

# Math 420, Spring 2013

## Seventh Group Homework

due Monday, 22 April, 2013

In the following exercises consider the risky assets in groups (A) and (B) of your final project.

**Exercise 1.** Consider one-year histories of daily share price data for each asset over the years ending June 30 of 2007-2012 and use uniform weights. Assume that  $\mu_{si}$  is the US Treasury Bill rate at the end of the given year. Assume you are an investor who chooses  $\chi = 0$ . Design the optimal long portfolios with risky assets drawn from group (A), from group (B), and from groups (A) and (B) combined. How well did these optimal long portfolios actually do over the subsequent year?

**Exercise 2.** Repeat the above exercise for an investor who chooses  $\chi = 1$ . Compare these optimal long portfolios with the corresponding ones from the previous exercise. Explain the differences you see in their performances.