Project Number: DTZ 1102

An Interactive Qualifying Project Report: submitted to the Faculty of
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Degree of Bachelor of Science
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Abstract

Using Interactive Brokers as a simulation trading platform and Yahoo! Finance, among other current financial news sources, the project team conducted four individual seven-week stock market simulations using four different trading strategies: buy-and-hold, shorting the market, leveraged ETFs and options straddle prior to earnings announcement. The simulations were analyzed weekly and at the final conclusions. The four simulations were compared to learn the effectiveness and applicability of the strategies.

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1. Introduction

The purpose of our Interactive Qualifying Project (IQP) is to research and analyze various trading strategies and their effectiveness. We will specifically focus on analyzing a long-term buy-and-hold portfolio, a portfolio designed to play against the market, a highly leveraged day-traded portfolio, and an options portfolio designed to take advantage of hypothesized increased volatility before earnings announcement days.

1.1 Objectives of the Project

Our main goals are to learn market trading strategies, evaluate causes of market fluctuations, analyze past performance of portfolios, practice predicting market/individual stock behavior, and determine which strategies tend to be more profitable. The point of this project isn't to just make money, earn a profit, be in the green or however you choose to say it – this is a learning experience for us to experiment in stock trading in the safety of a simulation, rather than risking real capital. At the end we will be able to come to the table with a conclusion not saying, "this is how to make money," but rather, this is what we did, this is what happened and most importantly, why.

1.2 What is the Stock Market?

While most people have a basic concept of the stock market, not all people truly know what the market actually is or how it works. The stock market is in fact an actual market, much like popular internet marketplaces, such as EBay. In the stock market, instead of trading physical items, people buy and sell partial ownership of companies. Instead of walking through the aisles of this market to make transactions, most trading in the stock market is done over the internet or over a phone through a broker.

Unlike other types of markets, where goods are simply for sale in large supply, stock always has ownership, and only a finite amount of stock exists for each company, though a company can change this amount by buying back or selling more of its stock. There does not exist a large amount of surplus stocks in case an investor would like to purchase more than exists to be traded. In other words, it is important to emphasize that to trade stocks an investor cannot buy any amount of stock unless another party is looking to sell an equal amount, though for large cap stocks, because of the high liquidity from high volume trading, this is rarely a problem for investors. In the case of privately owned companies, the stock does not trade very often at all, and trades are often only with the company itself, thus changing the overall amount of stock the company has on the market.

Another way the stock market differs from a traditional market is in the ability of an individual to be physically present to trade on the market floor. For reference, although it is free to any individual to walk into a supermarket and purchase goods, the cost of a seat on the New York Stock Exchange (NYSE) reached $4 million in December of 2005. A seat on the NYSE enables the seat-holder to trade securities on the floor, through either physical hand signals (nowadays less commonplace) or terminals. These seats may be owned by individuals, but are typically owned by companies, which are known as member firms. Since 1953 the number of seats available has remained at 1,366 [44].

The broker is the stock market equivalent of the bookie at the race track. A broker facilitates the transaction between two parties, one buying and one selling, without ever purchasing stocks personally. A broker or brokerage firm makes a profit by taking a fee for each transaction facilitated.

Just as a food market has a physical location, each stock market has a physical trading floor, e.g. The NYSE is located at 11 Wall St. in New York City.

While an individual technically owns a portion of the company, in which he or she owns stock, the actual control of the company is limited to a near negligible vote in the board of directors' election. The exception to this is major shareholders in the company, who have a significant say.

1.3 Outline of the Project

Our plan is for each of us to research our individual strategies for trading, and use our research to try and learn more about trading on the stock market through simulation. Over the course of a seven-week period, we will be using these strategies in four different simulations to study different trading strategies and their relative effectiveness. The trading methods used will be: a long term buy-and-hold, market shorting, leveraged ETFS, and long option straddles prior to earnings announcements. This diversity of trading strategies will allow us to accomplish a solid trading method comparison for our relatively short-term simulation.

For the actual simulations, we will be using a virtual trading program called Interactive Brokers, which will allow us to keep track of our stock trades and our overall trading performance. During the course of this simulation we will be writing weekly updates of the stock performance and our interpretation of the results. For instance, the buy-and-hold simulation trader will explain the week-to-week movements of each stock in the portfolio and predictions for future movement. After our seven-week trading period, we will analyze the performance of each portfolio and the method used, and their effectiveness of the method in relation to the others. Interactive Brokers is a trading platform generally used by brokers and high net-value or very experienced individuals and thus has a slightly lower trading commission than most online brokerage firms, so for the purposes of our project we will be using the $1 commission per what Interactive Brokers charges.

While we obviously would prefer to show a profit at the end of the seven-week trading period, a more important inter-market comparison will be our performance versus a market-representative index such as the S&P 500. This strategy of "beating the market" is often a sufficient goal of traders, despite possible losses in a bear market. The other important goal in our project is, in the case of a successful portfolio, determine what the strengths of the portfolio were that made it successful and if there were any flaws that hindered additional positive performance; and in the case of an unsuccessful portfolio, determine what the weaknesses of the portfolio were that lead to its poor performance, and whether any part of the strategy still has merit despite its performance.

2. Simulation A: Buy-and-Hold

For this simulation I will be observing what happens with stocks over a longer period of time compared to other simulations. Throughout the weeks of simulation, I will hold the same stocks and for a period of time and watch the trend in price for those stocks. I will divide up my money between seven different stocks in three different categories and observe what happens with the market.

2.1 Introduction and Background

For the method of buy-and-hold there needs to be more background research than with other strategies, in order to see trends not just in the short-term, but over months in order to see the general direction the stock is moving. Even though this simulation is only seven weeks, it will give a general idea of long term trading trends with this type of portfolio. While many traders believe that long term holding is not the way trading should be done, our group is interested in comparing this method to ones that are more complicated and involve more rapid trading to see if profits are still made.

Long term holding is a common method used by many people. A great deal of people buy into the stock market but, as they do not know much about investing, simply hold their stocks until they're ready to retire. One of the reasons is because some companies give their employees a reduced rate on stock so the employees buy it but then almost forget about it. In some cases when companies are new and beginning to do well it is good to hold the stock for a longer time but for stocks in companies with uncertain futures it is not a good idea. The goal of a long term hold portfolio is to find a stock that will retain its value or increase over time, which can be hard to predict.

2.2 Portfolio Strategy and Research

For this section of the simulation I will be buying shares of stock at the beginning of the simulation and holding them until the end of the simulation which is when I will sell them. In order to try to pick the best stocks much background research is needed to ensure success.

2.2.1 Trading Strategy

When looking for long term stocks, one thing that is good to look at is the idea of dividends. Dividends are usually a quarterly payout that is given to stockholders who have the stock roughly a month in advance. This payout is a way to let the investors receive part of the companies' profits as well. Even if a stock is going down or fluctuating a lot the buyer could still make money off of dividends. For many stocks, the date that a stock must be purchased in order to receive a dividend for that quarter has passed. Due to that, when deciding what stocks to purchase for this simulation, I will decide if any dividend stock left look promising and worth the dividend or whether I should purchase others instead.

Another thing to look into with long term holding is whether the stock is a growth stock. A growth stock is stock in a company that is usually newer to the business but is already doing very well. If a stock is doing well right from the beginning it is predicted that the stock will continue to do even better as the company grows. When looking at companies I will also look for growth stocks.

2.2.2 Portfolio Selection Criteria

When looking into long term stocks another thing that needs to be considered is world events. If there is a war over oil, buying stocks in oil companies would not be a good decision. This time of year is one that is very prone to hurricanes and after hurricane Irene just hit New

York and Vermont very badly, looking into stocks for stores such as Home Depot or construction companies may be a good choice. This is will be very important in deciding the stock and will be discussed more in depth when looking at a finalized list of what stocks I will be purchasing for this simulation.

When looking at stocks to be held over a longer period of time, it is important to not just buy and see what happens but also to have a plan and reasons behind the stocks chosen. For this project looking at overall trends for the stock will be important but looking into events in the news also is. The idea of dividends will play a role in my decision making but may not work for the types of stocks I feel will do best for this simulation.

2.2.3 Companies Selected

For actually picking the stocks for my simulation I did research into many trends of stocks right now. I tried to look for ones which seemed to be going upward steadily instead of just having a recent peak. I tried to pick stocks within the same category so I could have competitors with hope that at least one will do well enough for me to profit. I also looked into recent news stories in order to pick those categories better for the time in which we will be doing the simulation. I ended up picking seven different stocks from three different categories. Those categories are internet search companies, oil companies, and construction related companies. I gravitated towards those stock categories through recent events in the news and the time of year and further narrowed down my search within the categories by recent trends in the market. Although the idea of dividends was considered with my stock options, I found it was better in this case to just pick without looking at whether or not it had a dividend because of the limited amount of dividend stocks available at this time.

The first sector of interest was construction related companies. This included Caterpillar and The Home Depot. There were many reasons that I looked into construction companies for my stocks in this project. One of those is the season right now. During this time of year there are many storms and many hurricanes which hit the United States. At the beginning of September, hurricane Irene hit the capital district of New York extremely hard. Many houses were completely destroyed and in other parts of the state, flooding caused major damages. Due to this, much rebuilding needs to be done in order to bring those communities back to how they were before the storm. This is one of the many reasons why I looked into construction. With power being out for so long in many places along the east coast, many generators were being bought. There were also many replacement materials that needed to be bought which are bought at places such as The Home Depot. When I looked into Lowes, a competitor of The Home Depot, their stock was not doing as well as The Home Depot so I picked The Home Depot for my long term. I picked Caterpillar because as a construction company, they will be working on many repairs caused by the fall weather. Also, in general, there are always structures being built so there is always work for their company. When looking at both of these stocks, they both had an upward trend which made me decide on them.

Knowing some specifics about the companies picked is also a good thing. The first stock in the construction category is The Home Depot. In 1978 Home Depot was founded by Bernie Marcus and Arthur Blank. The Home Depot is said to be the "fastest growing retailer in U.S. history". The Home Depot was first available on the New York Stock Exchange in 1984 after going public on the NASDAQ. This makes The Home Depot a newer stock to the market. With The Home Depot still growing as a company, this stock is a good one to look into. Over the past couple years they have open location in Mexico and China buy buying other companies making them now an international company [43].

The CEO of The Home Depot right now is Frank Blake. He was appointed in 2007 after holding positions of vice chairman of the board of directions, and executive vice president of the company. He also had prior leadership experience by the time he became CEO due to being an executive vice president starting in 2002. In this job, Frank Blake had a great deal of responsibilities including corporate operations. With all of this experience Frank Blake has made a good CEO and with his leadership and the recent increase of sales I feel that The Home Depot will be a good choice for my stock [43].

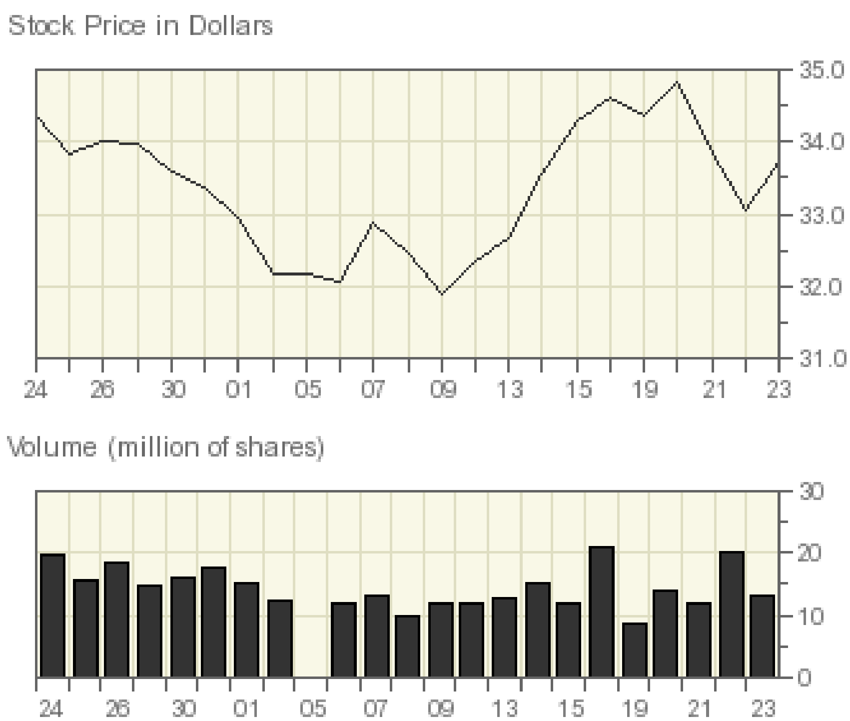

Figure 2.1. The Home Depot stock over the past month

My other choice for a construction related company was Caterpillar Inc. Caterpillar is known for their construction equipment along with mining equipment. They also make diesel and natural gas engines, industrial gas turbines, and diesel-electric locomotives. Not only are they involved with the actual equipment, they also are involved with services such as finance, remanufacturing, logistics, and progress rail services. With all of the construction going on in the United States and also across the world, Caterpillar is doing very well. Right now the company is installing a rail line through Saudi Arabia's Nafud Desert [4].

Caterpillar is older than The Home Depot and has been around for over 85 years, demonstrating that it can last on the market. Their sales last year (2010) were $45.588 billion. The CEO of the company and also the chairman of the company is Douglas R. Oberhelman. He has held many positions in the company since joining in 1975. He was a senior finance representative in South America, which makes having him in charge a positive thing from a financial standpoint. He was also the chief financial officer from 1995 to 1998 while also holding the vice president position. Having Douglas R. Oberhelman as the CEO of Caterpillar Inc is good for the company, and makes me believe that buying stock in them is a good choice [4].

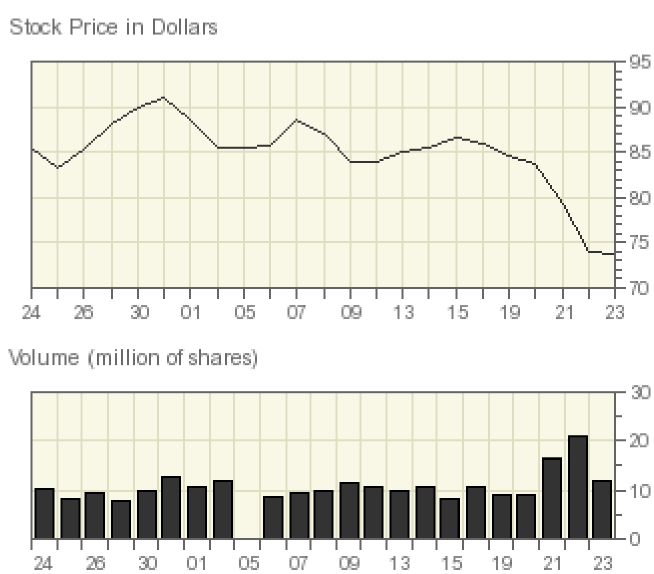

Figure 2.2. Caterpillar stock over the past month

One of the other categories that I chose for my stocks was oil. The two companies that I was going to pick were BP and ExxonMobil. The reason that I looked into oil was the time of year. The weather in the United States is becoming colder which usually causes sales of heating oil to go up. It is predicted at the moment that oil prices will remain about the same for the rest of the calendar year, which will hopefully make the market for oil prices stable. When looking in general at the oil market right now, it appears to be climbing. I am hoping that it will remain this way in order to increase my profits. I also am interested in watching the trends of oil market prices, due to these reasons I chose to buy two stocks in the oil industry. I ended up deciding near the end of the week that BP would not be as good of a choice as I first thought due to recent news events so I am now going with ATP Oil & Gas.

The first oil stock I chose is ExxonMobil. As one of the leaders in the oil business I felt it would be interesting to look into them. When looking at their stock they appeared to be steadily going up so appeared to be a good choice for this simulation. ExxonMobil has been around for over 125 years showing that it has survived many hard economic times. With ExxonMobil being now made up of ten separate companies, I feel that they are a safe investment choice. The CEO of ExxonMobil is Rex W. Tillerson. He joined ExxonMobil in 1975 as a production engineer for the company. He moved up through the ranks of the company becoming a general manager, production advisor, and president of many divisions. In 1999 Rex Tillerson became the Senior Vice President of the development company and in 2001, the president of the corporation. In 2006 he became the CEO of the company. With his many years of experience within the company, he seems to be a stable leader. Since he has been CEO for many years, his leadership should not affect the stock negatively. I feel ExxonMobil will be a good choice for the simulation [36].

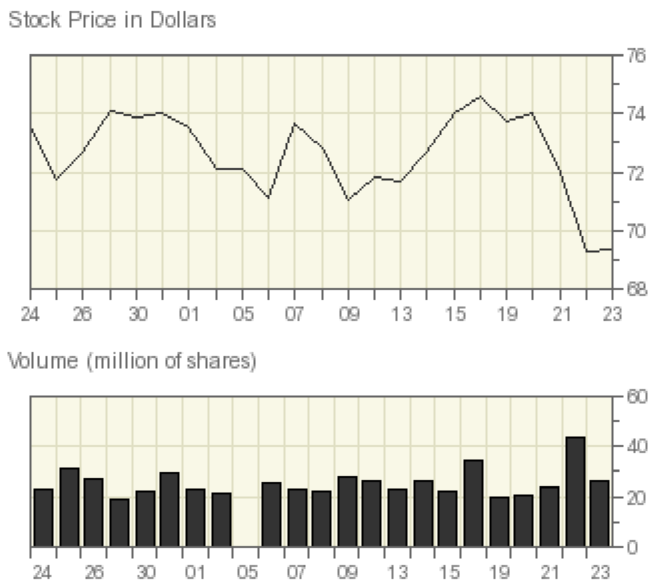

Figure 2.1. ExxonMobil stock over the past month

In the weeks leading up to the stock simulation beginning I was looking into BP because they were rebuilding a year after the oil spill and stocks were going up. On April 20, 2010 there was an explosion on a BP oil rig which began a three month oil leak due to not having an emergency shut off valve. This cost the company millions of dollars. Since it has been a year since the spill, I figured this would be a good time to buy the stock. In the week that I picked my stocks I noticed that BP was beginning to drop and after looking into it I noticed on September 21, 2011 a bill passed the House of Representatives bringing the oil spill back into the news. This bill was about the distribution of the fines that were collected from BP. Although no more money will be collected from BP, the fact that the oil spill is back in the news is bad for BP's stock. Due to this I have changed my decision to purchase BP stock [35].

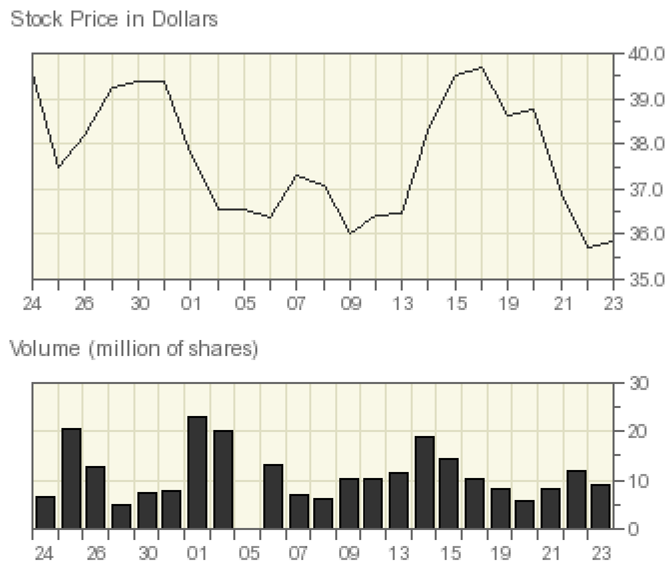

Figure 2.2. BP stock over the past month

My second oil company after deciding not to use BP was ATP Oil & Gas. I looked at them because their stock dipped recently but it is now going back up again. ATP works with natural gas and oil in the Mediterranean Sea, the Gulf of Mexico, and the North Sea. It was founded in 1991. Since then, the company has a 98% success rate with their projects which is a good outlook for the company. The CEO of ATP is T. Paul Bulmahn and the company is located in Houston, Texas [3].

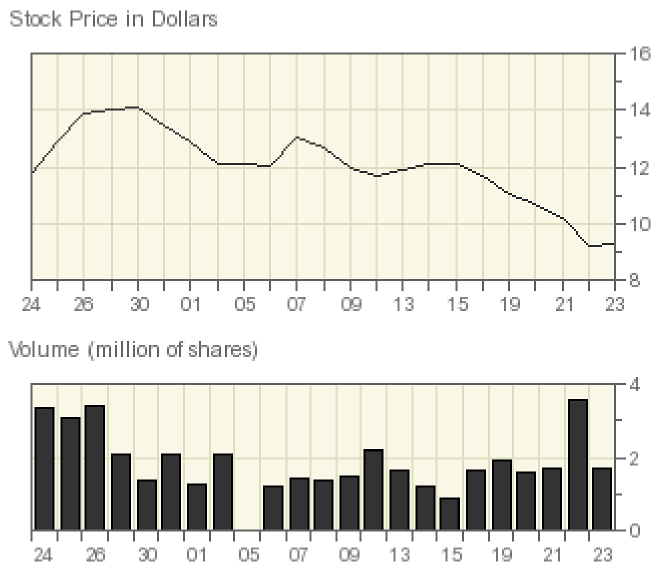

Figure 2.3. ATP Oil & Gas stock over the past month

My last category of stocks were different internet search engines. The three I looked into were Google, Yahoo, and Bing, which is owned by Microsoft. The reason I looked into this category is because I noticed how many business moves Google has been making and looked into their stocks. Although they dropped a bit in recent history, since the end of August they had been doing well. I decided it would be good to look into other search engine companies so I decided on Yahoo and Microsoft. Microsoft interested me anyway due to their new products and I picked Yahoo because their stock was going up and because it was a good third party to look at. Looking to technology companies for stocks to purchase can greatly pay off when they come out with new improved products. When looking into Microsoft I considered Apple but due to the declining health of Apple CEO Steve Jobs I chose not to use them.

The first of my companies for technology and search engines is Google. One of the first things that I noticed about Google stock was that it was extremely expensive. While all of the other stocks I'm looking into are less than $100 per share, Google as of September 22, 2011 is $520.66 per share. Since I am thinking of splitting my stock money evenly between all of the companies I may not be able to acquire many shares of Google but I am still going to purchase them. Google started as BackRub in 1996 by Larry Page and Sergey Brin. They wanted to determine how important individual web pages were and after formalizing it in 1998 it became Google. Google's CEO right now is one of the founders, Larry Page. I feel this is a secure choice for the company since he's been with the company from the beginning. Even though Google is a newer company, they have made many important business decisions. They have acquired a great deal of other companies making them even more powerful than before. Recently, in August 2011 Google made an offer to purchase Motorola which own a great deal of Google based Android cell phones. Business moves like these are making Google stock even greater. With all of these positive decisions by the company, I have decided to include Google in my simulation [24].

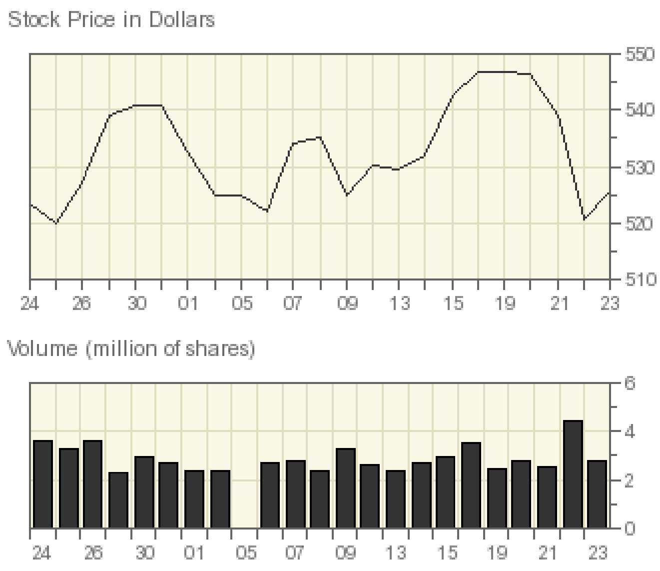

Figure 2.4. Google stock over the past month

Yahoo is one of the other companies that I'm buying. When looking into other search engines besides Google, I found that Yahoo's stock was going up and felt they would be a good choice. They have been around for a while and are stable in the market so they seemed to be good for the simulation. Yahoo was founded in 1994 by David Filo and Jerry Yang. They were

PhD candidates at Stanford and wanted a way to keep track of their internet interests. Since then, the company has made a search engine which makes it easier for people to find things that they were looking for on the internet. Yahoo wants people to be able to connect with other people over the internet and be able to learn more about topics of interest and connect over them. The company has expanded to having employees in 25 different countries with the headquarters in Sunnyvale, California. On September 6, 2011, there was a CEO change in the company (Overview). Former CEO, Carol Bartz was fired after months of talk of such a move. The intern CEO right now is Tim Morse. This could be a risky time to buy the stock but it seems like the public approves of this change in power in Yahoo. Hopefully this decision pays off for the stock prices [31].

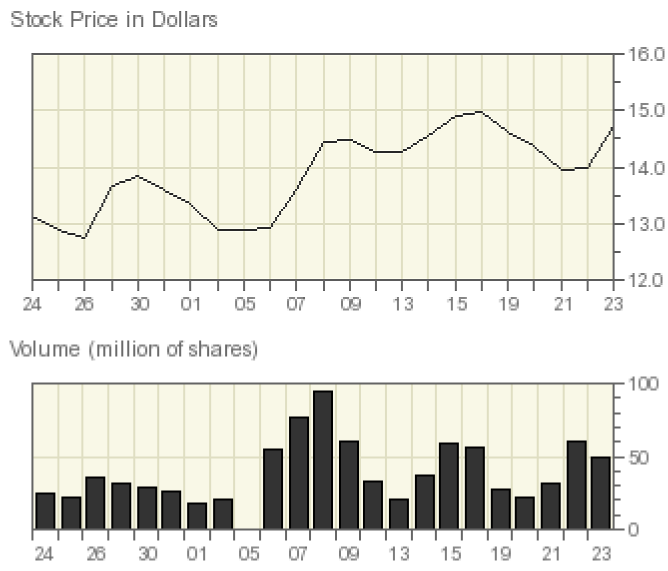

Figure 2.5. Yahoo stock over the past month

The last company I looked into was Microsoft. I was thinking of different search engines and I picked Bing as one to look into. Bing is owned by Microsoft and with all of the developments that Microsoft has, I felt they would be a good choice. Microsoft was founded by

Bill Gates and Paul Allen in 1975. Since then, the company has grown exponentially with their introduction and refinement of the Windows operating system. Microsoft's leading competitor is Apple but with the leadership of Apple, Steve Jobs, having health issues, the future is much more stable for Microsoft. The CEO for Microsoft is Steve Ballmer. Steve Ballmer joined Microsoft in 1980 so his history with the company makes him a good CEO choice [27].

