



How To Play The Yale Stock Trading Game

GETTING STARTED

How to set-up

All players will receive a link to their game via email. Yale users may log in with NetID; all others will be asked to create a user and password (alphanumeric, minimum of six characters).

Once registered and logged in, you will see a list of your games. A “countdown” will appear in the “Link” column a few minutes prior to game start. Once the market opens, enter the game by clicking on the active link.

The game is designed to be played on desktop and laptop computers, as well as Surface Pro tablets -- **game play is *not* supported on other tablets or any phone.**

Double-clicking during the game can slow the time it takes to execute trades, so try to **always click once!**

For more information, [consult the game’s website](#).

Test for latency (for off-campus players)

We recommend a high-speed internet connection -- the faster, the better. If you have any doubts about your connection, we suggest visiting <https://www.speedtest.net/> before you play the game. Change the server to **Pilot in Ashburn, Virginia**, and click “Go.” In the results you will see a measure called Ping ms:

- < 50 is excellent.
- 50 - 100 is very good.
- Some users, especially in other countries, may see numbers from 200-300.

If your results are significantly above 100 ms and you are using WiFi, we encourage you to try using a *wired* ethernet connection or changing location.

THE OBJECTIVE OF THE GAME

The objective of the game is to maximize the value of your portfolio and beat the market. Your portfolio consists of the underlying, liquidation value of your stocks and cash. It is important to note that it is the underlying value of each stock that is important, not the market value determined by the last trade. You could very well have a portfolio with high last traded prices and lose the game.



There are four companies in our game – each designated by a color. The underlying value of each company is determined by a stack of ten cards chosen at random at the beginning of the game from two decks of cards. When the game was invented, actual playing cards were used and similar terminology persists as the game was moved online. Each card has a numerical value corresponding to its card value with face cards equaling ten and aces valued at 20. The value of each black card is multiplied by 2 and each red card is multiplied -1. The value of the company is the sum of the values for all ten cards - if the total valuation comes to less than zero, the company is valued at zero.

The price of each company at the beginning of the game is set to \$40 a share – the average of all possible card combinations, i.e \$4 a card.

It is important to note that each company's stack is chosen at random from different decks – so the values of the companies are entirely independent of one another. It is entirely possible that all companies are worth more than \$40 a share or that all companies are worth less than \$40. Each game is different because the cards are randomly selected, so the ending value of a stock is likely to be very different than \$40.

At the start of the game you are given 5 shares of each of the 4 companies plus \$200 in cash – a portfolio worth \$1,000. This is identical to the market (index) portfolio, which does not trade. You are attempting to make trades that make your portfolio more valuable than the untraded market portfolio.

GETTING INFORMATION

Forming a judgment about the actual value of each stock is the key to being successful in the game. There are three ways to gain information about the underlying values of the company, two of these methods are public in that they are available to all players and one is private.

One source of public information is the Security Analysts Reports announced at the beginning of the game and once more during the course of play. The computer generates the security analysts report by choosing five cards at random for each company and then adding \$20 to the sum to generate a share value estimate. For example, let's say the ten cards that determine the Green company's value are:

-10, -10, 4, 8, 8, 40, -2, 20, 6, -6

Let's say the computer chose the first five cards of this stack for the security analyst's report. The sum of these cards is 0 and therefore the security analyst's report would report the value of the company as \$20. The computer will not tell you which five cards it selected for its assessment, only the final aggregated value. Also note that the security analyst's report can be wildly off about the true value. Using the above example, the analyst's report could have been anywhere from \$0 to \$102 - while the true value of the company is actually \$58!

Another public bit of information is the EPS reported during the game. The EPS is generated when the computer selects one card from a company's stack and replaces it with another. The computer then reports the change in value as the EPS. For example, in our scenario about the Green company,



let's say the computer chooses the 6 card and replaces it with a -5 card. The EPS is reported at -11. Note that the EPS represents an actual change in the company's value. After the EPS report, the Green company's underlying value falls to \$47 a share.

There is also a way of generating private information known only by you. For \$1, you can buy a peek at three cards for a particular company. Go to the private information screen and specify which company you want information on. For each pick, the computer chooses three cards at random from the company's stack. You can ask for as many peeks as you want at any point during the game. Using our example of the Green company, the computer could generate the following peeks:

-10/4/8
-10/40/-2
4/8/20

But remember, the numbers are chosen at random from the company's stack each time. You don't know if the -10, 4, or the 8 appears twice in the stack or whether you are seeing the same card again! Since each participant sees different private information, an active trading market usually develops.

TRADING

In the game, you buy and sell stocks, trading with each other, attempting to maximize the value of your portfolio. The most recent traded prices show up on your computer screen during game play – watch this to look for deals or mispricing. There are two ways to trade a stock – there are limit orders and there are market orders.

To purchase or sell shares of stock, go to the trading screen for the company in which you are interested in trading. At the top of the screen, there is a space for the limit orders. Here you can decide to buy or sell a specified number of shares at a given price.

For example, let us say that the price of the Green has trended downward based on its securities analyst report. Having peeked and spotted the +40 card in the company's stack, you think the last trade at \$30 was low. You decide to bid even lower hoping to pick up a bargain. Using the limit order screen, you place an order for 3 shares at \$28 (a bid). You click on the place order button and wait to see if someone is willing to sell you the shares at the price you specified.

On the other hand, you can just accept an ask from another market participant. You note that someone has an ask of 2 shares of Green at \$31. Go to the right-hand side of the order and click the buy button and secure the order for yourself.

Consider if the securities analyst report had put the stock at \$92 and the stock had gone up to \$80, a price you thought was too high. You could sell your shares with a limit order or sell a few shares to whomever had an acceptable bid as a market order.



Be aware that if you accept either a bid or ask, you might not be able to complete the order. With dozens of players and latency within the system – there is a likelihood that someone might snap up

the order before you. This actually is a feature of many electronic trading systems. You may need to refresh your screen to continue and try again with another order.

GOING SHORT OR LONG

Let's say that Green's share price remains high, but you have sold all of your shares. You can still profit from your insight that the company is overpriced. You can sell up to 5 shares that you do not own, either through a limit or market order. In this way you are shorting the stock. You will get the cash from selling the shares at whatever price you can find in the market. If you sold 5 shares at \$80, your cash account will be credited with \$400, but you will own negative -5 shares of Green.

At the end of the game, your 5 share short position will have negative value. If the underlying, liquidation value of Green is \$37 a share, your Green shares will be worth negative - \$185. But since you sold them for \$400, you will have made a profit of \$215 on your short.

You can also borrow money to go long on a stock. Even if your cash account is zero, you could borrow up to \$200 in cash. At the end of the game, you will owe the amount you borrowed, plus 10% interest on your ending cash, if negative. Interest is only charged at the end of the game (not during the game), and only if you end up with negative cash.