

# **Presentation #8**

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# Bubbles!

- Stock prices are not always equal to their **fundamental value: stocks are sometimes under-priced or over-priced**
- Under which conditions can such mispricing occur? The surprising answer is that it can occur even when investors are rational!!!!
- Consider the case of a truly worthless stock (that is, the stock of a company that all financial investors know will never make profits and will never pay dividends). **The fundamental value of such a stock is equal to 0.**

# Bubbles!

- Might you nevertheless be willing to pay a positive price for this stock? Yes, if you expect the price at which you can sell the stock next year to be higher than this year's price. And the same applies to a buyer next year: he may well be willing to buy at a high price if he expects to sell at an even higher price in the following year. **This process suggests that stock prices may increase just because investors expect them to.**

# Bubbles!

- Such movements in stock prices are called **rational speculative bubbles**: financial investors might well be behaving rationally as the bubble inflates. Even those investors who hold the stock at the time of the crash, and therefore sustain a large loss, may also have been rational. **They may have realised there was a chance of a crash, but they thought there was also a chance that the bubble would continue and they could sell at an even higher price.**

# Bubbles!

- **Steps of a Bubble**

**1. Displacement:** A displacement takes place when investors get bewitched by a new paradigm, such as an innovation (tech bubble) or interest rates that are extraordinarily low (housing bubble) or the beauty of flowers (Dutch tulip bubble).

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**2. Boom:** Following a displacement at early stages prices increase slowly... Later on more participants enter the market, triggering the boom phase. At this stage, the asset in question attracts attention of agents fearing of missing out on what is perceived to be an once-in-a-lifetime opportunity.

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**3. Euphoria:** in this phase caution and wisdom are fully abandoned and the price of the asset in question skyrockets.

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**4. Profit Taking:** In this phase, the smart money\* (anticipating the warning signs) starts to sell out positions and make profits. Of course, the exact time of the bubble burst is unknown and difficult to anticipate. Sometimes, very minor events can be the warning sign of the collapse.

\* smart money refers to insiders and well-informed speculators.

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**5. Panic:** In the panic stage, the price of the asset in question reverses course and collapses rapidly. Investors and speculators now are willing to liquidate the asset on the spot and at any price. As supply exceeds demand, asset prices fall sharply.

# Examples of bubbles

- <http://www.investopedia.com/articles/personal-finance/062315/five-largest-asset-bubbles-history.asp>