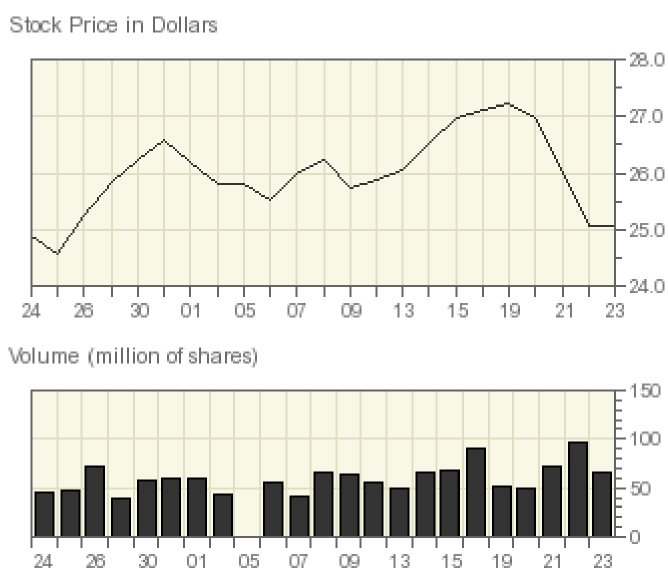

Figure 2.6. Microsoft stock over the past month

As I progress with this simulation, I will be tracking what happens with both the prices of the stocks and the companies themselves. With the long term holding method I feel that it is important to know the history of the company and know the trends of the stocks. As the simulation progresses, I will watch the news and the stocks to analyze why the stocks are changing.

2.3 Transactions

Week 1

September 26, 2011

Today we began the simulation part of our project. Since I am doing the long term holding portion of the simulation, I put in the orders for my stocks before the market opened through Interactive Brokers so I would get them purchased soon after opening. When calculating my allowable money to spend on stocks, I used the closing prices from Friday September 23, 2011 in order to divide up my $25,000 between my 7 stocks. I divided it so I could spend $3571.43 on each stock. When I figured this out I added up the leftover money and was able to purchase another share of Google. Although I calculated the costs with the closing prices, it takes some time for the transactions to go through so I ended up going over my budget by a bit and spent $25,173.85 on my stocks. Although I did go a little over, it was about the budget we each had individually. I ended up purchasing seven shares of Google for $527.84 each, 142 shares of Microsoft for $25.25 each, 242 shares of Yahoo for $14.60 each, 51 shares of ExxonMobil for $70 each, 105 shares of The Home Depot for $33.75 each, 48 shares of Caterpillar for $74.82 each, and 384 shares of ATP Oil & Gas for $9.45 each. Each order had a transaction fee of $1 so I spent $7 in fees on the orders as well. After placing these orders, now I just have to monitor the market and see what my profits are at the end of each day. Although I cannot sell my stocks until the last day of the simulation, keeping track of what happens each day will help me to better understand the trends in the market.

original picks	Price	allowed	shares	spent	left
GOOG	525.51	3571.43	6	3153.06	418.37
MSFT	25.06	3571.43	142	3558.52	12.91
YHOO	14.71	3571.43	242	3559.82	11.61
XOM	69.31	3571.43	51	3534.81	36.62
HD	33.72	3571.43	105	3540.6	30.83
CAT	73.86	3571.43	48	3545.28	26.15
ATPG	9.3	3571.43	384	3571.2	0.23
Total				+$7 commission	536.72
GOOG			7		

Table 2.1. How I divided up my stocks

In order to keep track of my stocks I have entered them into the program that the rest of my group is using called Interactive Brokers. It is easier for them to use it since you can buy and sell on it. In order to keep track of mine though I also have downloaded an app for my Android phone called Stock Watcher which keeps track of my daily gains and loses with my set stocks. It isn't good for buying and selling as much but for what I need it is perfect. I can track my daily profits and losses on that then transfer it into a Microsoft Excel document.

For my first day of trading, I ended up with an overall profit. Last week, the market went down for the majority of the week and then on Friday it started going back up again. This appeared to carry on Monday as well since all of the stocks I purchased went up in value. For my first day watching the market I made more money than I expected which was impressive to me. For each day that I watch the market I will be adding to a chart in which I will be keeping track of the daily changes in the market. I will insert the daily results into this document in order to show in a daily entry form what is happening.

In summary for my first day I ended up making $345.80 on the market. The difference between my simulation and of the others in this project is that I don't sell every day, so those profits are only theoretical. I still have many weeks of leaving my money in the market so in the end I will see what my final profits turned out to be.

Tuesday September 27, 2011

Today was my second day trading on the market. Like the first day, stocks were continuing to climb. Although I am just holding for the entire simulation I do monitor the stocks throughout the day. At one point I had almost $1000 in asset profits and although I ended the day with and overall asset profit of $613.16, it was very interesting to watch how much the market moves throughout the day. Although my method doesn't involve doing much with the market it makes it easy to watch trends and learn how to understand the market better.

After the market went down for four days last week I expected that it would go up again today and I was correct in assuming that. Although some stocks did fluctuate during the day making my asset profits larger, at the closing I had five out of my seven stocks go up while two went down. The two that went down were Yahoo and The Home Depot. When looking into events in the news there was no clear reason why those two went down, so I assumed that the market was going to even out again after the big drop, and subsequent big rise in prices. Based on this assumption I feel that tomorrow the market might drop a little more but I will have to see what that looks like.

Wednesday September 28, 2011

Today was a bad day overall for the market. Although some of my group members enjoy days in which the market goes down, for example the shorting portfolio, I do not. I know that there will be days in which the market goes down but it still is frustrating to watch knowing that I cannot sell until the last simulation day. The past couple days I have been watching my group members making their profits for the day but then are able to keep those profits unless they want to risk them in the market again. With my daily profits, they mean nothing because I could lose them all the next day. This is what happened today for my long term holdings. When I checked the market during the day most of my stocks were going down and a few remained going up but by closing they had all gone down below the value at which I bought them so I now have less money than I began with.

I was curious as to why the market was going down so much that day so I looked up some information about world news in order to better understand why the market did what it did today. When researching I found that the reason it went down was due to the European debt crisis. Overall the Dow Jones Industrial Average fell 1.61% today because investors were getting worried about the handling of the debt. Today Finland voted to approve changes to the bailout fund for the euro-zone. Tomorrow I expect this to affect the market again when Germany votes on the changes. By tracking world events around the stock market I can better understand the trends [8].

Thursday September 29, 2011

Today was another bad day for the market with more talks of the debt crisis in Europe. Although the market wasn't affected as badly as yesterday, it was still a bad day for my stocks. I had four of my stocks continue to go down while three of them climbed up slowly. Sadly the amount they went down was still more than the increase from the rising stocks was, so I was still losing money overall. Just today alone I lost $320.57 so my overall loss is $405.90. Hopefully with more voting in the European nations going on today, this will put investors at ease and the market will climb up again tomorrow for next week. It's very interesting to learn how events worldwide affect the whole stock market. With each day on the market I'm learning more about how the stock market works.

Friday September 30, 2011

Today finished out my first week on the market. It was a very interesting week for me to get into the market for the first time. While the week started out very well, by the end of the week I was losing money. Today the market continued to go down due to the debt crisis. I also learned that this was the worst quarter for the stock market since the first quarter of 2009 with the Dow Jones Industrial Average dropping 2.16% on Friday and 12% for the quarter. Most of this was due to the debt crisis in Europe and with the recessions in the U.S. and China. More investors were worried about the stock market and invested more into the U.S. Treasury than the market. They are now hoping that the fourth quarter will be better [30].

Due to all of this information, I am hoping to see an increase in the market next week. With this optimistic view of events in the fourth quarter hopefully my stocks will go up with a profit at the end of the simulation. In my first week of watching the market I have already learned so much about how the market changes and how events in the world affect the prices on the market.

	shares	bought	cost	closing 9/26	Asset Gain/Loss	closing 9/27	Asset gain/loss
GOOG	7	527.84	3694.88	531.89	3723.23	539.34	3775.38
MSFT	142	25.25	3585.5	25.44	3612.48	25.67	3645.14
YHOO	242	14.68	3552.56	14.75	3569.5	14.54	3518.68
XOM	51	70	3570	71.72	3657.72	72.91	3718.41
HD	105	33.75	3543.75	34	3570	33.88	3557.4
CAT	48	74.82	3591.36	76.85	3688.8	77.67	3728.16
ATPG	384	9.45	3628.8	9.63	3697.92	10.01	3843.84
Total			7 (fee)		25519.65		25787.01
			25173.85				
daily profit					345.8		267.36
total profit					345.8		613.16

closing 9/28	Asset gain/loss	closing 9/29	Asset gain/loss	closing 9/30	Asset gain/loss
528.84	3701.88	527.5	3692.5	515.04	3605.28
25.575	3631.65	25.45	3613.9	24.89	3534.38
14.19	3433.98	13.42	3247.64	13.17	3187.14
72.07	3675.57	73.88	3767.88	72.63	3704.13
33.6	3528	33.79	3547.95	32.87	3451.35
75.08	3603.84	75.39	3618.72	73.84	3544.32
9.15	3513.6	8.54	3279.36	7.71	2960.64
	25088.52		24767.95		23987.24
	-698.49		-320.57		-780.71
	-85.33		-405.9		-1186.61

Table 2.2. Table of results for week 1

Week 2

Monday October 3, 2011

Today was another down day for the market. As the first day of the fourth quarter I expected stocks to begin going up again but I was wrong in my guess. It turned out that even though the manufacturing activity in the U.S. went up today, this was overshadowed by the debt in Greece. Over the weekend Greece said that its target for deficit would be missed. Investors last week thought that the scare would be over this week leading to the market increasing again but this was not the case. At one point today the Dow Jones Industrial Average was trading below the lowest closing level of the year but then raised up a bit so it was still down 191 points but not as extreme as earlier today.

When looking at my stocks I noticed that Yahoo was the only one of mine that went up today and that was because Jack Ma who is the chief executive of the Chinese Internet company named Alibaba Group said he was interested in buying the stock. I found it was interesting that even the idea of this company being bought brought the stock up. Jack Ma never said that he would buy for sure only that he was interested. This is a good trend to look out for in the market [40].

Tuesday October 4, 2011

Today was an interesting day for the market. For the majority of the day when I checked my stocks I noticed that most of them were going down. Then at the closing, I noticed that most of them except ATP Oil & Gas were up. This was very good news for my portfolio since it has been down for a while now. It turned out that in the last hour of trading, there was a report that the European Union ministers are figuring out how to recapitalize the Continent's banks. They feel that Europe's banks can withstand the debt crisis. Even with this good news, investors are still worried about the situation in Greece. Luckily the good news for today caused the Dow Jones Industrial Average to rise 153.41 points [41].

Wednesday October 5, 2011

Today the market got back on track for one of the first days since the simulation began. With all of the talk of the debt crisis in Europe, investors have not been holding much hope in the stock market but with that situation getting sorted out more, investors are buying again. Today the Dow Jones Industrial Average gained 131.24 points. This was also helped by more jobs being added this month than expected. This will be officially announced Friday [6].

Yahoo continued to go up today but for other reasons as well. It was reported that Microsoft is considering a bid for the company. At the moment they are at their highest point in three months. It seems that different people are making bids each day so that news of a potential buyout is helping the company. The company is preparing to send financial information to their potential buyers. Microsoft tried unsuccessfully to buy the company in 2008 [23].

Thursday October 6, 2011

Today was another good day for the market. Due to Europe's attempts to control the debt, the market has been steadily increasing over the past couple days. Even stocks that were doing poorly lately due to the debt crisis ended up rising today. The European Central Bank decided to keep the interest rate steady at 1.5% which helped both the market in Europe and here. For my portfolio Yahoo and ExxonMobil still fell but only by cents instead of dollars [39].

Friday October 7, 2011

This is the end of my second week of trading. Today looked like it was going to be a good day for the market but near closing almost all of my stocks fell. News came out today that the United States has added more jobs to the economy but they aren't keeping up with the pace that the government was hoping for, in order to get the unemployment rate down further. This news though didn't seem to affect the market too heavily. The main reason for the drop today was the situation with Spain and Italy. Both of these countries had debt downgrades today which once again put investors in panic mode. This news made the euro go down in value which caused the market to go down during closing. The government is trying to restore confidence in the banks in those countries but it wasn’t enough for the market today.

For the second week of trading I am not doing too bad considering the situation going on in Europe at the moment. I am hoping that while the simulation continues, the debt crisis in Europe gets sorted out so I will end up with a profit. I find it very interesting to be monitoring the market at a time such as this and I am being provided with a good experience, with the market’s reaction to world events.

	shares	bought	Cost	closing 10/3	Asset gain/loss	closing 10/4	Asset gain/loss
GOOG	7	527.84	3694.88	495.52	3468.64	501.9	3513.3
MSFT	142	25.25	3585.5	24.53	3483.26	25.34	3598.28
YHOO	242	14.68	3552.56	13.35	3230.7	14.46	3499.32
XOM	51	70	3570	71.15	3628.65	72.83	3714.33
HD	105	33.75	3543.75	31.59	3316.95	32.47	3409.35
CAT	48	74.82	3591.36	70.55	3386.4	72.54	3481.92
ATPG	384	9.45	3628.8	6.65	2553.6	6.58	2526.72
Total			7 (fee)		23068.2		23743.22
			25173.85				
daily profit					-919.04		675.02
total profit					-2105.65		-1430.63

closing 10/5	Asset gain/loss	closing 10/6	Asset gain/loss	closing 10/7	Asset gain/loss
504.7	3532.9	514.71	3602.97	515.12	3605.84
25.89	3676.38	26.34	3740.28	26.25	3727.5
15.92	3852.64	15.65	3787.3	15.47	3743.74
73.95	3771.45	73.89	3768.39	73.56	3751.56
32.83	3447.15	33.38	3504.9	33.92	3561.6
74.26	3564.48	77.09	3700.32	75.52	3624.96
7.49	2876.16	8	3072	7.78	2987.52
	24721.16		25176.16		25002.72
	977.94		455		-173.44
	-452.69		2.31		-171.13

Table 2.3. Table of results for week 2

Week 3

Monday October 10, 2011

Today is the beginning of the third week of the simulation. For the first day of trading this week the market did extremely well. All of my stocks ended up going up today making me end up with a profit if I sold today. The Dow Jones Industrial Average gained 329 points. This increase was due to European leaders unveiling a plan which, it is claimed, will solve the debt crisis in Europe by the end of the month. The plan developed by Angela Merkel and Nicolas Sarkozy involves recapitalizing the European banks. The plan will be officially presented at the G20 meeting on November 3 and 4. This helped to restore the investors' confidence in the market. The euro value went up along with oil and silver [47].

One of the stocks that has been constantly going up every day is Yahoo. This is due to even more potential buyers of the company coming forward. It was reported that the founder of Yahoo, Jerry Yang may organize a buyout of the company with different firms [46].

Tuesday October 11, 2011

Today was a mixed day for the market but for my stocks it was pretty good. All of my stocks went up except for ExxonMobil which only went down one cent. Through most of the day stocks went down but then changed at the end of the day when it was said by European leaders that there will be a debt plan unveiled by the end of October. Tomorrow looks like it will be a losing day for the market when after-hours news was released about Slovakia voting down the bailout [37].

Wednesday October 12, 2011

Today was the third day of trading for the week and for the most part the market went up. This was surprising news after hearing the in Slovakia, the lawmakers were holding up the euro zone bailout expansion which stopped the efforts for the moment. This means that there will have to be another vote but it is unknown at the time when that will happen. It is said that Slovakia will vote yes in the next vote but just wants to work out their own problems first [38].

Thursday October 13, 2011

Today was a positive day for the market overall. The Dow Jones Industrial Average ended up 102.55 points. Although three of my stocks went down today, it was only by a small percentage each. This increase in the market was due to investors being more optimistic about the banks in Europe being recapitalized. Even though stocks ended high, the last hour of trading brought the profits down a little. Today was good overall for industrial stocks including one of mine, Caterpillar which rose 1.3%. Today Blackberry stocks went down due to their service problems which is probably why Google who has Android phones went up a great deal today [5].

Friday October 14, 2011

Today was a great day for the market. With the gains that the market made today, the Dow Jones Industrial Average and the Nasdaq Composite are both in the green for this year. This is also three weeks in a row of the Dow going up. Investors became optimistic that this weekend there will be meetings about the crisis in Europe [11].

One of the leading stocks today was Google which I had picked as one of my stocks. Google jumped $32.69 today to finish at $591.68 with a gain of 15%. Google reported strong earnings after closing on Thursday which made the stock start off today on a high note. Soon after opening when I checked I noticed that it had already jumped about $20 and only continued to climb [30].

	shares	bought	cost	closing 10/10	Asset gain/loss	closing 10/11	Asset gain/loss
GOOG	7	527.84	3694.88	537.17	3760.19	543.18	3802.26
MSFT	142	25.25	3585.5	26.94	3825.48	27	3834
YHOO	242	14.68	3552.56	15.84	3833.28	15.86	3838.12
XOM	51	70	3570	76.28	3890.28	76.27	3889.77
HD	105	33.75	3543.75	34.66	3639.3	34.71	3644.55
CAT	48	74.82	3591.36	79.13	3798.24	80.66	3871.68
ATPG	384	9.45	3628.8	8.53	3275.52	8.59	3298.56
Total			7 (fee)		26022.29		26178.94
			25173.85				
daily profit					1019.57		156.65
total profit					848.44		1005.09

closing 10/12	Asset gain/loss	closing 10/13	Asset gain/loss	closing 10/14	Asset gain/loss
548.5	3839.5	558.99	3912.93	591.68	4141.76
26.96	3828.32	27.18	3859.56	27.27	3872.34
15.77	3816.34	15.93	3855.06	15.91	3850.22
77.16	3935.16	76.37	3894.87	78.11	3983.61
34.72	3645.6	34.41	3613.05	35.05	3680.25
81.7	3921.6	81.44	3909.12	84.09	4036.32
9.04	3471.36	9.17	3521.28	10.65	4089.6
	26457.88		26565.87		27654.1
	278.94		107.99		1088.23
	1284.03		1392.02		2480.25

Table 2.4. Table of result for week 3

Week 4

Monday October 17, 2011

Today was a down day for the market. For the past two weeks stocks in general have had an upward trend but today ended that trend. The Dow Jones Industrial Average fell 2.1% today.

This was due again to the European debt crisis. Europe said that they are far from a solution to the debt crisis still and Germany gave a similar notice [7].

Although my stocks went down today I still have an overall profit at the moment which I hope will hold out until the end of the simulation.

Tuesday October 18, 2011

Today was a good day for the stock market after there were reports that there will be an increase in bailout money for Europe. This increase is said to be coming from Germany and France. This caused the market to increase today. This helped after the large decrease in the market yesterday. One of my stocks, Yahoo, went up because their earnings were higher than expected even though they were down this quarter [48].

Wednesday October 19, 2011

Today for the most part, my stocks went down. The only one that went up was Yahoo and that has been going up recently due to the talks of the company being bought out. It continued to go up today when their earnings announcement came out which was low, but higher than expected. Today's drop in the market was due to the report given by the Federal Reserve today which was more pessimistic about the economy than was hoped for. For most of the day the market remained pretty even but then changed once it was announced that the economy wasn't doing very well. Investors are said to not be trading as much due to being nervous about the U.S. economy and that of Europe [15].

Thursday October 20, 2011

Today was an interesting day to be watching the market. Stocks were moving up and down constantly with the end result having my stocks move only a few cents each. This trend was attributed to the debt crisis again due to different stories coming out of Europe. In the afternoon it was said that European leaders were going to have a plan for the bailout plan by next Wednesday. That morning it was said that there were disagreements over how to give out the bailout money [12].

One of my stocks, Microsoft was in the news today after falling during the day. After the market closed Microsoft reported their earnings for the quarter which caused the stock to continue to drop after hours [9].

Friday October 21, 2011

Although today wasn't an especially good day for Microsoft in the market, their earnings announcement might make the stock go up for Monday's opening. Microsoft had a profit increase of 6.1% in the third quarter. This was mostly due to the sales of Microsoft Office continuing to increase [25].

Today stocks rose and one of the reasons was the death of Moammar Gadhafi, making investors in the United States and overseas pleased. Gadhafi was the dictator of Libya for 42 years. He was killed by rebel forces in Libya today.

	shares	Bought	cost	closing 10/17	Asset gain/loss	closing 10/18	Asset gain/loss
GOOG	7	527.84	3694.88	582.41	4076.87	590.51	4133.57
MSFT	142	25.25	3585.5	26.98	3831.16	27.31	3878.02
YHOO	242	14.68	3552.56	15.7	3799.4	15.47	3743.74
XOM	51	70	3570	77.47	3950.97	78.89	4023.39
HD	105	33.75	3543.75	34.65	3638.25	35.95	3774.75
CAT	48	74.82	3591.36	81.52	3912.96	84.72	4066.56
ATPG	384	9.45	3628.8	10.29	3951.36	10.32	3962.88
Total			7 (fee)		27160.97		27582.91
			25173.9				
daily profit					-493.13		421.94
total profit					1987.12		2409.06

closing 10/19	Asset gain/loss	closing 10/20	Asset gain/loss	closing 10/21	Asset gain/loss
580.7	4064.9	583.67	4085.69	590.49	4133.43
27.13	3852.46	27.04	3839.68	27.16	3856.72
15.94	3857.48	16.18	3915.56	16.12	3901.04
78.43	3999.93	78.71	4014.21	80.13	4086.63
35.4	3717	35.73	3751.65	36.86	3870.3
83.56	4010.88	84.26	4044.48	87.39	4194.72
10.14	3893.76	10.04	3855.36	10.08	3870.72
	27396.41		27506.63		27913.56
	-186.5		110.22		406.93
	2222.56		2332.78		2739.71

Table 2.5. Table of results for week 4

Week 5

Monday October 24, 2011

Today was a good day for my stocks. I ended up gaining almost $600. The only that dropped was The Home Depot so it was an overall good day. One of the reasons that stock could have gone down was due to Caterpillar having such a good earnings announcement. Since they are in the same category of products this could have affected The Home Depot. Caterpillar had record revenue for the third quarter this year and is still looking strong. Investors were also more optimistic about the crisis in Europe. Hopefully the plan that is said to be revealed on Wednesday will make investors more willing to trade [53].

Tuesday October 25, 2011

Today was an extremely bad day for the market. All of my stocks ended up going down making me lose about $600. Investors were nervous about what is going to be said tomorrow in Europe. Tomorrow is when the plan from Germany and France will be revealed about the debt crisis. There were rumors today that the meeting for tomorrow was cancelled but nothing has been confirmed yet [59].

Wednesday October 26, 2011

Today was the meeting of the European leaders and due to that, the stock market went up. Since investors were not as worried anymore about the debt they began investing more today. The only news that came out of the meeting was that they were closer to a compromise. This helped make all of my stocks go up today with the exception of Microsoft. Many shares were being sold of Microsoft making their value decrease. Hopefully good news continues to come out of Europe and make the market continue its upward trend [17].

Thursday October 27, 2011

Today was a great day for the market. It was agreed upon today in Europe that the bailout fund would be increased and they would be taking losses on Greek bonds. Once this news came out, the market immediately went up. I'm hoping that this will continue to impact the market in a positive way for the remainder of the simulation. One of my stocks, ExxonMobil, rose when their quarterly numbers came out, which showed a profit of $10.3 billion. This was due to an increase in the price of oil and gas [57].

Friday October 28, 2011

Today my stocks basically remained the same. I ended up losing money overall but it evened out mostly with the amount some went up and some went down. Investors were once again having doubts about the handling of the debt situation. This made the market have little change overall with not much trading going on. I am hoping that next week there will be more information coming out of Europe to make investors less worried [51].

	shares	bought	cost	closing 10/24	Asset gain/loss	closing 10/25	Asset gain/loss
GOOG	7	527.84	3694.88	596.42	4174.94	583.16	4082.12
MSFT	142	25.25	3585.5	27.19	3860.98	26.81	3807.02
YHOO	242	14.68	3552.56	16.71	4043.82	16.24	3930.08
XOM	51	70	3570	80.17	4088.67	79.44	4051.44
HD	105	33.75	3543.75	36.7	3853.5	36.04	3784.2
CAT	48	74.82	3591.36	91.77	4404.96	89.89	4314.72
ATPG	384	9.45	3628.8	10.64	4085.76	10.23	3928.32
Total			7 (fee)		28512.63		27897.9
			25173.9				
daily profit					599.07		-614.73
total profit					3338.78		2724.05

closing 10/26	Asset gain/loss	closing 10/27	Asset gain/loss	closing 10/28	Asset gain/loss
586.31	4104.17	598.67	4190.69	600.14	4200.98
26.59	3775.78	27.25	3869.5	26.98	3831.16
16.3	3944.6	16.63	4024.46	16.56	4007.52
81.07	4134.57	81.88	4175.88	81.48	4155.48
36.55	3837.75	37.22	3908.1	36.12	3792.6
91.57	4395.36	96.33	4623.84	96.85	4648.8
10.46	4016.64	11.32	4346.88	11.46	4400.64
	28208.87		29139.35		29037.18
	310.97		930.48		-102.17
	3035.02		3965.5		3863.33

Table 2.6. Table of results for week 5

Week 6

Monday October 31, 2011

Today was a down day overall for the market. This was due to the problems about Europe's solution to the debt crisis. Although this was a down day, the overall month ended in positive territory. Although good news came out of the meeting last week, investors were becoming nervous once again about whether this plan would work. It became known that Greece still needs to approve this plan and because of that, investors sold more for the remainder of the day, causing the decrease in stock prices [49].

Tuesday November 1, 2011

Today was another down day for the market. It seems that the fears that were present at the end of yesterday carried over into today as well. This was due to the debt plan still needing to be voted on by Greece. Since the plan results in Greece taking losses, it is a possibility this idea will be voted down which is bothering investors. They reason that it is safer to sell at this point and buy stocks back if the plan goes through [50].

Wednesday November 2, 2011

Today stocks began to rise again. After losing about $2000 over the past two days, I am starting to make some of that back again. This increase was due to Ben Bernanke holding a press conference. He stated that he will work to help restore the economy in America. Investors were rallied by this and began investing again. They are still worried about Greece but the talk today overshadowed that for the most part. Hopefully the talks in Greece will go well and that will continue to raise the stock market once the talk by Ben Bernanke wares off investors [55].

Thursday November 3, 2011

Once again, my stocks all went up today. This was good considering how much I lost on my stocks earlier in the week. The situation with Greece was ignored for the day and instead the rate cut for Europe's Central Bank was focused on which made investors happier. They were hoping the bank would do more to help in the future. Going into tomorrow, I hope the issue of Greece will continue to not affect the market as much [19].

Friday November 4, 2011

For the final trading day of the week, the market went down with all of my stocks losing money. As I feared yesterday, the concerns about Greece affected the market making the overall week negative. Tonight there is supposed to be a vote for the prime minister which will affect the debt crisis making investors worried. The good news for the day was that the unemployment rate has decreased causing the market to not drop as harshly. With next week being my last week of trading, I am hoping that the market will go up again [16].

	shares	Bough t	cost	closing 10/31	Asset gain/loss	closing 11/1	Asset gain/loss
GOOG	7	527.84	3694.88	592.64	4148.48	578.65	4050.55
MSFT	142	25.25	3585.5	26.63	3781.46	25.99	3690.58
YHOO	242	14.68	3552.56	15.64	3784.88	14.93	3613.06
XOM	51	70	3570	78.09	3982.59	75.94	3872.94
HD	105	33.75	3543.75	35.8	3759	35.54	3731.7
CAT	48	74.82	3591.36	94.46	4534.08	91.63	4398.24
ATPG	384	9.45	3628.8	10.55	4051.2	9.77	3751.68
Total			7 (fee)		28041.69		27108.75
			25173.9				
daily profit					-995.49		-932.94
total profit					2867.84		1934.9

closing 11/2	Asset gain/loss	closing 11/3	Asset gain/loss	closing 11/4	Asset gain/loss
584.82	4093.74	597.5	4182.5	596.14	4172.98
26.01	3693.42	26.53	3767.26	26.25	3727.5
15.1	3654.2	15.48	3746.16	15.24	3688.08
77.37	3945.87	78.86	4021.86	78.52	4004.52
35.99	3778.95	36.45	3827.25	36.39	3820.95
93.94	4509.12	96	4608	95.74	4595.52
10.29	3951.36	10.58	4062.72	10.46	4016.64
	27626.66		28215.75		28026.19
	517.91		589.09		-189.56
	2452.81		3041.9		2852.34

Table 2.7. Table of results for week 6

Week 7

Monday November, 7, 2011

Today begins the last week of trading for this simulation. I am hoping that at the end of the week I will have a profit to show. I am still in the green for money at this point so unless the market is too volatile I should keep that money. The market was all over the place today but most of my stocks ended up going up. This was due to investors now being worried about Italy instead of Greece. Over the weekend there were protests over the reforms made by the prime minister. Tomorrow there will be a vote on whether or not he will remain in office. The Prime Minister of Greece will also be resigning since the bailout plan is approved. This made investors seem secure about Greece but have now begun to focus on Italy [18].

