

## Statistics 434: Bullet Points for Day 24

### Risk Adjusted Returns

It is a simple fact that any mutual fund, investment manager, asset class, or investment strategy will be judged on the basis of its historical returns. Moreover, everyone knows that the riskiness of the investment should somehow be taken into account, and we have already considered how “beta” and “VAR” are used by some asset managers.

Now we will consider some other methods that have been used to get at the notion of a “risk adjusted return.” You will probably want to incorporate one or more of these measures in your final project. Each of the measures has non-trivial faults, yet taken together they represent the best that academia and industry have to offer.

- Comments on the Final Project and the Project Proposal
- Remaining Comments on Co-Integration (and mean reversion)
- General Issue: How to Compare?
- Risk Adjusted Returns and Related Measures of Risk
  1. Sharpe Ratio
  2. Sortino Ratio
  3. Draw Down
  4. Modigliani-Modigliani Difference
- Generic Criticism
  1. The Peso Problem
  2. The “one-path” problem of all financial and economic analyses
- Market Timing Measures
  1. Crumby Modest Regression Test
  2. Kuiper Score T-test
- Attempts to measure the sources of “value added”
- Further discussion of the project design

#### Quote of the Day:

“No Guts. No Sausage.” — Anonymous