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Stock Market Simulation

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Abstract

Utilizing online software, a six-week stock market simulation was conducted in which effectiveness of different investing strategies were evaluated and compared to one another. These strategies were decided on after conducting research on investment methods and focusing on a select group of companies. Working on this project will improve the investing competency of those involved and grant a stronger understanding of economics on a large scale.

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1. Introduction

1.1 Goals of Project

The primary goal of this project is to gain a better understanding of the stock market as an investment option. To do so, I will decide between multiple investment strategies to determine which ones are the most effective given certain circumstances. The simulation will be conducted on 10 companies I have researched and trading will go for six weeks. All trading shall be conducted electronic and I will keep a record of everything done to analyze at the end of the trading period. By the end of the project, I should have a better understanding of economics, stock market trading, and investing.

1.2 Overview of the Stock Market

For those who are unfamiliar with the stock market or have a very limited understanding, it is important to understand what it is and how it works. The stock market is a collection of stocks (also known as shares, essentially a piece of a company) that are bought and sold by investors. The most well known stock markets in America are the New York Stock Exchange (NYSE) and the NASDAQ. These markets are regulated by the U.S. Securities and Exchange Commission (SEC). A company can decide to list itself on the stock market with each share at a certain value. At any fixed point in time, all shares are worth the same amount for one company. The amount of stocks sold in any given period of time (typically per day) determines the volume, limiting the amount that can be sold per day. The value of the share is determined by the supply and demand of said share. The buying and selling price comes from how successful a company is as well as speculation of how a company can grow. A share of an international conglomerate will be worth more than the share of a small business. This is not always the case, as investors can be wrong

and ‘bubbles’ can form. A bubble occurs when stocks prices are rated too highly compared to the actual profits of a company. Many Americans are familiar with this term from the housing bubble back in 2008. Because the profits of a company vary along with speculation about the company’s future, stock prices may rise and fall by varying amounts. This is what is so interesting to investors. For someone like myself, the goal is buy stocks of a company at a certain price, have the value of the stocks rise, and then eventually sell back the stocks to make a profit. However, it is possible that once someone buys stock, the value can plummet and they will lose money!

The other important factor to note is that the stock market is not open all day every day. The NYSE and NASDAQ are open from 9:30 AM Eastern Time until 4 PM Eastern Time from Monday to Friday (with the exception of certain holidays). Also, trades are typically facilitated through brokers, who can either assist an investor or simply execute the trade. Brokers make money through commissions for each trade, which can vary depending on the firm.

1.3 How Trading Will be Conducted

I will be creating a simulation on www.marketwarch.com [1] to facilitate trading with the following conditions listed in Figure 1.1:

Portfolio Options	
Starting balance for players:	\$500,000.00
Commission:	\$10.00
Credit Interest Rate:	0.00%
Leverage Debt Interest Rate:	5.00%
Minimum Stock Price:	\$0.01
Maximum Stock Price:	\$500,000.00
Trading Volume Limit:	50.00%
Short Selling:	Enabled
Margin Trading:	Enabled

Symbols Available for Trading		
All symbols can be traded		
Indexes:	Exchanges:	Security Types:
<ul style="list-style-type: none"> • S&P 500 • Dow Jones • Nasdaq • Nasdaq 2000 	<ul style="list-style-type: none"> • AMEX • Nasdaq • NYSE • OTC-BB 	<ul style="list-style-type: none"> • Public Companies • Funds • ETFs

Figure 1.1 Simulation Conditions

These options were chosen to be realistic and give me enough freedom to make different kinds of decisions. These conditions are important to understand and should be explained:

- **Starting balance for players** – The amount of money I have at the start of the simulation. I was recommended the amount of \$500,000 as it gives me enough to work with. I can buy a large amount of shares and experiment with different methods.
- **Commission** – The amount that is paid to the brokerage for every transaction. Regardless of if I sell one stock or 1000 stocks it will always cost me \$10 per trade. This gives me incentive to try and make over \$20 (\$10 to buy, \$10 to sell back) on every trade.
- **Credit Interest Rate** – When you have money in the bank, you typically receive interest. For this project, however, I have reduced this number to 0% because I want all my profits and losses to come from trades only. Making money from interests would skew my results.

- Leverage Debt Interest Rate – Should I decide to engage in Margin Selling, this is the amount of interest on my debt.
- Minimum/Maximum Stock Price – The lowest and highest value of a stock I am allowed to buy. I reduced the minimum to one cent so I can buy penny stocks should the need arise (see 2.4 for more info on penny stocks).
- Trading Volume Limit – There is an actual limit to the number of shares that exist for a given company. If this limit was not in place the simulation would allow me to purchase 110% of a available shares if I had the capital! I set a limit of 50% to be more realistic but still give myself enough freedom to buy many shares of a company.
- Short Selling – I essentially borrow a share and the sell it before buying it. I then “buy back” (typically known as “covering”) the share to cover my debt of shares (see 2.3 for more on Short Selling).
- Margin Selling - Borrowing money to invest. This is something I plan on avoiding, as it may lead to more debt, but if an opportunity to make money arises and I want to invest more I have this option.

In addition, this software will assist in keeping records of all my transactions, as well as providing info on my gains and losses.

1.4 Information Sources

In order to be successful, I must consistently be checking the news or any info on my companies as well as the economy as a whole. I shall be using the MarketWatch news section as well as CNBC every weekday morning, occasionally other news sources and the websites of the companies I follow if I need more information.

2. Investment Strategies

In order to be successful at anything it is important to have a strategy. Many people have heard the expression “buy low, sell high” but that still leaves many options. There is no perfect easy strategy to the stock market, if there was, everyone would use it. After researching a few different techniques I’ve come up with four main strategies for the simulation.

2.1 Short Term Investments

This strategy involves multiple transactions per day. A value of a stock can rise and fall rapidly and serious money can be made in a short amount of time. In addition, this allows me to quickly sell some shares of a certain company if I think I want to buy more shares of another company. With careful attention, I can potentially make more money than I would from the other strategies. The problems with this strategy is that it will require me to constantly be checking stock prices from 9:30 AM to 4:00 PM five days a week which can be stressful and time consuming. In addition, I will be paying \$10 for every trade and those payments could quickly add up, especially considering I will want to sell back every purchase by the end of the project.

2.2 Long Term Investments

This strategy is about conducting one or less transactions per week. If I see a company that I think will do well in the long term, this is a good option. I will purchase many stocks and wait for the value to rise more significantly than it could in a day. This option is less stressful, will cost less due to the number of transactions, and could leading to big gains at the end of each week. The major flaw with this plan is that if I select poorly on which company I make a long term investment in, I could lose a significant amount of money.

2.3 Short Selling

Short selling reverses the traditional strategies of investing. Instead of buying then selling a stock, I borrow it and sell it first then cover it later. This means I want to short sell a stock at a high price and then cover it at a lower price. Because of this interesting strategy, it would be beneficial to short sell stocks of companies that I believe will not do well in the future. This may be a little difficult to understand, so here is a quick example:

*Let's imagine Company A is listed on the NYSE at \$100 per share. While I am online, I read a breaking news article that claims Company A is illegally polluting lakes and rivers wherever their factories are. This could mean the factories will be shut down or environmental activists could protest or boycott the company. Knowing this would be bad for Company A, I short sell 100 stocks. A few days later, the stock value drops to \$90. I then cover 100 stocks of Company A. My total revenue is $(\$100 * 100 \text{ shares}) - (\$90 * 100 \text{ shares}) - \20 commissions totaling \$980 in profit.*

Short selling is something that can be conducted long term or short term. The biggest risk with this strategy is that if the company I am investing in does well, I will actually lose money.

2.4 Don't put all your eggs in one basket!

It may seem promising to invest most of the money I have in a single company. Admittedly, if I am very confident I could make money from this; this could be an extremely successful investment. However, this strategy is almost universally discouraged. If the company I invest in ends up decreasing in value, I will have no backup and lose a significant amount of money. Also, if I see another company is doing better more rapidly, I would not be able to invest in that company because I have no spending money left over. As a result, I will typically be investing less than half of my total net worth into any one company at a time.

2.5 Diversify

It is common for different companies in a similar market (technology, healthcare, etc.) to have similar performances over a given period of time. Similar to what was discussed in 2.5, it is a bad idea to invest in only one market. While technology is my focus, I will also be looking at the entertainment and healthcare markets to ensure I am well enough diversified.

