## Stock Market Simulation

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## Table of Contents

Acknowledgements ..... 3
Abstract ..... 4
1 Introduction
1.1 Goals of the Group ..... 5
1.2 History of Stock Market ..... 5
1.3 NYSE vs. NASDAQ ..... 9
1.4 How to Invest ..... 10
1.5 Risks and Payoffs of Investing ..... 11
2 The Big Dipper Method
2.1 Introduction ..... 13
2.2 Stock Selection ..... 14
2.3 Trades ..... 19
2.4 Trade Results ..... 19
2.5 Conclusion ..... 26
3 Short Trading
3.1 Introduction ..... 29
3.2 About Short Trading ..... 29
3.3 Strategies and Goals ..... 30
3.4 Trades ..... 32
3.5 Trade Summary ..... 33
3.6 Conclusion ..... 51
4 Momentum Trading
4.1 Introduction ..... 53
4.2 Trading with This Method ..... 53
4.3 Stock Selection ..... 54
4.4 Transactions ..... 58
4.5 Trading Summary ..... 59
4.6 Conclusion ..... 66
5 Trend Following
5.1 Introduction ..... 67
5.2 Stock Selection ..... 68
5.3 Trade Results ..... 74
5.4 Trades ..... 87
5.5 Conclusion ..... 87
6 Nate's Investing Strategy
6.1 Introduction ..... 89
6.2 Stock Selection ..... 89
6.3 Trades ..... 95
6.4 Trading Summary ..... 96
6.5 Conclusion ..... 110
7 Conclusions
7.1 Project Summary ..... 112
7.2 Analysis of Trading Methods ..... 112
7.3 Final Thoughts ..... 114
References ..... 115

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#### Abstract

Our group conducted a 7-week stock market simulation using resources available to the public on the internet. In doing so, we acquired some real-world trading experience and insight into the pros and cons of using different trading methods and strategies to manipulate the performance of our investments in the stock market. This project has undoubtedly bettered our understanding of stock trading and will prove to make us more versatile traders in the future.


## Chapter 1: Introduction

### 1.1 Goals of the Group


#### Abstract

The goal of this project is for each member of our group to acquire experience trading in the stock market and to gain knowledge of a variety of different trading methods and strategies. This will be achieved by means of a five week real-time stock market simulation using the internet. Each member of our group will have $\$ 250,000$ starting cash with which he will buy whichever stocks he chooses and trade them accordingly with regards to a certain trading method. When the 7-week trading period ends, each member will observe the results of his trades and analyze the performance of his strategy. At the culmination of our project, all strategies will be discussed and compared. At this time, having seen which methods work better than others, our group will arrive at a conclusion.


### 1.2 History of the Stock Market

The stock market is a place where millions of people can go to buy and sell "shares" of a company. When purchased, these "shares" represent an actual part ownership in the company. These shares are traded millions of times per day and with each trade, the share may go up in value and make the owner money, or go down in value and lose the owner money. This is basically what
goes on in the stock market. Put simply, it is the buying and selling of constantly fluctuating shares or "interests" in companies.

Since the beginning of any kind of civilized history, people have been trading goods and services with each other in order to take advantage of their abilities to do some things better than others. For example, a blacksmith might give some horseshoes to a farmer in exchange for vegetables or meat. In 1653, Wall Street was originally a place where settlers of Dutch descent built a defensive post to protect themselves against Native Americans. This was before it had its name as it is known today. Thirty-two years later, in 1885, the twelve-foot wall that was built to ensure the safety of the settlers in that area was torn down and a road was built in its place. The British called this new road Wall Street [11].

In 1792, two years after the first American stock market exchange was founded in Philadelphia, twenty-four men from New York founded the New York Stock Exchange. Two and a half decades later, the men sent a representative to Philadelphia to see why the exchange in New York was so much less prosperous than this other stock exchange. When he came back, he brought news of a board of trustees to keep track of the market and ensure things run smoothly [11].

With Black Tuesday, on October 29, 1929, the great depression started due to a large drop in the market caused by inflation and instability of the multitudes of banks popping up. Nearly 14 billion dollars of investors' money was lost due to this crash [19]. This depression was not just felt domestically either, but globally as well. The Great Depression did not end until the start of World War II when the wartime economy kicked in. There were four main causes for
this crash. The first is that the stocks at the time were overvalued and people were spending too much on them. The second is margin buying, which allowed someone to put only $10 \%$ of the value of the stock down in order to buy it. The third was the FED policy that raised the interest rates on loans from brokers. The last was banking structure; half a dozen banks were being opened per day and two closed every day [19]. This marked the first major crash of the stock market.

After the depression began, the market and the country as a whole were in a slump, but Wall Street continued to evolve and grow. In 1934 the New York exchange was registered with the Securities and Exchange Commission as a national securities exchange and had a president and a thirty-three member board. In 1971, the number of board members was dropped to twenty-five [11].

After a drop in the Dow Jones Industrial Average in 1997, a new rule was introduced to the exchange. This rule, known as the "circuit-breaker" rule was to ensure that another depression would not happen. It stated that if the market dropped ten percent or more that it would be stopped for an hour, two, or the rest of the day in order to let investors reassess the financial situation [20].

Wall Street has had many problems in its history. The market was closed from July to November of 1914 with the advent of World War One and was opened in order to raise funds by selling war bonds [11]. The World Trade Center was bombed in 1993, and was destroyed on September 11, 2001 causing the market to close for 6 days[19]. Many people have been indicted for insider trading; most notable were the recent events with billionaire Martha Stewart. Wall Street has also had some perilous moments. In September of 1920 a horse
drawn carriage with a bomb in it exploded outside of the JP Morgan building and killed 35 people [11]. On Black Monday, the crash of 1987 occurred, which, interestingly enough, also occurred on October 29. The market lost nearly a quarter of its value [19]. And let's not forget the previously mentioned "Great Depression" which drove many people to suicide and lives of crime.

There are two types of crashes that the stock market can endure. The first type is caused by fads and paranoia, which lead people to by and/or sell in a way different to how they normally would. The second is simply a depression period. Black Monday was an example of a crash due to fads, and was the largest oneday loss of market value in history [11]. About a year later, the market had reaccumulated its value. Again the market crashed on October 27, 1997, and lost 550 points. Fortunately, however, the "circuit breaker" rule was in effect and was able to quell this crash to some extent [20]. The long time crashes are also known as "all-out bear" markets. The two worst cases of these are the increase in oil prices during the '70s that caused a "bear-market" from 1972 to 1974 and the decrease in price two-fold in Japanese stocks since 1989 [11].

Although there have been problems, Wall Street and stock markets in general are continuing to flourish all over the world. Even after many large crashes, these markets have persevered and have continued to grow. Nowadays high-powered businessmen and investors have agents to inform them as to which stocks will make them the most money. Tens of thousands of dollars are spent to keep the market going, keeping technology like that used in stock tickers up to date, and funding the numerous upgrades to computer systems. The
market consists of over 300,000 computers belonging to traders which are all networked together. These 300,000 computers are then linked to 26 million computers in banks and small businesses all over the world. Another 300 million computers belonging to day-traders who connect and disconnect at will from the market [20]. This is much different than the $\$ 5000$ a year spent on rent and salaries when the New York Stock Exchange first moved into Wall Street [11]. Trillions of dollars are exchanged every day and fortunes can be both made and lost in less than an hour. Trading is becoming easier and easier to do and is simple for even the lower middle class.

### 1.3NYSE vs. NASDAQ

The New York Stock Exchange (NYSE) and the National Association of Securities Dealers Automated Quotation System (NASDAQ) are responsible for the highest volume of traded equities in the world [23]. However, these two stock exchanges are extremely different. The older of these two stock exchanges is the NYSE. It's perceived by many to be the more stable and well established. Unlike the NASDAQ, the NYSE is an auction market [23]. Trades take place on the floor of Wall Street. Once on the floor, a broker goes to a specific spot where a stock is being traded, known as the trading post [23]. As stated before the NYSE is an auction market, meaning the price is the highest amount a bidder is willing to pay and the lowest amount someone is willing to sell. These trades are facilitated by a "specialist" whose job is to match buyers and sellers [23].

The NASDAQ unlike the NYSE is a dealer's market. In a dealer's market, the dealer known as the market maker creates a market for a security and investors buy and sell stocks from the market maker [23]. Trades on the NASDAQ take place via a communications network between investors and the market maker. Although the NASAQ is younger than the NYSE, it's perceived as more volatile and growth oriented partly because of its lower listing prices than NYSE [23].

### 1.4 How to Invest

There are several important things to take into consideration when investing in the stock market. Three of the most crucial are timing, taxes, and diversification [25]. Do not try to time the market. It is not possible to determine its trends, though many have tried [14]. Use of cost averaging will ensure that you are always buying stocks at an average price. This is done by buying stocks on a periodic basis rather than trying to time the market.

Taxes are the second most vital thing to take into account. When you buy stocks, it is important to try to hold them for more than one year. Selling before holding for one year you will be taxed at an ordinary income tax rate rather than at the long term capital gains rate, which can mean paying a percentage up to twice as high [5]. Another way to protect yourself from taxes is to invest as much as possible into tax-sheltered $401 \mathrm{~K}, 403 \mathrm{~B}$ and IRAs. With 401 K and 403 B plans, you get to invest your earnings before taxes, so the investment will grow on a higher base. This means that you are investing your total earnings rather than
just what is left after taxes which will produce a higher return than your taxed earnings [5]. Many employers offer matching investments that could make that investment equivalent to one of double the original value.

The third thing is to diversify your investments. Rather than just investing in stocks, you should diversify your investments into other asset classes including real estate, cash and maybe even bonds [25]. This way, there is no overdependence on any one asset class. Diversifying your stocks is crucial. It is dangerous to load up on just one or two stocks. If your portfolio is not large enough to buy 15 or more different stocks, you should consider purchasing one or more mutual funds to ensure diversification [25].

