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Trade and Investment Strategy
45-871 M2 2023

ASSIGNMENT 3

There are two questions. Please submit your answers using Gradescope, one set of answers per group. You may submit a group assignment of up to 4 but no more than 4 in the group will be permitted. I have no problem with larger groups (for example 5) churning over ideas in the initial discussion of the assignment, but please turn in distinct assignment material (say one group of 2 and another group of 3).

Question 1 *(8 points, two per part)*

Goldmines is a (fictitious) company on the Toronto Stock exchange, and at 1:00PM the contents of its limit order book are 100 buy orders at $85; 50 buy orders at $70; 30 sell orders at $105 and 40 sell orders at $110. Then the electronic "ticker tape" shows that at:

1:05PM	Buy orders for 20 at $95.00 submitted.
1:10PM	Sell orders for 100 at $100.00 submitted.
1:12PM	Market sell orders for 10 at $95.00 submitted.
1:15PM	Buy orders for 50 at $85.00 withdrawn.
1:20PM	Market sell orders for 10 at $95.00.
1:40PM	Sell orders for 20 at $110.00 withdrawn.
1:50PM	Buy orders for 40 at up to $110.00 submitted.

At 2:00PM Goldmines announces a major discovery doubling the size of its reserves, a complaint is registered with the Canadian SEC, and trading in Goldmines is temporarily suspended:

a. Graphically show what the limit order book looks like at 2:00PM.
b. Graphically show how the bid ask spread evolved from 1:00PM until 2:00PM.

c. What was the volume of transactions between 1:00PM and 2:00PM and at what price did each transaction occur?
d. Why might trading have been suspended?

Question 2 *(7 points, two for the first three parts, one for the last)*

On a tour of the NYSE a visitor complains to a specialist that he never executes his orders, and the specialist responds that the limit buy orders of the visitor are too low and his limit sell orders are too high:

a. Using illustrations, demonstrate the argument that the specialist is making.
b. Suppose the specialist is front running. Show how the visitor would have gained from trading and the specialist was (illegally) able to expropriate those gains from visitor.
c. Supposing front running were legalized, how would the specialist set prices? Use diagrams if they are helpful.
d. Using your answer to the previous part, explain what would happen if the rules against front running were not fully enforced.