3. Companies

It is important to keep track of the companies I want to invest in. I decide 10 was a reasonable number as it gives me multiple options but is not overwhelming. I decided to mostly stick with companies I am familiar with in markets I understand. Most of these companies work in the technology or toys industry. However, I made sure to pick some companies outside of this field so I could learn more and have options if I wanted to trade with penny stocks. Included with each description is a Year To Date chart of the company's performance provided by Market Watch [1].

3.1 Activision Blizzard Inc. (ATVI)

Industry: Toys Sector: Consumer Goods

Activision Blizzard Inc. is one of the largest gaming companies in the world. After developing games in the early 80s, Activision moved on to become one of the biggest video game publishers in America [2]. They now fund other studios to develop games and own a wide variety of franchises such as The Call of Duty video game series. Call of Duty has been a juggernaut in the gaming industry, often making over one billion dollars in sale per year. In 2007, Activision merged with Blizzard Entertainment. Blizzard is known for their online games and created World of Warcraft, the most successful MMORPG of all time. World of Warcraft still releases expansion packs, additional content for the game, which players buy as they continue to play the game years after its release. This is another gaming company I follow regularly, and a game release usually leads to a high amount of sales. The stock prices have been fairly steadily rising from \$18.55 in January to about \$25 now. Recently, Activision Blizzard announced their financial results [3], seen here in Figure 3.1.1:

Santa Monica, CA – May 6, 2015 – Activision Blizzard, Inc. (Nasdaq: ATVI) today announced better-than-expected financial results for the first quarter of 2015.

(in millions, except EPS)	First Quarter		
	2015	Prior Outlook*	2014
<u>GAAP</u>			
Net Revenues	\$ 1,278	\$ 1,140	\$ 1,111
EPS	\$ 0.53	\$ 0.37	\$ 0.40
<u>Non-GAAP</u>			
Net Revenues	\$ 703	\$ 640	\$ 772
EPS	\$ 0.16	\$ 0.05	\$ 0.19

*Prior outlook was provided by the company on February 5, 2015 in its earnings release.

Figure 3.1.1 ATVI Q1 2015 Earnings provided in press release

I find these results to be very promising. This year alone, Activision Blizzard will release (or announce and make money from pre-orders) games such as Guitar Hero Live and Call of Duty: Black Ops III. The results of such game announcements can be seen in the rise of stock prices pictured in Figure 3.1.2. There is a big gaming conference known as the Electronic Entertainment Expo (which I will refer to as E3 from now on), that runs from June 14 to 16. This is a huge opportunity for game developers and publishers to show off their latest projects and capture the attention of players and investors alike. Although this company does not have its own press conference, Activision Blizzard publishes games for all the major consoles (Microsoft's Xbox One, Sony's PS4, Nintendo's Wii U, and computers). This means the conferences by these other three companies will almost certainly show off some of what Activision Blizzard has been working on. I predict a significant increase in stock price for Activision Blizzard during this time period.



Figure 3.1.2 Activision Blizzard YTD Stock Performance

3.2 Agria Corp. (GRO)

Industry: Farming and Fishing Sector: Consumer Goods

Agria Corp. is an agriculture business with its headquarters in China. Agria operates all over the world in countries like The United States, Mexico, Brazil, Spain, South Africa, and Australia [4]. The company focuses on the research and development of seeds as well as crop protection. In addition, Agria provides services for wool and livestock trading as well as irrigation and real estate. Agria has been growing for the last few business quarters and plans on expanding into other countries such as New Zealand. Agria partnered with Lincoln University in New Zealand in May for collaborations in research and development for New Zealand's agriculture industry. Even in China, billions of dollars are being invested in dairy farming that Agria hopes to take advantage of. This was an interesting penny stock, so I decided I would follow this company to broaden the scope of businesses I was looking at. I find any company

involved in developing something as important as food can hopefully make a breakthrough and not only help millions of people to be better fed but to also make a hefty profit while doing so. The stock prices hit a low of one dollar this winter but have been rising with a few jumps every few weeks to about \$1.30, as seen in Figure 3.2.



Figure 3.2 Agria YTD Stock Performance

3.3 Apple Inc. (AAPL)

Industry: Computer Hardware Sector: Technology

Perhaps the biggest company on this list, Apple Inc. is the technological titan of the business world. The company developed the OS X operating system and the Mac computer line, but is more known for its modern achievements in mobile technology [5]. Apple created the iPhone line of phones as well as the iOS operating system for these devices. The company also manages iTunes and the App Store, virtual stores where users can download music or applications for their devices. I picked this company because I think their marketing strategies are very effective. Any time a new product is announced, it makes national news. Apple will

have its World Wide Developers Conference (WWDC) in June. This is the time to show off the latest gadgets, software, and services to devout Apple fans. Since Apple has such a large and devoted fan base, I expect most of their announced products will sell very well and generate media attention. There is speculation that Apple will become the world's first trillion dollar company, something I would not want to miss out on as an investor. Figure 3.3 shows the steady rise in stock prices since January.



Figure 3.3 Apple YTD Stock Performance

3.4 Dot Hill Systems Corp (HILL)

Industry: Computer Hardware

Sector: Technology

Dot Hill Systems is one of the smaller technology companies on this list. Dot Hill develops both hardware and software for computer data storage [6]. Dot Hill provides storage arrays for big and small businesses all around the world. In addition, the company will partner with other technology firms on products such as digital imaging software and high performance computing. Since technology is always growing and people will need a place to store data for

their electronic devices, this seemed like a good choice for a smaller company. With an increase in the amount of data going back and forth comes an increase in the demand for faster transfer of data. That is why Dot Hill is now developing hybrid storage arrays that can handle SSD flash drives as well as traditional hard drives. These systems will be good for current use and be useful well into the future. This gives customers incentives to use products that they know can be re-purposed should the need arise. As Figure 3.4 shows, prices have been consistently rising since late February.



Figure 3.4 Dot Hill YTD Stock Performance

3.5 Electronic Arts Inc. (EA)

Industry: Toys Sector: Consumer Goods

Electronic Arts is one of the most successful gaming publishers of all time. This American company owns the rights to games like Battlefield and The Sims, some of the most popular computer games of all time [7]. In addition, the own the rights to most major sports games including FIFA, NHL, NBA Live, and Madden NFL. Despite criticisms about certain

business practices such as day one premium downloadable content, their games are often among the highest grossing of the year. Figure 3.5 shows the stock prices hit a low of \$45.96 in January but have made solid increases to about \$62. This is a company I know has a regular release schedule, as they make a new sports game every year that will essentially guarantee multi-million dollar sales. Unlike some ‘traditional’ game publishers who only focus on consoles, EA has been expanding its library of games onto the mobile platforms of the iOS and Android smart phone devices with popular games such as the Plants Zombies series. While the market for mobile games is relatively new, there is a massive amount of money generated through these games that have shorter development cycles than their console counterparts. As I mentioned before with Activision Blizzard, the E3 press conference should be a good thing for EA. Unlike Activision Blizzard, however, EA hosts its own conference on June 15, meaning all the attention of the millions of people watching live or at home will be on this company.



Figure 3.5 Electronic Arts YTD Stock Performance

3.6 Facebook Inc. (FB)

Industry: Internet Sector: Technology

Facebook is the most popular social media website on the planet. What started as a fun college project (as made popular by the film *The Social Network*), Facebook now has over 1.4 billion monthly active users [8]. Because users have access to the website for free, most of Facebook's revenue is generated through advertisements. It now owns Instagram, a popular photo sharing website, and Oculus VR, a virtual reality device. Facebook is a giant social media company that isn't going away anytime soon, and they continue to buy and grow other products or companies. Facebook executives always seem to find a way to generate more revenue by optimizing the way ads and posts are seen on its website. After stock prices fell a bit from late April to early May, they have been on the rise and remain volatile (seen in Figure 3.6). This makes it a little bit riskier to invest in but something I think I can make money off of if I pay careful attention. I also believe investing in the Oculus VR device will reward the company handsomely. Virtual reality is pretty much untouched in today's consumer world but it has so much potential. One such potential, of course, are video games. I would be surprised if Oculus *did not* make an appearance at this year's E3 conference. I imagine many players will be willing to wait hours in line to try the device, a fact that is very enticing to developers. This is why I picked Facebook as a company to follow.