### 1.5Risks and Payoffs of Investing

Trading stocks is just like any other form of betting or gambling. You can win big, or lose all your money in one sitting, if you don't trade correctly. You can gain just a little bit, slowly and steadily, or you can jump out almost right after you begin to get down. Knowing when to get in and out as well as which method of trading to incorporate will ultimately reward you in the end, with massive gains achievable.

Just like gambling if you go big, you either win or lose big, you could put a large amount of money in a new small start-up company with a fresh idea. Or you can play it safe, by putting your money into giant corporations and conglomerates, which have a long history of long term gain [19]. A lot of
research is involved no matter what kind of trading style you choose. You must find trends in the market, in that sector and for that company. Common sense is always a big help when choosing your stocks. For example, if the company is making a brand new product that makes it easier to create steel, they might be a good choice if you are in construction. If you get all of your steel from manufacturers that use this new product, you are creating more use for the product and will attract more investors. Thankfully there are brokers who help by doing a lot of this research for you so that it is easier for you to make an informed decision.

One way to almost guarantee a return that just about every broker recommends now is to diversify your portfolio [25]. This means that you invest in more than just 1 sector of the stock market, and put small amounts of your available money into many different stocks. If most of your money is in 1 or 2 stocks your chances of losing money is much greater since just 1 losing stock can overtake the others profits. By investing your money into many different companies, and possibly using different methods for each, you have a much lower risk of getting negative returns [25]. Now if 2 or even 3 stocks are falling, you should have enough gain from the other stocks to at least be even or have a small gain still.

## Chapter 2: The Bigger Dipper Method

### 2.1 Introduction

The trading method used in this chapter is the "Big Dipper Method." To apply this method you must first choose a number of stocks to examine more closely. After doing this, you look at the history of the stocks on the long term. To apply this method you look for where the stock has lost value or "dipped" then began to regain it. You then examine how long the stock stayed down, when it began to rise again, and how long it rose for. Then you look at where the stock stands at the current time and apply this method to find the stocks that are recovering from a fall in price. Another thing to look out for when buying your stocks is a sudden drop in value or a long-term loss. At this point you can decide to purchase said stock taking the risk that it may not recover right away or at all. Finally, based on your research of time taken to recover, you decide how long to keep the chosen stocks. After this time period, you sell the stocks whether they are still gaining value or not. The problem with this is that you are also supposed to keep the stocks if they are losing you money.

Goals for this chapter are the same as those for any of the chapters: to make money in the given time period, using the given trading strategy; more specifically to make an overall profit and to gain an understanding of the "Big Dipper" method of choosing stocks. Also, I intend to learn more about the stock market and how it works. The method of trading that I have picked deals with
choosing a stock based on what it has done in the immediate past; this will help teach me about stock trading websites, and how to comprehend other aspects of the market.

### 2.2 Stock Selection

Each one of the stocks used in this section was picked using the "Big Dipper Method." Research was done on each of these stocks, which were picked to examine more closely at the beginning of this project. With no experience trading in the stock market, the stocks picked were done so by using the "Big Dipper' method as described earlier. All chosen stocks have been shown to have dipped down in price and were purchased either right after this dip or soon after and while the stock was still rising in value.

The first stock chosen is Gilead Sciences Incorporated. Gilead Sciences is involved in the development and sales of therapeutic products for people with life-threatening diseases such as HIV, hepatitis B, and even the common flu. They also deal with aging related degeneration and other problems that occur with aging. Their products are distributed mostly through wholesalers [5].

Using the "Big Dipper Method," this stock was suitable because its history showed it to be still rising in value after a dip in late February. Although stock prices are higher than what they have been in the last year, the stock has been rising rather steadily since its low point in February. This stock will be traded away on June $24^{\text {th }}$. The lowest value that this stock has reached in the last year
occurred in February but lately has recovered. Although this stock appeared to be rather fickle, it met the criteria for picking based on the "Big Dipper" method. Since March, this stock has been rising in value with only a few dips in price as shown below.


Table 2.1: Gilead History

The second stock is Sequenom Incorporated. Sequenom specializes in Genetics and Pharmaceuticals. On the Genetics side, Sequenom makes hardware and software. On the Pharmaceuticals side, they concentrate on the discovery of disease causing genes. They have a system of analyzing genes and calculating the amount of a given material in these genes [6].

The value of this stock peaked in February and declined in price until the beginning of May. Since May this stock has gone up in value about $40 \%$. This stock will be kept until the end of trading. What can be seen from a historical
chart of this graph is that the stock was continually losing value until late April when it began to turn around. This is the kind of drop that you look for when using the "Big Dipper" method. Unfortunately, the stock began to fall before the end of the trading period and actually lost me money.


Table 2.2: Sequenom History

The third of the four stocks chosen is Alfacell Corporation. Another biopharmaceutical company, Alfacell specializes in the development of drugs used to treat cancer and other life-threatening diseases. Its main focus is the development of a protein isolated from a leopard frog, which affects the growth of malignant cells[5].

This stock seams to peak in the summertime and slowly descend for the rest of the year. Alfacell reached its lowest point in April and has been on a slow but steady increase since. This stock will also be kept until the end of trading.

This stock reached a low value in early April after dropping around five and a half points in the seven months before that. This, coupled with the fact that the stock was so cheap was one of the determining factors in buying it.


Table 2.3: Alfacell History

IBM, the stock that Gilead will be traded for is one of the leaders in computer hardware. This company operates in six different segments, but mainly focuses on hardware and software. Being one of the first companies in "the market" of computers, IBM is a multi-billion dollar company [5]. Although the stock is rather expensive, it is right now at about the lowest it will be all year [12]. So according to the "Big Dipper method" this is a good stock to purchase and it will be kept until the end of trading. After peaking in December of 2004 at nearly \$100 a share, IBM suddenly plummeted in April and stayed at around \$74 a share until the beginning of the purchase period when it began to rise quickly.


Table 2.4: IBM History

### 2.3 Trades

| Date | Symbol | Buy/ <br> sell | Price | Shares | Net Cost/ <br> Proceeds | Profit/ <br> loss | Total Cash | Total asset |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 6-7-05 | GILD | Buy | 42.11 | 3,562 | \$149,995.82 | 0 | \$100,004.18 | \$250,000 |
| 6-7-05 | SQNM | Buy | 1.05 | 47,619 | \$49,999.95 | 0 | \$50,004.23 | \$250,000 |
| 6-7-05 | ACEL | Buy | 2.05 | 24,390 | \$49,999.5 | 0 | \$4.73 | \$250,000 |
| 6-24-05 | GILD | Sell | 43.00 | 3,562 | \$153,166 | \$3170.18 | \$153,170.73 | \$253,170.18 |
| 6-24-05 | IBM | Buy | 75.40 | 2,031 | \$153,137.40 | 0 | \$33.33 | \$253,170.18 |
| 7-24-05 | SQNM | Sell | 1.03 | 47,619 | \$49,047.57 | \$952.38 | \$49,080.90 | \$252,217.80 |
| 7-24-05 | ACEL | Sell | 2.39 | 24,390 | \$58,292.10 | \$8,292.60 | \$107,373.00 | \$260,510.4 |
| 7-24-05 | IBM | Sell | 84.44 | 2,031 | \$171,497.64 | \$18,360.24 | \$278,870.64 | \$278,870.64 |

Table 2.1: Trades

### 2.4 Trade Results

## Week 1

The first week of trading was rather prosperous. Not one of the original three stocks experienced an overall drop from Tuesday to Friday of this week. Gilead Sciences seems to be doing the best out of the three thus far. With a price
of $\$ 42.11$ on Tuesday of this week and a closing price of $\$ 43.32$ on the following Friday, a gain of $\$ 1.21$ per share, this stock has made the largest price increase of the three, but because it is much more expensive than the other three, the gains are less extravagant. I purchased 3,562 shares which is a gain of \$4310.02. I have invested a total of $\$ 149,995.82$ in this stock and will keep it for two more weeks [5].

The second stock, Sequenom Incorporated still increased in price but less so. The buying price for this stock was $\$ 1.05$ on Tuesday and the closing price on Friday was $\$ 1.15$. I have invested $\$ 49,999.95$ in 47,619 shares of this stock. This is a net gain of $\$ 4,761.90$ which makes this stock the number one money maker this week [5]. This stock will be kept until the end of trading on the basis of the research done using the "Big Dipper Method."

The results of the third and final of my three stocks, Alfacell Incorporated, were extraordinary. 24,390 shares of this stock were purchased at a price of $\$ 49,999.50$. The price of Alfacell was $\$ 2.05$ a share on Tuesday and there was a closing price of $\$ 2.54$ on Friday. This is an increase of $\$ 0.49$ per share which, given the relative inexpensiveness of the stock, is tremendous. This is a gain of $\$ 11,951.10$, more than twice either of the other stocks [5].

## Week 2

Week two has turned out to be much more modest than week one. With two of the three stocks going up just slightly and one going down a little more
significantly, this week is still not a disappointment. Gilead Sciences opened on Monday at $\$ 43.43$. This is an increase since its close last Friday at $\$ 43.32$. This stock, however, closed on the Friday concluding week two at \$43.49; up just \$.06 from Monday. The 3,562 shares owned equal a profit of $\$ 213.76$ [5].

Sequenom Incorporated had a much less profitable week than previously. With an opening price this Monday that matched the closing price for the previous Friday, Sequenom may be slowing down as far as price gains go. Opening price was $\$ 1.15$ on Monday and Friday's closing price was $\$ 1.16$. This stock gained only $\$ .01$ per share but since it is so cheap the 47,619 shares owned translates into a profit of \$476.19 [5].

The final of the three stocks, Alfacell, is the only one to have lost money. Even after a great start on Monday with an opening price of $\$ 2.80$ (up $\$ .36$ from last Friday's close), the stock quickly began to fall once again until Thursday and Friday when some of the lost ground would be made up and the stock closed at $\$ 2.72$ on Friday. This loss of $\$ .08$ a share with 24,390 shares translates into a net loss of $\$ 1,951.20$. Hopefully this stock will rebound soon. If not, it may have to be traded away [5].

