Market Efficiency and Investor Behavior

Gestão Financeira II

Undergraduate Courses

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The Efficient Capital Market Hypothesis

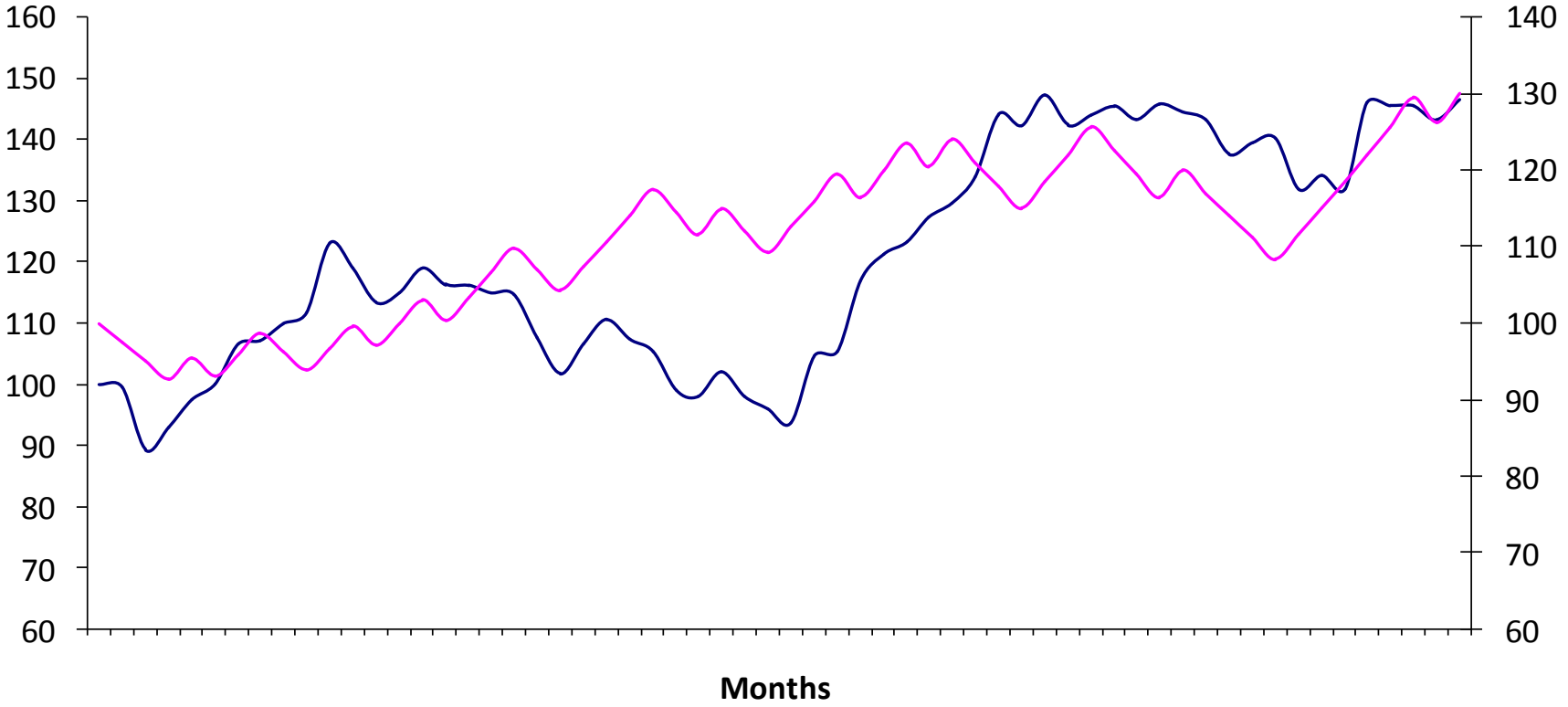
- In an efficient capital market, stock prices fully reflect available information.
- Market Efficiency has implications for investors and firms:
  - Since information is reflected in security prices quickly, knowing information *when it is released* does an investor little good.
  - Firms should expect to receive the fair value for securities that they sell.
  - Firms cannot profit from fooling investors in an efficient market.

The Efficient Capital Market Hypothesis

- When we say 'prices are correct,' we are implicitly stating what 'correct' is, i.e., we are assuming an asset pricing model
  - Joint hypothesis problem.
- Efficient markets $\Rightarrow$ prices follow random walk
  - Only strictly true if the discount rate does not change over time
  - Over short time frames returns should look random
- If we all thought that the price of an asset was going up in the future, then we would start buying today and the price would go up right now, not in the future

The Efficient Capital Market Hypothesis

- Which is the S&P Index, and which is Tossing a Coin?



Three Forms of Market Efficiency

Type of Information reflected in Prices	Market is
Past Information / Historical data	Weak Form Efficient
All Publicly available information	Semi-Strong Form Efficient
All Information (even Private)	Strong Form Efficient

Weak Form Efficiency

- Current prices fully reflect all information contained in past prices:
  - Using *past* prices, returns, volumes will produce no predictable patters that can be exploited to yield better returns in the *future*
- Technical analysis
  - Search for recurring and predictable patterns in prices
  - Believe in slow response of prices to fundamentals
  - Called "chartists" because they study charts of past stock prices and volumes (candlesticks, heads and shoulders, moving averages)
- Even if there are patterns, they are self-destructing
  - Discovery leads to exploitation and ultimately invalidation