Figure 3.6 Facebook YTD Stock Performance

3.7 Google (GOOGL)

Industry: Internet Sector: Technology

What began as a search engine in 1996 has bloomed into one of the biggest technology corporations in America. Google has expanded its online services to include email, social media, electronic maps, and even purchased YouTube for video content [9]. Google is also the developer of the Android operating system for mobile phones. This company is extremely business savvy and regularly purchases smaller web companies. Google is the only company I'm following with a stock price that has almost always been above \$500 per share for this year, a fact that can be clearly seen in Figure 3.7. The values of its shares have gone down a bit since late April but I expect it to come back up for the summer. The company is also innovating and finding new ways to change how people use technology from streaming video to online profile integration to fiber optic internet cables. The Google Fiber project got my attention the most out of all the recent projects. The service is both faster and cheaper than traditional cable companies

such as Comcast and Time Warner Cable who have held a monopoly on certain regions. With Google as a new challenger, I think the price of internet services will decrease and more people will be able to have a good experience online and possibly use Google's online services.



Figure 3.7 Google YTD Stock Performance

3.8 InspireMD Inc (NSPR)

Industry: Medical Supplies Sector: Health Care

InspireMD is a relatively small medical supplies company from Boston. This company holds patents in stent technology, something used for bypass surgery [10]. InspireMD developed the MicroNet mesh that attaches to stents. MicroNet is used in the CGuard and MGuard products to seal plaque and support the heart vessels. The CGuard technology was highlighted at EuroPCR by Dr. Piotr Musialek on May 22. Dr. Musialek commented that the CGuard's performance and flexibility has caused a procedure success rate of 100%. EuroPCR is a cardiovascular event in Europe attended by over 120 companies. This is another penny stock company that interested me as I wanted to know more about the medical field and the company

has been doing well for the last few months. In addition, I find the very low stock price as something to experiment with that could lead to big gains percentage wise. After a big drop in share values in May from about 80 cents to 25 cents (Figure 3.8), I expect the value will rise back up again or I can take advantage of the small gains and losses.



Figure 3.8 InspireMD YTD Stock Performance

3.9 Intel Corp. (INTC)

Industry: Semiconductors Sector: Technology

Intel Corp is one of the biggest manufacturers of computer parts in the world. First known for its Intel processors, the company also works in high-end computing and other electronic devices. Intel’s x86 series of processors are extremely popular and found in most personal computers around the world [11]. Intel is in the process of purchasing Altera, a computer chip manufacturer. Also, Intel has started making 3-D transistors that leads to better processing performance while conserving area. Admittedly, for a few years Intel was a little ‘behind the times’ so to say. The company relied on desktop computer processors and physical

data storage. With a new CEO in January of this year things began to change. Intel has developed incredibly small processors for portable and even wearable devices and has collaborated with eASIC for cloud processing and data storage. Figure 3.9 shows that the share prices hit a low of \$29.89 late March but prices have been rising to about \$33. Knowing all of this, I considered this to be a good technology company to invest in.



Figure 3.9 Intel YTD Stock Performance

3.10 Twitter Inc. (TWTR)

Industry: Internet Sector: Technology

Twitter Inc. is one of the most popular social media companies in the world. Its website is famous for allowing users to read and write short messages. The company prides itself on the idea that users will enjoy sending and reading short bursts of information, and over 500 million users would agree [12]. Twitter is the go-to website for celebrities, and it is common for famous users to advertise their own work, such as films or music albums, or write about sponsored content. This is a website I am very familiar with and was always interested in how the business

operated. Many analysts predict Twitter can grow to or near the levels of Facebook. The big difference between Facebook and Twitter is the average user age. Twitter has a proportionally higher amount of young adult and teen users than Facebook. This is the target age for advertisers looking for new customers, which is why I think Twitter can make much more money from ads. After a huge drop in share values late April from \$52 to \$38, shown in Figure 3.10, I predict this will leave room for values to rise again if executives can prove Twitter is a valuable company.



Figure 3.10 Twitter YTD Stock Performance

4. High Profile Stocks Simulation

This is the ‘safer’ option of the two simulations. My goal here is to focus on companies that typically are featured in the news with relatively high share values. By the end of the six weeks I will show the date for trading made on each individual company as well as all of them as a whole. The companies in this simulation are Activision Blizzard, Apple, Dot Hill, Electronic Arts, Facebook, Google, Intel and Twitter. It is important to clarify one company, Dot Hill. The SEC defines a penny stock as something that trades for below five dollars. At the start of this simulation, a Dot Hill share trade for a little over seven dollars. Since it is near the borderline, I will be creating two sets of data, one that includes this company and one that does not. These diverse companies will ensure my portfolio is diverse (refer to section 2.5 on why diversity is important).

While I do not expect to make much money percentage wise, I should make a good amount of actual dollars per trade. An increase of only one or two cents probably will not be enough to even cover the cost of commission seeing as I am limited in the amount of shares I can buy at one time. I should not make a trade that costs me over \$250,000 as it is considered risky. Instead, my transactions should be between 500 and 4000 shares, depending on the price and my current investment knowledge. I expect to see these kinds of companies in the news often on CNBC and the web. Trades will range from one minute to the entire simulation if I have to, taking pieces from my methods detailed in section 2.1 and 2.2. It is also important to understand when I must trade at a loss; typically when the value has dropped so far below what I paid for and something more lucrative comes up and I need the money to invest in that. Usually, there will be notes for the day or week unless there is little to report.

This data will analyze returns as well as the time it takes to get said returns. Companies will be compared to each other as well as the Dow Jones Industrial Average, the S&P 500, and the NASDAQ.

In the data tables, located at INDEX, the changes will be listed as changes to my available spending money. So, 'buys' and 'covers' will be negatives while 'sells' and 'shorts' will be positive. In addition, the VALUE column rounds to the nearest cent, therefore that column as well as the REVENUE column will not be entirely accurate. However, the Net Worth data is accurate and does not come from those numbers. In addition, the final Net Worth is calculated at 4pm. The percentages on the left represent net worth change by day followed by change from the start of the simulation.

4.1 Week 1: June 1 to June 5

- June 1; Intel purchases Altera. I made many short term investments. Ending up holding Intel, this surprisingly ended up lower at the closing bell, and Twitter by the end of the day.
- June 2: Speculation of an Apple music streaming service for the Apple TV. Twitter receives more publicity after Caitlyn Jenner posts Vanity Fair cover, once of the most talked about things on social media this week. Intel may have paid more for Alter than it is worth. Apple and Google compete with mobile payments method, challenges the traditional way to manage money. Intel unveils Thunderbolt 3 port, compatible with USB-C Port and able to can transfer data at 40Gbps. Unfortunately, Intel remained low around \$33.27 and while I did achieve a gain from other trades my revenues were weakened due to this.

- June 3: Speculation that European markets will perform better because the American dollar is weakening. Apple CEO Tim Cook criticizes other tech companies for privacy invasions and that it is not something Apple wants to do. He doesn't mention companies by name, but seems to be directed at companies who make income by advertisements (Facebook and Google). NFL makes deal with Yahoo to live stream games on electronic devices. Facebook considers putting more ads on Instagram to generate revenue. Apple announces recall of 220,000 Beats speakers.
- June 4: Dish Network and T-Mobile are in talks of a merger, one that could potentially take less than 4 weeks. Evercore downgrades Twitter, CEO defends strategies by saying he is making a long term profit plan. Global "bond beatdown" as many shares lose value. This was the hardest trading day for me thus far as I was not able to make many good trades later in the day.
- June 5: 280,000 jobs added in the US, the jobless rate for May dropped to 5.5%. China suspected in hack of US Government, taking employee names seems to be the only action taken thus far. Both Apple and YouTube (Google) announcing music streaming service to work with music artists. Valve announces the Steam Machine, a device that plays computer games from users' virtual library of games.

For this week, I wasn't able to cash in on many long term investments. My hope is that since I bought many of these stocks while prices were falling, they will eventually bounce back up again and I can sell at a higher price. I currently only have \$3,858.96 of cash to spend, which isn't much to make a significant difference in my account. I do not wish to sell these stocks at a loss, but other factors next week may change that. While I am satisfied with my first week's performance, I was able to identify some mistakes to hopefully make next week more successful.