## Week 3

After closing last Friday at $\$ 43.49$, Gilead Sciences has dropped once more this week and the closing price this Friday is $\$ 43.00$. Although this price is noticeably lower than that of last week, it is still higher than the price I originally
purchased it at. All shares in the Gilead Sciences stock will be sold this week for a profit of $\$ 3,170.18[5]$. The $\$ 153,166$ now available for spending will be used to purchase stock in IBM.

Sequenom Inc. closed last Friday at $\$ 1.16$. This is also what it opened at on Monday, but since then it has steadily declined for some reason. Losing an average of almost 4 cents a day, it closed at $\$ 1.02$ on Friday. After losing 8 percent of its value this week, which is a lot for such an inexpensive stock, I may need to trade this away if it does not recover in the next week. A loss of $\$ 0.14$ per share means that I lost $\$ 6,666.66$ from this stock in the last five days of trading[5].

Alfacell had an equally bad week this week. After closing last Friday at \$2.72, which is also what it opened on Monday, this stock lost $\$ 0.22$ per share on Monday alone, and hovered around this price all week, only to close at $\$ 2.52$ on Friday. This $\$ 0.20$ per share loss translates into a $\$ 4,878$ loss for this week[5]. Luckily, this stock has been very profitable in the last two weeks and I can afford a loss like this.

## Week 4

This week was the first week for the IBM stock, after selling Gilead Sciences for a profit of $\$ 3,170.18$. Since this stock was sold, it has risen in value by $\$ 2.38$ per share, unfortunately I sold estimated too short a time before selling this. Other than that, this week has been rather profitable and only one of the
three stocks that I am holding have lost value. At the end of week 4, total assets reached $\$ 256,031.31$ and although this is not what it has been in weeks past, it is still a net profit and hopefully all three stocks will increase in value before the end of the simulation [5].

Sequenom closed on Friday at $\$ 1.09$ which is an increase of only 4 cents from the original buying price, but it is up 7 cents from last week when it dropped. With 47,619 shares of Sequenom, a profit of $\$ 1,904.76$ has been made in the last 3 weeks. This stock has yet to match the price of $\$ 1.16$ from two weeks ago but is still doing well [5].

Alfacell closed at $\$ 2.15$ on Friday, which is a big drop from the $\$ 2.52$ of a week ago, but it is still up 10 cents from when I first bought it. 24,390 shares, at $\$ .10$ increase per share, amounts to a profit of $\$ 2,439$. This is also rather modest compared to the prices in weeks past but still has time to recover[5].

Finally, IBM had a dismal first week. I purchased 2,031 shares of this stock. Due to its expensive price of 75.40 last Friday, and its closing price this Friday of $\$ 74.67, \$ 1,482.63$ was lost due to a drop of $\$ .73$ per share. Hopefully this stock will rebound quickly and profits will once again become positive for IBM [5].

## Week 5

For week 5, profits have once again started to rise. Sequenom closed on Friday at the exact same price that it was purchased at. This means that the
profits for this particular stock are now at zero, but this is better than being in the red. Hopefully the value of the stock will go up a little bit this week so that profits are once again positive. Thus far, the "Big Dipper" method has been working, if the stock raises even a few cents this week, the profits will be exceptional due to the 47,619 shares. Sequenom started the week at $\$ 1.12$ but lost 9 cents per share that very day and did not recover from this loss [5].

This week, Alfacell is down 5 cents per share, but still up 5 cents from when the stock was originally purchased. Like Sequenom, this is a reasonably cheap stock, and with 24,390 shares, a rise of a few cents would be a tremendous increase in profits. This stock started the week at $\$ 2.15$ a share and stayed at about that all week. On Friday, it opened at $\$ 2.18$ a share but during the course of the day it lost 13 cents per share to close at $\$ 2.15$ [5].

Finally, IBM has done very well for itself this week. It opened at $\$ 74.38$, down $\$ 1.29$ from the close of the previous Friday. This stock shot up this week, 41 cents the first day, and more than a dollar for each of the next three days in this short week. IBM closed at $\$ 79.30$ this Friday. Having purchased 2,031 shares of this stock at $\$ 75.40$ per share, an increase of $\$ 3.90$ a share, a total profit for this stock since the beginning of the simulation is $\$ 7,920.90[5]$. Not a bad recovery after the loss of profits in the first week of holding the shares in IBM.

## Week 6

This week of trading has been the most profitable of this entire simulation. Even with one of the stocks posting a loss of almost a thousand dollars, the other two more than made up for this. Sequenom started this week at $\$ 1.04$ and shot up 5 cents in the middle of the week which was quickly lost and closed at $\$ 1.03$ on Friday. 5 cents isn't much compared to some of the other increases that have been seen, but this stock is only about a dollar a share [5].

Alfacell had a rather profitable week. Starting on Monday up 25 cents a share from the closing price of $\$ 2.10$ a share last Friday, Alfacell stayed at around this price until this Friday when it closed at $\$ 2.42$ a share. This stock is worth 37 cents per share more than what it was purchased at. Not bad for an inexpensive stock [5].

Finally, IBM had the most profitable final week out of the three. Up \$3.08 from just last week, IBM is up $\$ 6.98$ from when it was purchased. This increase, although the stock is kind of expensive, translates to a profit of $\$ 14176.38$. This profit along with the profits and losses of the other two stocks amounts to a total profit of $\$ 25,418.48$ over the entire simulation period thus far [5].

## Week 7

This week Sequenom stayed at almost the exact same price as its close last Friday of $\$ 1.03$. It peaked at $\$ 1.06$ on Wednesday only to once again close
this Friday at that very same $\$ 1.03$. With 47,619 shares of this stock, a loss of only 2 cents per share from what it was purchased at amounts to $\$ 952.38$ in lost money [5].

Alfacell opened this week at $\$ 2.54$ after closing last Friday at $\$ 2.42$. Dropping to $\$ 2.37$ the very next day, this stock recovered to only $\$ 2.39$. A loss of only 3 cents a share from last week still translates into a sizeable profit for the conclusion of this simulation. Having 24,390 shares of this stock and a 34 cent per share increase in price, the profits from selling this stock are $\$ 8,292.60$, pretty good for 7 weeks [5].

After closing last week at $\$ 82.38$, IBM continued to rise in value. Having a slow Monday this week, IBM lost a few cents per share then quickly jumped to over $\$ 84$ a share and stayed around this price until closing Friday at $\$ 84.44$. This is an increase of $\$ 9.04$ per share. Unfortunately, this stock is much more expensive than the others. 2,031 shares of this stock at a $\$ 9.04$ increase per share amounts to a profit of $\$ 18,360.24$, which is still quite an exceptional profit.

### 2.5 Conclusion

For this project, the goals simply put were reached and exceeded. As to the goal of making money, more than $\$ 25,000$ dollars was made in the seven weeks of this project. A much more in depth understanding of the stock market was achieved, along with an understanding of the history of the market. Using my
strategy I was able to more easily estimate what a stock would do depending on what it has done in the past.

In real numbers, I made a total of $\$ 28,870.64$ in the seven weeks of the simulation. Most of this money was made with the purchase of the IBM stock, which went up $\$ 9.04$ a share in only 4 weeks. This amounts to $11.99 \%$ increase in price, and although the stock was almost twice the price of Gilead ( the next most pricey stock ) this increase is quite phenomenal. The price of IBM means that without a rather large investment, there will not be much short-term gain.

Alfacell made the next highest return. With $\$ 8,292.60$ in total profits in seven weeks, this is quite good also. This stock started at $\$ 2.05$ a share and closed and closed at $\$ 2.39$ a share. A total of $16.59 \%$ increase in the price per share over seven weeks. This however was a much cheaper stock and 34 cents per share is not as impressive as $\$ 9.04$, but this was still quite profitable.

Next was Gilead, which went up a modest 89 cents per share. Opening at $\$ 42.11$ a share and closing at $\$ 43.00$ a share, Gilead made a total profit of $\$ 3,170.18$ from only a $2.11 \%$ increase in value. This stock should probably have been held throughout the entire trading period, but instead it was sold off early, and didn't have time to "clear its throat" so to speak. Gilead made its greatest increase in the first week of $\$ 1.21$ a share.

Finally, there is Sequenom, which posted the only overall loss in the simulation. This stock would have been much more profitable if it was sold after the second week of trading, before it lost 12 cents a share. 12 cents does seem like that much, but with a stock originally purchased at $\$ 1.05$ a share and that
dropped at $\$ 1.16$ a share, this is equivalent to a $10.34 \%$ loss. In the end, $\$ 952.38$ was lost from this stock alone.

My second goal was also achieved, and I have learned much about my trading method and the market in general. Using yahoo I have been learned to check prices, history, and read background information on all stocks on the market. However, I still have much to learn about the market and other trading methods, but I have a reasonable understanding of the "Big Dipper" method and what is involved with it. I also now have a better knowledge of the history of the market and how it came to be what it is today. This project has been a success in all aspects.

## Chapter 3: Short Trading

### 3.1 Introduction

This chapter will elucidate about the use of short trading in the current market. Unlike the other trading methods in this paper, the trading method depicted here has nothing to do with the research, choice of stocks or when to buy and sell your stock, but actually how the money is invested. This rather uncommon technique, if done correctly with the proper research, can in fact become extremely profitable. The goals will of course be set realistically for the time period we are given, and the stocks that are chosen. First, research will be conducted to find the appropriate companies to trade with. After that, trading will begin, keeping a close watch to make sure when to sell. Next, the results will be collected, and analyzed. Finally, everything will be summarized and conclusions will be made for each of the investments made.

### 3.2 About Short Trading

Short Trading, also know as Reverse Trading, is very different from the other methods in this paper. Most trades done each and everyday are long trades [22]. Long trades are exactly the type of trades my partners will use for their trades. An investor would perform a normal trade because they believe the company is going to increase in stock price. But what happens when you think
the company is going to lose money, not gain. This is where short trading comes in. In a sense, you sell a number of shares at a high price before you buy them at the lower price. Basically, when you feel that you know of a stock that is going to drop instead of increase you sell the shares first and purchase them second. Because you are technically making money before you give money a special Margin Account will need to be set up with your broker [22]. This type of trading is just as risky as standard trading if not more, since the same amount and precision of research needs to be conducted, plus the market as a whole will always go up. Any of the research trading methods listed in this paper could be used. Short trading is much better suited for short term investing as in the long run; the stock market will just about always go up. The stock market, since it's incarnation in 1792, has always had a history of increasing over periods of 10 years or more [20]. But there have of course been a few times when the entire market headed downward, and certainly many times when individual stocks were run into the gutter, or close to it. These are the stocks we want to find for Short Trading. I would say the best amount of time to hold onto a short trade is from about 2 days to 2 weeks. More and even less can be used depending on your situation, the risk you are willing to take, and the method you use for trading.