Tuesday November 8, 2011

Today was another positive day for the market which kept me hopefully about making money when I sell my stocks Friday. The reason for the increase in the market today was due to the resignation of Italy's Prime Minister Silvio Berlusconi. He said that once the new budget is approved, he will leave office. This made investors more confident that Italy will make it through the money crisis although they are still worried for the future. With these problems being handled temporarily, I feel that my stocks will remain high for the remainder of this week [54].

Wednesday November 9, 2011

Today was the worst day for the market that I have seen since I started my simulation. I lost $1422.12 asset profits off of my total in just one day. This seemed to have been caused by Italy fears starting again. Investors started off the day by selling since it was announced that the 10-year bond yield for Italy was above 7%. This made investors fear that Italy would also require a bailout in the future. When word got out about this, the European Union then announced that they would not bailout Italy. This made investors even more worried and caused them to sell more. Their lack of confidence made this announcement even more detrimental to the market [52].

Thursday November 10, 2011

Today stocks started to go back up again after the large decrease yesterday. Today one of the reasons that stocks went back up was due to a bond auction for Italy. It was also mentioned that the European Central Bank was having an emergency meeting. Although this made investors feel more relieved today, it is likely things will turn around again like they did yesterday. Since things change so often from day to day, investors are extremely uneasy overall [56].

While most of my stocks went up today, one of the ones that went down was ATP Oil & Gas. When looking as to why, I found that they are $2 billion in debt and fear of that caused the stock to drop. At the end of last month they had lost $260 million alone. This has a lot to do with the fact that they do a lot of drilling in the Gulf of Mexico where there was an oil spill last summer. This not only made it slower to drill there, it also made it more expensive. It is also being rumored that the company is going bankrupt. They are hoping that once more deep sea drilling begins, they will begin making more profits [13].

Friday November 11, 2011

Today all of my stocks went up again with the exception of ATP Oil & Gas which I investigated yesterday. Since this is the last day of the simulation I waited until 3:50pm EST to sell my stocks in order to make as much money as possible in my last day of trading. The reason for the increase today was due to investors being less worried about Italy and Greece. Lucas

Papademos was sworn in today as the new prime minister of Greece which made people happier in general [58].

After selling my stocks I ended this simulation with a profit of $2100.12. I feel that with the market being so volatile throughout the simulation, I made good choices with my stocks and was happy to have made such a profit. The only stock that I ended up losing money on was ATP Oil & Gas.

	shares	Bought	cost	closing 11/7	Asset profit/loss	closing 11/8	Asset profit/loss
GOOG	7	527.84	3694.88	608.33	4258.31	612.34	4286.38
MSFT	142	25.25	3585.5	26.8	3805.6	27.16	3856.72
YHOO	242	14.68	3552.56	15.69	3796.98	15.97	3864.74
XOM	51	70	3570	79.35	4046.85	79.76	4067.76
HD	105	33.75	3543.75	37.34	3920.7	37.94	3983.7
CAT	48	74.82	3591.36	95	4560	95.89	4602.72
ATPG	384	9.45	3628.8	10.37	3982.08	10.5	4032
Total			7 (fee)		28370.52		28694.02
			25173.9				
daily profit					344.33		323.5
total profit					3196.67		3520.17

closing 11/9	Asset profit/loss	closing 11/10	Asset profit/loss	closing 11/11	Asset profit/loss
600.95	4206.65	595.08	4165.56	608.7	4260.9
26.2	3720.4	26.28	3731.76	26.92	3822.64
15.92	3852.64	15.95	3859.9	16.25	3932.5
77.39	3946.89	78.7	4013.7	79.67	4063.17
37.16	3901.8	37.2	3906	38.06	3996.3
91.64	4398.72	92.2	4425.6	96.13	4614.24
8.45	3244.8	7.25	2784	6.73	2584.32
	27271.9		26886.52		27274.07
	-1422.12		-385.38		387.55
	2098.05		1712.67		2100.22

Table 2.8. Table of results for week 7

2.4 Analysis

Now that the simulation portion of the report is complete I am going to be looking back at my stock portfolio and seeing how I did overall. During the time of the simulation the market was extremely volatile which made it hard to tell if the stocks I purchased were good choices or not. Overall I ended up with a profit of $2093.22. In order to see how my stocks did in comparison to the market, I made some graphs to demonstrate this using Google Finance. I plotted each of my stocks against the index they are associated with.

The first stock that I analyzed was Google. Google is in the Nasdaq index so in order to see how much I made on Google I compared it to the Nasdaq. I was pleased with the overall result since Google ended up above the Nasdaq. Although it followed the same trends as the market for the most part, it was usually gaining a higher percent following October 14, 2011. Over the course of the simulation the Nasdaq gained a total of 7.87% while Google gained 15.57%. Since this stock performed better than average I consider this to have been a good choice for the simulation.

Figure 2.9. Google stock vs. the Nasdaq

One of the other technology stocks that I picked was Yahoo. When making a graph of Yahoo compared to the Nasdaq I noticed that the percent increase by Yahoo was also greater than that of the Nasdaq. Yahoo went up a total of 10.6% over the course of the simulation compared to the Nasdaq's 7.87% increase. One of the things that I noticed was that Yahoo was more volatile than Google was. Instead of riding consistently about the index, it was instead changing every few days. It also had an extremely large drop during the first week of the simulation which made it harder to come back from. During the simulation there was a CEO change which made the stock unstable for some time. Although it was hovering below the Nasdaq levels near the end of the simulation, in the finals days it rose again pushing it above the average. Even though Yahoo had some rough times during the course of this simulation, it turned out to be a good choice for my portfolio.

Figure 2.10. Yahoo stock vs. the Nasdaq

The last of the technology stocks that I picked was Microsoft. Although I ended up making a profit of 7.37% it was below the average and therefore wasn't as good as it could have been. Although Microsoft was above the average until October 22, it then fell below for the remainder of the simulation. When looking at the stock drop near the beginning of the simulation, I noticed that Microsoft didn't drop as far as the average which minimized my potential losses near the beginning. I was pleased to have made as much money from the stock as I did though.

Figure 2.11. Microsoft stock vs. the Nasdaq

In the construction category of my portfolio I purchased shares of Home Depot stock. The Home Depot is part of the Dow Jones index so I made a graph comparing the stock to the average. Until the last few days The Home Depot was below the average but in the end it was up 12.86% compared to the Dow Jones which was up 12.83% overall. I felt this stock was good choice for my portfolio since it both made a profit and was above the Dow Jones average.

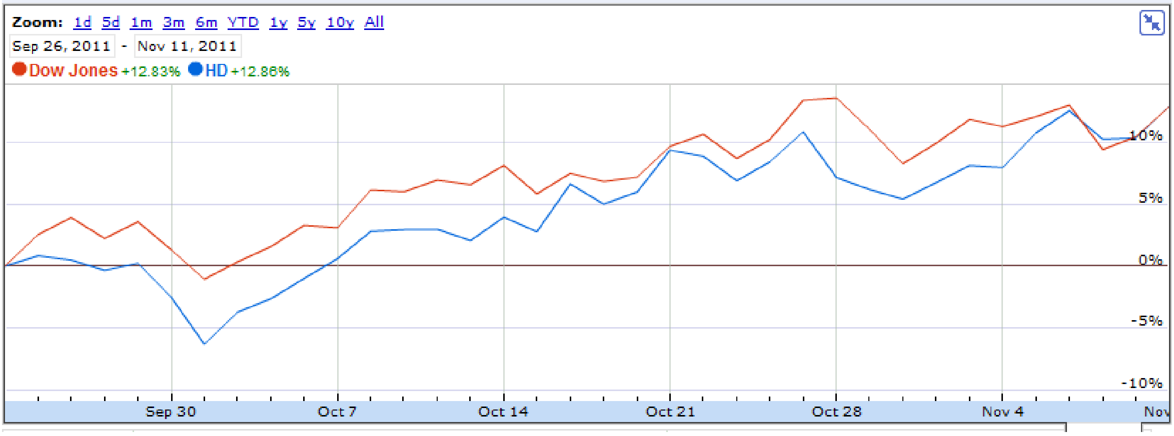

Figure 2.12. The Home Depot stock vs. the Dow Jones

The other construction company that I had for my portfolio was Caterpillar. This stock was one that I had chosen based off the assumption that storm damage caused around the time that the simulation began would cause for an increase in construction. Although this stock went down like the others did at the beginning of the simulation, it then rose significantly. From October 8th on the stock was way above the Dow Jones average finishing with a 30.14% increase compared to the Dow Jones 12.83% increase. I consider this to have been one of my best stock purchases. The high increase showed how paying attention to world events while deciding what stocks to look into can really help to make good choices.

Figure 2.13. Caterpillar stock vs. the Dow Jones

The last category that I chose for stocks was oil companies. The first one that I bought was ExxonMobil. ExxonMobil proved to be a good choice when I noticed it started above the Dow Jones and remained there throughout the whole simulation. While the Dow Jones went up 12.83% ExxonMobil went up 15.01% resulting in high profits.

Figure 2.14. ExxonMobil stock vs. The Dow Jones

ATP Oil & Gas was the only stock that I ended up losing money on. While the Nasdaq went up 7.87% throughout the simulation, ATP Oil & Gas dropped 27.42%. Near the middle of the simulation the stock was up around 25% but then began to fall as news came out of their debts and how they were losing money. This caused the stock to begin rapidly falling around November 9. From looking at ATP Oil & Gas over the course of the simulation I noticed how it rarely followed the Nasdaq trends and instead strayed extremely far away. Within the first few weeks of the simulation the stock dropped so far that I knew it was a bad decision to invest in that stock but I rode it out anyway for the purpose of the simulation.

Figure 2.15. ATP Oil & Gas vs. the Nasdaq

Over the course of this simulation I have learned a lot about the ways the market is affected by different world trends and by the trends of the indexes. In order to be successful in long term holding, research needs to be done first and rash decisions cannot be made. If a lot of time cannot be put towards working the market, long term holding is a good strategy for making money off the market.

3. Simulation B: Market Shorting

My simulation will be based around the strategy known as short-selling. I will conduct background research into short-selling, learning what I can about the strategy before the simulation starts as well as during the remainder of the project. I will analyze market trends for determining profitability of companies before making a decision to add any company to my trading portfolio. As the simulation progresses, I will continue learning from my trades, both successes and failures, and continue to analyze market data. All stock price data in this simulation is taken from Yahoo finance [45].

3.1 Introduction and Background

The most common perception of stock trading strategy is the age-old saying: “buy low, sell high”. This is certainly a valid way of thinking, but it is not the only method of turning a profit on the stock market. A technique known as short-selling, or simply “shorting”, can be employed to profit from market declines. In essence, shorting involves an investor borrowing shares of stock from a broker or brokerage firm to sell them when the price is high. The investor is then said to be short the stock borrowed, hence the name short selling. The investor at this point is hoping to profit from a decline in stock price, at which point the stock is bought back for a lower price and returned to the broker. The difference between original selling price and the buy-back price is how the investor hopes to make a profit [14].

There are dangers inherent in this type of trading. One obvious danger is that the price of the stock purchased may *increase* during the time the investor is hoping it will decrease. This will result in a net loss to the investor of the difference in stock price. A frightening truth in shorting is that although your potential profits are limited since the stock price cannot fall below zero, the potential losses are limitless due to the ability of the stock price to rise indefinitely. One way to combat this potential disaster is by using a stop-loss buy order placed on the stocks being shorted. This would automatically buy the stock set ahead of time if the price reached a predetermined unacceptable level.

3.2 Portfolio Strategy and Research

My strategy in general will be to sell stocks "borrowed" from my simulated broker during a period of time when the stocks are high in value. This will involve multiple aspects of trading strategy and tactics. I will need to decide what is a high enough starting value to short sell. Merely having a high value at the point of sale is not an acceptable criteria; the trend of the stock price will need to be considered as well. If I simply sell a quantity of stock once I see the price has reached, for instance, $20.00 per share, I run the risk of accruing large losses If the stock continues rising. For this reason my starting strategy will be to attempt to start my trades at a point in time *just past* a peak of stock price, when the stock is on a downward trend.

3.2.1 Trading Strategy

If possible I will attempt to begin trading immediately in the week of the simulation start, with all of my selected companies. If for any reason a particular company is not doing well financially that day I will wait until I deem their stock price sufficiently high to begin shorting that company. As my simulation progresses I will monitor the market in general, and look for new companies that seem to be good shorting candidates.

Once I have sold stock of a company I will then need to wait until the stock prices fall sufficiently that I judge it is a good time to buy them back and return them to my broker. Beyond pure judgment, there are necessities to this waiting game. As a bare minimum, I must make a sufficient profit to offset my transaction fees. If I have timed my trade poorly, the stock price I am hoping to successfully short may begin to rise. At this point I would have a few options open to me. First, I could immediately buy back the shares, deciding I chose poorly, and minimize my losses. Additionally I could wait an indefinite amount of time in the hopes that my stock will peak quickly and then fall back below my original purchase price. Finally, I could have a predetermined cutoff point that I will buy back the stock at. For my simulation I have decided to choose the last option. I will establish guidelines, which will include acceptable rises in price before selling stocks and the issuing of stop-loss buy orders.

As a baseline plan, I will start by tolerating a price change of 1% favorably or 0.5% unfavorably of the stock price before taking action. In this way I will in theory be able to make a profit over time as long as I stick to my plan and choose stocks wisely. In order to offset the transaction fees associated with such relatively rapid trading I will try, when possible, to make trades less frequent, but higher volume. As my simulation progresses I will reevaluate my plan and revise my cutoffs if needed.

As my simulation progresses I will gain familiarity with timing of stock trading, as well as a foundation of knowledge about shorting. Although my future experiences in stock trading will not be exclusively limited to short selling, I hope to apply what I learn during this simulation to real life trading in the future.

3.2.2 Portfolio Selection Criteria

Shorting requires a sense of market prediction. In my portfolio choices I will look for companies which appear to be at a peak of stock price. I will also establish a solid understanding of what affects company stock, and which companies tend to be more or less volatile and why. I will analyze companies' past stock price performance and trends. This will enable me to better predict downward trends in stock price, which will produce the greatest profit through shorting.

A potential strategy for portfolio selection is to find two companies directly competing with each other. This seems like a valid direction to move in for shorting purposes. If one company profits the other hopefully declines, allowing for oscillating stock prices conducive to shorting. The potential hazard involved with this method is in the lack of sector diversification. What this means is that if the industry involved moves one direction as a whole, both companies will tend in the same direction. This can lead to a lack of damage control.

In addition to trying to find competing companies to invest in, I will try to determine which companies are the most volatile. This means I will look at which companies have the greatest percentage change in stock price over time. I have researched assembled lists of the most volatile stocks currently on the market. My hypothesis is that the more a stock tends to oscillate in value, the better that stock will be for shorting. For this reason I will try to locate the stocks that most investors would deem high-risk. Companies that seem on the verge of collapse would be an example of good shorting material.

3.2.3 Companies Selected

To begin building my portfolio required background research. I analyzed past stock performance for several companies, and eventually selected five of my possibilities to trade. My company choices are listed below, along with their ticker.

NVIDIA (NVDA)

NVIDIA is a computer parts company with headquarters in California. Specializing in graphics processers and motherboards, NVIDIA is a company who has been active in industry since the release of their first commercial product in 1995. As an avid computer technology enthusiast I chose NVIDIA partially because I have a better understanding of the industry they operate in. An increased knowledge base will facilitate better understanding of the causes of stock price fluctuations [10].

Although NVIDIA is a very successful company, I feel it will be possible to profitably short this company in conjunction with a competitor, AMD. I analyzed NVIDIA's past performance and decided their stock prices tend to fluctuate enough for my purposes.

AMD (AMD)

Advanced Micro Devices (AMD) is my second chosen company. They, like NVIDIA, produce computer components, specifically processors and motherboards. AMD owns the graphics processor production company ATI, which directly competes with NVIDIA. For this reason I have chosen both of these companies, hoping that if NVIDIA's stock increases in price ATI's stock price will decrease, and vice versa. ATI was incorporated into AMD in 1985, the same year they produced their first graphics card product [2].

Fuel Systems Solutions (FSYS)

Fuel Systems Solutions is an alternative-fuel components and systems manufacturer, specializing in propane and natural gas. Fuel Systems solutions has subsidiary companies in the automotive, transportation and infrastructure industries: IMPCO, and BRC. Fuel Systems Solutions' stock prices tend to fluctuate significantly, and although it is a grim thought that this should be a good thing, recent trends have shown a consistent decline in stock price. This caught my eye and led to my decision to short this company [21].

Sequenom (SQNM)

Sequenom is a biomedical company who specializes in technology and research relating to genetic disease diagnosis including DNA sequencing. Sequenom caught my eye due to their poor stock performance, fluctuating enough to make shorting profitable. Although Sequenom appears to consistently fluctuate in price, I believe this company represents the greatest threat to my portfolio. Sequenom's stock is so low at the present time that I fear the possibility of a dramatic rise in stock price. I am unsure of how real a possibility this is, and Sequenom will certainly be a company I will monitor very closely as my simulation progresses.

Of extreme interest is a particular event in Sequenom's past. In June of 2008 Sequenom began making announcements regarding an early test for Down syndrome, claiming the test would be close to 100% accurate and released by June 2009. In response to these announcements Sequenom's stock rose to a peak of just under $28 per share in September 2008, compared to $7.66 per share before the announcements regarding the test. In April 2009 it was discovered that Sequenom's claims regarding test accuracy had been forged, with multiple pieces of test data being fabricated. In response to this, Sequenom's stock fell to just $3.62 per share. This type of history in this company leads me to believe the possibility exists for continued dramatic fluctuation of stock price, and I will include this company in my portfolio [42].

Jaguar Mining (JAG)

Jaguar Mining Inc. is a Brazilian based mining corporation, specializing in gold production. I chose them for my starting portfolio due to the rapid rate of change of their stock price. Prices fluctuate a large percent daily for this company, making them an excellent candidate for shorting.

Netflix (NFLX)

Netflix is an extremely popular DVD rental and internet streaming company. Recently, Netflix has decided to split the portion of their company dedicated to DVD delivery and rentals into a new company, called Qwikster. I believe there will be a drop in Netflix stock price related to this decision, and so have decided to add Netflix to my starting lineup of companies.

All of these companies represent my starting choices to trade. As my simulation progresses I may notice opportunities for large profits with companies not listed above. In that situation I will describe the company I intend to short, as well as my motives for deciding to make that move.

3.3 Transactions

For this simulation I will be using a virtual online trading platform hosted by www.interactivebrokers.com. This website runs virtual trading services including stock watching, buy and sell orders, stop-loss orders, and more all for a subscription fee. Since a member of this IQP group already possessed an account at this website we have all agreed to make use of this platform for our trades. In addition to this site I will be keeping track of all of my transactions and trading activity in an Excel Spreadsheet. This will facilitate easier organization and graphical presentation of my final data. Finally, I will provide tables of daily transactions within this section for review. All total costs displayed in tables are taking into account a $1.00 commission fee on each transaction.

In general I will organize this section by date, adding new sections for each day of activity and separating my data by week. My opening series of trades was made as soon as the market opened on Monday, the 26th of September. I set up virtual sell orders for each of the companies I planned to trade in advance the night before, so they would be processed as soon as possible after opening time. I observed the trends of my listed companies and decided almost all of them looked like they were at good times to sell. AMD was the only company I wasn't sure about in terms of trending price. I opted to wait and track AMD further before taking action, and instead traded my other five companies.

I took the $25,000 dollars allotted to my portion of this project, and divided it by the number of companies I planned to start with (six) to get a total of $4,166.67 available for each stock. Although I wasn't yet trading all six companies, I decided to leave the money dedicated for AMD alone at this point. The process of shorting begins with a sale of stocks, rather than a purchase. Despite this, I set aside this particular amount of money for each stock with the thinking that just in case I chose my trade timing poorly, I would at least have enough capital to back out of failing trades without going bankrupt. For at least the beginning of this simulation I will limit the volume of stock traded at one time to however much could be bought at that time for $4,166.67 regardless of whether or not I am trading six companies at once.

I decided my first set of trades should be high volume, to minimize the percentage cost of the commission for each transaction (we assumed all commission charges for this simulation were $1.00). I therefore purchased the maximum amount of shares in NVDA, NFLX, FSYS, SQNM, and JAG possible given the amount of $4,166.67.

Monday 9/26/2011

Once the market opened for trading on Monday, September 26th, my orders were processed and stocks were sold. I was able to check the progress of my portfolio about two and a half hours after opening time, and observed the price of JAG stock had fallen 4.37%. This was well above my previous set cutoff of 1% favorable change, so I promptly bought all of the shares of JAG I was short. This resulted in a net profit of $175.60 after transaction fees. I was tracking all of my stocks at this point and a few minutes later made the decision to buy all of my shares of NVDA after a fall of 3.79%, making a profit of $158.06 after commission. I took similar action with NFLX and FSYS, making a profit of $215.60, and $80.51 respectively. When watching both of these companies' performances I was unsure whether or not I had reached an opportune time to buy the shares I was short, believing I could wait longer for a greater profit. I realized this was the type of thinking which could lead to a large loss of capital, and since I had planned to buy after a loss of 1% of stock price, I stuck to my system and bought the shares.

I watched SQNM for a few hours during the day but their stock price slowly rose throughout the day. I was tempted to hold out in the hopes that the stock would turn around and drop enough for a profit, but after a rise of 1.32%, well over my previously accepted limit of 0.5% rise, I realized my error and bought back my shares in an attempt to stop my losses from rising further. This resulted in a loss of $57.30, bringing my total profits for the day to $572.47. I consider this to be a huge success for the first day of trading in this simulation. In the future I will try to act quicker at minimizing my losses.

Date	Symbol	buy/sell	price	shares	Net Cost	profit/loss	Total Cash	Total Profit
26-Sep	FSYS	sell	18.7	-223	-4169.1		29169.10	
26-Sep	NFLX	sell	137.49	-32	-4398.68		33567.78	
26-Sep	JAG	sell	5.48	-740	-4054.2		37621.98	
26-Sep	SQNM	sell	5.3	-790	-4186		41807.98	
26-Sep	NVDA	sell	13.96	-302	-4214.92		46022.90	
26-Sep	JAG	buy	5.24	740	3878.6	175.6	42144.30	175.60
26-Sep	NVDA	buy	13.43	302	4056.86	158.06	38087.44	333.66
26-Sep	NFLX	buy	130.69	32	4183.08	215.6	33904.36	549.26
26-Sep	FSYS	buy	18.33	223	4088.59	80.51	29815.77	629.77
26-Sep	SQNM	buy	5.37	790	4243.3	-57.3	25572.47	572.47

Table 3.1. Transactions for 9/26

Tuesday 9/27/2011

This day opened with my sell orders being processed as soon as the market opened. I had high hopes for all of my companies based on starting prices and rapid downward trends after the market opened, but quickly realized the day was not as fortuitous as Monday. Between opening and around 12:30 PM AMD stock rose 2.1%. Since I had shorted 651 shares of AMD I lost $91.14 after transaction fees. NFLX at first netted me a large profit, but then rose past my acceptable levels today and therefore, due to my past experience with SQNM, I closed my position as soon as I noticed the losses accruing. Due to this action I was still able to net a profit of $131.95 with NFLX.

Allowing my trading frequency to slow throughout the day, I was able to net a profit of $39.13 with NVDA by waiting until later in the day to buy back the stock I was short. At many points throughout the day NVDA was down a few cents, but I made a decision to trade with less frequency and commanded a larger profit near to closing time. JAG and SQNM were similarly well traded for me, with profits totaling $140.98, and $22.89 respectively. Overall Tuesday was a success for trading, with my final profits totaling $229.81.

Date	Symbol	buy/sell	price	shares	Net Cost	profit/loss	Total Cash	Total Profit
27-Sep	NVDA	sell	14.18	-301	-4267.18		29839.65	572.47
27-Sep	JAG	sell	5.71	-742	-4235.82		34075.47	572.47
27-Sep	SQNM	sell	5.53	-763	-4218.39		38293.86	572.47
27-Sep	AMD	sell	6.57	-651	-4276.07		42569.93	572.47
27-Sep	NFLX	sell	134.53	-31	-4169.43		46739.36	572.47
27-Sep	NFLX	buy	129.52	31	4016.12	153.31	42723.24	725.78
27-Sep	AMD	buy	6.71	651	4369.21	-93.14	38354.03	632.64
27-Sep	JAG	buy	5.52	742	4096.84	138.98	34257.19	771.62
27-Sep	NFLX	sell	127.94	-32	-4093.08		38350.27	771.62
27-Sep	NFLX	buy	128.03	32	4097.96	-4.88	34252.31	766.74
27-Sep	NFLX	sell	127.87	-32	-4090.84		38343.15	766.74
27-Sep	SQNM	buy	5.5	763	4197.5	20.89	34145.65	787.63
27-Sep	NVDA	buy	14.05	301	4230.05	37.13	29915.6	824.76
27-Sep	NFLX	buy	128.51	32	4113.32	-22.48	25802.28	802.28

Table 3.2. Transactions for 9/27

Wednesday 9/28/2011

Wednesday provided an interesting learning experience. I began the trading day by selling almost all of my selected companies short as usual, specifically FSYS, NVDA, and NFLX. After this I tracked the market as best I could, given my busy Wednesday schedule. My only buy of the day was to purchase NVDA stock back after a sufficiently large fall in stock price to net me $49.17 in profits for the day. I sold AMD towards the end of the day as well as a newcomer to my portfolio: British Petroleum (BP).

I made the decision to add BP to my short-list for a few reasons. Chiefly I noticed the fines BP was obligated to pay for damages relating to the gulf oil spill the company had caused a few years ago were being distributed. This in itself didn't necessitate a drop in BP stock but this news did bring the public eye back to the gulf spill, and for this reason I believed BP stock would suffer. In addition to this I noticed downward trends in stock price over a few days and decided to attempt shorting BP.

Wednesday brought to light for me an interesting point I had not considered before. When a single investor is attempting day trading, a difficulty arises in simply being available to watch the stock price rise and fall. I am only at my computer for a few hours on certain days of the week; an investor with a full time job would likely have even less time to devote to trading. Clearly trading must either be a full time occupation, or the frequency of trades must suffer. Less frequent trading is not necessarily a bad thing due to transaction fees, but leads to the possibility of missing mid-day spikes or drops in stock price. As the scale a given stock is viewed at increases, the stock fluctuations shrink. This means for trading styles such as short-selling, a shorter term hold between selling and buying is more profitable, whereas for extended growth-based portfolios, long term holds may be more profitable. This will be examined in more depth at the conclusion of our simulation period.

