



Quantitative Trading

JULIEN KOCKELKOREN

Make an impact



Assignment 3

SIMULATIONS OF AN ORDER BOOK
MODEL

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Instructions for the assignment

- ◆ The assignments are to be done in groups of 4 or 5 students.
- ◆ Each assignment should be uploaded in Blackboard as a Jupyter file
 - Due date: Feb 2.
- ◆ The Jupyter file should include the following (use Markdown):
 - Section “0” with information about your submission:
 - ◆ Line 1: QT Assignment n
 - ◆ Line 2: Group members: listed alphabetically by last name, where the last name is written in CAPITAL letters
 - ◆ Any comments/challenges about the assignment
 - Section “k” where $k = \{1, 2, \dots\}$.
 - ◆ First type Question k of Assignment n.
 - ◆ Then, below the question, provide your answer.
 - ◆ Your code should include any packages that need to be imported.



Order book modeling

The goal of this exercise is to get a flavor of order book modeling. You will simulate a simple particle model, close to the Bak et al. model and analyze the dynamics of mid-point price and bid-ask spread.

The code and the questions can be found in the attached Notebook.



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