FIN 376: Exam 1

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Due: 10/6/2017

Instructions:

By end-of-day on Friday upload your completed exam files to Dropbox under 'Exam 1'. You should complete the short answer questions in Word (or some other word processing software), and either upload a Word or PDF file with these answers to Dropbox. You should complete the computation questions in Excel, and also upload the Excel file with these answers to Dropbox.

Be sure to show your work to get at least partial credit. If you get the correct answer, but show no work, you will receive no credit. Showing good work toward an answer is more important than the answer itself.

Do not try to email me questions regarding the exam. If you have a question, post it to the 'Exam 1' discussion board. If you don't receive an answer there, just answer the question as best you can.

You may use spreadsheets you have created for your homework, or any other spreadsheet that you have created yourself.

You may not use any part of a short-answer or spreadsheet created by someone else, and you may not use the internet to assist you during the exam. If any part of your answer or spreadsheet is not your original work, or if there is evidence you have used information from the internet (googled questions for example), you will receive a 0 on the exam. You may consult your textbook during the exam.

By sending me your completed exam you are affirming that it is solely your work, and you have not received any outside assistance.

1 Short Answer

Please provide short, concise answers. If you write anything incorrect, the entire question will be marked incorrect. So be careful, and don't write too much.

1. In Bagehot's 'The Only Game in Town', how do market makers profit?

2. Assume, at any given point, there is a 50% change of a stock's price increasing or decreasing. If you trade randomly do you expect to break-even? Why?

3. You have sold short 500 shares of PVA which is now trading for an ask/bid of \$20.12/\$20.10. If you want to limit your losses to 10% from this point, what type of order would you submit to the exchange? Does this guarantee you won't lose more than 10%?

4. Briefly explain what happens when you short a stock (what does your broker do)?

5. When you submit an order to trade a stock, briefly describe how that order may be handled, i.e. is it sent to the floor of the NYSE in Manhattan?

6. In your own words, define *liquidity* and explain which order types provide liquidity.

2 Computation

Be sure your spreadsheet answers are organized, and the answer is easily seen. Hardcode as little as possible.

1. Limit Order Book

   Use for the next two questions. Consider the following limit order book.

Limit Buy Orders		Limit Sell Orders	
Price	Size	Price	Size
84.77	200	84.79	100
84.76	100	84.80	300
84.75	400	85.70	700

a. If you submitted a market sell order for 400 shares, how much would you receive?

b. If someone sent a market sell order immediately after you (before any new orders entered the order book) at what price would they sell?

2. Margin: Long Stock

   Use for the following 3 questions: Say you buy 87 shares of GS for \$164 per share on 70% initial margin. The maintenance margin is 30%.

   a. Say GS increases to \$200 per share. What is your margin percentage now?

   b. Again assume GS increased from \$164 to \$200 per share. What was the percentage change in your equity?

   c. What is the highest stock price at which you would receive a margin call?

3. Margin: Short Stock

   Use for the following 3 questions. Say you sell short 100 shares of MSFT at \$22.50 per share on 60% initial margin. Your maintenance margin is 20%.

   a. If MSFT decreased to \$20.00, what is your new margin percentage?

   b. If instead MSFT increases to \$25.00, what is the percentage change in your equity?

   c. What is the lowest price at which you would receive a margin call?

4. Stock Indices

   A stock index contains two stocks, A and B. On Tuesday stock A closed at \$25 per share and on Wednesday at \$20. On Tuesday stock B closed at \$150 per share and on Wednesday at \$130. Stock A has 30 million shares in its free float, and stock B has 2 million in its free float.

a. What is the change in the price-weighted index of stocks A and B from Tuesday to Wednesday?

b. What is the change in the value-weighted index of stocks A and B from Tuesday to Wednesday?