Date	Symbol	buy/sell	price	shares	Net Cost	profit/loss	Total Cash	Total Profit
28-Sep	FSYS	sell	19.14	-220	-4209.8		30012.08	802.28
28-Sep	NVDA	sell	13.95	-301	-4197.95		34210.03	802.28
28-Sep	NFLX	sell	128.87	-32	-4122.84		38332.87	802.28
28-Sep	NVDA	buy	13.78	301	4148.78	49.17	34184.09	851.45
28-Sep	AMD	sell	6.21	-660	-4097.6		38281.69	851.45
28-Sep	BP	sell	37.65	-110	-4140.5		42422.19	851.45

Table 3.3. Transactions for 9/28

Thursday 9/29/2011

The major news of Thursday was a very dramatic fall of AMD stock, bottoming out well over 12% lower than at opening. Through some research I attribute this fall to some difficulties in AMD's chip supply company, Globalfoundries. AMD is unveiling a new line of processor for laptop computers, which is drawing a high demand. Supply for this chip was jeopardized through difficulties at Globalfoundries' manufacturing plant in Germany. Through the exploitation of this drop in price I was able to achieve a profit of $468.60 from AMD alone! I additionally shorted BP for a profit of $46.20, and NFLX for a profit of $17.60. Total closing profits were $532.40. I allowed most of my companies to "ride out" the day, without trading the majority of my portfolio [26].

Figure 3.1. AMD stock over the first week of trading

Taking advantage of large swings in stock price is going to be the key to the success of a short-selling portfolio. Paying attention to company news is crucial for determining when these swings are likely to take place. I will continue to watch the financial headlines each day with a careful eye for anything that could affect the performance of my portfolio. Figure 3.1 shows AMD stock performance for the week, displaying the dramatic drop on the twenty ninth.

Date	Symbol	buy/sell	price	shares	Net Cost	profit/loss	Total Cash	Total Profit
29-Sep	NFLX	buy	128.32	32	4107.24	15.6	38314.95	867.05
29-Sep	AMD	buy	5.5	660	3631	466.6	34683.95	1333.65
29-Sep	BP	buy	37.23	110	4096.3	44.2	30587.65	1377.85
29-Sep	NFLX	sell	118.02	-35	-4129.7		34717.35	1377.85
29-Sep	NFLX	buy	116.6	35	4082	47.7	30635.35	1425.55
29-Sep	BP	sell	36.73	-112	-4112.76		34748.11	1425.55
29-Sep	NVDA	sell	13.51	-306	-4133.06		38881.17	1425.55

Table 3.4. Transactions for 9/29

Friday 9/30/2011

Friday brought bad news for my portfolio. Although the market as a whole went down, my portfolio in general rose. NVDA provided the majority of my profits on Friday, netting me $267.75. AMD provided an additional $38.75, and I gained $43.19 from BP. NFLX, FSYS, and SQNM all dented my profits, with losses of $100.05, $43.10, and $91.76 respectively.

Closing brought my total profits for the day to $114.19, and brought my weekly profits to $1,508.04! This number is far better than I was expecting for my first week of trading, and I consider this week to be a complete success. I learned a lot about how the market performs, how timing affects profits, how my own schedule affects my trading ability, and how the news can assist market prediction. My losses this week were valuable experiences; I learned something from each one. In general I realized how important it is to have a predetermined trading system or strategy, and how important it is to stick to that strategy. I look forward to the next week of trading, and hope to continue to improve as a trader.

Date	Symbol	buy/sell	price	shares	Net Cost	profit/loss	Total Cash	Total Profit
30-Sep	NVDA	buy	12.78	306	3911.68	221.38	34969.49	1646.93
30-Sep	BP	buy	36.36	112	4073.32	39.44	30896.17	1686.37
30-Sep	FSYS	buy	19.6	220	4313	-103.2	26583.17	1583.17
30-Sep	FSYS	sell	19.81	-207	-4099.67		30682.84	1583.17
30-Sep	NVDA	sell	12.69	-327	-4148.63		34831.47	1583.17
30-Sep	NFLX	sell	112.16	-37	-4148.92		38980.39	1583.17
30-Sep	BP	sell	36.22	-115	-4164.3		43144.69	1583.17
30-Sep	SQNM	sell	5.07	-816	-4136.12		47280.81	1583.17
30-Sep	AMD	sell	5.22	-815	-4253.3		51534.11	1583.17
30-Sep	FSYS	buy	19.51	207	4039.57	60.1	47494.54	1643.27
30-Sep	AMD	buy	5.17	815	4214.55	38.75	43279.99	1682.02
30-Sep	NVDA	buy	12.55	327	4104.85	43.78	39175.14	1725.8
30-Sep	SQNM	buy	5.18	816	4227.88	-91.76	34947.26	1634.04
30-Sep	NFLX	buy	114.81	37	4248.97	-100.05	30698.29	1533.99
30-Sep	BP	buy	36.17	115	4160.55	3.75	26537.74	1537.74

Table 3.5. Transactions for 9/30

Week 2: 10/3/11

Week two began smoothly: I saw opportunities for five of my companies to be profitable and shorted accordingly. I noticed JAG seemed to have a steady upward trend and decided to wait and not trade JAG on Monday.

Figure 3.2. JAG price over week two

As evidenced by the chart of JAG's performance over the week of trading, I missed out on an opportunity to make a large profit. It is important to note that the likelihood of making a profit and the *apparent* likelihood of making a profit are two very different things. Reference scale plays a large part in this: had I shorted JAG early on Monday, and then attempted to close my position later that same day I would have either suffered a loss or made a slight profit. Expanding my scale of reference and decreasing my trading frequency would have resulted in a much larger profit.

I have yet to establish a firm guideline in terms of how often to make my trades. For resolving this issue I will henceforth close a given position as soon as it hits my favorable change limit of 1%, and will close a position that is changing unfavorably once it has remained above the limit of 0.5% for over one trading day. This further definition in strategy will remain in effect until I evaluate and make additional changes to my strategy in general.

I chose not to short NFLX on Monday for similar reasons as my decision to not short JAG. I noticed an upward swing in stock price and didn't want to risk losing capital. Of the companies I did trade, AMD provided the greatest capital gains: AMD fell nearly 3% for a profit of $121.00. The remainder of my companies I chose to trade were all profitable, with total profits for the day reaching $338.51.

Date	Symbol	buy/sell	price	shares	Net Cost	profit/loss	Total Cash	Total Profit
3-Oct	BP	sell	35.89	-115	-4126.35		30664.09	1537.74
3-Oct	AMD	sell	5.02	-820	-4115.4		34779.49	1537.74
3-Oct	FSYS	sell	18.9	-216	-4081.4		38860.89	1537.74
3-Oct	NVDA	sell	12.31	-330	-4061.3		42922.19	1537.74
3-Oct	SQNM	sell	5.02	-816	-4095.32		47017.51	1537.74
3-Oct	AMD	buy	4.87	820	3994.4	121	43023.11	1658.74
3-Oct	FSYS	buy	18.72	216	4044.52	36.88	38978.59	1695.62
3-Oct	NVDA	buy	12.12	330	4000.6	60.7	34977.99	1756.32
3-Oct	BP	buy	35.38	115	4069.7	56.65	30908.29	1812.97
3-Oct	SQNM	buy	4.94	816	4032.04	63.28	26876.25	1876.25
3-Oct	FSYS	sell	17.37	-250	-4341.5		31217.75	1876.25

Table 3.6. Transactions for 10/3

Tuesday 10/4/11

Tuesday was even more profitable than Monday. I believe this is due in part to my decision to decrease my trading margin. Up until this point I have been unwilling to sell more shares than I could buy back with an even distribution of my starting funds, or margin. At this point in the simulation I decided to be more aggressive in the amount of volume per trade, and increase my potential profits. Increasing the number of shares will also decrease the percentage of my profit per trade that is spent on transaction fees. The danger in this strategy is that if the worst-case scenario occurs and all my stocks rose a large enough amount I would not possess enough capital to cover the cost of buying the stocks back. In order for this disaster to occur my portfolio would have to rise a very large amount, but it is still a possibility that must be considered.

One of the notable points of Tuesday's trading was my rapid sell-and-buy of NVDA stock. I shorted NVDA and a mere ten minutes later the stock fell 1% so I quickly closed my position to earn a profit of $46.00 after commission. This illustrates the point I made last week about the importance of trade timing and being physically present in order to take advantage of market changes. I noticed the stock reached my goal of a 1% favorable change and acted quickly as per my trading strategy. This adherence to strategy is of the utmost importance when using a trading strategy not based on mathematical formulas. As soon as an investor allows emotion or intuition to override strategy, failure is imminent. My total profits for the day reached $271.20, with SQNM making up the largest portion ($98.00).

Date	Symbol	buy/sell	price	shares	Net Cost	profit/loss	Total Cash	Total Profit
4-Oct	FSYS	buy	17.11	250	4278.5	63	26939.25	1939.25
4-Oct	SQNM	sell	5.09	-1000	-5089		32028.25	1939.25
4-Oct	NVDA	sell	12.53	-400	-5011		37039.25	1939.25
4-Oct	NFLX	sell	114.24	-40	-4568.6		41607.85	1939.25
4-Oct	BP	sell	34.63	-150	-5193.5		46801.35	1939.25
4-Oct	AMD	sell	4.49	-500	-2244		49045.35	1939.25
4-Oct	NVDA	buy	12.41	400	4965	46	44080.35	1985.25
4-Oct	AMD	buy	4.44	500	2221	23	41859.35	2008.25
4-Oct	NFLX	buy	113.16	40	4527.4	41.2	37331.95	2049.45
4-Oct	SQNM	buy	4.99	1000	4991	98	32340.95	2147.45

Table 3.7. Transactions for 10/4

Wednesday 10/5/11

Wednesday was a good day for the market, and therefore was a terrible day for my portfolio. Through a series of market fluctuations and aggressive trading at the beginning of the day, coupled with my busy schedule, I lost a significant amount of money. I set my trades in the morning, selling a large number of shares in many companies. My class schedule and extracurricular activities prevented me from being able to close my positions until after the market had already closed. I was only able to observe how much money I was about to lose, and set my positions to close as soon as the market opened on Thursday. I briefly considered leaving my positions in place in the hopes that the market would fall, but decided I had already lost too much capital and needed to simply cut my losses. The only company that I closed my position on today was BP, which actually provided me with a profit of $124.00.

Date	Symbol	buy/sell	price	shares	Net Cost	profit/loss	Total Cash	Total Profit
5-Oct	BP	buy	33.79	150	5069.5	124	27271.45	2271.45
5-Oct	AMD	sell	4.63	-1000	-4629		31900.45	2271.45
5-Oct	BP	sell	35.62	-120	-4273.4		36173.85	2271.45
5-Oct	FSYS	sell	17.82	-250	-4454		40627.85	2271.45
5-Oct	JAG	sell	4.61	-1000	-4609		45236.85	2271.45
5-Oct	NFLX	sell	114.9	-40	-4595		49831.85	2271.45
5-Oct	NVDA	sell	12.79	-322	-4117.38		53949.23	2271.45
5-Oct	SQNM	sell	5.21	-1000	-5209		59158.23	2271.45

Table 3.8. Transactions for 10/5

10/6/11

Thursday I closed my positions left over from Wednesday, and the effect Wednesday had on my portfolio was fully realized. I lost a total of $1664.52 over all of my companies except BP. AMD rose 3.5% for a loss of -$162.00. NVDA rose 7.9% for a loss of -$327.22. FSYS rose 7.2% for a loss of -$324.50. BP rose 2.3% for a loss of -$99.20. NFLX rose over 7.9% for a loss of -$367.60.

I feel that today's performance was a result of multiple factors. Primarily I believe the nature of the market in present times is so volatile that it would be difficult to make a sustained profit over the time period in which I was trading. Additionally my inability to take swift action on Wednesday once my stocks began rising compounded the situation. Had the market rose on a day where I was present at my computer more often I would have registered less of a drop in assets. My solution to this will be to ensure that my trading on Wednesdays is very conservative, saving my aggressive trading for days when I can cut my losses quickly if the market performance is poor.

Date	Symbol	buy/sell	price	shares	Net Cost	profit/loss	Total Cash	Total Profit
6-Oct	AMD	buy	4.79	1000	4791	-162	54367.23	2109.45
6-Oct	JAG	buy	4.86	1000	4861	-252	49506.23	1857.45
6-Oct	SQNM	buy	5.34	1000	5341	-132	44165.23	1725.45
6-Oct	NVDA	buy	13.8	322	4444.6	-327.22	39720.63	1398.23
6-Oct	FSYS	buy	19.11	250	4778.5	-324.5	34942.13	1073.73
6-Oct	BP	buy	36.43	120	4372.6	-99.2	30569.53	974.53
6-Oct	NFLX	buy	124.04	40	4962.6	-367.6	25606.93	606.93

Table 3.9. Transactions for 10/6

10/7/11

Friday at first looked like trading would be more profitable than Wednesday or Thursday, but quickly losses began accumulating. Although I was much less aggressive with my trading I still lost a significant amount of money Friday. Total Friday losses were -$195.60 split over five of my companies.

Friday brought my total losses for the week to -$1126.41, and my total profits were reduced to $373.93. The fact that I have still profited overall is encouraging, although my losses for the second week of trading diminish my confidence. Figure 3.4 shows the amount of liquid assets I possess as a function of the number of transactions I have made. This graph clearly displays that although on a daily basis my profits go up and down, over the longer term I have still gained money over the simulation start time.

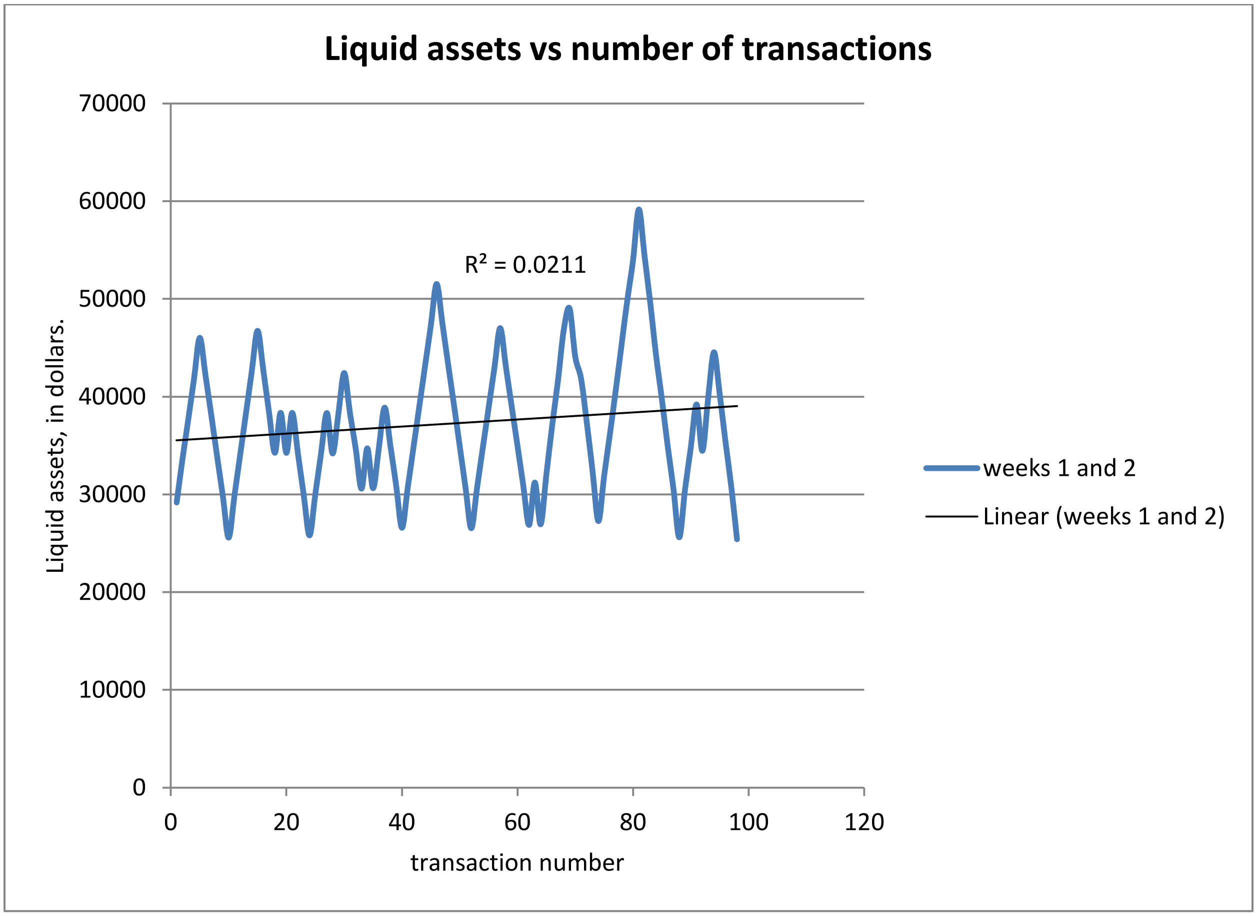

Figure 3.3. Assets over the simulation time to date

So far my experiences with this simulation have vastly increased my knowledge of the stock market, and my knowledge of trading in general. I have noticed trends in my own trading that lead to losses, and trends that lead to profits. I will continue to improve as a trader and to learn more about the stock market in general as the simulation continues. I look forward to the next week of trading.

Date	Symbol	buy/sell	price	shares	Net Cost	profit/loss	Total Cash	Total Profit
7-Oct	NFLX	Sell	122.53	-40	-4900.2		30507.13	606.93
7-Oct	BP	Sell	37.23	-115	-4280.45		34787.58	606.93
7-Oct	NVDA	Sell	13.82	-320	-4421.4		39208.98	606.93
7-Oct	NFLX	Buy	118.77	40	4751.8	148.4	34457.18	755.33
7-Oct	SQNM	Sell	5.39	-1000	-5389		39846.18	755.33
7-Oct	FSYS	Sell	18.8	-250	-4699		44545.18	755.33
7-Oct	BP	Buy	37.27	115	4287.05	-6.6	40258.13	748.73
7-Oct	FSYS	Buy	19.42	250	4856	-157	35402.13	591.73
7-Oct	NVDA	Buy	14.34	320	4589.8	-168.4	30812.33	423.33
7-Oct	SQNM	Buy	5.4	1000	5401	-12	25411.33	411.33

Table 3.10. Transactions for 10/7

Week 3: 10/10/11

Week three of trading brought continued dissatisfaction with my portfolio performance. I began trading with high expectations. I opened and subsequently closed my position on NFLX today and netted a generous profit. I ignored the possibility of shorting NFLX for the remainder of the day, content with what I had made in profits. Through my lack of attention I missed the largest drop in NFLX price in recent history, with the market value falling 14% from $122.99 to $105.65 before I sold shares again. Considering I was paying fairly close attention to the market during this time I attribute missing out on this opportunity at least partially to the rapidity of the change in price. A slower decline is much easier to act upon, although a slower drop may not command as much excitement as a rapid fall.

One of the companies I have decided to drop from my portfolio, at least temporarily, is BP. BP caught my attention when decisions regarding regulations affecting BP brought the Gulf spill back to the public eye, but recently BP has rebounded from drops in previous weeks, with stock prices continuing to trend upwards and cause losses for my portfolio.

Figure 3.4. BP stock price over week three

In addition to BP I have decided to halt trading FSYS. This company at first appeared volatile enough to be profitable for shorting, but with recent trends of steady price growth, I have little use for FSYS in my portfolio. Losses from FSYS alone this week totaled -$653.34.

Figure 3.5. FSYS price over week three

Date	Symbol	buy/sell	price	shares	Net Cost	profit/loss	Total Cash	Total Profit
10-Oct	NFLX	sell	126.67	-40	-5065.8		30477.13	373.93
10-Oct	BP	sell	37.94	-135	-5120.9		35598.03	373.93
10-Oct	FSYS	sell	19.89	-250	-4971.5		40569.53	373.93
10-Oct	NVDA	sell	14.63	-340	-4973.2		45542.73	373.93
10-Oct	NFLX	buy	122.99	40	4920.6	145.2	40622.13	519.13

Table 3.11. Transactions for 10/10

10/11/11

Tuesday I was unable to achieve much in the way of active trading, due to finals week at WPI causing me to not have the free time to devote to trading. This once again illustrates the importance of dedication to trading. If an investor hopes to be profitable, he or she cannot afford to miss out on opportunities for profit, or miss out on cutting short potential losses. I did have a small amount of time to scan my portfolio for opportunities and I noticed that NFLX market value continued to drop rapidly, and so initiated another short on NFLX, letting my other positions continue in the hopes of making a profit on Wednesday.

Date	Symbol	buy/sell	price	shares	Net Cost	profit/loss	Total Cash	Total Profit
11-Oct	NFLX	Sell	105.65	-50	-5281.5		45903.63	519.13

Table 3.12. Transactions for 10/11

10/12/11

Wednesday was the day my total net proceeds from trading so far changed from a profit to a loss. My usual lack of availability on Wednesday led me to close my positions early in the day, before I became too occupied to trade effectively. Wednesday's losses totaled -$1,049.70, making Wednesday by far the worst trading day so far. I am not able to say for sure that this loss could have been avoided with an exclusively short-selling based portfolio. A portfolio so confined to a single strategy as this one is by nature lacking in versatility and ability to handle undesired market changes (in this case a rise of price). Wednesday was when I realized I needed to make a change of companies in my portfolio if I hoped to continue to be profitable for the duration of the simulation.

Date	Symbol	buy/sell	price	shares	Net Cost	profit/loss	Total Cash	Total Profit
12-Oct	BP	Buy	38.88	135	5249.8	-128.9	40653.83	390.23
12-Oct	FSYS	Buy	21.84	250	5461	-489.5	35192.83	-99.27
12-Oct	NVDA	Buy	14.75	340	5016	-42.8	30176.83	-142.07
12-Oct	NFLX	Buy	113.38	50	5670	-388.5	24506.83	-530.57

Table 3.13. Transactions for 10/12

10/13/11

Thursday, with some trepidation I shorted an assortment of my companies, before witnessing an almost universal rise in stock price. I was particularly aggressive in my shorting of

JAG, noticing a downwards trend in stock price I hoped would continue. Soon I regretted my actions; JAG, a company which in the past has remained volatile and high-risk, now seemed to be rising steadily. All of my companies seemed to be rising. I let my positions remain overnight in the hopes that I could at least suffer minimal losses when closing on Friday.

Date	Symbol	buy/sell	price	shares	Net Cost	profit/loss	Total Cash	Total Profit
13-Oct	FSYS	Sell	21.42	-238	-5096.96		29603.79	-530.57
13-Oct	NVDA	Sell	15.27	-333	-5083.91		34687.7	-530.57
13-Oct	BP	Sell	38.57	-131	-5051.67		39739.37	-530.57
13-Oct	JAG	Sell	5.07	-1000	-5069		44808.37	-530.57

Table 3.14. Transactions for 10/13

10/14/11

Friday I closed out all my positions and realized I needed a revised portfolio. Total losses for the week came to -$1,519.54. Many of the companies I felt certain would continue to fall and be volatile surprised me by rising steadily. I have decided I will attempt to find a better set of companies to trade for the upcoming week, while still monitoring my previously chosen companies carefully.

Figure 3.6. JAG price over week three

In general this week my stocks rose, as evidenced by the charts and data provided. Total losses were large, but will not impact my ability to continue trading. I have begun research into other potentially profitable companies to short, and look forward to the next week of trading.

Date	Symbol	buy/sell	price	shares	Net Cost	profit/loss	Total Cash
14-Oct	BP	buy	39.45	131	5168.95	-117.28	39639.42
14-Oct	FSYS	buy	22.1	238	5260.8	-163.84	34378.62
14-Oct	JAG	buy	5.32	1000	5321	-252	29057.62
14-Oct	NVDA	buy	15.51	333	5165.83	-81.92	23891.79

Table 3.15. Transactions for 10/14

Week 4: 10/17/2011

Week four of trading began with my decision to change my portfolio for the week, as well as my overall trading strategy. I added two new companies to my portfolio, which I will discuss in detail. In addition to this, a major change in strategy this week involved my decision to only trade these two new companies. In past weeks I typically would short around five companies at one time, having many open positions at once. This many positions I felt stretched myself too thin in terms of trying to manage the hour by hour fluctuations of stock price when searching for the best time to “get out” of the market. For this week I will only trade the two new additions to my portfolio: Mastercard, and Chile’s Mexican Grill.

Mastercard (MA) is a major credit card company. Mastercard was originally founded in 1966 under the name Interbank Card Association. They have offices worldwide and billions of people use their services. At first glance Mastercard may not seem like a good candidate to short, given their large business volume and relatively stable platform of capital. My plan for attempting to short MA was to take advantage of two factors: my small number of companies to keep track of this week, and small fluctuations in stock price during the day. Over a long period of time MA stock appears to be increasing in value steadily as shown below [29].

Figure 3.7. MA performance over the last year

Viewing MA performance on a smaller scale, for instance over three months, displays many more opportunities to profit from shorting.

Figure 3.8. MA performance over three months

I hope to be able to take advantage of dips and fluctuations in price on an even smaller, perhaps hourly scale.

Chile's Mexican Grill (CMG) is a large chain of restaurants specializing in Mexican food. I researched this company and found that much like MA, CMG has high enough short term volatility to be profitable for the scope of this simulation. I have begun to understand that almost any company can be profitable for shorting, depending on the scale of reference. This reference scale, or timeframe the investor is working in, makes all of the difference in whether or not a consistent profit can be realized.

Monday 10/17/11

Monday I sold CMG and MA early in the day. Throughout the remainder of the day I merely observed the market whenever I was able. I wasn't sure of any good opportunities for buy-back so I allowed my positions to remain as they were for the day.

Date	Symbol	buy/sell	price	shares	Net Cost	profit/loss	Total Cash	Total Profit
17-Oct	CMG	sell	318.47	-20	-6368.4		30260.19	-1145.61
17-Oct	MA	sell	334.77	-20	-6694.4		36954.59	-1145.61

Table 3.16. Transactions for 10/17

Tuesday 10/18/11

Tuesday I observed the market, without opening any new trades or closing existing positions. Eventually I observed a decline in CMG price equal to my set cutoff of 1.00% and so bought, netting a profit of $68.40 after fees. I didn't see any good opportunities to buy back MA today and so decided to wait, hoping to see a drop large enough to warrant closing the position.

Date	Symbol	buy/sell	price	shares	Net Cost	profit/loss	Total Cash	Total Profit
18-Oct	CMG	buy	314.95	20	6300	68.4	30654.59	-1077.21

Table 3.17. Transactions for 10/18

Wednesday 10/19/11

Wednesday I was unable to trade whatsoever due to my schedule. I hoped the market would be favorable the next day, and intended to close my MA position on Thursday.

Thursday 10/20/11

Thursday, as I had hoped, MA fell enough to buy, and I netted a profit of $167.60 after fees. I observed that CMG had continued to drop over the week and so I sold shares of CMG today, hoping the downward trend would continue.

Date	Symbol	buy/sell	price	shares	Net Cost	profit/loss	Total Cash	Total Profit
20-Oct	MA	Buy	326.29	20	6526.8	167.6	24127.79	-909.61
20-Oct	CMG	Sell	309.66	-20	-6192.2		30319.99	-909.61

Table 3.18. Transactions for 10/19

Friday 10/21/11

Friday I was travelling to WPI and so was unable to monitor my portfolio, or make trades. As I have observed many times throughout this simulation, being physically able to trade at any time the market may be favorable is a requirement for sustained profitability. Timing and commitment are prerequisites for any serious trader, regardless of trading strategy.

