

Chapter 4. Information

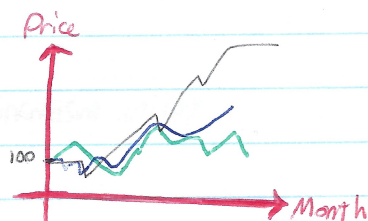
The Efficient Markets Hypothesis

If prices reflect all relevant information about future cash flow, there is no pattern to predict price or value changes.

$$PV = \frac{\text{Payoff}}{1+r}$$

Present Value ↓ Market rate of interest

$$= \frac{100}{1.10} = \$90.91$$



Correlation Coefficient

$$-1 \leq \rho_{A,B} \leq 1$$

↓
between two variables

$\rho_{A,B} = 0 \iff$ There is no relation between changes in A and changes in B.

Serial Correlation

$$-1 \leq \rho_{A_t, A_{t-1}} \leq +1$$

↓
between two different periods

useful for bond price changes, stock returns (monthly)

Negative Serial Correlation \rightarrow Reversion to the mean

\hookrightarrow Read the article - You're not responsible for advanced economic techniques

Bubbles and Crashes

Activities in past won't help predicting the future

Examples of big violation of information efficiency

- Crash → Corrections - bandwagon effect: when everybody in the market decide to do the same (buy / sell)
- Bubble → Actual trading price exceeds the market value of Risk-averse (H_0)

Average Trading Prices

Null Hypothesis

$$H_0 = P_t = \sum_{t=1}^{\infty} \frac{E(Div_t)}{(1+r)^t} \quad \text{Expected Dividend}$$

Equilibrium Price

* $r > 0$: } 1/ because of Time
2/ Risk aversion

* Assumption

- * we assume that Time is irrelevant when the period is so short (ex. 3 hours, ...)
- * In the context of the experiment, we assume that people are Risk-neutral.

→ The profit / Payoff would be considered as the only factor

Measuring the risk

The more,
the riskier

→ 1/ Standard deviation
or
→ 2/ Spread

Hilroy

