

# Study on Statistical Arbitrage in Futures Market

Midterm Presentation

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# Introduction

Preliminaries

Principles

Tools

Arguments from Scale

Graphical Methods

Basic Optimization

# 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

# Programmings in this class

1.  $\text{\LaTeX}$ :
  - 1.1 `moderncv`
  - 1.2 `beamer`
  - 1.3 `article`
  - 1.4 `tikz`
2. R:
  - 2.1 `tikzDevice`
  - 2.2 `lm`
3. Git
  - 3.1 `git init .`

# 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