### 3.3 Strategies and Goals

My main goal, just like any investor is to use the stock market correctly so that I generate maximum profits. However, my goal for the project is also to gain
some excellent real world knowledge of different trading methods, and to learn how to better invest in the future when I start to make money.

Before I can start my simulation with Reverse Trading, I must first find out what companies to trade. To do this I will first conduct a lot of research in a few different sectors of the market, mainly tech stocks as that is what I know best. I will look for companies that have been falling (to see if they will keep falling), that have been rising rapidly (and might soon drop sharply). I will be paying close attention to both Earnings and Profit. In addition, I will take a look to see if any company is coming out with a new product, which I believe won't be the money maker that they hope it will be. To do some comparison I will also utilize regular Long trades. I will also choose 2 stocks to do long-term even tough short trading is better suited for short-term. Each week I will choose at least one stock to do short trading with, and one stock to do a regular long trade with. I might buy the stock on Monday or anytime during the week, but no matter what I won't keep it for more than a week, as short-term quick trading is the idea here. Of course, in the real world it might be a better idea to keep for longer than a week, but for this experiment I will limit my holding.

I will set myself with some realistic goals of making a $15 \%$ profit, hopefully making at least $2-3 \%$ each week. This would bring in $\$ 37,500$ using our $\$ 250,000$ each or $\$ 3,750$ if I were to use a more realistic for my near future amount of $\$ 25,000$.

### 3.4 Trades

| Date | Symbol | buy/sell - <br> short/long | Price | Shares | Net Cost/ <br> Proceeds | Profit/Loss | Total <br> Cash | $\frac{\text { Total }}{\text { Asset }}$ |
| :--- | :--- | :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| $6 / 7 / 2005$ | DELL | buy - short | $\$ 40.39$ | 1237 | $\$ 49,962.43$ | $\$ 0.00$ | $\$ 50,037.57$ | $\$ 100,000.00$ |
| $6 / 7 / 2005$ | YHOO | buy - long | $\$ 37.44$ | 1335 | $\$ 49,982.40$ | $\$ 0.00$ | $\$ 55.17$ | $\$ 100,000.00$ |
| $7 / 11 / 2005$ | DELL | sell | $\$ 39.50$ | 1237 | $\$ 51,063.36$ | $\$ 1,100.93$ | $\$ 51,118.53$ | $\$ 101,100.93$ |
| $7 / 19 / 2005$ | YHOO | sell | $\$ 37.60$ | 1335 | $\$ 50,196.00$ | $\$ 213.60$ | $\$ 101,314.53$ | $\$ 101,314.53$ |

Table 3.1: Long Term Stocks

| Date | Symbol | buy/sell short/long | Price | Shares | Net Cost/ Proceeds | Profit/Loss | Total Cash | $\begin{aligned} & \text { Total } \\ & \text { Asset } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 6/7/2005 | GOOG | buy - short | \$293.12 | 341 | \$99,953.92 | \$0.00 | \$50,046.08 | \$150,000.00 |
| 6/7/2005 | IMCL | buy - long | \$30.16 | 1657 | \$49,975.12 | \$0.00 | \$70.96 | \$150,000.00 |
| 6/8/2005 | GOOG | sell | \$279.12 | 341 | \$104,727.92 | \$4,774.00 | \$104,798.88 | \$154,774.00 |
| 6/8/2005 | IMCL | sell | \$35.27 | 1657 | \$58,442.39 | \$8,467.27 | \$163,241.27 | \$163,241.27 |
| 6/13/2005 | BOL | buy - short | \$75.37 | 1326 | \$99,940.62 | \$0.00 | \$63,300.65 | \$163,241.27 |
| 6/14/2005 | TOM | buy - long | \$11.08 | 4512 | \$49,992.96 | \$0.00 | \$13,307.69 | \$163,241.27 |
| 6/15/2005 | BOL | sell | \$72.97 | 1326 | \$103,123.02 | \$3,182.40 | \$116,430.71 | \$166,423.67 |
| 6/17/2005 | TOM | sell | \$12.98 | 4512 | \$58,565.76 | \$8,572.80 | \$174,996.47 | \$174,996.47 |
| 6/22/2005 | ATYT | buy - short | \$12.78 | 7824 | \$99,990.72 | \$0.00 | \$75,005.75 | \$174,996.47 |
| 6/22/2005 | CSCO | buy - long | \$19.80 | 2525 | \$49,995.00 | \$0.00 | \$25,010.75 | \$174,996.47 |
| 6/23/2005 | ATYT | sell | \$11.78 | 7824 | \$107,814.72 | \$7,824.00 | \$132,825.47 | \$182,820.47 |
| 6/23/2005 | ATYT | buy - long | \$11.74 | 4258 | \$49,988.92 | \$0.00 | \$82,836.55 | \$182,820.47 |
| 6/24/2005 | ATYT | sell | \$12.01 | 4258 | \$51,138.58 | \$1,149.66 | \$133,975.13 | \$183,970.13 |
| 6/24/2005 | CSCO | sell | \$19.30 | 2525 | \$48,732.50 | \$1,262.50 | \$182,707.63 | \$182,707.63 |
| 6/27/2005 | RHAT | buy - long | \$12.20 | 4098 | \$49,995.60 | \$0.00 | \$132,712.03 | \$182,707.63 |
| 6/30/2005 | PIXR | buy - short | \$50.00 | 2000 | \$100,000.00 | \$0.00 | \$32,712.03 | \$182,707.63 |
| 7/1/2005 | RHAT | sell | \$14.20 | 2000 | \$58,191.60 | \$8,196.00 | \$90,903.63 | \$190,903.63 |
| 7/1/2005 | PIXR | sell | \$43.00 | 4098 | \$114,000.00 | \$14,000.00 | \$204,903.63 | \$204,903.63 |
| 7/5/2005 | MU | buy - short | \$10.30 | 9708 | \$99,992.40 | \$0.00 | \$104,911.23 | \$204,903.63 |
| 7/6/2005 | SFA | buy - long | \$33.60 | 1488 | \$49,996.80 | \$0.00 | \$54,914.43 | \$204,903.63 |
| 7/8/2005 | MU | sell | \$11.42 | 9708 | \$54,803.04 | \$10.872.96 | \$109,717.47 | \$159,714.27 |
| 7/8/2005 | SFA | sell | \$36.83 | 1488 | \$89,119.44 | \$4,806.24 | \$198,836.91 | \$198,836.91 |
| 7/11/2005 | ERTS | buy - long | \$57.50 | 860 | \$49,967.50 | \$0.00 | \$148,869.41 | \$198,836.91 |
| 7/11/2005 | CD | buy - short | \$22.49 | 2223 | \$49,995.27 | \$0.00 | \$98,874.14 | \$198,836.91 |
| 7/11/2005 | TSM | buy - long | \$9.18 | 5446 | \$49,994.28 | \$0.00 | \$48,879.86 | \$198,836.91 |
| 7/12/2005 | ERTS | sell | \$60.52 | 860 | \$52,650.70 | \$2,683.20 | \$101,530.56 | \$201,520.11 |
| 7/12/2005 | TSM | sell | \$9.37 | 5446 | \$51,029.02 | \$1,034.74 | \$152,559.58 | \$202,554.85 |
| 7/12/2005 | COOL | buy - short | \$6.86 | 14577 | \$99,998.22 | \$0.00 | \$52,561.36 | \$202,554.85 |
| 7/13/2005 | COOL | sell | \$3.09 | 14577 | \$154,953.51 | \$54,955.29 | \$207,514.87 | \$257,510.14 |
| 7/15/2005 | CD | sell | \$22.04 | 2223 | \$50,995.62 | \$1,000.35 | \$258.510.49 | \$258,510.49 |
| 7/18/2005 | ERTS | buy - long | \$57.80 | 865 | \$49,997.00 | \$0.00 | \$208,513.49 | \$258,510.49 |
| 7/19/2005 | INTC | buy - short | \$28.62 | 3494 | \$99,998.28 | \$0.00 | \$108,515.21 | \$258,510.49 |
| 7/19/2005 | ERTS | sell | \$61.57 | 865 | \$53,258.05 | \$3,261.05 | \$161,773.26 | \$261,771.54 |
| 7/22/2005 | INTC | sell | \$26.75 | 3494 | \$106,532.06 | \$6,533.78 | \$268,305.32 | \$268,305.32 |

Table 3.2: Short Term Stock

Combining the numbers from long-term and short-term bring my total assets to $\$ 368,631.95$, giving me a total amount gained throughout this project of \$119,619.85 or a whooping 47.85\% increase from the initial \$250,000 invested.

### 3.5 Trade Summary

## Long Term

First thing I did was try to figure out what stocks I wanted for the long term, full 7 weeks, of trading. I conducted a good amount of research here hoping to pick the correct stocks. Since I am a Computer Science major, I decided it would be best to stay in the IT/Tech stocks for the long-term trading. I chose wellknown companies because I believed it would be easier to predict how a large commonly known company's stock might perform. For my Short trade, it was rather easy for me to choose Dell (DELL). Other than my personally built computer, all of the desktops and laptops in my house are Dell. Generally, you would think that because we have so many that I would like this company. But on the contrary, Dell has started outsourcing their Tech. Support almost completely. This not only makes a lot of their customers angry, including my parents and me, when I have to fix something for them, but it takes away a lot of US jobs which investors as a whole don't normally take kindly to. I was thinking about choosing Google (GOOG) because as of recent they had been gaining quickly and immensely. I figured Google was due to start losing all of this
momentum it has been happening. I ended up deciding against it and will probably short trade Google for the first week and then keep a close eye on what how it is doing.

