

# **FIN 410 - Investment Theory & Applic. - Spring 2011**

## **OTIS - Online Trading and Investing Simulator**

### ***I. The Trading Simulation: What is Your Responsibility? What is Your Option?***

Each of you should pay the \$20 required to establish a simulated trading account of \$1,000,000. I explain how to do this below. **THIS IS YOUR RESPONSIBILITY.**

This account will help you learn how the trading process works, in a realistic setting. I will provide all the information you need, to learn how to trade various securities that we will discuss throughout the course, including stocks, bonds, futures, and options. The simulation will track your trading experience and performance, along with all students in the class. This document explains what is expected of you and how your performance on this simulation will be evaluated.

At the end of the semester, your performance will be ranked with all students, into quintiles. The top 20% will earn 5 points for this simulation exercise; the next highest 20% will be given 4 points; the third highest 20% will be given 3 points; the fourth highest 20%, 2 points; and the lowest, 0 points.

We will have 11 quizzes throughout the semester. Each quiz will have a total of 5 points possible. Remember, your lowest quiz score will automatically be thrown out.

YOU WILL HAVE THE OPTION to replace up to 4 more (of your lowest) quiz scores with the score you earn on this trading simulation. For example, *if* your trading performance is in the top quintile, you can replace four more of your lowest quiz scores with perfect scores of 5 points each.

### ***II. Getting started***

To register for OTIS, you will need to purchase an access code online (credit card required, \$20.00)

- a) Go to: <http://wharton.pearsoncmg.com/otis> .
- b) About 2/3 down the left side of this page, click on "purchasing access to OTIS online".

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#### **ATTENTION Previous OTIS Users:**

\*\*\*\*\* **If you have ever used OTIS before, PRETEND YOU HAVEN'T.** \*\*\*\*\*

Go through this login/registration without referring to your previous use, AND use a login name *different* from the one you used before (it will prompt you for something different if you try to use the same name).

Otherwise, OTIS will attempt to connect you to your old account.

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This will lead you to a screen that asks you to read and accept the user agreement.

Then the next screen asks, "Do you have a Pearson Education account?" Check "No."

Then it asks you to create a Login Name and Password. Write these down.

Then you are prompted to fill in your personal & credit card information to establish your account.

You will also be asked for the course ID, which is: [otis-koch230](#) or [otis-koch400](#) .

In the next screen enter information for your simulation. Some of the fields will have default information; some fields, like the Portfolio Name, you will have to edit.

1. For your own name, enter your name as it is in the school records (do not use an abbreviation).
2. For the **Portfolio Name**, use **your student ID number** exactly as it appears in the school records.  
\*Do\* include any leading 0's. Do **NOT** include the word "Portfolio". Do **NOT** make up a name.

For example, if your student ID is 01234567, you must enter your Portfolio Name as "01234567".  
That is how I will link your portfolio with your name in this course, to give you a grade.

***If you use any other portfolio name, you will NOT get credit for your work.***

- \*\* If you already set up your portfolio with some other name by the time you read this, all is not lost.
- \*\* You will just have to change your Portfolio Name to your student ID to get credit for your work.
- \*\* ==> **Also, you will have to make this change for each of the portfolios separately:**
- \*\* i.e., for Portfolio 1, 2, and 3 (For Portfolio 4 it doesn't matter, because I don't grade that.)

To change your Portfolio Name at any time:

1. Login to OTIS.
2. On the opening page, there are tabs on the upper right of the page.
3. Select "options" (far right).
4. Under the "Student Options", the 4th line is "Portfolio Name".
5. Change Portfolio Name to your Student ID.

### ***III. Overview of the Simulation***

OTIS is a portfolio management simulation that will give you a good feel for what it's like to manage a live portfolio for a pension fund or mutual fund company, or for your own account. You will learn how various financial assets work, how they are traded and how performance is measured.

You will be assigned \$1 million to invest in world-wide financial markets. You will be subject to realistic restrictions and costs, much as in a real-world portfolio (including commissions, total volume and short-selling trade restrictions, etc.).

**NOTE:** I do not control this portfolio simulation. It is handled by Pearson Co., through Wharton Business School. If you have problems with either the running of the portfolio or with specific transactions, contact their help desk directly. Although I can see your trades, I cannot change or correct them. **Please do not ask me to "check a trade" (you will incur a processing penalty).**

The semester will be divided into three different periods, with three different portfolio simulations. The first simulation (called "**Portfolio 1 – Getting Started with OTIS**") is for practice. The purpose of this first portfolio is strictly to help you get used to the simulation, and learn to make trades. This portfolio only counts toward your grade in that you must make at least ten trades.

For this first portfolio, your \$ performance (i.e., how much money you make or lose) doesn't matter - you are only graded on whether you make at least ten trades. So experiment, make lots of trades, and get used to the system. That's the point. This first simulation lasts 3 weeks, until Feb. 10, 2011.

The remainder of the semester will be divided into two more portfolio simulation periods. The second simulation (called “**Portfolio 2**”) will last 5 weeks; the third (“**Portfolio 3**”) will last 6 weeks. In these last two simulations, \$ performance does count, so be careful with your trades.