4.2 Week 2: June 8 – June 12

- June 8: Apple to have WWDC (World Wide Developer Conference) later today at 1pm. Expected to talk about iOS9, OS X 10.11, and a music streaming service for \$9.99 a month. JP Morgan announces the use of data will be used more in the next two years than in all of previous human history. President Obama gives speech at G7 Summit. Speaks on cyber security, ISIL, immigration, health care, and maintaining sanctions with Russia. This was a very uneventful day trading, focused more on research and news involving Apple and the US Government. I still don't have much cash and now heavily consider taking loans for marginal trading.
- June 9: Analysts have mixed feelings about Apple WWDC. Some say their music streaming service could be the most popular, others think it will not take off. NASDAQ and S&P into 4th day of losses. Tech companies lose about \$35 billion due to NSA spying.
- June 10: First day this week most share values rose. No significant news on my holdings.
- June 11: Apple considers adding Ad-Blocker. Google looks into improving cities. Shopify will integrate with Facebook's 'buy' button. Retail sales go up 1.2%. Facebook hints at showing off the Oculus VR (Virtual Reality) technology, demonstrates consumer version. In addition, partnership with Microsoft to include Xbox controllers with every device.
- June 12: Twitter CEO Dick Costolo to step down July 1, co-founder Jack Dorsey will take his spot. US Net Neutrality rules go into effect today. YouTube to offer streaming for E3 event. US House does not pass trade act.

Admittedly, this week was much harder than my first week. The first few days were really rough but I was able to make a bit of a recovery towards the end. Overall, my net worth decreased from Friday of last week but I still remain above my starting point of \$500,000. On Friday I could have sold Apple and Twitter at a small loss but it was not something I had to do. At this point though, I'm willing to get rid of these stocks as they are bringing my Net Worth down by over \$10,000.

4.3 Week 3: June 15 – June 19

- June 15: Severe losses on the opening bell today can be correlated to Greece debt failure. Twitter hit a 52 week low this morning. Microsoft starts E3 conference, announces new games and Xbox One backwards compatibility for Xbox 360 games. Starting at 4pm, EA announces games such as Mass Effect Andromeda, Need for Speed, and NHL 16 and demonstrated Star Wars Battlefront III and FIFA 16. Call of Duty Black Ops III is demonstrated during the Sony conference.
- June 16: Facebook launches Moments app for sharing photos that uses facial recognition. The Oculus Rift faces competition from other virtual reality devices from Microsoft and Sony.
- June 17: Dorsey, CEO of Twitter, says he will stay at Square. Adobe reports very positive earnings on the Adobe Creative Cloud.
- June 18: Twitter in the works for creating a news platform and live video coverage, currently competing with other online companies to stream NFL games. Info on the Apple Watch 2 leaked as Apple reports their watch has sold to 2.79 million people in the United States alone.

- June 19: California releases report on Google self driving cars; only 11 accidents in the past month and the other drivers were the cause of the accidents. Intel buys Canadian tech company Recon to create wearable electronic devices.

4.4 Week 4: June 22 – June 26

- June 22: Apple agrees to pay music artists during trial period of streaming music service.
- June 23: Facebook passes Walmart in market cap. Tidal (streaming music service) has CEO Tonstad leave. Google's Gmail service offers an 'Undo Send' feature to retrieve emails a user did not want to send.
- June 24: Google's Play service now offers ad-supported streaming music.
- June 25: After much debate, pop music star Taylor Swift allows Apple to stream her music. EA begins to accept alpha testers for Star Wars Battlefront.
- June 26: New Intel chip known as 'Cannonlake' faces a pushed back release date. Activision partners with Red Bull on a marketing campaign for the upcoming Destiny expansion pack.

I have played this week much more conservatively, trying not to make as many trades as previous weeks. I am now looking more into longer term investments (see chapter 2.2).

4.5 Week 5: June 29 – July 3

- June 29: Debt crisis in Greece causes most stock prices to fall.
- June 30: Consumer confidence index rises to 101.4.
- July 1: Facebook begins to test ad supported videos similar to how YouTube has been making money.
- July 2: US jobless rate falls to 5.3 percent
- July 3: Images of Apple's iPhone S6 leaked to the public. NYSE on Holiday.

4.6 Week 6: July 6 – July 10

Voters in Greece vote “No” on paying back debts, stocks continue to fall. NYSE experiences a “glitch” as all trading is shut down for a few hours. All holdings have been sold as of July 10.

4.7 Analysis

So ultimately, how was my performance? I decided to break everything down by company and time, and then consolidate all the earnings to reflect on my performance in the simulation as a whole. The net costs and subtotals are calculated before the cost of commission for each trade (\$10 per trade), while the total will factor that in.

- Activision – All the trades are tabulated here in Table 4.7.1:

Date	Time	Action	Shares	Price	Net Cost/ Proceeds	Subtotal Profit
June 1	9:30	Buy	3000	25.44	-76320	-76320
June 1	10:43	Sell	3000	25.43	76290	-30
June 4	10:55	Buy	3750	25.92	-97200	-97230
June 9	10:06	Short	5000	25.38	126900	29670
June 10	9:41	Cover	5000	25.3	-126500	-96830
June 11	9:44	Short	2500	25.29	63225	-33605
June 11	9:45	Cover	2500	25.21	-63025	-96630
June 11	9:55	Short	3000	25.32	75960	-20670
June 11	10:00	Cover	3000	25.28	-75840	-96510
June 12	10:32	Short	2500	25.21	63025	-33485
June 12	10:34	Cover	2500	25.18	-62950	-96435
July 10	3:48	Sell	3750	25.4	95250	-1185
Trades: 12						Total = -1305

Table 4.7.1 Activision Trades

Activision was not a company that I was as successful with as I would have liked. One of the early purchases I made (June 4) did not go over that price later on. I was, however, able to mitigate this loss by selling short throughout the month of June. Overall, my income was -\$1305.

- Apple - All the trades are tabulated here in Table 4.7.2:

Date	Time	Action	Shares	Price	Net Cost/ Proceeds	Total Profit
June 1	1:16	Buy	2000	130.72	-392160	-392160
June 1	2:00	Sell	2000	130.82	392460	300
June 2	9:30	Buy	1800	130.03	-234054	-233754
June 2	10:44	Sell	1800	130.27	234486	732
June 3	9:36	Buy	1900	130.33	-247627	-246895
June 3	9:40	Sell	1900	130.64	248216	1321
June 4	9:31	Buy	2500	129.65	-324125	-322804
June 4	9:39	Sell	2500	129.99	324975	2171
June 4	12:05	Buy	400	129.58	-51832	-49661
June 4	12:32	Sell	400	129.73	51892	2231
June 5	10:46	Buy	975	129.12	-125892	-123661
June 15	10:11	Short	1000	126.35	126350	2689
June 15	10:25	Cover	1000	126.34	-126340	-123651
June 23	9:56	Sell	975	127.36	124176	525
Trades: 14						Total = 385

Table 4.7.2 Apple Trades

Apple was another company I was not completely satisfied with. Some early promise at the start of the simulation was crushed later on as prices fell. I could still make money off this company, and ended up with a net profit of \$385.

- Electronic Arts - All the trades are tabulated here in Table 4.7.3:

Date	Time	Action	Shares	Price	Net Cost/ Proceeds	Total Profit
June 1	9:37	Short	2000	62.52	125040	125040
June 1	9:48	Cover	2000	62.48	-124960	80
June 3	9:42	Buy	4000	63.17	-252680	-252600
June 3	9:55	Sell	4000	63.19	252760	160
June 4	9:35	Buy	1200	63.05	-75660	-75500
June 4	9:40	Sell	1200	63.06	75672	172
June 5	9:35	Buy	1900	62.33	-118427	-118255
June 5	10:03	Sell	1900	62.62	118978	723
June 8	12:33	Short	60	62.1	3726	4449
June 8	3:57	Cover	60	61.7	-3702	747
June 9	9:59	Short	2000	61.38	122760	123507
June 9	10:05	Cover	2000	61.17	-122340	1167
June 11	11:43	Short	2250	62.41	140422.5	141589.5
June 11	11:49	Cover	2250	62.41	-140422.5	1167
June 15	9:44	Short	2000	61.82	123640	124807
June 15	9:47	Cover	2000	61.63	-123260	1547
June 16	9:46	Buy	130	61.92	-8049.6	-6502.6
June 17	9:34	Sell	130	63.44	8247.2	1744.6
June 25	9:43	Buy	700	67.82	-47474	-45729.4
June 25	10:16	Sell	700	68.11	47677	1947.6
July 1	10:33	Buy	850	67.63	-57485.5	-55537.9
July 1	11:08	Sell	850	67.88	57698	2160.1
Trades: 22						Total = 1940.10

Table 4.7.3 Electronic Arts Trades

EA was one of my most successful investments for this simulation. I was able to follow this company in the news very easily and I had a good sense of when share values would rise or fall. I ended up with a profit of \$1940.10.