For my Long Trade I went with the company whose website I do all of my research on, Yahoo (YHOO). Yahoo has started coming out with a lot of new products recently. This includes everything from toolbars, to new search engines, and new services and programs. Most notably is the iTunes like music player and download center. Yahoo has had this product in development for almost 2 years now, and has been watching closely to what the other companies like Apple and Real are doing. There are 2 main selling points for this product; you can choose how you pay, per song, or monthly fee, and it is cheaper in both regards than any other service. The question is, will there be a big enough user base, and are their prices too cheap so that they end up not making any profit? I will just have to wait and see. I also use Yahoo Finance to find out all of my stock info, and it's always better to invest in something you know and use. However, if this stock drops consistently for 2 or 3 days, I may have to take my losses and jump out.

I came to a decision to use $\$ 50,000$ for each of these 2 stocks and the final $\$ 150,000$ for each week's short-term trades. That way I could use $\$ 100,000$ for one stock if I feel strongly about how that stock will fair. This made the total amount invested in Dell $\$ 49,962.42$ buying 1237 shares at $\$ 40.39$, while I used $\$ 49,982.40$ purchasing 1335 shares in Yahoo for $\$ 37.44$ per share.

Neither of these stocks really helped me out in the long run. Yahoo basically stayed around the amount I bought it at, expect towards the end when it started dropping, which I didn't want for Yahoo, to under \$35 per share. I was ready to take my losses but I felt compelled to stick with it and let it get back up. In the end, I sold it at $\$ 37.60$ for a gain of only $\$ 213.60$, the smallest gain or loss I had. I saw it go above $\$ 38$ and then drop back down, so I grabbed it just in time, because the following day it dropped even more to below $\$ 34$. Dell gained me a little more than Yahoo, $\$ 1,100.93$ or $3.19 \%$. Dell, just like Yahoo, was fluttering around the amount I bought at. Then it stayed around $\$ 39.30$ for almost 3 weeks. One day I saw that the Low's for the stock were starting to increase, so I sold it at $\$ 39.50$ when I saw it rise to almost $\$ 40$ that day. Again, I got lucky and got out just in time.

## Week 1

For my first week's short trade I went with Google (GOOG) instead of using it for the long term. Google has been on a steady increase ever since it joined the NASDAQ last September. They roll out with a new product almost every week, but they are always of the highest quality. The problem is most of the Google's products are free for the user. I figured that since it has been increasing rapidly as of recent that it was on its way down, at least for the short term.


Figure 3.1: GOOG 1 yr. History

When choosing a company for a normal long trade I went with a tip I got from my father, who is a rather active investor. He has been into Biotechnology and Nanotechnology stocks for about the past 8 months and had done pretty good, so I took his advice and researched a few stocks he told me about. I looked at ImClone (IMCL) on Yahoo Finance, and noticed that they were extremely close to a 2 year low. I came to the conclusion that I would buy this company because there has been a lot of talk in the news lately about success stories in cloning, stem-cell research and other bio/nanotech news. It could be nice to hold on for the long-term, but that is always an unstable group. They may not be able to get back up to the numbers they had 2 years ago, but for the shortterm I can certainly see the stock making a nice jump back up.

I felt that Google was really headed towards a steep drop, so I invested \$100,000 worth into Google totaling \$99,953.92 or only 341 shares for $\$ 293.12$ per share. For ImClone I spent a total of $\$ 49,975.12$ which came to 1657 shares of the $\$ 30.16$ priced ImClone.

Both of these stocks helped my project jump off with a bang by performing exactly how I had hoped they would. Google dropped exactly $\$ 14.00$ from what I bought it at in only 1 day, while ImClone increased roughly $16.94 \%$ in that same day span. After selling Google at $\$ 279.12$, I gained $\$ 4,774.00$ or $4.78 \%$ from the amount I put in. ImClone did even better because of the higher amount of shares I was able to buy. I came out with $\$ 8,467.27$ profit from selling these shares. I choose to sell both after 1 day because I was at a rather high amount gained for such short time, and I waited to get out until they started going in the opposite direction that day. A nice beginning to my project, but certainly not something I should expect to happen every week.

## Week 2

After performing so well in week 1, I was hoping to try some new sectors of the market as well as improve on the earnings that I had achieved. I decided that this week I would try to get my feet wet in some none computer technology stocks. I went with Bausch\&Lomb (BOL), one of the top optical research companies, for my short trade. They recently announced an increase to their R\&D department worth $\$ 35$ million and 200 new jobs to the Rochester area. I
chose this a short trade because Bausch\&Lomb has been rather consistent for the past few months, steadily increasing, but has been dropping as of the past few weeks. I figured that with an announcement of such a large proportion it would actually keep the stock dropping for the short-term as investors look at all the possibilities and determine whether or not they think this is a good decision by the company. However, I should watch this stock as it will probably go up after 2 or 3 weeks because of this boost in research.


Figure 3.2: BOL 1 yr. History

For my long trade, I decided to go with a company that I buy from on a frequent basis. Tommy Hilfiger (TOM) is probably my favorite jean company. It has nothing to do with the name and label, but they fit me the most comfortably. I went to buy my first pair of shorts from Tommy at J.C.Penny's the other day and noticed a lot of people leaving the store with Tommy Hilfiger clothes and
accessories. That sealed the deal for me to buy this stock, even though it isn't near back-to-school time yet. I was always told by my father to invest in what you know, and I took his advice on this one.

When I started to buy these stocks, I didn't really feel too confident about either of my choices. After thinking it through, I figured that Bausch\&Lomb had less of a chance to gain this week than Tommy Hilfiger did with losing money. So I invested my bulk into Bausch\&Lomb which came to $\$ 99,940.62$ after buying 1236 shares at $\$ 75.37$ a pop. With what was left I bought 4512 shares of Tommy Hilfiger, which was priced low at $\$ 11.08$. This meant I invested \$49,992.96 into the clothing giant.

I came up a little bit short with meeting my target performance, but I was still very close. Bausch\&Lomb dropped to $\$ 72.97$ in only 2 days with Tommy Hilfiger gaining $17.15 \%$ in 3 days. Selling Bausch\&Lomb netted me $\$ 3,182.40$ or $3.18 \%$ in profit. I didn't keep this stock any longer because it starting shooting back up after dropping all the way to $\$ 72.53$. Tommy Hilfiger was sold right after the closing bell on Friday at $\$ 12.98$. This gave me earnings of $\$ 8,572.80$ from just the one stock. I wish I would have invested the larger amount of money into Tommy Hilfiger, but that's all just part of playing the stock market.

## Week 3

Going into my $3^{\text {rd }}$ week I was rather excited because of my first 2 weeks. This week I went back to what I know best, computers and new technology. My
short trade was done with ATi Technologies (ATYT). One of the top 2 video cards manufacturers, ATi, has been close to releasing their newest chip the R520. It's getting closer to when official release of their next-gen powerhouse, but the chip has been delayed, again. I keep a close eye on ATi as they are the only video card I put in any of the desktop computers in my house. I bought this stock almost immediately after I heard the news. A few days later, I sold the ATi stock I had so that I could buy ATi again but as a long trade. Even though the earnings were lower than expected, ATi's sales and revenues rose to more than the previous year. This just about always signifies a stock that will increase in the near future.

For my first long trade of the week I choose Cisco (CSCO). I work in the Network department of a company and all we use is Cisco routers and switches for our LAN and WAN traffic. Cisco also operates around $80 \%$ of all internet traffic in the world. This equipment is extremely expensive as well so Cisco is certainly making a good dollar off each unit. They have been increased consistently over the past 2 months and I don't see that coming to an end sometime soon.


Figure 3.3: CSCO 6 m. History

I knew that ATi would lose a lot of money so I spent $\$ 99,990.72$ buying 4258 shares at $\$ 12.78$ each. With Cisco I spent only $\$ 49,995.00$ since I was going on intuition alone. This came to 2525 shares at $\$ 19.80$ per share. When I bought ATi for the second time I decided not to spend the whole $\$ 100,000$ available and spent only spent $\$ 49,988.92$ to purchase 4258 shares at $\$ 11.74$ each.

ATi carried me this entire week as Cisco gave me my first loss so far. I sold my short trade of ATi at $\$ 11.78$, giving me a profit of $\$ 7,824.00$ or $7.83 \%$. I sold this because I had a feeling it would go back up in a strong surge. Cisco as I stated, inflicted me with my first negative earnings. I sold it at $\$ 19.30$ losing a total of $\$ 1,262.50$ or $-2.53 \%$. I chose to just take my losses at a minimum and get out before I lost more. My second acquisition of ATi didn't give me such
good numbers but I still gained $\$ 1,149.66$ after selling my shares at $\$ 12.01 \mathrm{a}$ piece. This still ended up as a good week doing better than I expected at the start of the project.

## Week 4

For this week, I stayed with investing in tech stocks. I am a big fan of Linux and the Unix Operating System. Red Hat (RHAT) is one of the biggest, and most well known of the Linux distributions. They recently came out with there quarterly statement and there revenue was up more than the same quarter last year. I felt this meant a long trade was due, before the stock started stabilizing.

As for my short trade, I went with Pixar (PIXR) who also came out with earnings, but it was the other way around. Pixar hasn't really come out with any good movies as of late, with The Incredibles being the most notable recent feature film. However, even with this lack of movies or press, their stock has still been increasing slowly. With the bad news of the earnings and revenues down, there is only one direction for this stock.


Figure 3.4: PIXR 6 m. History

With Pixar's poor performance and shockingly high stock, I gave them the $\$ 100,000$, and I used all of it because Pixar's stock was at $\$ 50.00$ a share, giving me 2,000 shares. For Red Hat I spent $\$ 49,995.60$ on 4098 pieces of stock. The buying price was $\$ 12.20$ per share.

