Statistics 434 : Bullet Points for Day 11
Betting on AR(1) and an Introduction to EMHs

After a brief review, we see what the Kelly criterion suggests when we consider a return process given by an AR(1) model. This works forms the basis for Homework 5, which offers a bump-up in challenge.

We then look the Devil in the eye and open the discussion of the Efficient Market Hypothesis — or Hypotheses. This is one of those thing that everyone thinks they understand, and they do — right up to the point where they try to be mathematically precise in what they say. The world then starts to look just a little more subtle.

- Review of Kelly Principle for IID returns
- What is the relevant analog for AR(1)?
  1. Conditional vs. Unconditional Means
  2. A "Fermi Calculation" in AR(1)
  3. Practical Variations
- Discussion of Homework 5 — Things Getting Serious
- Stalking Horses: The Efficient Market Hypotheses (EMHs)
  1. Three (or more) Versions – none 100% precise
  2. Some Specifics for Random Walk: Testing Diffusivity
  3. Grossly practical considerations
     (a) Indexing and practical choices
     (b) "Total Balance" and the only source of "excess returns"
     (c) The predictable returns of the average mutual fund
     (d) The daunting challenge of judging performance
     (e) The Paradox of stupid investments
- Brief Reflection on the "Big Picture"

Three Quotes for Today

"Why not invest your assets in the companies you really like? As Mae West said, 'Too much of a good thing can be wonderful.' " — Warren Buffett

"It has been my experience that competency in mathematics, both in numerical manipulations and in understanding its conceptual foundations, enhances a person's ability to handle the more ambiguous and qualitative relationships that dominate our day-to-day financial decision-making." — Alan Greenspan

"The rich get richer. Not only because they have surpluses with which to invest, but because of the overriding emotional release they experience from having wealth." — Stuart Wilde