- Facebook - All the trades are tabulated here in Table 4.7.4:

Date	Time	Action	Shares	Price	Net Cost/ Proceeds	Total Profit
June 1	12:58	Short	3000	80.05	240150	240150
June 1	1:02	Cover	3000	80.02	-240060	90
June 3	10:51	Buy	2750	82.26	-226215	-226125
June 3	10:55	Sell	2750	82.31	226352.5	227.5
June 4	10:02	Buy	4000	82.69	-330760	-330532.5
June 4	10:11	Sell	4000	82.83	331320	787.5
June 9	9:47	Short	2000	80.11	160220	161007.5
June 9	9:50	Cover	2000	79.89	-159780	1227.5
June 10	9:50	Short	1750	81.22	142135	143362.5
June 10	3:24	Cover	1750	82.48	-142590	772.5
June 11	9:37	Short	1500	82.69	124035	124807.5
June 11	9:39	Cover	1500	82.55	-123825	982.5
June 12	10:10	Short	1200	81.85	98220	99202.5
June 12	10:22	Cover	1200	81.76	-98112	1090.5
June 26	9:36	Buy	900	87.74	-78966	-77875.5
June 26	3:26	Sell	900	88.2	79380	1504.5
June 29	10:42	Short	600	86.7	52020	53524.5
June 29	12:28	Cover	600	86.55	-51930	1594.5
Trades: 22						Total = 1374.5

Table 4.7.4 Facebook Trades

I was actually surprised with how well my investments with Facebook went. At the start of the simulation, I was expected share values to drop as other social media platforms became more prevalent. Facebook ended up doing much better than Twitter, and I attribute some of this success to their new Oculus Rift virtual reality technology. Overall, I made a nice profit of \$1374.5.

- Google - the trades are tabulated here in Table 4.7.5:

Date	Time	Action	Shares	Price	Net Cost/ Proceeds	Subtotal Profit
June 1	9:52	Buy	250	544.83	-136207.5	-136207.5
June 1	9:53	Sell	250	545.18	136295	87.5
June 3	9:32	Short	300	557.16	167148	167235.5
June 3	9:34	Cover	300	556.01	-166803	432.5
June 3	10:06	Buy	400	554.9	-221960	-221527.5
June 3	10:12	Sell	400	556.1	222560	1032.5
June 4	9:48	Buy	450	553.1	-248895	-247862.5
June 4	9:59	Sell	450	554.59	249565.5	1703
June 23	9:58	Buy	150	560.03	-84004.5	-82301.5
June 23	11:46	Sell	150	561.17	84175.5	1874
Trades: 10						Total = 1774

Table 4.7.5 Google Trades

Google was a company that initially intimidated me due to the high values of their shares. I quickly learned I could take advantage of this because even though the percentage of the share values did not change that much, the actual values did and I was able to take advantage of this. If I had the chance to redo this simulation, I probably would go right ahead and invest more into this company (assuming all other variables stay constant). Due to the fact that I

made little trades, I did not lose that much on commissions and was able to finish with an income of \$1774.

- Intel - the trades are tabulated here in Table 4.7.6:

Date	Time	Action	Shares	Price	Net Cost/ Proceeds	Total Profit
June 1	9:30	Buy	4500	34.41	-154845	-154845
June 1	9:36	Sell	4500	34.5	155250	405
June 1	10:01	Buy	2000	34.06	-68120	-67715
June 11	10:50	Short	2100	32.09	67389	-326
June 11	10:54	Cover	2100	32.05	-67305	-67631
June 12	9:33	Short	3000	31.83	95490	27859
June 12	9:43	Cover	3000	31.78	-95340	-67481
June 12	10:57	Short	2500	31.42	78550	11069
June 12	11:03	Cover	2500	31.36	-78400	-67331
June 15	9:35	Short	2500	31.05	77625	10294
June 15	9:36	Cover	2500	31.07	-77675	-67381
June 15	10:20	Short	2500	31.25	78125	10744
June 15	11:05	Cover	2500	31.32	-78300	-67556
June 17	9:31	Short	2600	31.75	82550	14994
June 17	10:38	Cover	2600	31.87	-82862	-67868
July 10	3:30	Sell	2000	29.32	58640	-9228
Trades: 16						Total = -9388

Table 4.7.6 Intel Trades

Intel seemed to promise high rewards at the start of this simulation, but I was ultimately very let down. Hearing that they acquired other tech companies gave me the impression that Intel

share values would rise. Other investors did not share my feelings and the price steadily declined. In the end, I lost \$9388 from investing in Intel.

- Twitter - the trades are tabulated here in Table 4.7.7:

Date	Time	Action	Shares	Price	Net Cost/ Proceeds	Total Profit
June 1	9:41	Buy	3000	36.79	-110370	-110370
June 3	9:44	Sell	3000	36.95	110850	480
June 4	10:12	Buy	6000	37.48	-224880	-224400
June 11	9:48	Short	3000	36.15	108450	-115950
June 11	9:51	Cover	3000	36.14	-108420	-224370
June 12	9:54	Short	3000	36.6	109800	-114570
June 12	9:57	Cover	3000	36.43	-109290	-223860
June 12	10:46	Short	2500	36.27	90675	-133185
June 12	10:54	Cover	2500	36.17	-90425	-223610
June 15	9:55	Short	2500	34.4	86000	-137610
June 15	10:17	Cover	2500	34.34	-85850	-223460
June 19	12:01	Short	1500	36.17	54255	-169235
June 19	12:46	Cover	1500	36.08	-54120	-223355
July 10	3:42	Sell	6000	34.95	209700	-13655
Trades: 14						Total = -13795

Table 4.7.7 Twitter Trades

Twitter was by far my biggest mistake for the entire simulation. I thought from how I lived my life and what my friends were into that Twitter would become more popular with Facebook. After buying some shares Twitter announced a changing of its CEO and many people were not happy with that. Though I tried, I could not undo the damage that had been done and this investment ultimately cost me \$13795.

- Dot Hill Systems – I am listing Dot Hill here, but it will also be mentioned in Chapter 5.

The trades are tabulated here in Table 4.7.8:

Date	Time	Action	Shares	Price	Net Cost/ Proceeds	Total Profit
June 1	9:44	Buy	10000	7.06	-70600	-70600
June 1	12:23	Sell	10000	7.09	70900	300
June 2	9:39	Buy	9000	7	-63000	62700
June 2	9:45	Sell	9000	7.04	63360	660
June 3	9:45	Short	26000	7.1	184600	185260
June 3	9:53	Cover	26000	7.06	-183560	1700
June 3	9:57	Buy	60000	7.04	-422400	-420700
June 3	10:02	Sell	60000	7.07	424200	3500
June 3	10:25	Short	42000	7.11	298620	302120
June 3	10:34	Cover	42000	7.09	-297780	4340
June 3	10:39	Short	42000	7.15	300300	304640
June 3	10:46	Cover	42000	7.12	-299040	5600
June 4	9:40	Buy	28000	7.22	-202160	-196560
June 4	9:40	Sell	28000	7.26	203280	6720
June 4	9:41	Short	10000	7.27	72700	79420
June 5	12:27	Cover	10000	7.4	-74000	5420
June 9	9:52	Buy	550	7.13	-3921.5	1498.5
June 9	10:10	Sell	550	7.26	3993	5491.5
June 18	2:10	Buy	1200	6.93	-8316	-2824.5
June 22	9:49	Sell	1200	7.01	8412	5577.5
June 23	10:27	Buy	4000	6.94	-27760	-22182.5
June 23	1:32	Sell	4000	6.97	27880	5697.5
June 24	9:56	Buy	9500	6.9	-65550	-59852.5
July 10	3:31	Sell	9500	5.97	56715	3137.5
Trades: 24						Total = -3377.5

Table 4.7.8 Dot Hill Systems Trades

Dot Hill was a company I was doing pretty well with until the very end. There were bits and pieces of news and investor speculation I heard about this company. Unfortunately, the global economy started to tank around late June and early July. I could have profited with about \$5600 but one bad trade at the end reduced my earnings to a loss of \$3377.5

My overall experience with this simulation was initially very positive, but things went bad really fast. I learned that just because a company is changing bosses or acquiring new resources, share values will not necessarily get better. Also, the Greek debt crisis snuck up on me as I didn't worry about it at first but soon realized how important this global economy is. In the end I lost \$22391.90 (or \$19014.40 if we exclude Dot Hill) from \$500000. This means I lost 4.48% (or 3.8%) from this simulation.