Week four was profitable for my portfolio. I was able to pay enough attention to my limited trading positions that I could make favorable choices and time my trades effectively. In the future I hope to continue this timing and attentiveness, while attempting to increase my quantity of companies traded per day. I could certainly have improved my trading commitment on the days where I was unable to trade at all, but this would have been difficult to accomplish without sacrifice in other areas of my life. Profits for this week totaled $236.00 and brought my total losses for the simulation to -$909.61.

Week 5: 10/24/11

The major news for week five of trading was the massive collapse of NFLX stock at the beginning of the week. Due mainly to the cumulative loss of over 800,000 subscribers this quarter, coupled with recent earnings announcements that predicted losses in 2012, NFLX stock fell massively from over $100 per share down to around $75 a share Tuesday before the market opened. Unfortunately for my portfolio I did not possess a short position in NFLX at the time, and so was unable to capitalize on this dramatic loss [32].

Figure 3.9. NFLX price over week five

Tuesday 10/25/11

Tuesday I hoped NFLX would continue to plummet and so shorted 200 shares even though I had missed the large pre-opening drop. In addition to NFLX, I sold BP and AMD, two companies I had ceased trading for some time. I believed I would be able to revisit my portfolio armed with a plan of less volume of trades per week, and from this plan turn a profit. I closed my position on CMG Tuesday, losing over $600. I decided to drop CMG and MA from my portfolio for now, and revisit the companies I began the simulation with. I shorted AMD successfully today after the stock price had fallen exactly 1.00% from when I sold. I closed my position on NFLX late in the day, after a loss of -$506.00. This I attribute to NFLX bouncing back several dollars from the near rock-bottom price I sold at.

Date	Symbol	buy/sell	price	shares	Net Cost	profit/loss	Total Cash	Total Profit
25-Oct	NFLX	Sell	74.91	-200	-14981		45300.99	-909.61
25-Oct	CMG	Buy	340	20	6801	-608.8	38499.99	-1518.41
25-Oct	BP	Sell	43.46	-150	-6518		45017.99	-1518.41
25-Oct	AMD	Sell	5	-1500	-7499		52516.99	-1518.41
25-Oct	AMD	Buy	4.95	1500	7426	73	45090.99	-1445.41
25-Oct	NFLX	Buy	77.43	200	15487	-506	29603.99	-1951.41

Table 3.19. Transactions for 10/25

Wednesday 10/26/11

Wednesday I allowed my existing positions to remain as they were, not trading at all. I intend to slow the volume and frequency of my trading, while still watching for sudden drops or spikes in stock price.

Thursday 10/27/11

Thursday I closed my position on BP, suffering a loss of over $250 and initiated shorts on both NVDA and AMD. Trading in both AMD and NVDA at the same time I hope to be able to profit from the fact that these companies are each other's largest competition. I am hypothesizing that if one company's stock rises the others should drop slightly.

Date	Symbol	buy/sell	price	shares	Net Cost	profit/loss	Total Cash	Total Profit
27-Oct	BP	buy	45.14	150	6772	-254	22831.99	-2205.41
27-Oct	NVDA	sell	15.1	-400	-6039		28870.99	-2205.41
27-Oct	AMD	sell	5.27	-1500	-7904		36774.99	-2205.41

Table 3.20. Transactions for 10/27

Friday 10/28/11

Friday I continued to watch the positions I opened on Thursday, as well as shorting JAG, SQNM, and FSYS. These companies all rose large percentages before the market opened and I am confident in my ability to profit from shorting the portfolio I have.

Date	Symbol	buy/sell	price	shares	Net Cost	profit/loss	Total Cash	Total Profit
28-Oct	JAG	sell	5.22	-1500	-7829		44603.99	-2205.41
28-Oct	SQNM	sell	4.7	-1500	-7049		51652.99	-2205.41
28-Oct	FSYS	sell	23.42	-400	-9367		61019.99	-2205.41

Table 3.21. Transactions for 10/28

I lost a lot of money this week but I am hopeful about prospects for the next week of trading. Relying entirely on shorting as a means of trading has limited my successes and has turned me into something of a pessimist. I find that when the market is performing poorly I am more confident and happier than when the market performs well.

Week 6: 11/1/11

Week six began well for my portfolio. I closed the positions I had allowed to remain open over the weekend at well-timed points in the day and made a large profit on all fronts. After I bought NVDA I decided to refrain from shorting them for the near future. I saw a steady rise in NVDA price with brief, minor drops, leading me to believe that a short position on NVDA would not be favorable at this stage of my simulation.

SQNM dropped steadily this week, although I only profited from this company on Monday. SQNM released third-quarter earnings announcements later in the week, but this did little to quell the decline in stock price.

My largest source of profits on Monday was from FSYS. This company fell enough over the weekend to provide over $400.00 in profits. I decided to ignore FSYS for the remainder of the week as prices steadily rose. This rise in FSYS price is most likely due to FSYS being recently selected by General Motors (GM) to be the official supplier of fuel for a new natural-gas powered vehicle GM will be designing. This close affiliation with such a prominent company will most likely lead to rising stock price, and a lack of shorting-profitability [20].

Date	Symbol	buy/sell	price	shares	Net Cost	profit/loss	Total Cash	Total Profit
1-Nov	NVDA	buy	14.2	400	5681	358	55338.99	-1847.41
1-Nov	FSYS	buy	22.22	400	8889	478	46449.99	-1369.41
1-Nov	SQNM	buy	4.6	1500	6901	148	39548.99	-1221.41

Table 3.22. Transactions for 11/1

Tuesday 11/2/11

Tuesday I closed my positions on both AMD and JAG, accumulating large losses from both. JAG continued to rise past when I closed my position, affirming I got out of the market at an opportune time.

Date	Symbol	buy/sell	price	shares	Net Cost	profit/loss	Total Cash	Total Profit
2-Nov	AMD	buy	5.43	1500	8146	-242	31402.99	-1463.41
2-Nov	JAG	buy	5.85	1500	8776	-947	22626.99	-2410.41

Table 3.23. Transactions for 11/2

Wednesday 11/3/11

Wednesday I saw an opportunity in both AMD and JAG to make a profit. I hypothesized that both of these companies were at a localized peak of stock price, based off observation of recent performance. For this reason I sold both JAG and AMD. I ignored other companies in my portfolio for now, unsure of how performance would be.

Date	Symbol	buy/sell	price	shares	Net Cost	profit/loss	Total Cash	Total Profit
3-Nov	JAG	sell	5.94	-1500	-8909		31535.99	-2410.41
3-Nov	AMD	sell	5.43	-1500	-8144		39679.99	-2410.41

Table 3.24. Transactions for 11/3

For the remainder of this week I did not trade, watching my stocks and waiting for their price to decline enough to profit. At first both companies rose but then began to fluctuate. I am confident I will profit from closing my positions during this coming week of trading. At this point I have realized my own limitations as a trader; mainly lack of time to devote to very short-term trades. I intend to keep my trading breadth low for the final week of this simulation, and look forward to analyzing my overall performance.

Week 7: 11/7/11

Monday I began my last week of simulated trading by watching the market. I felt that at this stage of the simulation I had no need to rush my trades. I monitored my position on both AMD and JAG, but did not buy either company today. JAG held fairly steady in price for the duration of the day, a fact which I found uncharacteristic of the company based off of my observations during this simulation.

Figure 3.10. JAG price over week seven

As the graph shows, JAG remained at a level price for Monday, before dropping off later in the week. AMD dropped slightly during the day Monday, but rose before closing, causing me to wait to purchase AMD.

Figure 3.11. AMD price over week seven

Tuesday 11/8/11

Tuesday I purchased AMD and JAG as soon as I was able in the day, netting a substantial profit from JAG and an even more substantial loss from AMD. Based on later observation of AMD price over the following days, if I had held my position until Wednesday or Thursday before selling, I could have profited.

Date	Symbol	buy/sell	price	shares	Net Cost	profit/loss	Total Cash	Total Profit
8-Nov	AMD	buy	5.73	1500	8596	-452	31083.99	-2862.41
8-Nov	JAG	buy	5.75	1500	8626	283	22457.99	-2579.41

Table 3.25. Transactions for 11/8

Wednesday 11/9/11

Wednesday I initiated short positions on several companies, NVDA, BP, and FSYS. My reasoning was that since I was available to monitor their prices throughout the day I could handle the slightly increased trading load. I found an opportune time to close FSYS Wednesday before closing, and netted a profit. BP and NVDA I decided to hold for at least another day before taking any action.

Date	Symbol	buy/sell	price	shares	Net Cost	profit/loss	Total Cash	Total Profit
9-Nov	NVDA	sell	14.76	-400	-5903		28360.99	-2579.41
9-Nov	BP	sell	42.51	-100	-4250		32610.99	-2579.41
9-Nov	FSYS	sell	19.72	-300	-5915		38525.99	-2579.41
9-Nov	FSYS	buy	19.16	300	5749	166	32776.99	-2413.41

Table 3.26. Transactions for 11/9

Thursday 11/10/11

Thursday I closed positions on both NVDA and BP. The profits from NVDA exactly cancelled the losses incurred from BP so for Thursday I broke even. This close to the end of the simulation I had a total loss for the entire simulation of -$2413.41, which lead me to believe that no amount of trading completed in two more days would be sufficient to cancel out this loss. With this in mind I did not initiate short positions on any other company on Thursday.

Date	Symbol	buy/sell	price	shares	Net Cost	profit/loss	Total Cash	Total Profit
10-Nov	NVDA	buy	14.57	400	5829	74	26947.99	-2339.41
10-Nov	BP	buy	43.23	100	4324	-74	22623.99	-2413.41

Table 3.27. Transactions for 11/10

Friday 11/11/11

Friday was the last day of trading in my simulation. I kept my trading volume to a minimum, selling and purchasing NFLX only. I was only successful in increasing my total losses by a few hundred dollars. Total losses for the entire simulation now equal -$2657.41.

Date	Symbol	buy/sell	price	shares	Net Cost	profit/loss	Total Cash	Total Profit
11-Nov	NFLX	sell	85.5	-100	-8549		31172.99	-2413.41
11-Nov	NFLX	buy	87.92	100	8793	-244	22379.99	-2657.41

Table 3.28. Transactions for 11/11

Although the simulation is now over, there is a lot of raw data to analyze. I will attempt to draw conclusions about the success of my portfolio, errors I made in strategy, and unavoidable pitfalls attributed to either the market in general, or a portfolio based solely on short-selling.

3.4 Analysis

Completion of the simulated trading portion of this project left me with conclusions regarding the effectiveness of my portfolio, as well as some unanswered questions. From a purely financial standpoint my portfolio was a failure, as evidenced by my large overall losses. However, due to the large amount of knowledge I gained about the stock market in general, as well as the first-hand experience in short-selling, I consider this simulation to be a success.

Some semblance of an analysis of my portfolio's performance can be made by simply tracking profits or losses over time. This indicates only an absolute representation of either positive or negative cash flow, without giving any frame of reference to compare to. Bearing this in mind, displaying profits/losses over time does have the advantageous effect of allowing insight into the times at which the portfolio was performing well or poorly.

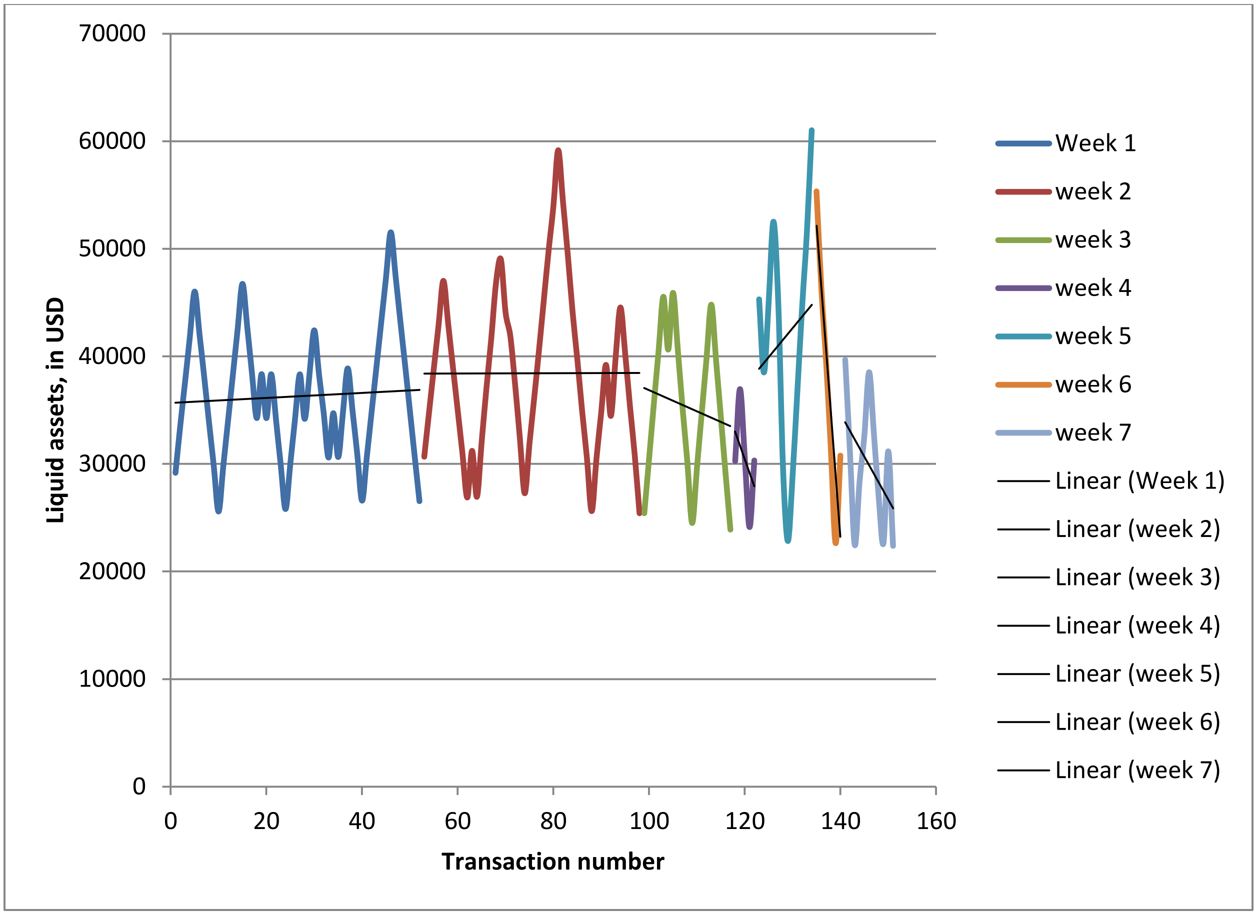

Figure 3.12. Total liquid assets over the simulation time

As shown in Fig. 3.12, my portfolio saw the most stability early in the simulation, with weeks one and two showing the steadiest linear approximations. Late in the simulation, possibly due to market fluctuations or overly aggressive trading, my portfolio oscillated more rapidly, ultimately losing $2657.41, or 10.63% over seven weeks of trading.

Plotting the performance of companies in my portfolio against a representation of a larger portion of the market's performance is a valuable analytical method. This will show how successful I was in choosing companies based off of their short-selling profitability. Profitability from short selling, as previously discussed, arises from volatile stocks, particularly stocks that drop rapidly in price. I have chosen the S&P 500 as my reference stock to gauge my performance against. The S&P 500 is an index of 500 large companies which are publicly traded in the United States.

JAG

JAG performed fairly well for my purposes, which is to say that JAG fluctuated a lot over the simulation timeline, consistently underperforming the S&P 500.

Figure 3.13. JAG vs. S&P 500

AMD

AMD was another company which performed well for me overall, falling well under the S&P's performance. AMD is a company I should have attempted a longer-term hold with early in the simulation, in order to better capitalize on the long-term decline evident in Fig. 3.14.

Figure 3.14. AMD vs. S&P 500

FSYS

I realize now that FSYS was not as valuable an addition to my portfolio as I thought it was going to be. This company, while profitable from time to time, did not exhibit the large drops in price displayed by both AMD and JAG.

Figure 3.15. FSYS vs. S&P 500

BP

BP is an example of a company which performed very well over the simulation timeframe, and was therefore a terrible choice on my part. BP rose consistently over the simulation time, despite short-term swings.

Figure 3.16. BP vs. S&P 500

NFLX

NFLX performed well for my portfolio, falling consistently and by a large amount during the simulation timeframe. The only way my position on NFLX could have been improved would be if I had been able to initiate a short position earlier in the year and hold the position until after the large crash late in the simulation timeline.

NVDA

NVDA was not a good choice for a company to short-sell. NVDA consistently performed better than the S&P index, with several small drops in price but large overall price increases. I do not believe my early hypothesis regarding AMD and NVDA price directly affecting each other. If one of these two companies stock does affect the others, it is only by a minute amount.

SQNM

SQNM performed badly overall, and therefore performed well for my portfolio, during the simulation period. I expected this company to crash rapidly and permanently given their history involving a fraudulent product.

MA and CMG

Both MA and CMG I believe I should not have bothered trading. These companies were only added to my portfolio during a time when I was observing unsatisfactory performance by the other companies in my portfolio. In hindsight, a more correct move would have been to reduce the volume of trades I made temporarily in order to gain a better grasp of the current market situation.

In general, I feel that a portfolio based exclusively on short-selling is impractical, and very difficult to profit from. Profiting from such a singular strategy requires a level of dedication and time commitment on par with a typical job, making this portfolio all but impossible for the casual investor. Shorting requires fast action for the short term, and good decision-making for the long term investments. An interesting experiment would be to repeat my simulation, shorting the same companies, but doing a long term short. For this experiment I would sell stocks at the beginning and wait a longer period of time before buying them back. This would be similar but opposite to the long term buy-and-hold simulation part of this project.

This simulation has taught me a large amount of information about the stock market, shorting, market tracking, financial decision-making, and damage control. With the lessons learned through the virtual trading I accomplished, I hope to become a better investor in the future.

4. Simulation C: Leveraged ETFs

My simulation will not differ very much from the traditional trading strategy, with the only difference being that I am trading in a different type of "stock" that of an Exchange traded fund. My basic plan will be to Buy at a low price, and sell when the value increases.

4.1 Introduction and Background

Exchange traded funds (ETF) are index funds or trusts that allow for collective trading based on the overall performance of an entire stock portfolio. This allows for easier trading due to the treatment of an ETF as a single security. For example, one of my ETFs is based on the value of gold, and varies based on consumption and availability of gold. Another is based on technology, and the various companies that make up that sector. Leveraged ETF trading is not a long term trading plan; instead it looks at a day by day market fluctuation to attempt to make money.

The goal of a leveraged ETF is to create a larger variance than that of the index of the leveraged ETF. A leveraged ETF basically takes the gain or loss of an existing ETF and multiplies it by a value, for example all of my ETF's are multiplied by 2, to get the leveraged gain or loss. There are also two types of leveraged ETF's: long and short. Long ETF trading profits when the stocks rise in value. Short ETF trading is where the investor wants the stocks to fall in value, as money is made off of the depreciation in value of the stocks. My goal is to track three of these leveraged ETFs on a daily basis, while learning to identify trends in the market and performance of these ETFs.

4.2 Portfolio Strategy and Research

This section will overview the strategy I will be using to trade my ETFs, it will also cover which ETFs I have selected to trade and the reason for choosing them. In addition it will cover some of the qualities that these ETFs have and some background information on them.

4.2.1 Trading Strategy

My trading strategy will consist of buying and selling three separate ETFs and watching them for trends in their performance. My basic strategy is to buy ETFs and wait for an increase in value of about 5% to sell, and wait for the value to fall and start to rise to buy again. If I buy an ETF and it continues to fall, I will try and wait for a bottom out point at which I will buy more of the ETF and wait for it to rise again. If an ETF continues to fall, I will reevaluate and cut my losses if it seems the value will continue to fall. If one of my tracked ETFs isn't performing in a very volatile manner, I will monitor the ETF in question while avoiding trading with the ETF until it becomes more active. I will avoid selling ETFs at a loss unless it seems like there is no other option, and I will only lose more money by waiting. I will analyze the trends as they occur, try to become better at predicting how the market will perform to maximize my profits and minimize my losses. Using our trading program, I will look into using limit orders to automatically sell at a set value. About halfway through the trading period, I plan on looking at the performance of my portfolio, and I may look into another strategy of trading ETFs.

4.2.2 Portfolio Selection Criteria

I chose varying ETFs with different bases and both long and short ETFs to try some varying strategies for trading these ETFs. I wanted to try something that would be more stable and something that would more volatile too. I hope that trading in multiple sectors and with different types of ETFs will allow me to gauge the market better and learn to anticipate fluctuations and changes.

4.2.3 Companies Selected

The first ETF that I selected for my trading is Powershares DB Agriculture Double Short (AGA), a leveraged ETF based on the agriculture sector. AGA is an ETF that is based on the performance of the agriculture sector as a whole, and is tied into the production and sale of crops such as corn, soybeans, wheat, and sugar. This ETF is based on the Deutsch Bank Liquid Commodity Index (DB), which tracks the futures of these commodities.

My second ETF, Powershares DB Gold Double Short (DZZ). DZZ is also related to the DB and is tied directly into the current value of gold, and it's performance in today's market. Both of these DB ETFs are double short, which mean that they are twice as volatile as the regular ETF, and they rise when the ETF falls. So if the basis ETF drops by 1%, the value of these two ETFs rises by 2% in value.

The DB was launched in February of 2003, and tracks the performance of crude oil, heating oil, aluminum, gold, corn and wheat. The DB is unique in that it only trades in these 6 commodities, unlike other commodity groups, and the large portion of energy commodities it tracks. DB also does constant weighting to evaluate the world production and inventory providing balanced commodity exposure. The fact that these first two ETFs are traded through DB makes them a subset of ETF called an Exchange Traded Note (ETN). An ETN performs the same role as an ETF, except that instead of trading on the performance of the commodity itself on the market, you are trading a senior debt note that is issued by the bank itself. Because it is issued by a bank there is a chance that an investment would be lost if the bank goes under, but this is offset by how an ETF comes with taxes and potential tracking errors.

My final ETF is Proshares Ultra Technology (ROM), which is based off of the Dow Jones US Technology Index (DJTI), is a double long ETF, which means it doubles the performance of the DJTI, and the ROM rises when the parent index does. An example of this is if the underlying ETF rises 1% in value, this double long ETF will rise 2% in value. The DJTI is a section of the Dow Jones Index, which is an index of stocks related to the technology sector of the stock market. This index is made up of a little over 800 stocks, consisting of software companies, computer companies, medical research companies, and cell phone companies. A few examples of these companies are Motorola, Apple Inc. and Google Inc. An index is a way of evaluating a section of the stock market, and its performance as a whole, and weights each stock in order to come up with a value for the sector performance.

Dow Jones is a business and financial news company that holds control over many indices and averaged values that are used to define the performance of the market as a whole by many. The most prominent index is the Dow Jones Industrial Average, which is an index of several major companies, including Microsoft, General Electric and Exxon. They also control many other indices that are used to evaluate sectors of the market, such as the technology index used in the ROM.

My trading plan for the AGA ETF is to watch for gradual price reductions and try to anticipate a floor, and buy up shares when the floor is reached, in an attempt to buy in before the value starts to rise again. This is going to be my slower traded ETF, and will probably be the most inactive of my traded ETFs. The DZZ ETF will be slightly more volatile than the AGA

ETF and will be traded more actively than the other. I will also try to anticipate sudden price drops in both of these due to sudden downward market fluctuations and trade accordingly, as these small crashes will cause the value of these ETFs to jump up, and then slowly fall again as the market climbs back up.

As for the ROM ETF, I expect a much more volatile performance, due to the large amount of stocks that compose the DJTI, and the overall volatility of the many stocks being compiled. I plan to watch this ETF on a daily basis, and plan to be much more active in the trading of this ETF than the other two, due to the large amount of movement I expect. I also plan to keep an eye on the news, to keep track of anything that might affect the performance of any of my ETFs, and to act accordingly if I notice anything.

4.3 Transactions

For the actual trading I will be using Interactivebrokers.com to take care of my portfolio trading and tracking of stocks and ETFs. In addition I have set up a Yahoo Finance account to track my ETFs, and have an application on my phone set up to keep track of my ETFs. As a backup I am also tracking all of my trading in a spreadsheet that tracks when I made the trade, and how much I traded and for what value. This spreadsheet will allow me to present and analyze my data more easily, and to track my profits.

This section will be organized by date, with weekly performance reviews every Friday. I will talk about my trades, and profits, and things I could have done differently or things that went well.

Week 1

For the week overall, I made a minor profit on AGA and ROM, and am still waiting for a value to appear where I can make a profit off of the DZZ shares I hold. I will start trading larger amounts of shares next week, as I have gained some experience with how the market trends, and good ways to buy and sell in order to make a profit. I also gained some experience with limit orders, and know how to use them to trade without actually having to watch the market constantly. Table 4.1 below shows the record of the transactions I made for my first week of trading.

Date	Symbol	Buy/ Sell	Price	Shares	Net Cost /Proceeds	Profit/ Loss	Total Cash	Total Profit
9/26/11							25000	
9/26/11	DZZ	Buy	5.39	100	540.00		24460	
9/26/11	AGA	Buy	17.94	10	180.40		24279.60	
9/26/11	ROM	Buy	53.37	10	534.70		23744.90	
9/26/11	ROM	Sell	55.00	10	549.00	14.30	24293.90	14.30
9/27/11	AGA	Buy	17.37	50	869.50		23424.40	
9/27/11	DZZ	Buy	5.11	100	512.00		22912.40	
9/28/11	AGA	Sell	18.10	60	1085.00	35.10	23997.40	49.4

Table 4.1. Week 1 Transaction Record

9/26/11

For the first week of trading I wanted to start off slowly, so I only spent a small portion of the overall amount of money I had to work with, so in case my ETFs went down in value I wouldn't lose too much money. By doing this I hope to ease myself into trading on the market. Today I bought several shares of each of my ETFs. I bought 100 shares of DZZ at $5.39 a share, 10 shares of AGA at $17.34 a share, and 10 shares of ROM at $53.37 a share. After I bought these shares, I decided to set up a limit order on interactivebroker.com to sell my shares of ROM when the value hit $55. The value of the ROM hit $55 at 3:00 that day, and I sold the shares to make a small profit on this. As the day went on the value of DZZ started to go down, so I set up another limit order to sell when the value hit $5.45. The value of AGA also started to drop so I set up another order to sell this ETF when the value hit $18.10.

Today I made a small profit on my ROM ETF, bought my other two ETFs at a high point, and the value of these two started to drop off. I set up my limit order so that even if I wasn't actively watching the market, the trade would still go through and I would make a profit. I will also try to stick with this original value In order to keep a steady profit going, though this number may have to be changed depending on the performance in the days to come. I realized today that I should wait for a low point in the value of the stock to buy shares; otherwise there is a possibility for loss.

9/27/11

Tuesday the market for ROM went up to $58 a share, and I realized from this that I needed to set higher values for the limit orders, just in case there was a potential for me to make a larger profit. This little mistake taught me the value of limit orders, and how there is a large potential for easy trading with limit orders, due to the ability to set and forget a selling point. Besides the fact that I sold my ROM shares too early, I still made a profit, which is always a good thing.