Both stocks were outstanding performers for me giving me my highest total earnings for 1 week so far. I keep Red Hat for the entire week because it never reached the potential I thought it could reach. I finally sold my shares at $\$ 14.20$ to make my profit an even dollar amount. This gave me $\$ 8,196.00$ in profit or about a $16.39 \%$ increase. Pixar, on the other hand, I bought late in the week and only held for 1 day. In that 1 day I made $\$ 14,000.00$ as I sold my stock before it rose back up too high. This gain was exactly a $14 \%$ increase because I sold my shares at $\$ 43.00, \$ 7$ down from what I bought it the
day before. This week marks the week I passed my goal earnings for the entire project.

## Week 5

In this shortened week I certainly was not expecting the phenomenal numbers that I was able to gain last week. I again went with tech stocks of some sort. Scientific Atlanta (SFA) is one of the top manufacturers of cable set-top boxes in the country, and a great choice for a long trade. Charter Communication uses them for their cable both in Worcester and in my home town of Trumbull, CT. We recently picked up a new HDTV receiver, and couldn't be happier. The picture is amazing, and surround sound is nice from a TV program. With HDTV TV sales are starting to rise, and HDTV becoming a standard signal people are going to want to take advantage of what the bought with these receivers.


Figure 3.5: SFA 1 yr. History

When choosing a short trade this week I went with top memory maker Micron (MU). Computer memory sticks at pretty close to an all time low per Mbyte. This turned Micron's stock around back in early May. But now prices are starting to come back up to their normal levels which should deter some buyers. Micron also came out with some new "Low Profile" memory, but that isn't really something most people care about or even have a real use for.


Figure 3.6: MU 1 yr. History

I ended up throwing the bulk of this week's money into Micron, because I just didn't see any reason for them to increase. At only $\$ 10.30$ a share, I was able to purchase 9708 shares totaling $\$ 99,992.40$. I bought Scientific Atlanta's stock at $\$ 33.60$ a share. This came to $\$ 49,996.80$ totaling 1488 shares.

This certainly is my worst week of trading by far. Micron, my big guarantee gained over a dollar to end at $\$ 11.42$ when I finally let go of every piece I had. This gave me a loss of $\$ 10,872.96$ or $10.87 \%$. Scientific Atlanta gained to $\$ 36.83$ giving me a profit of $\$ 4,806.24$, only increasing $9.61 \%$. That definitely helped soften the blow that Micron gave to my portfolio.

## Week 6

After last week's dismal outing, I was ready to gain money again. I had a very busy week trading 4 different companies. First, I went with Electronic Arts (ERTS), the biggest video game publisher in the world. EA just came out with there NCAA football game for each console. It has gotten only great reviews which should send the game off the store shelves and the stock price sky high. EA is also rumored to be getting ready to purchase Jamdat (JMDT) the biggest mobile phones gaming company, which would mean even more money for this giant company.

I work for a subsidiary of Cendant Corp. (CD) called Trilegiant. Trilegiant does all the networking for Cendant and all of its branches around the world. I was sent an office memo one night explaining how the company was about to be sued, again, for renewing the subscriptions of users without their approval or knowledge. I felt that this was a good time to invest in what I know, and short trade my own company because they have lost a suit for this once before.

TSMC (TSM) is one of the top chip manufacturers in the world. They produce most of ATi and Nvidia's chips in their fabs, as well as their next-gen chips. ATi just taped out a few days ago. Phillips recently sold a large amount of its stock in TSMC which brought it way down, but recent agreements with Kodak should reverse that trend. About a month ago TSMC split and returned some dividends to their stock holders, which is always an indication of a thriving
business. I can only hope Phillips buys the stock back after I get my long trade in.


Figure 3.7: TSM 6 m. History

Majesco (COOL) is another game publisher, but certainly not as big as EA. They have come out with some very good games as of late, such as Psychonauts, but the stock continues to plummet. I originally was going to do a long trade, but it was announced that Majesco will get lower than expected earnings and revenue. This quickly became a short trade that meant I needed to sell my EA and TSMC stock so I could invest.

I bought EA, Cendant, and TSMC on the same day so I spread the $\$ 150,000$ evenly. EA was at $\$ 57.50$, so I bought 860 shares at $\$ 49,967.50$. I purchased Cendant at $\$ 22.49$ a share. This gave me 2223 shares for
$\$ 49,995.27$. TSMC cost $\$ 49,994.28$ total, which amounted to 5446 shares for $\$ 9.18$ a piece. After selling all of my TSMC and EA stocks I invested \$99,998.22 buying 14,577 shares for $\$ 6.86$ each of Majesco.

This week was more profitable than any other week by about triple. Most of it only came from one stock, with the other 3 performing about exactly what my goal was initially set at. EA rose to $\$ 60.62$ adding $\$ 2,683.20$ to my already impressive portfolio. TSMC rose just $2.07 \%$ to $\$ 9.37$ totaling to $\$ 1,034.74$ in profit. Both of these stocks would have gained me more if I didn't jump out to buy Majesco, and it was the right decision. Cendant didn't drop as much as I thought it would, dropping only $2 \%$ to $\$ 22.04$. I only gained $\$ 1,000.35$ from this stock after holding it all week, waiting for it to drop more. Majesco on the other hand just about doubled my earnings for the entire project so far. Dropping an amazing $50.49 \%$ to $\$ 3.09$, I came out with $\$ 54,955.29$ in profit for holding onto this stock for only 1 day. I only wish I had starting investing myself with some of these picks.

## Week 7

For my final week I really didn't care if I even traded after what I accomplished last week. I stayed with my bread and butter, technology stocks. I again went with EA (ERTS) for my long trade. Even after all of last weeks high expectations I still think EA will gain more ground. They even dropped back down to where I bought it the week before. They just came out with a few of their
first mobile phone games, hinting more at a Jamdat acquisition. The big news for this week though is that EA got the right to sell Half-Life 2, one of the top FPS of this year, if not all time. Valve who makes HL2 has been in a long fight with publisher VU over the rights of their intellectual property and other contract agreements. After settling the lawsuit, Valve chose EA to do all of their store sales.

I believe I picked a real winner for my final short trade. Intel (INTC) is the \#1 CPU makers in the world. They own their own fabs and almost all major OEM's use Intel inside. The problem though is that AMD is starting to beat Intel in the processing power on almost every test. AMD comes out with a new CPU almost every 2 months now, while Intel has delayed their last line of CPU's. AMD is also suing Intel accusing them of bullying OEM's into not using AMD CPU's and only using Intel's. This could get ugly, but even if it ends well for Intel the stock will without a doubt take a hit because of this announcement.

I am very confident in my choice of Intel for short trade so I used the larger amount on Intel. I spent $\$ 99,998.28$ grabbing 3494 shares of Intel stock at $\$ 28.62$ a piece. EA, as I said, was basically back down to the price I bought it at last week. Purchasing 865 stocks for $\$ 57.80$ each brought my total to $\$ 49,997.00$ for EA.

Both of these stocks performed about exactly the same, with EA gaining $6.52 \%$ and Intel losing $6.53 \%$. EA's selling price was up to $\$ 61.57$ and gave me a return of $\$ 3,261.05$. I sold this after only 1 day because the stock starting going down at the end of the day, and I felt it would keep dropping. Intel closed
at $\$ 26.75$ on Thursday, and I felt it was time to sell. Many OEM's were fighting the court orders to give out company e-mails with Intel to AMD. Intel added $\$ 6,533.78$ to my portfolio.

### 3.6 Conclusion

Short trading is a rather unusual but very useful trading method in the stock market today. Short trading effectively doubles the amount of options you have with a stock by being able to move in 2 directions. If done with the proper research and thought, short trading can be just as profitable as long trading. One nice part about short trading is that it is usually easier to find out bad news about a company than good news. This creates a small advantage over long trades because you get more information to make a decision with.

I met and exceeded my goals after only 4 weeks of trading. This was something I clearly wasn't expecting to happen. I took the time to make smart decisions, and was sometimes a little over aggressive, but in the end it worked out for the better. I only had 2 negative investments during the whole simulation. Just like with the regular stock market this is partially luck and a lot of research into what I invested in.

If I was to do this project over again I can be certain I would not gain nearly as much money as I did. I ended up gaining $\$ 119,619.85$, which is over 3 times my estimated $\$ 37,500.00$. It could end up the other way around and I lose $47.85 \%$ instead of gain that much. It's just too hard to tell, the stock market is a
volatile system that can change back in one direction in an instance. I have learned however when to be patient and sit with a long term stock, and when to be assertive and take risks, they are just part of the package.

## Chapter 4: Momentum Trading

### 4.1 Introduction

One method of stock trading is known as momentum trading. When one uses the momentum trading method, he looks for stocks moving significantly in one direction on high volume then holds onto the stock until the desired profit is reached [23]. Momentum traders will use the internet, television broadcasts, and scour momentum reports to find stocks generating a lot of buzz and excitement. Momentum trading seems to be a safe method of trading, but one must always be aware of exiting trends which signal a shift in momentum [23].

### 4.2 Trading with this Method

When picking stocks with the momentum trading method, one must first identify stocks in a position make huge gains. Keeping an eye on stocks with significant increases of volume in calls is the first order of business. This is a good indicator that a price increase or decrease is expected to occur. After keeping a watchful eye on these stocks, you should shorten the list of stocks and further analyze the best performing. At this stage the momentum indicator plays a key role in deciding which stocks to buy. The momentum indicator is the accumulated net change of a stock's closing price over a defined time period [24]. The momentum line is plotted with the price chart, and it displays an axis of
zero, with positive values signaling growth and negative values signaling decline [24].

Once stocks are chosen it is essential to find the right times to enter and leave the market. For this purpose it is essential to use a couple of indicators, the EMA and the MACD histogram. The EMA or exponential moving average measures market inertia. When EMA climbs, the inertia favors a strong growing market, and when EMA falls, inertia favors a slow moving declining market [24]. The MACD or moving-average-convergence-divergence histogram measures the momentum of the market. When the slope rises, bulls are gaining strength [24]. When it decreases, the bears are gaining strength. When both these indicators move in the same direction it signals the proper time to invest in the market. When the two measures diverge, it indicates time withdraw your money from the market [24].