5. Penny Stocks Simulation

Penny stocks are stocks worth less than \$5 as defined by the SEC. These are typically represented by new or small businesses. Penny stocks are a high risk, high reward option for investors. In terms of percentage, the values of penny stocks will change more dynamically and in a shorter period of time, as described in section 2.1. This could potentially lead to a big gain (or loss) on my account. The worst thing that could happen is that the company goes out of business and any stocks I have purchased are now worth nothing! This leads many investors to stay away from penny stocks as the risk may seem too high. I can use any of the previous investment strategies on penny stocks if I desire.

The companies I am focusing on for this simulation are Agria Corp, Dot Hill, and InspireMD. As I said before, I will create two sets of data, one with and one without Dot Hill data. Trading these shares may be a bit more challenging as there is usually not a significant amount of major news about these companies. Another big challenge is the amount I have to trade to earn a profit. Since the stock prices typically rise and fall by only a few cents, I will need to purchase more shares than in the other simulation to make a significant difference. However, I run into the problem of volume limitations, as I cannot trade shares that do not exist! Considering all of this, I will usually try and trade over 90,000 shares at a single time (if allowable). These stocks will require more attention as a difference in one cent on so many shares can make a big difference in my net worth.

Similar to the other simulation, this data will analyze returns as well as the time it takes to get said returns. Companies will be compared to each other as well as the Dow Jones Industrial Average, the S&P 500, and the NASDAQ. Also, some notes from the previous simulation may be repeated if I find them to be significant.

5.1 Week 1: June 1 to June 5

- June 3: Speculation that European markets will perform better because the American dollar is weakening. Apple CEO Tim Cook criticizes other tech companies for privacy invasions.
- June 4: Dish Network and T-Mobile are in talks of a merger, one that could potentially take less than 4 weeks. Global “bond beatdown” as many shares lose value. This was the hardest trading day for me thus far as I was not able to make many good trades later in the day.
- June 5: 280,000 jobs added in the US, the jobless rate for May dropped to 5.5%. China suspected in hack of US Government, taking employee names seems to be the only action taken thus far. While most of the day was not significant, I made a spectacular trade by shorting NSPR and earned about \$7000 in less than an hour.

While I am satisfied with my first week’s performance, I was able to identify some mistakes to hopefully make next week more successful.

5.2 Week 2: June 8 – June 12

- June 8: JP Morgan announces the use of data will be used more in the next two years than in all of previous human history. President Obama gives speech at G7 Summit. Speaks on cyber security, ISIL, immigration, health care, and maintaining sanctions with Russia. This was a very uneventful day trading, focused more on research and news involving Apple and the US Government. I still don’t have much cash and now heavily consider taking loans for marginal trading.

- June 9: NASDAQ and S&P into 4th day of losses. Tech companies lose about \$35 billion due to NSA spying.
- June 10: First day this week most share values rose. No significant news on my holdings.
- June 12: US House does not pass trade act.

Admittedly, this week was much harder than my first week. The first few days were really rough but I was able to make a bit of a recovery towards the end. Overall, my net worth decreased from Friday of last week but I still remain above my starting point of \$500,000.

5.3 Week 3: June 15 – June 19

- June 15: Severe losses on the opening bell today can be correlated to Greece debt failure.
- June 16: The Oculus Rift faces competition from other virtual reality devices from Microsoft and Sony.
- June 17: Adobe reports very positive earnings on the Adobe Creative Cloud.

5.4 Week 4: June 22 – June 26

- June 23: Tidal (streaming music service) has CEO Tonstad leave.
- June 25: Agria purchases irrigation firm in New Zealand.

I have played this week much more conservatively, trying not to make as many trades as previous weeks. I am now looking more into longer term investments (see chapter 2.2).

5.5 Week 5: June 29 – July 3

- June 29: Debt crisis in Greece causes most stock prices to fall.
- June 30: Consumer confidence index rises to 101.4.
- July 2: US jobless rate falls to 5.3 percent
- July 3: NYSE on Holiday.

5.6 Week 6: July 6 – July 10

Voters in Greece vote “No” on paying back debts, stocks continue to fall. NYSE experiences a “glitch” as all trading is shut down for a few hours. All holdings have been sold as of July 10.

5.7 Analysis

Just as I have done in chapter 4.7, I will be looking at how I did for each company.

The data for Dot Hill can be found in 5.7.

- Agria Corp - the trades are tabulated here in Table 5.7.1:

Date	Time	Action	Shares	Price	Net Cost/ Proceeds	Total Profit
June 1	10:22	Short	52000	1.33	69160	69160
June 1	11:13	Cover	52000	1.31	-68120	1040
June 2	9:49	Buy	50000	1.27	-63500	-62460
June 2	10:10	Sell	50000	1.3	65000	2540
June 3	10:09	Short	54000	1.34	76380	78920
June 4	9:31	Cover	54000	1.33	-75810	3110
June 4	11:36	Short	37500	1.36	51000	54110
June 4	11:39	Cover	37500	1.36	-51000	3110
June 9	9:36	Short	2800	1.39	3892	7002
June 10	10:13	Cover	2800	1.48	-4144	2858
June 12	10:02	Short	60000	1.57	94200	97058
June 12	10:05	Cover	60000	1.54	-92400	4658
June 12	10:24	Short	60000	1.57	94200	98858
June 12	11:04	Cover	60000	1.56	-93600	5258
June 17	10:06	Buy	5500	1.54	-8470	-3212
June 17	11:26	Sell	5500	1.56	8580	5368
June 23	10:01	Short	20000	1.62	32400	37768
June 23	10:03	Cover	20000	1.61	-32200	5568
June 23	2:00	Short	50000	1.68	84000	89568
June 23	3:18	Cover	50000	1.67	-83500	6068
June 30	11:35	Short	30000	1.7	51000	57068
July 2	10:31	Cover	30000	1.68	-50400	6668

July 8	11:54	Buy	36000	1.45	-52200	-45532
July 9	10:26	Sell	36000	1.46	52560	7028
Trades: 24						Total = 6788

Table 5.7.1 Agria Corp Trades

One of the most challenging things I learned about penny stocks is that news can be hard to find. Many of my trades were based on how the current share value related to its previous value in that day or week. Many of my trades were short as I was purposely cautious. As the weeks went on, I started making slightly riskier trades and most of the time I profited from it. By the end of this simulation, I walked away with \$6788.

- InspireMD - the trades are tabulated here in Table 5.7.2:

Date	Time	Action	Shares	Price	Net Cost/ Proceeds	Total Profit
June 1	9:30	Buy	90000	0.23	-20700	-20700
June 1	10:03	Sell	90000	0.24	21600	900
June 2	11:48	Buy	430000	0.23	-98900	-98000
June 2	12:02	Sell	430000	0.24	103200	5200
June 3	9:55	Buy	410000	0.24	-98400	-93200
June 3	9:56	Sell	410000	0.24	98400	5200
June 4	9:44	Buy	190000	0.24	-45600	-40400
June 4	9:44	Sell	190000	0.24	45600	5200
June 4	11:41	Short	100000	0.24	24000	29200
June 4	12:00	Cover	100000	0.24	-24000	5200
June 5	10:05	Short	350000	0.31	108500	113700
June 5	10:36	Cover	350000	0.29	-101500	12200
June 8	9:42	Buy	12000	0.28	-3360	8840
June 8	11:30	Sell	12000	0.29	3480	12320
June 10	9:47	Buy	19900	0.27	-5373	6977
June 10	9:48	Sell	19900	0.27	5373	12320
June 11	10:07	Short	310000	0.26	80600	92920
June 11	10:21	Cover	310000	0.26	-80600	12320
June 11	10:32	Short	320000	0.26	83200	95520
June 11	10:45	Cover	320000	0.25	-80000	15520

June 11	11:09	Short	310000	0.25	77500	93020
June 11	11:41	Cover	310000	0.25	-77500	15520
June 11	11:56	Short	300000	0.25	75000	90520
June 11	12:00	Cover	300000	0.25	75000	15520
June 12	9:50	Buy	22000	0.25	-5500	10020
June 12	10:27	Sell	22000	0.25	5500	15520
June 15	10:14	Short	300000	0.26	78000	93520
June 15	10:17	Cover	300000	0.26	-78000	15520
June 15	11:22	Buy	35000	0.25	-8750	6770
June 15	12:03	Sell	35000	0.25	8750	15520
June 15	1:07	Short	290000	0.26	75400	90920
June 23	9:42	Short	200000	0.39	7800	98720
June 23	9:51	Cover	200000	0.39	-7800	90920
June 26	9:33	Cover	290000	0.29	-84100	6820
July 7	10:32	Buy	220000	0.25	-55000	-48180
July 7	12:59	Sell	220000	0.27	59400	11220
Trades: 36						Total = 10860

Table 5.7.2 InspireMD Trades

This way by far the company I most actively traded on. I did run into one very significant problem. Often, I would made a trade when the price when up or down by one sent but due to the milliseconds it took for that trade to go through the price changed and I ended up losing \$20 on commissions many times. Besides that, I was able to make some very good trades that earned be a nice amount of \$10860.