Today the value of AGA and DZZ dropped even further, so at about noon I bought several more shares of both of these stocks. I bought 50 shares of AGA at $17.37 a share, and 100 more shares of DZZ at $5.11 a share. When I did this, I added both of these amounts to the existing limit orders, so that I would sell all of my stocks at the value I chose. The rest of the day was uneventful, as all three ETFs stayed at a stable value.

9/28/11

On Wednesday, at about 2:00 PM, one of my limit orders went through, and I sold 60 shares of AGA at $18.10 a share, making a nice profit on these shares. However, just that day the value went all the way up to $18.35 a share at one point, and I realized again that I should start putting higher values on these limit orders. Also on Wednesday the market for DZZ started to rise again, and the ROM started to decline in value. However the value of DZZ didn't get up to the selling point I had set, and I decided at that point that I should lower the threshold of the limit order to $5.40 a share, in hopes that the market would reach that point sooner.

Wednesday was altogether a stable day, as the values didn't change much as the day went on, and there were no real opportunities for trading, as I had no real idea where the market would go the next day. I hope that as the weeks go by, I will be better able to anticipate where the market will trend in days after steady days like today.

9/29/11

Thursday I didn't get a chance to make any real trades, as the market remained fairly stable, with no real changes occurring in the overall value of my ETFs. ROM did continue to slowly drop off as the day went on, but it hadn't yet reached a point I thought would be a good point to buy. This is due to the hope for a better profit margin to appear, and due to transaction costs, it might not be cost effective to buy at this point in time. DZZ still didn't reach a point at which my limit order would go through, so I continued to hold onto those shares. And AGA dropped off slightly as the day went on. Altogether it was a stable day, with no real reason appearing to trade at all.

9/30/11

Friday was a bad day for my portfolio, as I didn’t get a chance to check up on the market until after the trading day was over. DZZ continued to hover around $5.35 a share, not quite reaching my selling point, and stayed stable throughout the day. However I lost a huge opportunity to buy ROM shares, as the price dropped significantly to about $51.50 a share, which could have led to a huge potential to make a large profit when the value climbed again, as I am sure this was a low point in the value of this ETF. AGA spiked up overnight to a value of almost $18.90 a share, which again emphasized the fact that I had sold my shares of this much too early, showing me I need to set up my limit orders with a larger profit margin in mind and sell manually if I think I'm going to lose money if I wait any longer.

Today taught me I should set up several limit orders that will be long standing in order to take advantage of sudden changes in the market. I also learned that I should definitely keep track of my stocks every day, and try and make time to make some trades. After I had time to check up on the market, I set up a limit order to buy shares of ROM, just in case the market drops over the weekend, in hopes I can salvage this lost opportunity.

Week 2

As a weekly review, I made a nice profit off two of my ETFs, and made a little over $1000 in profit, while learning of a flaw in our trading program, and making a profit regardless. I also learned a little bit about when to cut my losses and just sell regardless of the price if I notice a trend I don’t like. I also saw an example of my first news related value change, and I have theorized as to why it affected the value. Table 4.2 below shows a record of the transactions I made for week 2.

Date	Symbol	Buy/ Sell	Price	Shares	Net Cost /Proceeds	Profit/ Loss	Total Cash	Total Profit
10/03/11	ROM	Buy	51.00	200	10201.00		13796.40	
10/03/11	DZZ	Buy	5.10	800	4081.00		9715.4	
10/04/11	DZZ	Sell	5.35	1000	5349.0	216.00	15064.40	265.40
10/06/11	ROM	Sell	54.79	200	10957.00	756.00	26021.40	1021.4
10/06/11	DZZ	Buy	5.15	2000	10301.00		15720.40	

Table 4.2. Week 2 Transaction Record

10/3/11

Monday of this week was an interesting learning experience for me. This is because of the trade I set up Friday after the market closed, which I had set to buy shares of ROM at $51 a share. What happened is that the stock dipped down to almost $49 a share, and the program waited till the stock came back up to $51 to buy, which means I lost a large potential profit due to a program error. So the trade I had set up went through and I bought 200 shares of ROM at $51 a share. I also saw that the value of DZZ dropped slightly and I decided that I should buy some more of that ETF, and I bought 800 shares at $5.10 a share.

So on Monday I bought several large quantities of ETFs, and decided that I needed to change my standing trades in order to make a small profit, and I set the trade up to sell all 1000 shares of DZZ at $5.35 a share, which would be a small loss on my original 100 shares, but overall it would turn a profit, and with the consideration that the value has not climbed very high in recent days, I decided it was a safer bet than watching the market fall again later.

10/4/11

Tuesday was a profitable day for me, and my ETFs started to rise in value. DZZ finally hit my selling point, and I sold all 1000 shares for a $216 profit. I continued to watch my shares of ROM, but they didn't reach a point at which I considered it a good time to sell. AGA continued to stay at a stable level, not reaching a point where I thought it would be safe to buy, so I continued to monitor the value of the ETF, but took no action with it.

The trading of DZZ taught me a lesson in cutting my losses on some shares, in order to still make a profit, as I sold at a lower value than I bought some, but I also still made a profit when I bought even more shares at a much lower value. Tuesday was a profitable day, but I couldn't do much trading due to the relative stability of the market.

10/5/11

Wednesday was a slow day for me, as not much at all happened. None of my shares appeared worth selling, and nothing dropped significantly enough to be worth buying. So altogether it was a boring trading day and I wasn't able to do much trading wise. There was some motion in ETF values, just not significant enough for my trading strategy.

10/6/11

Thursday was another good day for me. I kept an eye on the value of my ROM ETF, and I decided it had reached a good selling point at a little under $55, and decided to sell at market price immediately. So I ended up selling 200 shares at $54.79 a share, which led to a profit of $756 on this trade. This is the largest single profit I have made so far in this simulation. However, as that day came to a close, I realized I had sold a little too early, and the value of ROM reached $55.50 a share, and I lost about $100 in profit due to this sell, but as I see it a profit is still a profit, which is always good. In addition on Thursday, the value of DZZ dropped to about $5.15, and I decided that it was a good point to buy, so I bought 2000 shares of DZZ at this price, and set up an automatic sell when this price reached 5.40$ a share.

10/7/11

Friday was another relatively slow day for me, I only owned shares in DZZ and that value stayed at about the same price that I had bought at, though I did notice a sudden spike in the value, which appears to coincide directly with an article that appeared talking about the appearance of a local bottom in the underlying gold price. I cannot discern how this cause my ETF value to suddenly jump, thought I theorize it is due to the sudden selling of stocks, or something similar, that would cause a sudden drop in the underlying value of gold that would cause my ETF to jump up in value rapidly.

Week 3

Overall for the week I didn't get an opportunity to make many trades, as the market seems to be staying fairly consistent in its trends, either upwards or downwards, and my ability to trade seems to be slowing down. The trades I did make for this week are shown in Table 4.3 below.

Date	Symbol	Buy/Sell	Price	Shares	Net Cost /Proceeds	Profit/Loss	Total Cash	Total Profit
10/11/11	AGA	Buy	16.79	400	6717.00		9003.40	

Table 4.3. Week 3 Transaction Record

10/10/11

Monday started off slowly, with the values not being very volatile, and the values staying fairly stable, and not allowing for very much trading. I only currently own shares in DZZ, and that value didn't change by a large enough margin to cause my trade to go through.

The ROM and AGA also stayed at a consistent value, and didn't appear to be at a good buying point, so I decided to hold off on buying anything today.

10/11/11

Tuesday saw a sharp decline in the value of AGA, which prompted me to buy 400 shares at $16.79. I set up a automatic sell immediately to sell these shares at $17.15.

This sudden drop in the value of AGA is because of the sudden large increase in the value of corn and wheat futures, as a large majority of these crops grown in the US were harvested around this time, and the sudden spike is due to the large sale and movement of these crops. It's probable that this price will stay low for a long period of time, but I decided to buy at this point just in case it rose again for another reason. The price of these crops will drop again as the winter comes, due to the fact that more of these crops will be moved from overseas into the United States.

The values of DZZ and ROM continued to stay consistent, with ROM slowly continuing to rise in value, reaching a maximum today of ~$59.50. DZZ stayed at a fairly constant value from Monday, with a small rise in value.

10/12/11

Wednesday brought changes in all three ETFs, but nothing drastic enough to warrant a change. ROM continued to rise, making me regret selling what I held late last week, as the price has rising almost 5 dollars from my sell point. DZZ dropped off back to a similar price to Monday's, and AGA rose slightly, but not enough to cause me to sell.

10/13/11

Thursday was another fairly boring trading day for me, as nothing much happened. DZZ rose a small amount, ROM continued its rising trend, and AGA stayed fairly consistent, with a large spike then drop in the middle of the trading day.

10/14/11

Friday brought another sudden drop in the value of AGA, probably due to the increase in movement of more US grown crops, as they are continuing to be harvested around the country. However I decided not to buy additional shares of AGA due to the unknown of where this ETF was going to start heading in value.

DZZ dropped slightly during the day, and ROM continued its rise in value. My theory for why ROM continued to rise is due to the fact that many gaming companies are part of ROM, and early November and late October are periods during which many game releases occur, which would cause values to rise as a sudden buying of their product occurs.

Week 4

Overall the week was a slow one, I did manage to make a profit when the value of DZZ reached a high enough point to sell, but overall the market wasn't volatile enough were trading was feasible this week. Table 4.4 will show the transaction I made for this week.

Date	**Symbol**	**Buy/Sell**	**Price**	**Shares**	**Net Cost /Proceeds**	**Profit/Loss**	**Total Cash**	**Total Profit**
10/20/11	DZZ	Sell	5.40	2000	10799.00	498.00	19802.00	1519.40

Table 4.4. Week 4 Transaction Record

10/17/11

Monday brought little to no change in the values of the various ETFs, with DZZ and AGA remaining constant over the weekend, and ROM finally dropping off slightly. ROM continued to drop off for the duration of the day, which I believe implied a downward trend for the week.

10/18/11

Tuesday brought about sudden upward spikes in DZZ and AGA, which within the first few hours of the trading day dropped back down to values similar to Monday's values. ROM dropped slightly then rose as the day went on, but staying at fairly consistent levels overall. Tuesday was overall a useless trading day, and there was no opportunity for any smart trading.

10/19/11

Wednesday brought minor increases in the value of AGA and DZZ, and a slight drop in the value of ROM, but overall nothing drastic enough to cause a trade to be a smart choice.

10/20/11

Thursday brought more increases in the value of AGA and DZZ, and was enough that my standing trade for the sale of DZZ at 5.40 a share went through towards the middle of the day. This means I sold my 2000 stocks of DZZ for a total of a $598 profit. AGA didn't reach a point today where I considered it a good point to sell however, and I continued to hold onto those shares.

10/21/11

Friday brought about a drop in DZZ and AGA, and a small rise in ROM. This led to Friday becoming another slow day for the trade of these ETFs. One weird thing that happened over the course of Friday however was the rapid rise in the value of AGA towards the end of the trading day.

Week 5

For the week overall, I got a great opportunity to buy DZZ at the lowest I've seen it yet. I hope to get a chance to sell this for a great profit potential, I continue to hold onto 400 shares of

AGA, waiting for a good time to sell, and I now added 3000 shares of DZZ to that. I hope that over the weekend the price will spike on these ETFs, and I have a chance to sell them for a good profit. Table 4.5 below contains the transaction record for this week.

Date	Symbol	Buy/Sell	Price	Shares	Net Cost /Proceeds	Profit/Loss	Total Cash	Total Profit
10/26/11	DZZ	Buy	4.62	4000	13861.00		5934.40	

Table 4.5. Week 5 Transaction Record

10/24/11

Monday of this week started off with a drop in the value of AGA and DZZ and a small rise in the value of ROM. The trading continues to be slow and the very gradual slow changes doesn't allow for very active trading.

10/25/11

Tuesday brought about an interesting development, AGA and ROM continued on there gradual changes, with not a whole lot happening in the value of these ETFs. However the value of DZZ dropped very suddenly a few hours into the trading day, where the value dropped almost 5% over the course of an hour or so. I have found several articles relating to this rise in the price of gold, which leads to a drop in DZZ, is due to the financial crisis in Greece, and the relation to the bailout plan for Greece. This is because there are plans to use a large quantity of gold in order to bailout Greece, and because of this the value of gold seems to be on the rise. This sudden dropped seemed to signal a good time to buy, with the hopes that the price would start to climb back up as things started to settle.

10/26/11

Wednesday brought about a great opportunity to buy up shares of DZZ, as the price continued to drop, reaching a point of about $4.62 a share, which prompted me to buy 3000 shares. I set up an order that would sell these shares at $5.10 a share, hopefully netting me quite a nice profit.

AGA was holding steady early in the day, but spiked suddenly, which I believe is due to the release of some information relating to the increase in cost it takes to grow crops, as compared to past years. This would cause a drop in the base value of crops, due to the lower profit margin that growers are showing this year.

ROM held fairly steady today, and continued to show no opportunity for and trading in this ETF.

10/27/11

Thursday brought about even more value drop in DZZ, and it made me regret not waiting for an even lower point to buy up these shares. AGA dropped down overnight, and continued to drop in value as the day went on. ROM however did well, and the value went up from Wednesday, and stayed steady throughout the trading day.

10/28/11

Friday was the most boring day of the week for me trading wise, and everything stayed at a consistent level from the previous day, with no real value change at all.

Week 6

Overall week five went fairly well, my shares in AGA reached a point I was comfortable to sell at and I made a profit of $194.00 when I sold 400 shares. DZZ continued to stay at a low point, which meant I was unable to sell the shares I am holding, and ROM stayed at a high value, which meant I couldn't trade at all in ROM this week. My transaction for week 6 is contained in table 4.5 below.

Date	**Symbol**	**Buy/Sell**	**Price**	**Shares**	**Net Cost /Proceeds**	**Profit/Loss**	**Total Cash**	**Total Profit**
11/01/11	AGA	Sell	17.28	400	6911.00	194.00	12846.40	1713.40

Table 4.6. Week 6 Transaction Record

10/31/11

Monday was a fairly steady day, and the market didn't change very much over the weekend. ROM stayed high, AGA stayed low, and DZZ stayed at its average from last week.

11/01/11

Tuesday was a good day for me, as my AGA stocks reached a high point, and I was able to make a profit off of the shares I bought last week. I sold 400 shares of AGA at $17.28 for a nice profit. ROM dropped a few percent and in hindsight would have been a great time to buy some shares of ROM. DZZ increased somewhat overnight and dropped off over the day, but never reached a point where selling my shares would have led to any sort of decent profit, so I decided to wait it out.

11/02/11

Wednesday was another average day, ROM increased in value somewhat from Tuesday, AGA dropped off again, and DZZ dropped off even more. Overall a slow day and it wasn't a good day for trading.

11/02/11

Thursday was another slow trading day, with DZZ dropping off even more, AGA stayed about the same, and ROM increased again.

11/03/11

Friday was another bad day for me, with all three ETFs staying about the exact same as Thursday.

Week 7

Week 7 was another slow week for me, and I ended up having to close out my shares of DZZ at a loss, which wouldn't have happened in the long run if I had a choice here. I would have kept hold of those shares until I could sell for a profit, and only due to the fact we had to close all our active shares did I take a loss, theoretically. I of course have no idea where the market would go, but I would hope the market would fall again later, so I could make a profit off those DZZ shares. During this last week, I also realized that my trading slowed down in the last few weeks, due to the fact that I was used to the volatility of the market in the first few weeks and I didn't feel comfortable trading with the market so stable. I also realized this stability would mean long term trading would be more effective, and I was used to a faster trading strategy, and I wasn't able to enact a long term plan with the end of our simulation occurring soon. Due to the stability of the market for this last week, and the only trades that occurred being the sale of my DZZ, I am not going to do a day by day discussion, as there is not much to talk about for each day. My trade for the week is detailed in Table 7 below.

Date	Symbol	Buy/Sell	Price	Shares	Net Cost /Proceeds	Profit/Loss	Total Cash	Total Profit
11/11/11	DZZ	Sell	4.34	3000	13019.00	-842.00	25871.4	871.4

Table 4.7. Week 7 Transaction Record

4.4 Analysis

Trading with leveraged ETF's was an interesting way to get into the trading market, as the volatility of the market varied greatly with each day, and it made trading in these ETFs difficult. This was made especially hard due to my lack of experience overall in trading, and I didn't have very good judgment in trading. The very basic strategy I took to heart when trading these ETFs was essentially an easy strategy, and one that is used by many traders on the market today, the "buy low sell high" policy, and it did fairly well for me. Not considering the losses I took at the end of the simulation, which were due to and ending of the trading period, I made close to 7% in profit in a few short weeks. I considered this a very good profit rate, and I feel I would have continued this trend if the trading period went on for a longer period of time.

Throughout the trading time I learned many things about the market, and about predicting market trends, and noticing strong market fluctuation. I also got better at the recognition of floors and ceilings, and managed to trade profitably, almost from the get go. However my trading slowed down in the last few weeks, as the sudden market stability made me hesitant to trade, because I was unsure of the correct time to buy and/or sell shares of my ETFs. I realize after the fact that I was too used to the strong market fluctuation, and that I should have started looking for smaller profit margins as the market started to slow down, and that my desire for big profits all at once prevented me from making any good profit later in the trading simulation period.

One thing I noticed throughout the trading period is that my strategy was not one of the most efficient strategies for trading these leveraged ETFs, mainly due to the fact that there was no real difference from trading in regular stocks. A strategy I read about during my research, but didn't feel I had the experience to really enact, was the idea of trading in both the short and long versions of a specific parent ETF. For this idea, one would sell one of them, maybe the short ETF, and buy stocks in the long ETF using the money from selling in the short. One would then wait for the short to fall and the long to rise, and potentially double the profits off of the performance of one stock, however a downside to this approach is the potential for large losses instead of profits. Because of this I felt this strategy was much too risky for me, a first time trader, to attempt, but thought it would make sense for an experienced trader.

Another problem that appeared as the simulation period went on was my inability to take action on some of the opportunities that appeared when I was unable to actively trade, such as when I was in class. This hindrance cost me opportunities that a full time trader would not have missed, and it makes trading like this almost a full time job, and a hard strategy to enact when one is not a full time trader.

Overall I feel that this strategy has great potential for profit, but from the perspective of a college student with little experience in the market, I would much rather work a strategy that requires much less time and effort. There are also other strategies for trading in leveraged ETFs that I didn't have time to look into, but likely require a much more experienced person working full time as a trader to fully take advantage of.

5. Simulation D: Long Option Straddles Prior to Earnings Announcements

This simulation is based around the idea that volatility of a stock is increased during an earnings announcement for a company and that this can be used to profit through the use of a long option straddle, as explained in detail below.

5.1 Introduction and Background

Since ancient times the concept of using what we refer to today as an option (in the sense of the financial contract) has been used to do business. London saw the use of calls (referred to as "refusals") and puts starting just before the turn of the 18th century. America saw the use of options referred to as "privileges" in the 19th century. In today's world markets, there is an incredible variety in the types of options – those other than the basic calls and puts (vanilla options) are called exotic options. For the purposes of this project, we will only be using vanilla options, albeit in certain combinations called straddles.

Options provide a unique set of contract terms that allow the buyer the right, but not obligation to buy (or sell) a certain asset (called the underlying) at a predetermined price (called the strike price). For instance if party A sells party B a $5 call option contract for XYZ stock with a strike price of $25 and an expiry of July 1st, party B is given the choice on July 1st to buy 100 XYZ stock for $25 per stock from party A, regardless of the current price. If the current price of XYZ is greater than $25, party B will exercise the option, purchasing the stock and immediately has an unrealized profit of the difference between the current price and $25 (and a realized loss of the $5 for the purchase of the contract). If the current price is below $25, then it does not make sense for party B to exercise the option and the option contract is allowed to expire, leaving with party with a realized loss of $5. A put option works in the same way, except it is the right to sell to party A, and it only makes sense to exercise if the current price is below the strike price. In most cases a trader will sell the underlying immediately after purchasing in the case of exercise of a call option (or buying to cover in the case of a put option), turning the unrealized profit into an immediate realized profit. The overall profit then becomes the difference of the cost of the option and the profit, if any, of the exercise of the option. This type of option is a European option – American options work the same way with the exception that they allow for early exercise; that is the buyer is allowed to exercise the option prior to expiry. For the purposes of this project, we will use American options, simply for sake of convenience while simulating trading on an American stock exchange.

There are a variety of ways options can be used in combination in order to either limit potential profit-loss range or modify the way a trader profits relative to the movement in the price of the underlying. In this simulation, only one such combination will be used; this combination is a long straddle, formed by buying a call option and put option on the same underlying with the same strike price and expiry. This creates an interesting payoff diagram – the payoff is independent of the *direction* of the underlying's price, but depends solely on the absolute value of the difference between the strike price of the two options (remembering that they were purchased to have the same strike) and the current price of the underlying. Because both options are bought, there is a realized loss from the get-go, but the farther the underlying moves from the strike price, the less the loss (assuming the resulting underlying position is covered immediately, keeping in mind that it only makes sense to exercise one of the options since the underlying asset's price is either above or below the strike, or at the strike price, in which case exercise has no effect), until it moves far enough away from the strike price that a positive profit is achieved. This strategy is used based on a prediction that the price of the underlying will make a significant movement in one direction or another before or at the expiry of the options. If the underlying's price reaches a point in which the profit with early exercise would prove satisfactory to the trader, selling the options rather than exercising them would increase profit. This difference in profit comes from the time value, i.e. because of the time value of money due to the interest rate and the possibility that the option could become a more favorable position, it has an intrinsically higher value than just the value inherited from the difference between underlying and strike prices.

Companies typically have an earnings announcement on a quarterly basis in order to keep investors up-to-date on the performance of the company in regards to its overall cash flow. There is often a "market prediction" approximating what the earnings for the quarter (or other time period since the last earnings announcement) will be, and this can lead to what is referred to as an "earnings surprise," if the actual announced earnings are significantly different from the prediction, whether they are positive or disappointing. In the case of an earnings announcement leading to an earnings surprise, the stock price of the respective company can be expected to react accordingly, rising on positive news, falling if negative, proportionally, to an extent, to the degree of the surprise. This sharp movement in price with an unknown direction makes for a prime opportunity to use a long straddle, which is what this project seeks to test.

5.2 Portfolio Strategy and Research

5.2.1 Trading Strategy

The strategy of this simulation is to purchase a call and put option at-the-money (i.e. with a strike price equal to the current stock price) prior to a scheduled earnings announcement of the underlying company in the hopes that there will be significant enough earnings surprises to generate enough movement in the underlying stock's price to push the profit of the long straddle into the positive, enough to offset any losses from straddles due to a lack of earnings surprise or other unforeseen events that keep the stock price stable. Variables that are subject to trial-and-error are the size of the company (e.g. small-cap versus large-cap companies), the liquidity of the underlying (most likely directly correlated with the size of the company), the length of time between the purchase date and the announcement date, the length of time between the purchase date and expiry (and consequently the length of time between the announcement date and expiry), and possibly the historical accuracy of earnings predictions for a certain company.

Take Greenbrier Companies (Ticker: GBX) for example. At closing on September 23rd, the stock price was at 12.48, a call option with a strike roughly at-the-money (K = 12.5) and an expiry of October 11th was priced at $0.98, and a put option with the same strike and expiry was priced at $1.30. To purchase a long straddle would thus cost $2.28. Below is a diagram showing the profit function of the two options separately and the long straddle if the options were exercised [45].

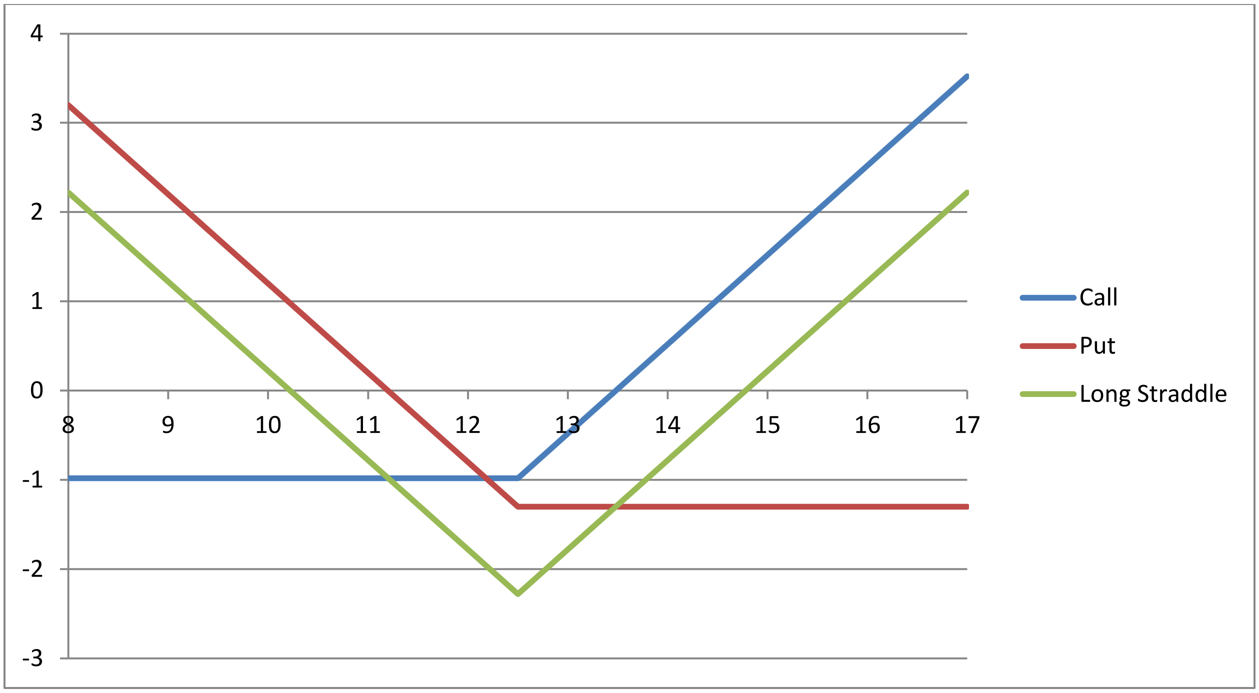

Figure 5.1. Option Long Straddle, Call Option and Put Option vs. Underlying Stock Price

The x-axis is the stock price at exercise, while the y-axis is of course the profit. For a profit, the stock must move either above $14.78 or below $10.22. Greenbrier has an earnings announcement planned for September 30th as this is being written. If the options were to be exercised on this day, even with the predicted volatility due to the announcement, the chance of the stock moving 18.4% or -18.2% is highly unlikely. This leads to the conclusion that the options cannot be exercised if a profit is desired. Instead as mentioned above, the options must be sold. There is no exact formula to determine how the market price of an option will react to a change (although Black-Scholes formula can be used to price theoretical prices of European-style options), so it isn't possible to construct a similar graph with the independent variable as stock price. The hypothesis of this simulation is that the movement in the stock price will be sufficiently great that the sum of the changes in the prices of the call and put options will be strictly positive. One immediate concern is that an option with an expiry in less than a month will lose value simply based on the passage of time more quickly than say an option with an expiry of three months (keeping in mind that time value grows exponentially with time, so theoretically an option's time value will degrade in a logarithmic manner). To test this hypothesis, the first week's purchases will include long straddles such that for each company, there are varying lengths till expiry in order to compare the results the following week and act accordingly.