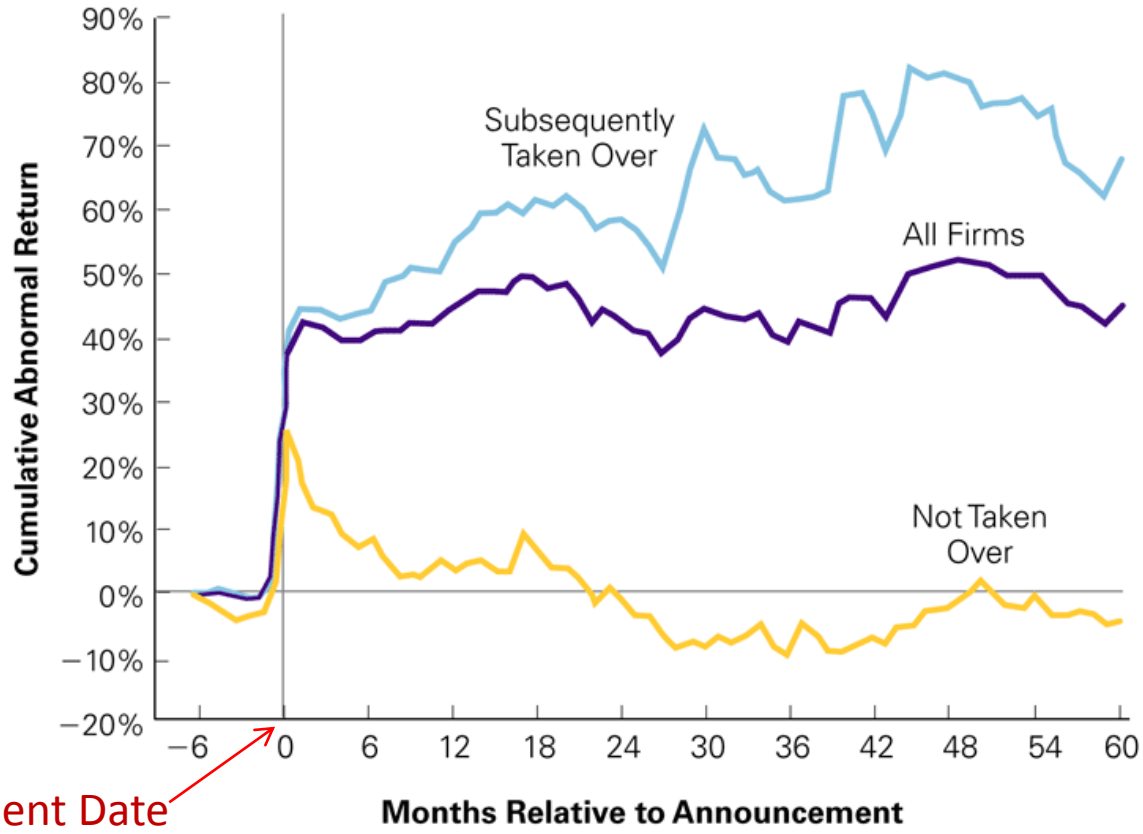
Semi-Strong Form Efficiency

- Current prices fully reflect all past prices and all new publicly available information
- Fundamental analysis (using economic and accounting information):
  - Sorting through income statements, talking to the company
  - Studying industries and the macroeconomic framework.
- Some evidence for semi-strong efficiency:
  - No abnormal returns after public announcements
  - Professional money managers do not outperform the market consistently.

Semi-Strong Form Efficiency

- Example of evidence on Semi-Strong Form Efficiency:

Returns to Holding Target Stocks Subsequent to Takeover Announcements



Source: Adapted from M. Bradley, A. Desai, and E. H. Kim, "The Rationale Behind Interfirm Tender Offers: Information or Synergy?" Journal of Financial Economics 11 (1983) 183–206.

Strong Form Efficiency

- Current prices fully reflect all information, public and private.
- Strong-from efficiency says that insider trading will not produce profits
  - E.g., knowing that a merger is going to take place before it is announced publicly will not produce profits
- Although illegal, there is some evidence that prices move before public announcements, suggesting insider information
- Insider trading appears profitable, indicating markets are not strong form efficient
  - These profits are short-lived, suggesting the market may be close to efficient

What makes markets efficient?

- There are a large number of competing profit-seeking investors
  - It is not necessary that the average investor is smart, only that there are a few smart investors (with deep pockets)
- New information about securities comes to markets in a random fashion
- Forces of arbitrage
  - Smart investors exploit the mispricing in securities until it disappears.

The Behavior of Individual Investors

- Despite evidence on markets being efficient, there are also some facts about investor behavior that are still unsatisfactorily explained.
- Some examples of peculiar Investor Behavior:
  - Underdiversification and Portfolio Biases
    - There is much evidence that individual investors fail to diversify their portfolios adequately.
    - Familiarity Bias
      - Investors favor investments in companies they are familiar with
    - Relative Wealth Concerns
      - Investors care more about the performance of their portfolios relative to their peers.

The Behavior of Individual Investors

- Excessive Trading and Overconfidence
  - According to the CAPM, investors should hold risk-free assets in combination with the market portfolio of all risky securities.
    - In reality, a tremendous amount of trading occurs each day.
  - Overconfidence Bias
    - Investors believe they can pick winners and losers when, in fact, they cannot; this leads them to trade too much.
  - Sensation Seeking
    - An individual's desire for novel and intense risk-taking experiences.
- Investor Attention, Mood, and Experience
  - Studies show that individuals are more likely to buy stocks that have recently been in the news, engaged in advertising, experienced exceptionally high trading volume, or have had extreme returns.
  - Sunshine generally has a positive effect on mood, and studies have found that stock returns tend to be higher when it is a sunny day at the location of the stock exchange.

The Behavior of Individual Investors

- Herd Behavior
  - When investors make similar trading errors because they are actively trying to follow each other's behavior
- Informational Cascade Effects
  - Where traders ignore their own information hoping to profit from the information of others