - There are investors with unlimited liquidity and those without unlimited liquidity

Efficient Markets (4)

- Implications:
  - If an irrational or misinformed investor mistakenly believes an asset is underpriced/overpriced and tries to buy/sell, the supply/demand is unlimited and the price is unaffected.



The Winner's Curse

- Consider the viewpoints of others.
  - How will they behave.
  - How should that affect your behavior.
- An auction in eBay

Bubbles

- Markets in which prices rise well above fundamental values.
- Easy to identify in hindsight
- What about while they are in progress?

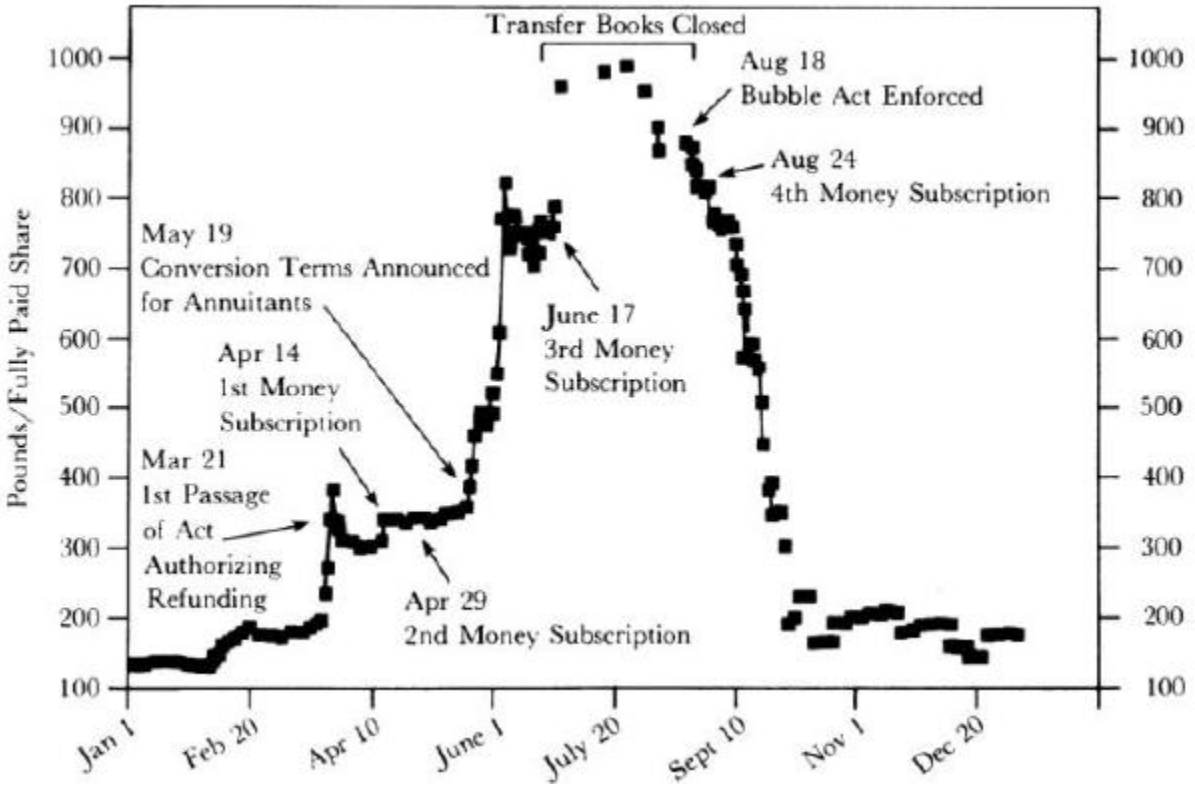
Some historical Bubbles

- Tulipmania
- South Sea Bubble
- Japanese real estate
- The dot com bubble
- Subprime Mortgages