### 4.3 Stock Selection

While researching stocks to trade, I came across three particular companies making huge news that seemed poised to make a huge jump in the market. These companies were Northrop Grumman Corp., Caterpillar Inc., and Whiting Petroleum Corp.

Northrop Grumman has been making headlines with the recent announcement that it is teaming up with EADS to break Boeing's control of supplying aerial-refueling aircraft to the military. After hearing this news and
discovering Northrop Grumman's positive momentum indicator, I decided it would be a good buy.


Graph 4.1: Price change over Momentum graphs for NOC

The next stock that attracted my interest was Caterpillar Inc. It was making news after Prudential boosted its rating from neutral to overweight. It also has strong momentum.


Graph 4.2: Price change over Momentum graphs for CAT

The third and final stock is Whiting Petroleum Corp. With the rising prices of oil and the existence of a bull energy market, Whiting seems to be in a position to benefit immensely. It has 865 cubic feet of proven reserves in North America and earnings per share were up $72.5 \%$ this year, couple this with strong momentum and this stock seems to be a winner.[17]


Graph 4.3: Price change over Momentum graphs for WLL

I have $\$ 250,000$ to trade with. I will divide the money three ways and invest $\$ 83,333.33$ in each stock. The remaining cash will be invested in Whiting Petroleum, since it's the cheapest stock and will allow me to buy the most shares. The current prices for Northrop Grumman Corp: $\$ 55.38$ a share, for Caterpillar Inc: \$96.58 a share, and for Whiting Petroleum Corp: \$35.34 a share. I will be purchasing 2,361 shares of Whiting Petroleum, 1,504 shares of Northrop Grumman, and finally 862 shares of Caterpillar.

In addition to trading these stocks I will also be following an additional seven stocks. If any or all of these seven began to make large gains of pick up momentum, I'll be selling some of the shares from the above three stocks and investing the money into these other stocks. The other seven companies include Apple Computer Inc., Texas Instruments Inc., Vertex Pharmaceuticals Inc.,

ImClone Systems Inc., Intel Corp., International Business Machines Corp., and finally Google Inc.

| Company | Symbol | Market |
| :---: | :---: | :---: |
| Northrop Grumman Corp. | NOC | NYSE |
| Caterpillar Inc. | CAT | NYSE |
| Whiting Petroleum Corp. | WLL | NYSE |
| Apple Computer Inc. | AAPL | NASDAQ |
| Texas Instruments Inc. | TXN | NYSE |
| Vertex Pharmaceuticals Inc. | VRTX | NASDAQ |
| ImClone Systems Inc. | IMCL | NASDAQ |
| Intel Corp. | INTC | NASDAQ |
| International Business Machines Corp. | IBM | NYSE |
| Google Inc. | GOOG | NASDAQ |

Table 4.1: Stocks, Symbols, and Markets

### 4.4 Transactions

| Date | Symbol | Buy/ <br> Sell | Price | Share <br> s | Net Cost/ <br> Proceeds | Profit/ <br> Loss | Total Cash | Total Asset |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $6 / 8 / 2005$ | WLL | Buy | $\$ 35.34$ | 2361 | $83,437.74$ | 0 | $166,562.26$ | 250,000 |
| $6 / 8 / 2005$ | CAT | Buy | $\$ 96.58$ | 862 | $83,251.96$ | 0 | 83.310 .30 | 250,000 |
| $6 / 8 / 2005$ | NOC | Buy | $\$ 55.38$ | 1504 | $83,291.52$ | 0 | 18.78 | 250,000 |
| $6 / 13 / 2005$ | NOC | Sell | $\$ 56.77$ | 1504 | $85,382.08$ | 2090.56 | $85,400.86$ | $252,090.56$ |
| $6 / 14 / 2005$ | ANF | Buy | $\$ 66.28$ | 1288 | $85,368.64$ | 0 | 32.22 | $252,090.56$ |
| $6 / 21 / 2005$ | CAT | Sell | $\$ 102.20$ | 431 | $44,048.20$ | $2,422.22$ | $44,080.42$ | $254,512.78$ |
| $6 / 22 / 2005$ | GOOG | Buy | $\$ 289.67$ | 152 | $44,029.84$ | 0 | 50.58 | $254,512.78$ |
| $6 / 28 / 2005$ | GOOG | Sell | $\$ 302.00$ | 152 | $45,904.00$ | 1874.16 | 45954.58 | 256.386 .94 |
| $6 / 28 / 2005$ | CAT | Sell | $\$ 97.80$ | 431 | $42,151.80$ | 525.82 | 88106.38 | 256.912 .76 |
| $6 / 29 / 2005$ | IMCL | Buy | $\$ 31.67$ | 2782 | 88.105 .94 | 0 | 0.44 | 256.912 .76 |
| $7 / 8 / 2005$ | ANF | Sell | $\$ 73.00$ | 644 | $47,012.00$ | 4327.68 | 47012.44 | $261,240.44$ |
| $7 / 8 / 2005$ | BBM | Buy | $\$ 77.38$ | 607 | $46,969.66$ | 0 | 42.78 | 261.240 .44 |
| $7 / 12 / 2005$ | WLL | Sell | $\$ 40.00$ | 1181 | $47,240.00$ | 5503.46 | 47282.78 | $266,743.90$ |
| $7 / 12 / 2005$ | AAPL | Buy | $\$ 38.23$ | 1236 | $47,252.28$ | 0 | 30.50 | $266,743.90$ |
| $7 / 22 / 2005$ | WLL | Sell | $\$ 39.20$ | 1180 | $46,256.00$ | 4554.80 | $46,286.5$ | $271,298.7$ |
| $7 / 22 / 2005$ | AAPL | Sell | $\$ 44.00$ | 1236 | $54,384.00$ | 7131.72 | $100,670.5$ | $278,430.42$ |
| $7 / 22 / 2005$ | IBM | Sell | $\$ 84.44$ | 607 | 51255.08 | 4285.42 | 151925.58 | $282,715.84$ |
| $7 / 22 / 2005$ | ANF | Sell | $\$ 71.76$ | 644 | 46213.44 | 3529.12 | $198,139.02$ | $286,244.96$ |
| $7 / 22 / 2005$ | IMCL | Sell | $\$ 35.95$ | 2782 | $100,012.90$ | 11906.96 | $298,151.92$ | $298,151.92$ |

Table 4.2: Trade Record

### 4.5 Trading Summary

## Week 1

After nearly one week of trading, my stocks appear to making excellent gains. Since purchasing shares of Caterpillar Inc. at $\$ 94.22$ a share it has risen $\$ 2.80$ a share to $\$ 97.02$. Whiting Petroleum Corp. has risen from $\$ 35.35$ a share to $\$ 37.11$, an increase of $\$ 1.76$. My final stock, Northrop Grumman Corp, has risen from $\$ 55.79$ to $\$ 56.61$, an increase of $\$ 0.82$. Both Whiting Petroleum and Northrop Grumman started the week off in decline and rallied at the end of the week to come up with gains, while Caterpillar inc. shot up big in the opening days of the week and suffered losses in the final day of trading. In the upcoming week I think I will sell some shares of Northrop Grumman and invest into a more volatile stock.

## Week 2

As mentioned in my synopsis of last week, I have gone through with my plan to sell my 1,504 shares of Northrop Grumman Corp. After trading concluded on Monday, Northrop Grumman's stock was up to $\$ 56.77$ a share. Since I've owned this stock, the price per share has gone up \$0.98.I invested \$83,291.52 in this stock and now after selling my shares l've accumulated $\$ 85,382.08$ for a total net gain of $\$ 2,090.56$.

In place of this stock I purchased shares of the clothing company Abercrombie and Fitch (ANF on the New York Stock Exchange) [2]. On Tuesday the opening price was $\$ 66.28$ per share. At this price, I purchased 1,288 shares of ANF. By the end of the week the price per stock had risen $\$ 2.67$ to $\$ 68.95$. This gained raised my total assets in this stock to $\$ 88,807.60$, an increase of \$3,438.96.

My other two stocks are continuing their upward trend established last week. Whiting Petroleum had a weekly net gain of $+\$ 0.98$, which brought my total assets up from $\$ 83,437.74$ to $\$ 89,954.10$, and increase of $\$ 6,516.36$. Caterpillar had a weekly net gain of $\$ 3.15$, which brought my total assets up from $\$ 83,251.96$ to $\$ 86,372.40$ and increase of $\$ 3,120.44$.

## Week 3

This week of trading shows just how volatile and unpredictable the market truly is. The week began generally with solid gains in all my stocks. I thought this trend would continue and lead to a profitable week, but by Wed. my stocks began the decline drastically. After two straight days of large gains from CAT, I decided to cash in on my earnings. I sold half of my 862 shares at Tuesday's closing price of $\$ 102.20$, giving me $\$ 44,048.20$ to invest in. I decided to invest in my first stock in the technology sector and researched Google Inc. After looking at graphs of its six-month performance and finding its high momentum number of 17.69, I felt this was a must have. I purchased 152 shares of Google Inc. (GOOG) at 289.67 a
share. By the end of the week the price had risen to $\$ 297.25$ a share to raise my assets invested from $\$ 44,029.84$ to $\$ 45,182$.


Graph 4.4: Price change over Momentum graphs for GOOG

After selling my half of my stocks invested in CAT, the stock began to plummet, facing three straight days of losses. It ended the week with a net loss of $\$ 3.14$, reducing my overall assets invested in CAT to $\$ 41,746.66$. WLL faced an up and down week as well, but much like CAT ended the week in the red. It experienced a weekly net change of $-\$ 1.63$ a share, dropping my profits from $\$ 89,954.10$ to $\$ 86,247.33$. My final stock ANF experienced three straight days of small gains followed by large losses the last two days of the week. ANF, like all my other stocks, finished in the red, reducing my total assets invested in ANF from $\$ 88,669.70$ to $\$ 86,162$.

## Week 4

This week I felt it was time to dump GOOG and the struggling CAT for a more volatile stock. After researching online, I came across an article about Imclone systems seeking approval for its cancer drug, Erbitux [18]. Big news like that usually precedes huge jumps stock value. Next I checked the momentum of this stock. Although it was low it seems to be gaining after a period of loss.