5.2.2 Portfolio Selection Criteria

The strike price will be chosen throughout the project so that the moneyness (the relationship between strike and current stock price) is at-the-money, because the focus is solely on the absolute volatility of stocks, not on predicting the direction of their performance as that would be an entirely different type of simulation. Depending on the week, I will test different variations for variables such as time between announcement and expiry, time between announcement and option purchase, or average trading volume of the underlying. Because there are obviously a limited number of companies giving an earnings announcement on any given day, the ability to change the independent variable to different levels and keep the other variables either constant or otherwise controlled is limited, but it will be done as best as circumstances allow.

For the first week, I will be buying the options for the long straddle on Monday, September 26th for companies that have earnings announcements on Friday, September 30th (some are before trading hours, some are during trading hours and some are after trading hours – in the case of the third, the options obviously can't be sold until the following week at the open of trading on Monday). For this week, I will not be using stop or limit orders to let the brokerage automatically place the trades, but rather watch the market real-time to try to determine when the appropriate time to close the position is. Theoretically the change in price due to the content of the announcement will occur very quickly – within minutes or even seconds, because the market is extremely efficient is generally able to react to news rapidly due to the liquidity produced by market makers (i.e. companies or individuals who attempt to profit from the range of the bid-ask spread).

5.3 Transactions

9/24/11

On Monday, September 26th, the planned trades are of an equal number of call and put options on BioDelivery Sciences International Inc. (Ticker: BDSI) with a strike of $2.50 and expiries of October 21st, November 18th, December 16th, and March 16th (2012); on NRG Energy Inc. (Ticker: NRG) with a strike of $22 and same expiries; and on Greenbrier Companies (Ticker: GBX) with a strike of $12.50 and same expiries. This will naturally create the desired long straddles as the strikes are all chosen to be as close to the current trading price as possible and the number of calls and puts on each stock is of course equal. These companies all have earnings announcements Friday of the same week (September 30th) and the positions on their options will be closed as soon as the market reacts to the news and it is feasible to do so (i.e. the market orders go through and obviously that the market is open for trading). As mentioned, these will be market orders placed manually at such a time at which it appears that the market has fully reacted to the content of the earnings announcements. The three month average trading volume for each company is, respectively, about 121K, 3,127K, and 654K. Because it is not possible to keep the volumes constant, the data produced after the simulated trading next week will be analyzed to compare how the expiry date affects the profit margin within the companies' options so as to not be influenced by the varying volumes [45].

9/24/11

I entered in the trades today as specified above. I decided to use limit orders on all of the trades, using good-till-canceled (or GTC) and used Interactive Brokers' "SMART" option for choosing which exchange to trade on (this increases my chances of the trade going through at the limit-specified trade by not limiting the order to only one exchange). Because of the low-liquidity of the underlying stocks, especially for BDSI and GBX, and thus even lower liquidity of their options as is the general case, there is a large bid-ask spread, which is simply the difference between the bid and the ask of a financial product. The ask is the price a seller is willing to trade at, and the bid is the price a buyer is willing to trade at. Obviously the ask price is always higher than the bid price. For some of BDSI's options, the bid-ask spread was as large as $0.50, which doesn't seem like much until you consider that the options are only trading around a dollar or two – an incredible spread of almost 50%. Because of this immense spread size, using a limit order helps to get a price closer to the "mark" value of the option. Using a buy market order on a low-liquidity financial product will often lead to a trader receiving a price closer to the ask price (much higher than the quote value, i.e. last value traded at). The limit order set at the quote value has the risk of not going through right away – or even at all, but does help curb the risk of getting an overpriced trade. In the case of selling with a market order, the effect is same, but because the price traded will often be much closer to the bid price, and thus be sold underpriced. Using GTC on my orders is so if the order doesn't go through on the same trading day, I won't have to reenter the trade the next morning, etc.

9/30/11

While a trader would see the results of this week as a devastating loss, as a student learning, I found them to be incredibly enlightening and useful for future trading. Overall I lost

$2,025 in realized profits plus transactions costs, and still have about $2,780 in unrealized losses from the options that did not sell on Friday because of low liquidity. Overall I ended up losing close to $5,000 from my original $25,000 share of the initial $100,000 portfolio value for a grand total loss of just under 20% in a week's worth of trading (and 5% for the group overall), which again, from the viewpoint of a trader would catastrophically bad and a good sign to find another job, but as a student it was an incredible learning experience for just a week's time.

Below is a table (Figure 5.2) showing all of my transactions and their consequential profits and losses, respectively.

Syml	Type	Expiry	Qty	Buy Date	Buy Price	Sell Date	Sell Price	Market Price	Unrealized Profit	Realized Profit	Straddle Profit	Company Profit
BDSI	Call	21-Oct	10	26-Sep	0.9	-		0.02	-880		0	-1200
BDSI	Put	21-Oct	0	-	-	-	-			-		
BDSI	Call	18-Nov	10	26-Sep	1	-		0.05	-950		0	
BDSI	Put	18-Nov	0	-	-	-	-			-		
BDSI	Call	16-Dec	10	27-Sep	1.15	-		0.2	-950		0	
BDSI	Put	16-Dec	0	-	-	-	-			-		
BDSI	Call	16-Mar	10	27-Sep	1.3	30-Sep	0.1			-1200	-1200	
BDSI	Put	16-Mar	0	-	-	-	-			-		
GBX	Call	21-Oct	10	28-Sep	1	30-Sep	0.6			-400	-250	-900
GBX	Put	21-Oct	10	26-Sep	1.15	30-Sep	1.3			150		
GBX	Call	18-Nov	5	28-Sep	1.45	30-Sep	1			-225	-150	
GBX	Put	18-Nov	5	26-Sep	1.5	30-Sep	1.65			75		
GBX	Call	16-Dec	5	29-Sep	1.75	30-Sep	1.25			-250	-200	
GBX	Put	16-Dec	5	27-Sep	1.6	30-Sep	1.7			50		
GBX	Call	16-Mar	5	30-Sep	2.4	30-Sep	1.8			-300	-300	
GBX	Put	16-Mar	5	27-Sep	2.2	30-Sep	2.2			0		
NRG	Call	21-Oct	10	27-Sep	0.85	30-Sep	0.65			-200	50	275
NRG	Put	21-Oct	10	26-Sep	1.1	30-Sep	1.35			250		
NRG	Call	18-Nov	10	27-Sep	1.35	30-Sep	1.2			-150	0	
NRG	Put	18-Nov	10	26-Sep	1.65	30-Sep	1.8			150		
NRG	Call	16-Dec	10	28-Sep	1.55	30-Sep	1.5			-50	250	
NRG	Put	16-Dec	10	27-Sep	1.85	30-Sep	2.15			300		
NRG	Call	16-Mar	5	28-Sep	2.45	30-Sep	2.15			-150	-25	
NRG	Put	16-Mar	5	26-Sep	2.65	30-Sep	2.9			125		
Mistakes:												
GBX	Call	16-Dec	5	30-Sep	1.65	30-Sep	1.25			-200	(hit button twice to sell	
				Total Realized Profit			-2025	Total "Profit"		-4805		
				Total Unrealized Profit			-2780					

Table 5.1. Results from Week 1 of Trading

As one can see from the table, BDSI lead to the majority of my intense losses, accounting for $1,200 of the realized losses (almost 60%, which translates into a portfolio loss of my portion of about 5%) and over $2,500 in unrealized losses (the only unrealized losses as all other positions were successfully closed before trading hours ended on Friday, translating into over 11% loss for my portion of the portfolio). As mentioned in the 9/29 Transactions entry, BDSI had the lowest trading volume (at a meager 121,000 trades per day of the underlying stock) and by definition the lowest liquidity. This lead to two especially negative consequences: first, the limit orders for the put options never went through, and second, the call option positions were never closed. The first result was disastrous for the straddle trading strategy because the straddle was never formed! Had the put orders gone through successfully, the profits would have been outstanding due to the tremendous loss in the underlying – over 60% in overnight trading Wednesday night. Naturally because the call options were the only trades to go through, the options with expiry around the corner lost nearly all their value, while the longer-term options retained some value due merely to time-value. The second result – the call option positions not closing – has led to there being the potential for even greater losses. Overnight trading this weekend put BDSI up about 10% as of writing this section, which will decrease unrealized losses slightly, but nowhere near the scale of the losses to begin with. GBX also has lower liquidity (trading volume was just over half a million at 654,000 trades per day) leading to some of the trades not going in until Friday, the day when I was selling on. NRG having greater liquidity (over 3 million trades per day) traded much better and all of the option orders went through smoothly. Another advantage was that the bid-ask spread was not nearly as large and this may have been the reason that NRG was the only company with which I made a positive profit. I suspect the bid-ask spread severely cut my profits with the other two companies, especially since I was forced to put in market orders on Friday to sell as I was not able to actively monitor the trades because of unforeseen conflicts. In addition, because I was in a rush to put these orders in, I carelessly "closed" one of my positions twice, forcing me to have to buy-to-cover on the extra sell order. This was an immediate $200 loss due to the $0.40 difference in the buy and sell prices I traded at. This spread reinforces my belief that I lost a significant portion due to the high bid-ask spreads on my options with lower liquidity. Next week I will be sure to only use limit orders in order to curb my losses due to any high spreads. I will also be looking primarily for companies with higher trading volume in order to further curb this effect.

Unfortunately, all three companies moved their earnings announcements dates to a future date, and thus any changes in price were due to other factors. BDSI felt a substantial loss Thursday morning at open due to their announcement that one of their drugs in trial resulted in no significant effect over the placebo. Investors naturally looked upon this unfavorably leading to the 60+% loss overnight and continuing loss through the rest of the week. BDSI started the week at $3.00 and ended it at $1.14, i.e. a 62% loss. GBX started the week at $12.73 and ended it at $11.66, an 8.4% loss. Looking at the graph below (Figure 5.2), GBX seems to have mostly traded based on the market's performance trend (granted with higher volatility) [45].

Figure 5.2. GBX vs. Dow Jones Industrials and S&P500 indices

NRG started the week at $21.93 and ended it at $21.27, a 3% loss for the week. It seems to have similarly traded with the market (it is a component of the S&P 500), with the exception of Tuesday, when there was an article released by the Wall Street Journal with analyst estimates of the planned earnings release on Friday [45].

Figure 5.3. NRG vs. Dow Jones Industrials and S&P500 indices

In terms of the effect from the length of time between trading and expiry, the data produced did not prove sufficient to make a conclusion yet because the effect from the wide bid-ask spread overshadowed its effect. I will again trade varying expiries next week to continue to try to see what the effect is.

In conclusion for the week, I've found that trading options on underlying stocks with low liquidity does not prove profitable primarily because of the detrimental effect of the bid-ask spread as well as the difficulty in trying to get limit orders to go through efficiently or at all. I also need to see if there is any way to ensure that a limit order will only go through if the whole straddle will go through – otherwise the whole point of the strategy is a moot point. This may require me to make market orders when buying, but this may not be too ill-effected if the bid-ask spread is small enough. I will continue to try varying expiries as there was no discernible pattern this week. I do not know how to avoid buying a long straddle on a company that reschedules its earnings announcement, but I hope to make progress on this in the following weeks.

10/2/11

For this week's trading, I have selected another three companies with scheduled earnings announcements this week. Unlike last week, the scheduled earnings announcements are on different days throughout the week. The first company, Yum! Brands, Inc. (Ticker: YUM) (best-known for its fast food restaurants Taco Bell, KFC, Pizza Hut and Long John Silvers) has its earnings announcement day scheduled for October 4th after-hours (i.e. it will make the announcement after trading has finished for the day, thus I will not be able to trade according to the results till the next day's trading has begun. YUM's trading volume is over five million, so I am not worried about illiquidity as I was the previous trading week with BDSI and GBX. The current price is hovering between 49 and 50, so I am buying the long option straddles at 49 (the strikes are generally not fractions of a dollar unless the value of the stock is particularly low), because the price rounded is 49. The expiries I am purchasing are October 21st, November 18th, and April 20th (of next year). I would have tried to stay consistent with last week's expiries but there were no December or March expiries available on YUM. I also decided to cut down on the number of expiries I try simply for sake of transaction costs. The next company is Marriott International, Inc. (Ticker: MAR) (a well-known hotel chain), which has its earnings announcement scheduled for October 5th after hours as well. Its average volume is also over five million, again, neglecting illiquidity worries for the most part. Its current price is hovering around 27, so I will of course buy the strikes to be at 27 and use the same October, November, and April expiries as with YUM. The last company is called Silvercorp Metals Inc. (Ticker: SVM) (a company which engages in the acquisition, exploration, development, and operation of silver mineral properties in China and Canada). Again, the volume is over five million. The three companies fortunately all have roughly the same trading volume, so this can be considered a constant in this week's trading results, and theoretically, I can avoid treating liquidity as a negative factor, though if this turns out to not be the case, I will reconsider this for next week's trading. The current price is hovering around 8 at the moment, so naturally the strike for the straddles will be at 8 and the expiries will be the same, with the exception of April's, which will be moved to March 16th, 2012, because there is no April expiry available on SVM. SVM's earnings announcement is scheduled for Friday, but a time is not specified [45].

All buy orders will be put in Sunday night, so they are acknowledged by the exchange as soon as trading opens for the week Monday morning. This week, I will use a feature of Interactive Brokers, which allows me to put in an order for the entire straddle, instead of having to put in separate orders for the calls and puts. This allows a limit order to be put in, while still ensuring that both sides of the straddle go in – avoiding the disastrous results of such an occurrence as happened last week with BDSI. The limit order works slightly differently from a normal limit order because neither the calls nor puts have a specific price for which they must be bought at, rather the *total* of the two prices is what the limit price is set to. For example, if I wanted to buy a straddle for 1.3 per option *pair* of call and put, the broker would wait until the total of the prices of the call and put were 1.3 – say 0.6 for the put and 0.7 for the call, and then put in the buy order. This will even allow some of the order to go through and if either or both of the option prices go high enough to set the total above the price I wanted to pay while orders are going through, the broker will stop trading and wait for the price to come back down before putting through anymore orders. I will let all of my orders run till Friday as I did last week, but this week I will try using limit orders so I do not lose as much on the bid-ask spread.

On a side note, my BDSI call option positions have still not been closed, despite being market orders, and they have continued to create heavier unrealized losses. Fortunately, my losses are at some point limited because it was a long, not short, position – in the case of the latter, I could be left with the potential for ever-growing losses.

10/3/11

Only one of my limit straddle orders has gone through in today's trading, which worries me slightly, but there's not much I can do but wait and see if the rest go through before their respective earnings announcements.

10/4/11

Only more one straddle order was executed today, which means the other two YUM option straddles are defunct because the earnings announcement for YUM is scheduled for tonight after trading. SVM and MAR still have a chance to go through though.

10/5/11

Unfortunately I did not cancel the orders for YUM as would have been logical to do, and they went through today – after the earnings announcement. I will let them ride till Friday on the off-chance that the stock makes an abrupt enough move that will still enable the straddle to make a profit. Fortunately for YUM investors, YUM reported better than expected earnings for the quarter – up 8% for the year. YUM's stock went up slightly overnight, but as soon as the market opened, YUM crashed from 49.70 to 47.95 (a drop of 3.5%) in less than an hour of trading and then flat-lined for the rest of the day. This doesn't make a lot of sense at first glance, but looking at the chart more closely for the previous day, the price spiked up an almost identical amount in about an hour, seemingly in anticipation of the earnings announcement, so it makes sense that the price would fall right back to where it was before the announcement. This is a prime example of traders' quick profit-taking in the market based on market events. There is also noticeably higher volume the morning after the YUM earnings announcement as can be seen in Figure 5.4 below [45].

Figure 5.4. YUM Performance around YUM Earnings Announcement Compared to S&P500 Performance

Unfortunately for my simulation strategy, this means that overall, there was no net change as my strategy requires for a profit. This makes me think that putting in a limit sell order for the straddle right after the limit buy order goes through, setting it at such a price that would ensure profit, would be advantageous to my simulation's performance.

Luckily for today, one of the SVM straddles (expiry on October 21st) was executed today, well before the SVM earnings announcement scheduled for Friday.

10/6/11

MAR had their earnings announcement last night as scheduled and reported earnings for the quarter that beat analyst estimates. Their stock behaved as could be expected, rising above the market's performance and showing sustained positive return (as shown below in figure 5.5).

Figure 5.5. MAR Performance around MAR Earnings Announcement Compared to S&P500 Performance

Again, one can see there is an increased volume of trading around the earnings announcement.

10/7/11

Today I put in orders to close all of my open positions and cancel all outstanding trade orders for straddles. Overall only five long option straddle orders were executed, two of which (YUM) went in after the earnings announcement, and one (SVM) never saw an earnings announcement because it was rescheduled. Overall, I saw, again, sever negative performance for the week, but this week's losses were $1,628 realized and about $515 unrealized for a total of

$2,143 in losses, which is just over 10% for the week. While this isn't stellar performance by any means, it certainly shows improvement over last week. Two changes that I believe are responsible for this are the limit orders on both the buy and sell orders and much higher volume of the underlying stocks. Next week, I will try to pair together the sell orders in the same way as the buy orders are paired together in long straddles, and I will put these orders in immediately after the buy order goes through. Lastly, I will make sure to cancel any open orders after the earnings announcement has been made for the respective companies. Below, Table 5.2 is a table of the week's performance in detail.

Syml	Type	Expiry	Qty	Buy Date	Buy Price	Sell Date	Sell Price	Market Price	Unrealized Profit	Realized Profit	Straddle Profit	Company Profit
YUM	Call	21-Oct	4	3-Oct	2.19	7-Oct	1.57			-248	-680	-1068
YUM	Put	21-Oct	4	3-Oct	2.3	7-Oct	1.22			-432		
YUM	Call	18-Nov	3	5-Oct	3.3	-		2.41	-267		-198	
YUM	Put	18-Nov	3	5-Oct	2.89	7-Oct	2.23			-198		
YUM	Call	20-Apr	2	5-Oct	5.25	7-Oct	5			-50	-190	
YUM	Put	20-Apr	2	5-Oct	5.75	7-Oct	5.05			-140		
MAR	Call	21-Oct	6	4-Oct	1.15	7-Oct	2			510	-150	-150
MAR	Put	21-Oct	6	4-Oct	1.6	7-Oct	0.5			-660		
MAR	Call	18-Nov	-	-	-	-	-				0	
MAR	Put	18-Nov	-	-	-	-	-					
MAR	Call	16-Mar	-	-	-	-	-				0	
MAR	Put	16-Mar	-	-	-	-	-					
SVM	Call	21-Oct	13	5-Oct	0.5			0.84	442		-143	-143
SVM	Put	21-Oct	13	5-Oct	0.7			0.25	-585			
SVM	Call	18-Nov	-	-	-	-	-				0	
SVM	Put	18-Nov	-	-	-	-	-					
SVM	Call	16-Mar	-	-	-	-	-				0	
SVM	Put	16-Mar	-	-	-	-	-					
Mistakes:												
YUM	Call	18-Nov	3	5-Oct	3.3			2.41	-267	(sell order didn't get entered correctly)		
				Total Realized Profit			-1628	Total "Profit"		-2143		
				Total Unrealized Profit			-515					

Table 5.2. Results from Week 2 of Trading

10/12/11

This week's trades will be Citigroup, Inc. (Ticker: C), Hasbro, Inc. (Ticker: HAS), International Business Machines Corporation (Ticker: IBM), and Wells Fargo & Company

(Ticker: WFC). All four companies have their earnings announcements on October 17th; C and HAS before trading opens, IBM at 4:30pm (EDT) and WFC at 8:00am (EDT). C's strike will be at 29, HAS's strike will be at 35, IBM's strike will be at 185, and WFC's strike will be at 27. They will all have expiries of October 21st, November 18th, and April 20th (2012). Their trading volumes are, respectively, 51 million, 2 million (a little on the low side, but sufficient), 5 million, and 36 million [45].

10/13/11

Unfortunately when I went to enter the trades for this week, there appeared to be an error on Interactive Brokers trading platform (WebTrader) for the options trading. When I entered in that I wanted to purchase a certain straddle, when I previewed the order, it displayed the order as a credit instead of a debit, implying that it was about to short sell the straddle instead of going long on it. Not only would this be the complete opposite of what I'm trying to do in this simulation, but because the limit price is closer to the bid side of the bid-ask spread, I would be selling at an extremely unfavorable price, from which I would later have to buy to cover. Given this error I will report tomorrow on my progress and not trade today.

10/14/11

Unfortunately the error in WebTrader persists. I also tried the WebTrader Beta, but to no avail. Because, in terms of trading days, it is the day before the earnings announcements, it is no longer feasible to make most of the trades because three of the four companies make their earnings announcements before trading even opens. I will have to select new companies to trade next week and hope that the error resolves itself. Also, simply writing down the trades as if I were making them is not feasible because option trading is not as simple as stock trading with the bid-ask spreads not being negligible for the personal investor. It is impossible to observe the option trades closely enough to determine which of my trades would go through and when, especially considering the number of different options I would be trading.

Below is a graph (Figure 5.6) with all four companies, which would have been the underlying for the option straddles had I been able to trade. As you can HAS, WFC and IBM may not have been very favorable trades, but C appears to have been an ideal candidate for this trading strategy as it increased over 20% in anticipation and release of the earnings announcement on the 18th [45].

Figure 5.6. Wells Fargo & Company, International Business Machines Corp., Citigroup, Inc., and Hasbro Inc. Stock Prices between October 11th and October 19th

10/17/11

Fortunately the error in Interactive Brokers system is no longer present and I am able to resume trading; only losing a couple days in the process. The next four underlying stocks which I will make option trades for are Quest Diagnostics Incorporated (Ticker: DGX), AT&T, Inc. (Ticker: T), BB&T Corporation (Ticker: BBT), and Capital One Financial Corporation (Ticker: COF). These companies all have earnings announcements dates on October 20th, DGX before trading hours, T before, BBT before, and COF after trading hours. DGX's strike closest to its current trading price is 50 and its option expiries will be October 21st, November 18th, and February 17th (2012). Its trading volume is around 2 million, which, given previous trades in this project, seems just high enough to provide sufficient liquidity for desired trading. T's strike closest to its current trading price is 29, and it will have the same option expiries except the third will be March 16th instead of February 17th. Its trading volume is around 24 million, more than sufficient. BBT's strike is 22 and has the same expiries as T. Its trading volume is around 5 million. COF's strike is 40, with the same option expiries as T and BBT. COF's trading volume is about 3.5 million. The option trades will be put into Interactive Brokers in the same way as last time since that proved highly effective in ensuring that the entire straddle would go through at the same time. My phone is set to be alerted as soon as a trade goes through so I can immediately put in another limit order which will be to sell both halves of the straddle at a limit price which is a total of the call and put option prices. This way it does not matter which direction the underlying's price moves for putting in limit orders for the calls and puts separately (otherwise market orders or constantly watching the stocks would be the only alternatives, the former being a large cut to profits and the latter being unfeasible as a full-time student). The limit prices will be set a bit higher than price at which the straddle was purchased, so even if the underlying only moves enough to make the option transactions profitable momentarily, the orders will theoretically go through [45].

10/18/11

Today was fortunate in that six of my twelve straddle limit orders went through by the end of the trading day (DGX October and February, T October and November, BBT November, and COF October). I of course immediately put through limit orders to sell these at a slight profit margin. The difficult part here is to determine how much of a profit margin to reach for. Too low and the inevitable losses from some of the options will outweigh any gains and too high and the order may never go through as the underlying never moves enough to make the straddle that profitable before the simple passage of time degrades the value of the options as they approach expiry. The limit sell orders are roughly 5-10% higher than the buy price was. In the remaining weeks I will try to observe how my trades react to this level and adjust accordingly. For the October options that I now own, the expiry date is in three days (21st), so if the limit orders don't go through, the options will simply expire leaving me in either a long or short position depending on which direction the underlying's price moves (by its nature, a straddle guarantees that either the puts or the calls will be in the money because the strike price is the same for both). In the case that this does happen, I will simply put a limit order on the stock and try to obtain some profit from the stock transactions (i.e. buying to cover at a lower price than the put options sold at or selling at a higher price than the call options bought at).

10/21/11

One of the straddle limit sell orders went through (COF October) just before it expired, giving me a healthy 12% profit on that straddle. The graph below (Figure 5.7) shows the positive result of the earnings announcement in the stock price of COF.

Figure 5.7. Capital One Financial Stock Price from October 18th to October 25th

Unfortunately, the rest of the October options expired with heavy losses. The DGX October straddle lost about 79%, despite the profit from buying back the stock at a lower price than the strike price. The T October straddle also lost about 80% despite selling the stock at a slightly higher price than the strike price. This result makes sense if one looks at Figure 5.1, the underlying's price in both cases of DGX and T was very close to the strike price, meaning that the losses were very close to 100% (if the underlying's price were exactly the strike price, there would be only the loss of the price paid for the options, i.e. 100% loss). Below is a graph (Figure 5.8) of T's movement between October 18th (straddle purchase) and October 21st (expiry), and one can see that the earnings announcement had very little effect on the price – in fact the underlying price barely moved more than half a percent away from the strike price I chose all week, which of course leads to heavy losses in my simulation strategy.

Figure 5.8. AT&T Stock Price between October 17th and October 24th

Below is a graph (Figure 5.9) of DGX's stock price, showing a similar pattern to T, although it did move a little more – almost 2% - it wasn't enough to create a profitable straddle/trigger the limit sell order before expiry. This is primarily because the earnings announcement date was moved to the 25th of October, after expiry. As you can see below, had the earnings announcement date not been moved, this straddle would have proven to be highly profitable with the jump in price on the morning of the 25th.

Figure 5.9. Quest Diagnostics Stock Price from October 18th to October 28th

10/25/11

As Figure 5.9 shows, DGX's earnings announcement was good news and the price spiked some 14% in overnight trading. Naturally the limit sell order for the other DGX straddle with February expiry went through immediately. The straddle had a profit of almost 20% alone (unfortunately this was completely overshadowed by the 80% loss from the October expiry due to the last minute change in earnings announcement date). The BBT November and T November straddles are still sitting in my portfolio with limit sell orders waiting to trigger, but their current market prices put them in the red. Eventually I will cut my losses if they continue to decline in price.

10/26/11

The next round of trading will be from the following companies: Whirlpool Corporation (Ticker: WHR), Weyerhaeuser Company (Ticker: WY), and Chevron Corporation (Ticker:

CVX). WHR has its earnings announcement scheduled for October 28th at 6:00am, and is currently trading around 58.5, making 57.5 the closest strike price. Expiries will be November 18th, December 16th, and February 17th. WY has its earnings announcement scheduled for October 28th before US markets open, and is trading a little over 17, so a strike price of 17 will be used. Expiries will be November 18th, December 16th, and April 20th. CVX has its earnings announcement scheduled for October 28th at 8:30am, and is currently trading just under 107, making 105 the closest strike price. Expiries will be November 18th, December 16th, and March 16th. As with the last two rounds of options, limit orders will be placed on the straddle as a whole for each expiry, and if/when the limit is triggered, another limit order to sell at a reasonable profit will be placed. This time I will use "DAY," or end of day for the "Time in Force," that is, how long the order remains active for if it is not triggered. This means that if the orders placed do not trigger before end of trading on the day placed (or the next trading day if the order is placed after-hours, as is the case for my simulation), they will simply cancel themselves and be removed from the list of orders. The limit orders to sell will remain as "GTC" or good 'til canceled in case the underlying moves in anticipation to the earnings announcement or if the earnings announcement is moved back a few days (as has happened on numerous occasions) [45].

