Study on Statistical Arbitrage in Futures Market

Midterm Presentation

Participant:
Shihong Li

Sponsor:
Greenwoods Asset Management Ltd.

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CONTENT

1. Terminology

Arbitrage
The possibility of a risk-free profit at zero cost.

Statistical Arbitrage

1. An investment process based on mathematical models
2. Aiming at making profits
3. Building up long and short positions for assets
4. Taking advantage of asset prices' deviation from theoretical values

2. Background Information

Prerequisite:

The securities market in which short selling exists.

Financial Market in China:

1. Before:
   1.1 Absent of short selling mechanism
   1.2 Absent of stock index futures
2. Now:
   2.1 Launched stock index futures on April 16 2010
   2.2 Inprovement in startup of securities margin trading

3. Sponsor‘s Background

Greenwoods Asset Management Ltd.

An investment management company specializing in managing investments into mainland China companies. Greenwoods currently manage funds investing in Greater China equities for global investors and A-share trusts for qualified Chinese domestic investors.

4. Deliverables

From team to sponsor:

1. We are going to present an algorithm along with a model in the end of this project.
2. The spread of featured contracts of stock index futures can be predicted.
3. Statistical arbitrage opportunities can be detected by our models.
4. Criteria for entering transactions with arbitrage opportunities can be determined.
5. R packages with a complete set of documents will be created.
6. Technical report and presentation summarizing the work.

4. Deliverables

From sponsor to team:

1. A list of portfolio of interest is needed
2. Sponsor's historic transaction data is needed for modeling, testing, and prediction
3. Computing resources
4. We also expect weekly conference calls for inquiries and consulting

Seven Basic Principles

1. Set the context
2. Choose effective examples and analogies
3. Choose vocabulary to suit your readers
4. Decide whether to present #s in text, tables, or figures
5. Report and interpret #s in the text
6. Specify the direction *and* size of an association between variables
7. For many #s, summarize overall pattern

Creating Effective Tables

Example: Cost of Packaging

Example: The Nuclear Mission Arms Race

Example: Maintaining Inventory