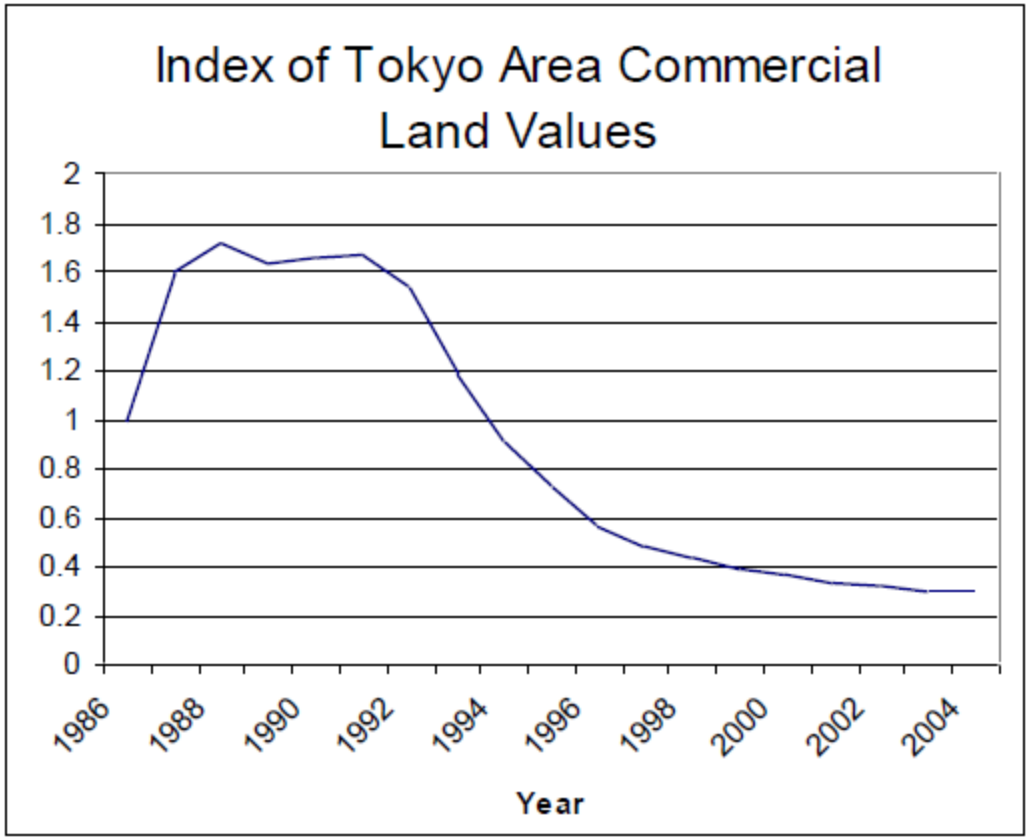
Tulipmania

- Late 1636 through February 1637
- Average annual wage between 200 & 400 guilders
- Single prized tulip bulb at height of market: ~6000 guilders
- Prices for some common varieties increased by 25 times in January 1637
- 2,500 guilders would have purchased 27 tons of wheat, 50 tons of rye, 4 fat oxen, 8 fat pigs, 12 fat sheep, 2 hogsheads of wine, 4 tons of beer, 2 tons of butter, 3 tons of cheese and a bed with linen
- Similar rises and declines in subsequent "new" flowers such as 18th century hyacinths

South Sea Bubble



Japanese Real Estate



Source: "Urban Land Price Index and National Wooden House Market Value Index as of the End of March 2004," Japan Real Estate Institute, May 2004.

Rising Asset Prices

- What can cause the fundamental value of an asset to go up?

$$PV = \frac{\Sigma (CF)}{r} \qquad \uparrow CF \qquad \text{or} \qquad \downarrow r$$

Historical Bubbles

- Something new about asset
  - Uncertain valuation
- Liquidity
- Momentum
- Difficult or impossible to prove
  - Somebody must have thought the asset was worth the price

"When beggars and shoeshine boys, barbers and beauticians can tell you how to get rich, it is time to remind yourself that there are no more dangerous illusions than the belief that one can get something for nothing."

Bernard Baruch, 1929

The dot com bubble

- Difficult to value tech companies at that time
- Flush of liquidity from baby boomers, tax policies favorable to affluent – who are more likely to invest, and heavy use of margin borrowing

Bubbles and Herding

- According to the rational investor paradigm, the investment decision is a function of the relationship between the price and fundamental analysis.

- Investors investment decisions are independent because:
  - Fundamental analysis is performed independently
  - The price itself is not an input into the fundamental analysis

Bubbles and Herding (2)

- Bubbles may arise if investor behavior is not independent.
- Investor behavior is coordinated through observation of other investor behavior
- The investment behavior of one investor changes the behavior of other investors

Choosing Restaurants

How do ants find food?