10/27/11

Three of the nine straddles I put in limit orders for bought today (and since they were only end of day orders, the remaining six have been canceled automatically). Unfortunately none of the straddles for WHR went through, so the performance of that company's stock is no irrelevant for my portfolio's performance this week. The March straddle for CVX and the

November and April straddles for WY went through, so accordingly with my plan, put in limit orders to sell those.

World markets saw a pleasant surge today at the open of trading after European policy makers were able to increase the European rescue fund to an incredible 1 trillion Euros, or roughly 1.4 trillion dollars. Individual companies, especially components of major indices such as the Dow Jones Industrial or S&P500, saw a similarly drastic increase, not necessarily because of anything about the company, but simply because of overall increased investor confidence in Europe's ability to handle the debt crisis. Europe is still far from out of the woods, but they bought themselves a stay of execution if nothing else, and in the process, showed the market their ability to continue working toward easing out of the debt crisis without major catastrophe [45].

As one can see in Figure 5.10 below, both WY and CVX saw a healthy increase in stock price a full day before their earnings announcements are scheduled to come out.

Figure 5.10. Dow Jones Industrial vs. Weyerhaeuser Company and Chevron Corporation from October 26th to October 28th

10/28/11

One of the WY straddles sold at a profit (about 6%), due primarily to the increase from the European deal and marginally to an increase in the stock price presumably from a positive earnings announcement. The other two stocks have obviously seen an increase in the call options' prices and decrease for the puts, but the remaining straddles as a whole are each still in the red.

Continuing to look at Figure 5.12 above, one can see that the earnings announcements had very little noticeable effect on either WY or CVX, and was only enough to trigger one of the three limit sell orders.

Unfortunately today when I went to put in the limit sell order for one of the WY straddles, I accidentally put in buy instead of sell, and since I was looking at getting a high price for it, the order immediately went through at the unfavorable end of the bid-ask spread. Fortunately the price of the straddle had fallen instead of increased, so with any luck, the straddle will come back up in price and overall still be profitable.

Out of curiosity's sake, looking at WHR's performance for the week, I see that had any of the straddles for this company gone through, it would have in all likelihood been a very healthy profit margin as the stock plummeted on an earnings announcement that did not meet expectations as well as a report that Whirlpool would be cutting 20,000 jobs. Below in Figure 5.11, you can see the 14% drop that occurred before trading hours on the 28th [45].

Figure 5.11. Whirlpool Incorporated Stock Price during the Week of October 24th

The limit orders to buy the straddles unfortunately did not go through most likely because of the increase in price due to the European deal on the 27th, and had they, then would have made a significant profit on the 28th as soon as the market opened for trading. It is possible that the limit orders were just for too low a price to trigger at any point.

Below, Tables 5.3 and 5.4 shows the results of the last two weeks of trading, with the first week updated to reflect the most recent changes in unrealized profits.

Syml	Type	Expiry	Strike	Qty	Buy Date	Buy Price	Sell Date	Sell Price	Market Price	Stock Price	Unrealized Profit	Realized Profit	Straddle Profit	Company Profit
DGX	Call	21-Oct	50	5	18-Oct	0.2	EXPIRED	EXPIRED	EXPIRED	49.89		-100	-895	-755
DGX	Put	21-Oct	50	5	18-Oct	1.7	EXPIRED	EXPIRED	EXPIRED	49.89		-795		
DGX	Call	18-Nov	50	0	-	0	-	-					0	
DGX	Put	18-Nov	50	0	-	0	-	-						
DGX	Call	17-Feb	50	1	18-Oct	2.8	25-Oct	7.3				450	140	
DGX	Put	17-Feb	50	1	18-Oct	4.3	25-Oct	1.2				-310		
T	Call	21-Oct	29	15	18-Oct	0.34	EXPIRED	EXPIRED	EXPIRED	29.13		-315	-765	-765
T	Put	21-Oct	29	15	18-Oct	0.3	EXPIRED	EXPIRED	EXPIRED	29.13		-450		
T	Call	18-Nov	29	7	18-Oct	0.72	-	-	0.95		161	0	0	
T	Put	18-Nov	29	7	18-Oct	0.69	-	-	0.19		-350	0		
T	Call	16-Mar	29	0	-	0	-	-					0	
T	Put	16-Mar	29	0	-	0	-	-						
BBT	Call	21-Oct	22	0	-	0	-	-					0	0
BBT	Put	21-Oct	22	0	-	0	-	-						
BBT	Call	18-Nov	22	3	18-Oct	1.19	-	-	2.14		285	0	0	
BBT	Put	18-Nov	22	3	18-Oct	1.4967	-	-	0.2		-389	0		
BBT	Call	16-Mar	22	0	-	0	-	-					0	
BBT	Put	16-Mar	22	0	-	0	-	-						
COF	Call	21-Oct	40	3	18-Oct	1.58	21-Oct	3				426	96	96
COF	Put	21-Oct	40	3	18-Oct	1.12	21-Oct	0.02				-330		
COF	Call	18-Nov	40	0	-	0	-	-					0	
COF	Put	18-Nov	40	0	-	0	-	-						
COF	Call	16-Mar	40	0	-	0	-	-					0	
COF	Put	16-Mar	40	0	-	0	-	-						
Mistakes:														
					Total Funds Used			5223	Total "Profit"			-1717		
					Total Realized Profit			-1424	Percentage Gain/Loss			-33%		
					Total Unrealized Profit			-293						

Table 5.3. Results from Weeks 3 and 4 of Trading

Syml	Type	Expiry	Strike	Qty	Buy Date	Buy Price	Sell Date	Sell Price	Market Price	Stock Price	Unrealized Profit	Realized Profit	Straddle Profit	Company Profit
WHR	Call	18-Nov	57.5	0	-	0	-	-					0	0
WHR	Put	18-Nov	57.5	0	-	0	-	-						
WHR	Call	16-Dec	57.5	0	-	0	-	-					0	
WHR	Put	16-Dec	57.5	0	-	0	-	-						
WHR	Call	17-Feb	57.5	0	-	0	-	-					0	
WHR	Put	17-Feb	57.5	0	-	0	-	-						
WY	Call	18-Nov	17	1	27-Oct	0.8	28-Oct	1.15				35	8	8
WY	Put	18-Nov	17	1	27-Oct	0.52	28-Oct	0.25				-27		
WY	Call	16-Dec	17	0	-	0	-	-					0	
WY	Put	16-Dec	17	0	-	0	-	-						
WY	Call	20-Apr	17	1	27-Oct	2	-	-	2.33		33		0	
WY	Put	20-Apr	17	1	27-Oct	1.75	-	-	1.28		-47			
CVX	Call	18-Nov	105	0	-	0	-	-					0	0
CVX	Put	18-Nov	105	0	-	0	-	-						
CVX	Call	16-Dec	105	0	-	0	-	-					0	
CVX	Put	16-Dec	105	0	-	0	-	-						
CVX	Call	16-Mar	105	1	27-Oct	8.5	-	-	8.91		41		0	
CVX	Put	16-Mar	105	1	27-Oct	6.95	-	-	5.63		-132			
Mistakes:														
WY	Call	20-Apr	17	1	28-Oct	2.15	-	-	2.33		18			
WY	Put	20-Apr	17	1	28-Oct	1.55	-	-	1.28		-27			
				Total Realized Profit			8		Total Funds Used			2052		
				Total Unrealized Profit			-114							
				Total "Profit"			-106		Percentage Gain/Loss			-5%		

Table 5.4. Results of Week 5 of Trading

11/2/11

The companies I will be trading options for are Ventas, Incorporated (Ticker: VTR), Warner Chilcott (Ticker: WCRX), and Ultra Petroleum Corporation (Ticker: UPL). The companies' stocks have trading volumes of about 1.8 million, about 5 million, and about 6.5 million, respectively. I will buy option straddles on VTR with a strike of 55 and November, December and February expiries. Option straddles on WCRX will have a strike of 32 and November, December and March expiries. Option straddles on UPL will have a strike of 18 and November, December and April expiries. I will be using an identical trading strategy as last week, placing limit orders to buy, waiting for the text alert before putting in a slightly increase price sell limit order [45].

11/3/11

Unfortunately the only limit orders that went through today were the straddles on VTR with November and February expiries. I'm not sure why no other orders went through, as I put the limit order prices roughly halfway in the bid-ask spreads for each straddle. At this point there's nothing that can be done since all of the earnings announcements are before trading opens tomorrow morning. I have been purchasing the options about a day ahead of time to minimize the loss of possible profits due to a decrease in price from loss of time value, but at the same time, the number of option purchases that have gone through is limited by the short time frame. Next week I will go back to buying a couple days ahead of time in the hopes that more of the limit orders will have the chance to go through.

11/4/11

Today was a highly disappointing day both in terms of the orders that did go through and the ones that did not go through. VTR's earnings announcement was of little consequence and the market treated it accordingly with next to no real movement in the stock price after the announcement that did not seem to be simple correlation to the general market trend at the time. Below is a graph (Figure 5.12) of VTR's performance this week and an overlay of the S&P500 to account for most of VTR's movement.

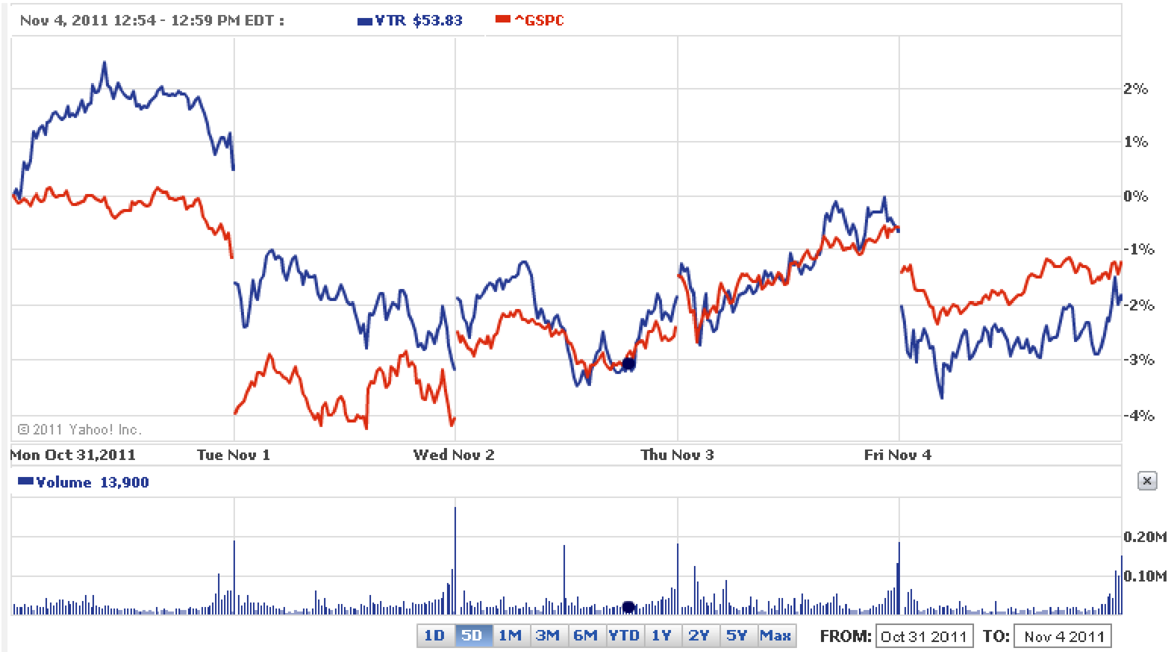

Figure 5.12. Ventas, Incorporated vs. S&P500 Performance for Week of October 31st

Looking at the earnings announcements of the other two companies, UPL and WCRX, it is highly regrettable that their options were not ordered. UPL was up almost 10% by the end of trading today on positive surprise for revenue earnings (although income was down for the quarter).

WCRX had similar results in that they would have proven profitable for my strategy. Unfortunately for any WCRX shareholders, the stock plummeted almost 11% within a couple hours after trading began following the news that morning that the third quarter profits were down 42%. Below is a graph (Figure 5.13) of both UPL and WCRX's performances for the week.

Figure 5.13. Warner Chilcott vs. Ultra Petroleum Corporation Performance for Week of October 31st

On Monday morning, I will close any open positions from previous weeks to cut my losses, and will put in new limit orders early in the week for three companies (TBD) with earnings announcements on Friday. One positive event for the week is that one of the previous CVX straddles sold at a very marginal profit of approximately 0.32%. Below is a table (Table 5.5) of this week's trading results.

Syml	Type	Expiry	Strike	Qty	Buy Date	Buy Price	Sell Date	Sell Price	Market Price	Stock Price	Unrealized Profit	Realized Profit	Straddle Profit	Company Profit
VTR	Call	18-Nov	55	1	3-Nov	1.65	-		1.16		-49		0	0
VTR	Put	18-Nov	55	1	3-Nov	1.8	-		1.98		18			
VTR	Call	16-Dec	55	0	-	0	-						0	
VTR	Put	16-Dec	55	0	-	0	-							
VTR	Call	17-Feb	55	1	3-Nov	3.6	-		3.08		-52		0	
VTR	Put	17-Feb	55	1	3-Nov	4.3	-		4.37		7			
UPL	Call	18-Nov	32	0	-	0	-					0	0	0
UPL	Put	18-Nov	32	0	-	0	-					0		
UPL	Call	16-Dec	32	0	-	0	-						0	
UPL	Put	16-Dec	32	0	-	0	-							
UPL	Call	16-Mar	32	0	-	0	-						0	
UPL	Put	16-Mar	32	0	-	0	-							
WCRX	Call	18-Nov	18	0	-	0	-						0	0
WCRX	Put	18-Nov	18	0	-	0	-							
WCRX	Call	16-Dec	18	0	-	0	-						0	
WCRX	Put	16-Dec	18	0	-	0	-							
WCRX	Call	20-Apr	18	0	-	0	-						0	
WCRX	Put	20-Apr	18	0	-	0	-							
Mistakes:														
					Total Funds Used			1135	Total "Profit"			-76		
					Total Realized Profit			0	Percentage Gain/Loss			-7%		
					Total Unrealized Profit			-76						

Table 5.5. Results of Week 6 of Trading

11/7/11

For my last week of trading I have selected three prime candidates for companies with earnings announcements on Thursday night or Friday morning: Walt Disney Company (Ticker: DIS), Molycorp, Inc. (Ticker: MCP), and NVIDIA Corporation (Ticker: NVDA). All three companies have very high trading volumes (22 million, 15 million, and 44 million, respectively) and thus excellent liquidity. DIS trading at 35.15 at today's close will have option straddles with a strike of 35, and expiries of November 18th, December 16th, and April 20th. NVDA trading at 14.74 at today's close will have option straddles with a strike of 15, and expiries of November 11th (the same day as the earnings announcement), November 18th, and March 16th. MCP trading at 41.62 at today's close will have option straddles with a strike of 42.5 and expiries of November 11th (the same day as the earnings announcement), November 18th, and March 16th. This is the first time I am trying option straddles with expiry dates coinciding with the earnings announcement dates (obviously the earnings announcements being chosen so they are released pre-trading hours). Last time I had option expiries so close to the earnings announcements (1 day after), I met disastrous losses, but this was half due to the last-minute change in the earnings announcement date. I am hoping that was simply a fluke and that this time I will have better luck. In the unfortunate case that I do not, it will still be a useful result in confirming that the two dates should not be in such proximity [45].

11/8/11

All of the limit orders for all nine straddles went through by the first half of the trading day, which is a first, most likely due to the up and down swing the market made immediately upon opening. I of course put in the limit orders to sell as soon as I had access to a computer later in the day. This time I decided to be more formulaic in how I chose the sell point, demanding that each limit be as close to a five percent increase as possible in terms of cents. This is a more conservative limit than I have been using in the past (ranging from 10-20%), which I believe will allow more of the options to be profitable for the strategy, as the slight majority have tended to not meet the high limit sell orders in previous weeks.

11/9/11

Two of the option straddles have already gone through today (NVDA's November 11th and DIS's November 18th straddles) at the required 5% profit. Below is a chart (Figure 5.14) of the two companies' performances as well as the S&P500's performance for comparison to the general market trend that day, for further explanation of why they might have gone through early.

Figure 5.14. Performance of Walt Disney Company vs. NVIDIA Corporation vs. S&P500 for Previous Week

Walt Disney took an additional hit to the market's dip after Euro Disney came out with its earnings report which included an increased net loss to 64 million Euros. NVDA has begun showing traders' interest as the earnings report approaches, and NVDA has beaten analyst estimates for the last four straight quarters [45].

11/10/11

Three more option straddles have sold at a pleasant 5% profit margin per their limit orders. The two November straddles for MCP and the remaining November straddle for NVDA, prematurely relieving my qualms about whether the November expiries would be too close to the earnings announcement dates. Below is a graph (Figure 5.15) comparing MCP and NVDA as in the above figure.

Figure 5.15. Performance of NVIDIA Corporation vs. Molycorp, Inc. vs. S&P500 from November 8th to November 10th

There was no news on Thursday for MCP, so as to why it moved so much without heavy influence from the market isn't clear other than possible trading in anticipation of the earnings announcement tomorrow.

11/11/11

Today one more of the option straddles sold (DIS's December 16th straddle), leaving only the long-term (expiries next year) options left. This week is the first to end in a positive profit, leaving hope that the strategy has been improved over the last seven weeks of trading to be something that has potential as a real-world strategy. Interestingly enough, it seems that the long-term options are less profitable than the very short-term ones, when there is a significant jump after the earnings announcement, as there was for all three companies. As shown in the table below (Table 5.6), the profit overall was 2%. Without the long term options, the profit would have been 5%, but the expensive nature of the MCP March straddle (almost three times as expensive as any other straddle for only one) heavily weighed against the profit margin.

Syml	Type	Expiry	Strike	Qty	Buy Date	Buy Price	Sell Date	Sell Price	Market Price	Stock Price	Unrealized Profit	Realized Profit	Straddle Profit	Company Profit
DIS	Call	18-Nov	35	2	8-Nov	1.2	9-Nov	0.58				-124	20	129
DIS	Put	18-Nov	35	2	8-Nov	0.87	9-Nov	1.59				144		
DIS	Call	16-Dec	35	1	8-Nov	1.86	11-Nov	2.95				109	109	
DIS	Put	16-Dec	35	1	8-Nov	1.68	11-Nov	0.77				-91		
DIS	Call	20-Apr	36	1	8-Nov	3.6	-		3.36		-24		0	
DIS	Put	20-Apr	36	1	8-Nov	2.7	-		3.06		36			
NVDA	Call	11-Nov	15	4	8-Nov	0.5	9-Nov	0.24				-104	20	41
NVDA	Put	11-Nov	15	4	8-Nov	0.59	9-Nov	0.9				124		
NVDA	Call	18-Nov	15	3	8-Nov	0.72	10-Nov	0.51				-63	21	
NVDA	Put	18-Nov	15	3	8-Nov	0.73	10-Nov	1.01				84		
NVDA	Call	16-Mar	15	1	8-Nov	1.99	-		2.02		3		0	
NVDA	Put	16-Mar	15	1	8-Nov	1.92	-		1.95		3			
MCP	Call	11-Nov	42.5	1	8-Nov	1.92	10-Nov	0.5				-142	24	54
MCP	Put	11-Nov	42.5	1	8-Nov	2.29	10-Nov	3.95				166		
MCP	Call	18-Nov	42.5	1	8-Nov	2.59	10-Nov	1.01				-158	30	
MCP	Put	18-Nov	42.5	1	8-Nov	2.87	10-Nov	4.75				188		
MCP	Call	16-Mar	42.5	1	8-Nov	7.2	-		2.64		-456		0	
MCP	Put	16-Mar	42.5	1	8-Nov	8.5	-		11.59		309			
Mistakes:														
					Total Funds Used			5197	Total "Profit"			95		
					Total Realized Profit			224	Percentage Gain/Loss			2%		
					Total Unrealized Profit			-129						

Table 5.6. Results of Trading Week 7

5.4 Analysis

The portfolio strategy to buy an option straddle with an underlying having an earnings announcement in proximity presented with mixed results during the simulation. The first few weeks were as much learning to trade options in more advanced ways as much as running the simulation for itself. Experimentation with the type of order (i.e. market, limit, etc.), longevity (i.e. day or good-till-canceled) and expiry date was vital to both the trading of the options in and of themselves as well as for the purposes of the simulation. The simulation showed that altering any of these variables can drastically change the behavior of the strategy. Further experimentation within the parameters of the simulation included how close the purchase of the option straddle was to the earnings announcement for the underlying company and how close the earnings announcement was to the options' expiry. After beginning to use limit orders, the price to set the sell order relative to the buy price was also varied. Each week one or more of these variables would be altered to improve upon the previous week's performance.

One of the first things that helped to improve the simulation results immediately was using limit orders for the option purchases so as to not get killed on the bid-ask spread with market orders. This naturally led to the problem that both sides of the straddle would not go through, which would be self-defeating in purpose for the simulation. Fortunately, the trading platform allowed for limit orders on the entire straddle, thus avoiding the problem of only buying or selling a portion of the spread and in all likelihood, missing out on the profitable side.

Using good-till-canceled orders became very important as using day orders would often lead to missed opportunities and the risk that I would not be able to reenter the orders in if necessary (due to lack of access to a computer, etc.), although the counter-risk was that the GTC orders had to be cancelled the night before the earnings announcement, as there would be no point in buying the orders afterwards (at least insofar as this simulation goes).

I quickly learned that low-liquidity stocks were not well-suited for this trading strategy in any way. Even if the underlying stock performed exactly as I wanted, there was not always a guarantee that there would be enough liquidity in the options to make the trades required to take advantage of the stock's favorable movement. I found this the hard way when trading BDSI and the orders for the puts never went through before the stock fell through the floor. About halfway through the simulation, I settled on an average trading volume of one to two million trades at minimum, more than five if possible, for the underlying in order to have sufficient liquidity in the respective options market.

Expiry dates tended to have a significant impact on the profit margin of the strategy. Options with far off expiries are naturally much more expensive and unfortunately as I found, much less prone to even drastic movements in the stock price, because so much of their price consists of time-value. In addition, options with expiries that were quite close to the earnings announcement date would react quite favorably if there were significant movements in the underlying. If I had had the opportunity to continue trading for this simulation, I would have begun to trade solely options with expiries within a month or two of the earnings announcement date and purchase date, as the long-term options repeatedly proved less profitable for the portfolio. One issue that came up when the earnings announcement and expiry were within days is that a rescheduling of the earnings announcement would just about devastate the strategy, especially if the options were expensive relative to movement in the stock, as they would simply expire and the only thing to offset the loss would be if there was any change in the stock price due to factors other than the rescheduled earnings announcement.

Another major timing issue was not just how close the earnings announcement and expiry dates were, but how close to the earnings announcement the limit orders were placed. Throughout the simulation I varied the timing between placing the limit orders and when the earnings announcement was scheduled for between several days and just the day before. The advantage of placing the day before was that it would minimize any loss due to time passing, but at the same time, it was outweighed by the advantage of a longer opportunity for the buy limit orders to go through by placing the limits several days in advance.

Stocks that were naturally more volatile did substantially better simply because they sometimes reached a price above or below the strike price that was enough to trigger the profitable limit sell order even before the earnings announcement had been reached. This was also in part due to trading in anticipation to the earnings announcement (especially if analysts had reason to believe that the earnings report would be especially good or bad) as well as any increased volatility in the market as a whole on a particular day that might have influenced the underlying's price.

One of my biggest conclusions not mentioned in my transaction entries was that time-constraints of the portfolio's trader, a student in this case, could greatly affect the performance of the portfolio simply because of how able one is able to follow the strategy strictly due to outside conflicts. A computer program to make these trades or at the very least a full-time trader, would be much more well-equipped to utilize this strategy as there would be no delay in the limit buy order going through and the limit sell order being placed, nor would mistakes go unseen for more than a moment (and in the case of a program, the only mistakes would be those created by the programmer, which once resolved, would theoretically cease to manifest).

Overall, I found this strategy to have a lot of potential, but the specific logistics of it still need to be worked out. A detailed algorithm with more rigid conditions and a significantly greater amount of experimental data to study would be needed before I would recommend such a strategy being utilized. Once such rigor was applied though, it would simply be a matter of giving the instructions to a computer as a trading program or a living and breathing full-time trader and the simulation I conducted suggested heavily that it could be quite profitable given enough time.

6. Comparison of Portfolio Performances

Our four portfolios made up a diverse spread of stock trading strategies, and had similarly diverse results. Having these four types of portfolios running at the same time provided for a more accurate comparison than having portfolios simulated at different times, since the market was fluctuating equally for each simulation, but given more time, it would have been better to be able to run the simulations in a variety of behaviors for the market in terms of volatility and overall performance (e.g. in a poorly performing market the short-selling portfolio would have highly out-performed long term holding, in a very volatile market, the leveraged ETF and option straddle portfolios tend to perform more effectively).

The most profitable method in this simulation was the long term holding. This method is best for those who don't have the time to be trading very often but are looking to get into the market and make a profit over a long time period (e.g. a Roth IRA). Of all the trading strategies used, this one required the most research and background work up front, but once the shares were purchased, no further trading was required. In a volatile time such as the one in which this simulation took place, long term holding was a good strategy in order to ride out the ups and downs of the market over the seven weeks.

The short-selling portfolio suffered very large losses overall and performed poorly especially when compared to the long-term buy-and-hold portfolio. Shorting was one of the most time intensive portfolios with respect to the time required during the trading day to monitor stock performance.

The leveraged ETF trading strategy requires large time considerations. Leveraged ETF trading can be quite complicated, although it can also potentially be incredibly profitable if one learns how to trade effectively. However, there are much easier trading strategies for someone who cannot be a full time trader.

The fourth portfolio, attempting to take advantage of earnings announcements with option straddles, showed mixed results, but as the simulation went on and variables were adjusted it steadily improved in performance finally reaching a positive 2% profit for the final week. With more work this could prove to be a very effective strategy but it was also a time-intensive trading strategy (though not nearly as much as the previous two) better suited for a machine to carry out the trades automatically with a more rigidly designed algorithm.

7. Conclusion

Overall our simulation data suggest that for individuals with money to put in the stock market, at our age it is more effective to be long-term investors rather than traders given the time requirements of trading and most people our age do not have enough initial capital to remain profitable given commissions on a higher frequency of trading. With further development and work on our simulation, it would likely be possible to improve the performance of all of the portfolios, but the second, third and fourth portfolios would of course still carry a significantly higher risk than long term investing, which by the time a person had the necessary initial capital to effectively use the latter three, the risk involved would likely be too high, leaving these strategies to be tried by institutional investors and persons of high net-worth.

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Appendix: Terminology

Option - a contract conveying a right to buy or sell designated securities, commodities, or property interest (i.e. the underlying) at a specified price (i.e. the strike) during a stipulated period

Straddle - the purchase or sale of particular option derivatives that allows the holder to profit based on how much the price of the underlying security moves, regardless of the direction of price movement

Earnings announcement - an official public statement of a company's profitability for a specific time period

Liquidity - an asset's ability to be sold with minimal loss of value and minimal effect on the price of the asset; characterized by the volume of trading

Position - A financial stance on a certain company, option, stock, etc. Having a position on a company indicates stock, options, etc, are either owned or have been shorted and are owed. Opening a position refers to creating a position, by beginning a trade through either purchasing or selling short. Closing a position refers to an investor removing themselves from the market on that particular stock, option, or similar, by selling stock or buying stock to end a short-sale.

Volatility - Volatility refers to the tendency of an asset to fluctuate in worth rapidly with respect to the market in general, or similar assets.