I was pretty happy with how the Penny Stock Simulation turned out. Despite having to work with little info, I did well. I think my expectation caused me to trade very cautiously and gradually become more comfortable. If I include Dot Hill in this simulation, I made \$14270.50 (or a more impressive \$17648 without including Dot Hill), meaning I earned 2.85% (or 3.53%) over this simulation.

6. Comparisons

I was surprised when I compared the two simulations. I expected trading with large companies would be the safer route while trading penny stocks would be risky business. In the end, I made money from the penny stocks and lost with what I thought was a safe bet. If Dot Hill is counted as my big business simulation, I made \$40039.90 more from trading. While this is impressive, we cannot simply believe that penny stock trading is simply the “best option”. All we can really say is that it was the better option for me during this six week time period. I think another benefit was that I did not hold onto most penny stock trades for a long time. I was holding onto one of my Twitter purchases for a long time because the price dropped at first and I wanted to make money. Instead of going up, the price kept dropping and I ended up losing about \$12000 from that trade. Sometimes in life you just have to accept the problems that come along and deal with them sooner rather than let them grow into bigger problems.

It is important to consider how I did compared to a national “average”. On June 1st, the day I started the S&P 500 opened at \$2108.64 and closed on July 10th \$2076.62, a decrease of 1.52% [13]. For my High Profile Stock Simulation I did relatively poorly, losing 4.48%. I mostly attribute it to a few poor decisions I wasn't aware of (such as Intel's acquisition not meaning much to investors) and the Greek debt crisis. My Penny Stock Simulation performed very well given these circumstances, with a positive increase of 2.85%. During the same time period, the Dow Jones Industrial Average went from \$18017.82 to \$17760.41, a decrease of 1.43%. The NASDAQ went from \$5094.94 to \$4997.70, decreasing by 1.91%. Overall, I would say my High profile Stock Simulation followed the national trend, albeit in a more negative way, then my Penny Stock Simulation.

7. Conclusion

This project was certainly more challenging than I expected it to be. There would be many days I would wake up before 8am just to turn on CNBC to see if I could pick up on useful information. While I may not have done so well in some areas, I certainly learned a great amount of information regarding economics, the stock market, and investing. This kind of thing is not like physics or math, where there is usually one definitive right answer. If people calculated the best trade to make at any time, we would all be millionaires! I learned that sometimes you can be a little lucky or unlucky with trades. I realized I needed to look at as many factors as possible so I could increase my luck and make the best choices. Had I decided to do this project months earlier, my results could have looked very different. This project has given me insight on how complex and sophisticated the world around me truly is.

Appendix

DATE	SYMBOL	TIME	ORDER	QUANTITY	VALUE*	REVENUE**
6/1/2015	NSPR	9:30	Buy	90000	0.23	-20700
	ATVI	9:30	Buy	3000	25.44	-76320
INITIAL NET WORTH	INTC	9:30	Buy	4500	34.41	-154845
500000	INTC	9:36	Sell	4500	34.5	155250
	EA	9:37	Short	2000	62.52	125040
TODAY'S GAINS	TWTR	9:41	Buy	3000	36.79	-110370
1930.45	HILL	9:44	Buy	10000	7.06	-70600
0.39%	EA	9:48	Cover	2000	62.48	-124960
	GOOGL	9:52	Buy	250	544.83	-136207.5
FINAL NET WORTH	GOOGL	9:53	Sell	250	545.18	136295
501930.45	INTC	10:01	Buy	2000	34.06	-68120
0.39%	NSPR	10:03	Sell	90000	0.24	21600
	GRO	10:22	Short	52000	1.33	69160
At 4:00pm	ATVI	10:43	Sell	3000	25.43	76290
	GRO	11:13	Cover	52000	1.31	-68120
	HILL	12:23	Sell	10000	7.09	70900
	FB	12:58	Short	3000	80.05	240150
	FB	1:02	Cover	3000	80.02	-24060
	AAPL	1:16	Buy	2000	130.72	-392160
	AAPL	2:00	Sell	2000	130.82	392460
6/2/2015	AAPL	9:30	Buy	1800	130.03	-234054
	HILL	9:39	Buy	9000	7	-63000
501930.45	HILL	9:45	Sell	9000	7.04	63360
	GRO	9:49	Buy	50000	1.27	-63500
502057.75	GRO	10:10	Sell	50000	1.3	65000
0.02%	AAPL	10:44	Sell	1800	130.27	234486
	NSPR	11:48	Buy	430000	0.23	-98900
0.41%	NSPR	12:02	Sell	430000	0.24	103200
6/3/2015	GOOGL	9:32	Short	300	557.16	167148
	GOOGL	9:34	Cover	300	556.01	-166803
502057.75	AAPL	9:36	Buy	1900	130.33	-247627
	AAPL	9:40	Sell	1900	130.64	248216
508884.14	EA	9:42	Buy	4000	63.17	-252680
1.35%	TWTR	9:44	Sell	3000	36.95	110850
	HILL	9:45	Short	26000	7.1	184600
1.78%	HILL	9:53	Cover	26000	7.06	-183560
	NSPR	9:55	Buy	410000	0.24	-98400

	EA	9:55	Sell	4000	63.19	252760
	NSPR	9:56	Sell	410000	0.24	98400
	HILL	9:57	Buy	60000	7.04	-422400
	HILL	10:02	Sell	60000	7.07	424200
	GOOGL	10:06	Buy	400	554.9	-221960
	GRO	10:09	Short	54000	1.34	76380
	GOOGL	10:12	Sell	400	556.1	222560
	HILL	10:25	Short	42000	7.11	298620
	HILL	10:34	Cover	42000	7.09	-297780
	HILL	10:39	Short	42000	7.15	300300
	HILL	10:46	Cover	42000	7.12	-299040
	FB	10:51	Buy	2750	82.26	-226215
	FB	10:55	Sell	2750	82.31	226352.5
6/4/2015	AAPL	9:31	Buy	2500	129.65	-324125
	GRO	9:31	Cover	54000	1.33	-75810
508884.14	EA	9:35	Buy	1200	63.05	-75660
	AAPL	9:39	Sell	2500	129.99	324975
503907.13	HILL	9:40	Buy	28000	7.22	-202160
-0.90%	EA	9:40	Sell	1200	63.06	75672
	HILL	9:40	Sell	28000	7.26	203280
0.78%	HILL	9:41	Short	10000	7.27	203560
	NSPR	9:44	Buy	190000	0.24	-45600
	NSPR	9:44	Sell	190000	0.24	45600
	GOOGL	9:48	Buy	450	553.1	248895
	GOOGL	9:59	Sell	450	554.59	249565.5
	FB	10:02	Buy	4000	82.69	-330760
	FB	10:11	Sell	4000	82.83	331320
	TWTR	10:12	Buy	6000	37.48	-224880
	ATVI	10:55	Buy	3750	25.92	-97200
	GRO	11:36	Short	37500	1.36	51000
	GRO	11:39	Cover	37500	1.36	-51000
	NSPR	11:41	Short	100000	0.24	24000
	NSPR	12:00	Cover	100000	0.24	-24000
	AAPL	12:05	Buy	400	129.58	-51832
	AAPL	12:32	Sell	400	129.73	51892
6/5/2015	EA	9:35	Buy	1900	62.33	-118427
	EA	10:03	Sell	1900	62.62	118978
503907.13	NSPR	10:05	Short	350000	0.31	108500
	NSPR	10:36	Cover	350000	0.29	-101500
511559.96	AAPL	10:46	Buy	975	129.12	-125892
1.52%	HILL	12:27	Cover	10000	7.4	-74000