At the end of each period (for Portfolios 1, 2, and 3), I will assess your performance based on certain criteria discussed below. I will download performance reports from OTIS, and I will sort the class into quintiles based on your performance. In each successive portfolio, your performance will be evaluated on specific goals, **during that simulation period only**. These goals are discussed below. Thus, a major mistake in one simulation will not hurt you in the next simulation.

The last simulation (“**Portfolio 4 – Just for fun**”) will not be graded. It begins at the end of the term and runs through mid-July, so you can continue trading on the simulation after the semester is over.

#### ***IV. Operational Details***

The simulation allows you to trade stocks in the U.S., and in many other markets around the world. You can place orders for trades at any time, but the trades will be executed only when that specific market is open. U.S. equities can be traded ‘real-time’ while the market is open, but there is a 15 or 20 minute delay before your order is executed (depending on the exchange). In the case of Bonds, Options and Futures, and International securities, trades will be executed as of that market’s daily close.

For example, if you place an order to buy a U.S. stock, such as Microsoft, when it is the evening in the U.S., the stock exchange in New York will be closed. If you place a market order after trading hours, it will be executed 15 minutes after the market opens the next trading day.

You might find the following link helpful to keep track of times that various markets are open around the world: <http://www.timeanddate.com/worldclock/> .

#### ***V. Trading Parameters and Time Frames***

**For all Portfolios:** Commission Rate: \$10.00 Per Trade on equities  
Initial Cash Amount: \$1,000,000  
Duration for GTC (good till cancelled) orders: 14 days

##### **Portfolio 1 – Getting Started with OTIS:**

|  |                        |
|--|------------------------|
| Begin Trading:                                       | Jan. 20                |
| End Trading:   | Feb. 10                |
| Futures, Options, Margin Trading, and Short Selling: | Disabled until Feb. 1. |

|                     |  |                        |
|---------------------|--|------------------------|
| <b>Portfolio 2:</b> | Begin Trading:                                       | Feb. 11                |
|                     | End Trading:   | Mar. 16                |
|                     | Futures, Options, Margin Trading, and Short Selling: | Disabled until Mar. 1. |

**Portfolio 3:** Begin Trading: Mar. 17  
 End Trading: Apr. 30  
 Futures, Options, Margin Trading, and Short Selling: Enabled from the start.

**Portfolio 4 – Just for Fun:**  
 Begin Trading: May 1  
 End Trading: July 13  
 Futures, Options, Margin Trading, and Short Selling: Enabled from the start.

**VI. Evaluation of your Performance - Total of 100 points:**

There will be several criteria that will determine your total OTIS grade for each simulation. Each simulation period is evaluated separately, and depends upon different criteria, as follows:

|   | <b>Date</b> | <b>Portfolio</b>              | <b>Grading Criteria</b> | <b>Points Possible</b> |
|---|-------------|-------------------------------|-------------------------|------------------------|
| 1 | Feb. 10     | Portfolio 1 – Getting Started | A                       | 10                     |
| 2 | Mar. 16     | Portfolio 2                   | A, B, C                 | 40                     |
| 3 | Apr. 30     | Portfolio 3                   | A, B, D, E              | 50                     |

**A. NUMBER OF TRANSACTIONS**

You must make a minimum of 10 trades during any of the 3 simulation periods, to get any credit. At least 10 trades means you get full credit for Portfolio 1, or you get evaluated for Portfolios 2 & 3.

**B. MAXIMIZE OVERALL PORTFOLIO VALUE**

Dollar performance (i.e., how much money is in the account when the simulation period ends).

**C. MINIMIZE TRACKING ERROR (RELATIVE TO BENCHMARK S&P 500)**

How closely your portfolio tracks the benchmark index, during the simulation period.

**D. MAXIMIZE OVERALL RISK-ADJUSTED PERFORMANCE (SHARPE MEASURE)**

Rate of return earned relative to the amount of risk taken, during the simulation period.

**E. MAXIMIZE EXCESS RETURN OVER THE BENCHMARK (ALPHA)**

Rate of return earned in excess of the benchmark S&P500 index, during the simulation period.

**HOW I EVALUATE EACH SIMULATION (PORTFOLIO 1, 2, OR 3) & ASSIGN A FINAL SCORE :**

On each criterion evaluated (# Transactions, Portfolio Value, Tracking Error, Sharpe, or Alpha), I will:

- #1. Consider all portfolios (students) that meet the minimum number of at least 10 transactions.
- #2. Assign a score to each **grading criterion** based on the rank within the class, scaled from 1 to 5.
- #3. For each portfolio (student), *average across ranks* for all **grading criteria** in that simulation.
- #4. Assign points to each portfolio (student) based on the *average rank* in class, scaled from 1 to 5:

Portfolio 1: Make at least 10 trades? Get 10 points. Make fewer than 10 trades? Get 0 points.

Portfolio 2: Based on #4 - 1<sup>st</sup> quintile = 40 pts; 2<sup>nd</sup> quintile = 30; 3rd = 20; 4th = 10; 5<sup>th</sup> = 0.

Portfolio 3: Based on #4 - 1<sup>st</sup> quintile = 50 pts; 2<sup>nd</sup> quintile = 40; 3rd = 30; 4th = 20; 5<sup>th</sup> = 0.