Georgia Institute of Technology

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Computational Investing, Part I

192: Information and Technical Analysis: Intro to TA

Find out how modern electronic markets work, why stock prices change in the ways they do, and how computation can help our understanding of them. Learn to build algorithms and visualizations to inform investing practice.

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What is Technical Analysis?

- TA uses historical price and volume data **only** to compute “indicators”
- Indicators are calculated from recent price and volume data to predict future price movements
- Indicators are “heuristics”
- An information source?

Controversial

- Many don't believe in the value of TA
  - "Voodoo" "Superstition"
- Depends on information in historical price and volume
- Leverages
  - Psychology of the investor
  - "market physics"

What's My View?

- Agnostic, evidence-based approach
- I have assessed technical indicators in
  - Back testing
  - Big data analysis
- Weak predictive power
- Why might it work?
- Best use: When a stock's indicators are contrary to the market

References

- "Technical Analysis Explained"
  - by Martin Pring
- Investopedia.com
- Wikipedia.org

Definition of TA (from Pring)

"Identify a trend reversal at a relatively early stage and ride on that trend until the weight of the evidence shows or proves that the trend has reversed."

Assumption: "People will continue to make the same mistakes they have made in the past."

Three "Branches"

- Sentiment Indicators
  - "Emotions of investors"
- Flow-of-Funds Indicators
  - How much cash has been flowing "in" or "out"
  - What is the capacity of the market to buy or sell
- Market Structure Indicators
  - Most indicators fall in this group

Time Scales and Trend Analysis

(Tucker's opinion)

- Shortest term price movement is driven by market mechanics. Can be predicted using co-located information like order book.
- Longest term price movement is driven by exogenous events and insights not always observable by computer.