2.31%

6/8/2015	NSPR	9:42	Buy	12000	0.28	-3360
	NSPR	11:30	Sell	12000	0.29	3480
511559.96	EA	12:33	Short	60	62.1	3726
	EA	3:57	Cover	60	61.7	3702

505271.56

-1.23%

1.05%

6/9/2015	GRO	9:36	Short	2800	1.39	3892
	FB	9:47	Short	2000	80.11	160220
505271.56	FB	9:50	Cover	2000	79.89	-159780
	HILL	9:52	Buy	550	7.13	-3921.5
501514.92	EA	9:59	Short	2000	61.38	122760
-0.74%	EA	10:05	Cover	2000	61.17	-122340
	ATVI	10:06	Short	5000	25.38	126900
0.30%	HILL	10:10	Sell	550	7.26	3993

6/10/2015	ATVI	9:41	Cover	5000	25.3	-126500
	NSPR	9:47	Buy	19900	0.27	-5373
501514.92	NSPR	9:48	Sell	19900	0.27	5373
	FB	9:50	Short	1750	81.22	142135
502722.89	GRO	10:13	Cover	2800	1.48	-4144
0.20%	FB	3:24	Cover	1750	82.48	142590

0.54%

6/11/2015	FB	9:37	Short	1500	82.69	124035
	FB	9:39	Cover	1500	82.55	-123825
502722.89	ATVI	9:44	Short	2500	25.29	63225
	ATVI	9:45	Cover	2500	25.21	-63025
504401.34	TWTR	9:48	Short	3000	36.15	108450
0.33%	TWTR	9:51	Cover	3000	36.14	-108420
	ATVI	9:55	Short	3000	25.32	75960
0.88%	ATVI	10:00	Cover	3000	25.28	-75840
	NSPR	10:07	Short	310000	0.26	80600
	NSPR	10:21	Cover	310000	0.26	-80600
	NSPR	10:32	Short	320000	0.26	83200

	NSPR	10:45	Cover	320000	0.25	-80000
	INTC	10:50	Short	2100	32.09	67389
	INTC	10:54	Cover	2100	32.05	-67305
	NSPR	11:09	Short	310000	0.25	77500
	NSPR	11:41	Cover	310000	0.25	-77500
	EA	11:43	Short	2250	62.41	140422.5
	EA	11:49	Cover	2250	62.41	-140422.5
	NSPR	11:56	Short	300000	0.25	75000
	NSPR	12:00	Cover	300000	0.25	75000
6/12/2015	INTC	9:33	Short	3000	31.83	95490
	INTC	9:43	Cover	3000	31.78	-95340
504401.34	NSPR	9:50	Buy	22000	0.25	-5500
	TWTR	9:54	Short	3000	36.6	109800
505999.35	TWTR	9:57	Cover	3000	36.43	-109290
0.32%	GRO	10:02	Short	60000	1.57	94200
	GRO	10:05	Cover	60000	1.54	-92400
1.20%	FB	10:10	Short	1200	81.85	98220
	FB	10:22	Cover	1200	81.76	-98112
	GRO	10:24	Short	60000	1.57	94200
	NSPR	10:27	Sell	22000	0.25	5500
	ATVI	10:32	Short	2500	25.21	63025
	ATVI	10:34	Cover	2500	25.18	-62950
	TWTR	10:46	Short	2500	36.27	90675
	TWTR	10:54	Cover	2500	36.17	-90425
	INTC	10:57	Short	2500	31.42	78550
	INTC	11:03	Cover	2500	31.36	-78400
	GRO	11:04	Cover	60000	1.56	93600
6/15/2015	INTC	9:35	Short	2500	31.05	77625
	INTC	9:36	Cover	2500	31.07	-77675
505999.35	EA	9:44	Short	2000	61.82	123640
	EA	9:47	Cover	2000	61.63	-123260
494318.49	TWTR	9:55	Short	2500	34.4	86000
	AAPL	10:11	Short	1000	126.35	126350
	NSPR	10:14	Short	300000	0.26	78000
-2.31%	NSPR	10:17	Cover	300000	0.26	-78000
	TWTR	10:17	Cover	2500	34.34	-85850
-1.14	INTC	10:20	Short	2500	31.25	78125
	AAPL	10:25	Cover	1000	126.34	-126340
	INTC	11:05	Cover	2500	31.32	78300
	NSPR	11:22	Buy	35000	0.25	-8750
	NSPR	12:03	Sell	35000	0.25	8750

	NSPR	1:07	Short	290000	0.26	75400
6/16/2015	EA	9:46	Buy	130	61.92	-8049.6
						494318.49
						497767.99
						0.70%
						-0.47%
6/17/2015	INTC	9:31	Short	2600	31.75	82550
	EA	9:34	Sell	130	63.44	4737.2
497767.99	GRO	10:06	Buy	5500	1.54	-8470
	INTC	10:38	Cover	2600	31.87	-82862
492619.19	GRO	11:26	Sell	5500	1.56	8580
						-1.03%
						-1.48%
6/18/2015	HILL	2:10	Buy	1200	6.93	-8316
						492619.19
						499655.86
						1.41%
						-0.07%
6/19/2015	TWTR	12:01	Short	1500	36.17	54255
	TWTR	12:46	Cover	1500	36.08	-54120
						499655.86
						497843.25
						-0.36%
						-0.43%
6/22/2015	HILL	9:49	Sell	1200	7.01	8412
						497843.25
						487590.11
						-2.06%

-2.48%						
6/23/2015	NSPR	9:42	Short	200000	0.39	7800
	NSPR	9:51	Cover	200000	0.39	-7800
487590.11	AAPL	9:56	Sell	975	127.36	124176
	GOOGL	9:58	Buy	150	560.03	-84004.5
472310.61	GRO	10:01	Short	20000	1.62	32400
	GRO	10:03	Cover	20000	1.61	-32200
	HILL	10:27	Buy	4000	6.94	-27760
-3.13%	GOOGL	11:46	Sell	150	561.17	84175.5
-5.54%	HILL	1:32	Sell	4000	6.97	27880
	GRO	2:00	Short	50000	1.68	84000
	GRO	3:18	Cover	50000	1.67	-83500
6/24/2014	HILL	9:56	Buy	9500	6.9	-65550
472310.61						
478217.61						
1.25%						
-4.36%						
6/25/2015	EA	9:43	Buy	700	67.82	-47474
	EA	10:16	Sell	700	68.11	47677
478217.61						
492704.61						
3.03%						
-1.46%						
6/26/2015	NSPR	9:33	Cover	290000	0.29	-84100
	FB	9:36	Buy	900	87.74	-78966
492704.61	FB	3:26	Sell	900	88.2	79380
487706.11						
-1.01%						
-2.46%						
6/29/2015	FB	10:42	Short	600	86.7	52020
	FB	12:28	Cover	600	86.55	-51930
487706.11						

475101.11

-2.58%

-4.98%

6/30/2015	GRO	11:35	Short	30000	1.7	51000
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475101.11

485324.11

2.15%

-2.94%

7/1/2015	EA	10:33	Buy	850	67.63	-57485.5
	EA	11:08	Sell	850	67.88	57698

485324.11

485002.36

-0.07%

-3.00%

7/2/2015	GRO	10:31	Cover	30000	1.68	50400
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485002.36

488242.36

0.67%

-2.35%

7/3/2015*

488242.36

7/6/2015

488242.36

483739.86

0.92%
-3.25%

7/7/2015	NSPR	10:32	Buy	220000	0.25	-55000
	NSPR	12:59	Sell	220000	0.27	59400

483739.86

487753.11

0.83%
-2.45%

7/8/2015	GRO	11:54	Buy	36000	1.45	-52200
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487753.11

478074.86

-1.98%
-5.39%

7/9/2015	GRO	10:26	Sell	36000	1.46	52560
	EA	10:28	Short	800	70.51	56408

478074.86

477775.96

-0.06%
-4.44%

7/10/2015	INTC	3:30	Sell	2000	29.32	58640
	EA	3:30	Cover	800	72.23	-57784
477775.96	HILL	3:31	Sell	9500	5.97	56715
	ATVI	3:48	Sell	3750	25.4	95250
482421.71	TWTR	3:42	Sell	6000	34.95	209700

0.97%
-3.52%

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