Georgia Institute of Technology

Computational Investing, Part I

041: Company Value

Dr. Tucker Balch
Associate Professor
School of Interactive Computing

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.

Objectives:

- Understand multiple methods of estimating a company's value:
  - Market cap
  - Future dividends
  - Book value

Notional Company

- Print $1/year each year, forever
- What is this company worth?

What is Current Value of a Future $1

Intrinsic Value

- “future income generated by the asset, and discounting it to the present value.”
- sum(dividend*gamma^i)
  - = dividend * 1/(1-gamma)

Why/How Does Information Affect Price?

- Informs traders about the company's capacity to make money in the future.
- Examples
  - CEO effectiveness.
  - Cost of raw materials.

Local and Global Affects