Graph 4.5: Price change over Momentum graphs for IMCL

Once I sold the 152 shares of GOOG and 431 shares of CAT, I used the $\$ 88,055.80$ to purchase 2782 shares of IMCL. Since I purchased this stock, the price per share has declined from 31.67 to 30.71 .

My other stocks have ANF and WLL have faired very well. ANF has risen $\$ 2.52$ a share this week and WLL has risen $\$ 1.43$ this week.

## Week 5

This week my stocks continued their rising trend. ANF opened the week at $\$ 69.28$ and finished the week $\$ 72.12$ and it eclipsed the $\$ 73.00$ barrier. To cash in on these gains I sold have of my share 1,288 shares at the opening Friday's trading day for a cost of $\$ 73.00$ share. At the end of the trading week ANF's stock had risen $\$ 5.84$ since the time it was purchased.

With the cash in hand that I received from selling 644 shares of ANF, I decided to purchase share of shares of IBM. I was able to purchase 607 shares of IBM at a price of $\$ 77.38$. IBM has recently been in the news with the introduction of the dual core version of the PowerPC 970 processor. Combine this with its positive momentum of 7.08 and I predict this stock will be making some solid gains in the near future.


Graph 4.6: Price change over Momentum graphs for IBM

Both WLL and IMCL rose. Although I contemplated selling my shares of IMCL at the end of last week after it plummeted almost a dollar, my patience paid off. IMCL rose from an opening price of $\$ 30.79$ on Tuesday to $\$ 33.89$ at the end of trading Friday. WLL from $\$ 38.25$ to $\$ 39.32$ this week and has risen a total of $\$ 3.98$ since I purchased the stock.

## Week 6

This week I saw mixed results in my trading. Both WLL and ANF finished down a couple dollars from where they started the week. WLL suffered a $\$ 1.12$ loss per share this week, ending the week $\$ 38.08$. ANF dropped $\$ 2.74$ per share this week, closing the week out at $\$ 70.01$ per share.

Although WLL came up with losses for the week it did surpass the $\$ 40$ a share mark. On July 12 I decided to cash in on these gains and sold have of my shares in WLL for \$40 a share. With the money I earned from this transaction I decided to purchase a stock I've been watching for while, AAPL. Since Apple Computer Inc. already released big news this year that it would begin using Intel CPUs in their computers and With the recent news that IBM had just released the dual core PowerPC 970 processor for Apple computers I figured this stock was poised to jump. With the funds I received for selling half of my WLL shares I purchased 1,236 shares of AAPL.[12]


Graph 4.7: Price change over Momentum graphs for AAPL

Since purchasing shares of AAPL, the price has risen from $\$ 38.23$ to $\$ 41.55$, confirming my hunch that it was poised to make a huge gain. IMCL remained pretty stable this week only losing \$0.03 a share for the week and IBM came up big gaining $\$ 3.18$ a share this week.

## Week 7

During my final week of trading, I decided to keep the stocks I had already purchased and let them do the work for me. This strategy was pretty effective as all my stocks had closed up from where they had closed the previous week. WLL finished the week at $\$ 39.20$ a share, up $\$ 1.18$ from last week. ANF finished the week at $\$ 71.76$ a share, up $\$ 1.75$. AAPL continued its strong surge, finishing the week at $\$ 44.00$, up $\$ 2.45$ a share from last week. IMCL finished at 35.95 per
share, up $\$ 1.80$ a share. Finally, my last stock IBM finished the week at $\$ 84.44$ per share; an increase of $\$ 2.06$ per share.

Since this was the last trading week, it was time to cash in my stocks and tabulate my earnings. I sold all my stocks at the Friday closing price for their respective companies and added the profits together. After doing this, I had $\$ 298,151.92$ in cash. This was an increase of $\$ 48,151.92$ since the beginning of the 7-week trading period began.

### 4.6 Conclusion

After an exciting and lucrative seven week trading period our summer stock market simulation has come to an end. I enjoyed using this method since doesn't it appear to be as risky as other methods. My main allies throughout the simulation were major news TV stations to stay posted on any business news. Once I have a preliminary list of companies making headlines I would research them further and look up charts and graphs. As long as you stay focused and regularly check your stocks when using this method, you're poised to make large gains.

## Chapter 5: Trend Following

### 5.1 Introduction

Trend following appears to be a lot like momentum investing. But actually, although they appear similar, they are quite different [14]. Both approaches are calculated forms of investing with a focus on price, trends, and on when to sell and leave the market. Both strategies buy on the upswing, and sell on the downswing.

Momentum investing looks at fundamentals first concentrating on sales, earnings, etc [14]. They predict and time buys, sells and shorts from this data. The random periods momentum investors use to predict earnings, sales and all other fundamentals do not necessarily lead to earnings in the future [14]. There is no way to predict how a stock will perform down the road [14].

Trend Followers look at price. That is the important difference between the two methodologies. Trend Followers pay no attention to predictions. They care only about what the price of a stock will be tomorrow. This leads to trend followers out performing momentum traders in the long run [14].

Trend Followers believe in patience, whereas momentum investors make moves rapidly, with constant purchases and sales [14]. Trend Followers can hold for months or even years before making a move. They focus on whether the price of a stock is on the upswing and jump into it if it is. Trend followers are very
careful in managing their capital leading to a very successful method.

### 5.2 Stock Selection

As a novice trader with zero knowledge of the market to rely on, there needs to be careful consideration taken when picking stocks. The two best methods I have found appear to be the careful examination of well-known companies and checking recent news for top performers and deciding whether or not their prices are on the upswing. The history of the stock's market prices, both the numbers and charts are very useful. A trend or pattern can usually be observed when examining the stock's history showing whether the given stock is on the verge of an upswing, or a downswing. Trend following focuses on the long term, therefore, I am looking for stocks on the upswing over the long haul, not ones with brief spikes in prices.

I began the week by researching into companies that are well-know and more than likely profitable stocks. One of the first that came to mind and, consequently, my first stock selected, is Intel. Intel is ranked $53^{\text {rd }}$ among Fortune 500 Companies. It was founded in 1968 and currently employs 91,000 people and supplies over 450 products and services. They are one of the world's largest makers of microchips and microprocessors and created the world's first microprocessor in 1971 [8].


Figure .1: INTC 1 Yr. History

As you can see, Intel is a successful company with a strong future and a history of profitable performance. I will initially invest around $\$ 75,000$ of my money into this stock. On Tuesday, June 7, at the market price of $\$ 27.30$ buys me 2747 shares, for a total of $\$ 74993.10$.

My second stock selection, Niku is a company that provides IT management and governance to companies small and large. Today there are nearly half a million users of Niku products at over 500 customers throughout the world. The broad deployments at customers like BT, Harrah's Entertainment, HSBC, GMAC Mortgage, Nissan, Philips, Royal Caribbean Cruise Lines, SingTel Optus, Textron Financial and Unilever have been very successful [10]. From examining a price graph of Niku over the past year, I found that following a recent downswing, prices appear to be on the verge of an upswing which I plan to catch. I will initially invest around $\$ 50,000$ of my money into this stock. On Tuesday,

June 7, at the market price of $\$ 15.81$ buys me 3160 shares, for a total of $\$ 49959.60$. The one year stock history for Niku is shown below:


Figure 5.2: NIKU 1 Yr. History

My third stock is ADTRAN, "the network access company." It provides high-speed telecommunication solutions. ADTRAN makes products ranging from digital transmission equipment to network routing and internet security products. ADTRAN solutions maximize network performance, lower costs, and help companies achieve the best return on investment. ADTRAN is committed to achieving success for customers by offering products with outstanding value [3]. I stumbled upon ADTRAN while looking at stocks that had performed well recently. The prices look good and are on the upswing. I will initially invest around $\$ 50,000$ of my money into this stock. On Tuesday, June 7, at the market
price of $\$ 23.75$ buys me 2105 shares, for a total of $\$ 49993.75$. The one year stock history for ADTRAN is shown below:


Figure 5.3: ADTN 1 Yr. History

My fourth stock selection is $H$ \& R Block. Consumers get more from $H \& R$ Block than just tax preparation. H\&R Block is now both a financial services company and a complete personal financial partner [7]. To meet the needs of its clients, H\&R Block has changed itself from a company solely for tax preparation to a company that provides complete financial services [7]. H\&R Block now offers a full-scale array of financial services, including brokerage services, annuities, mutual funds, and IRAs, which are available through the company's H\&R Block Financial Centers and at its expanded Web site [7]. This is a very prominent company with a bright future and obviously an excellent selection for me. I will initially invest around $\$ 50,000$ of my money into this stock. On Tuesday, June 7,
at the market price of $\$ 50.79$ buys me 984 shares, for a total of $\$ 49977.36$. The one year stock history for H \& R Block is shown below:


Figure 5.4: HRB 1 Yr. History

My fifth stock is Brinker International. Brinker is the foremost casual dining restaurant company in the world and has many achievements to its name over the years for its excellent restaurants [4]. Brinker's restaurants include Chili's Grill \& Bar, Romano's Macaroni Grill, On The Border Mexican Grill \& Cantina, Maggiano's Little Italy, Corner Bakery Cafe, and Rockfish Seafood Grill. Brinker was founded in 1975 and has grown to over 1,500 restaurants worldwide with 100,000 employees and sales approaching $\$ 4$ billion annually.

Brinker has perfomed well recently, with prices that are encouraging. It appears to be on the upswing right now. I will initially invest around $\$ 25,000$ of my money into this stock. On Tuesday, June 7, at the market price of $\$ 37.80$
buys me 661 shares, for a total of $\$ 24985.80$. The one year stock history for Brinker is shown below:


Figure 5.5: EAT 1 Yr. History

### 5.3 Trading Results

## Week 1

The first week of trading using the five initial stocks I invested in was very successful. One of my stocks, Intel experienced a small loss while the rest had a very productive week yielding a average net gain of $\$ 3.29$. At the beginning of my trading week, Intel had a stock price of $\$ 27.30$. On Friday, June 10, when the market closed, Intel had a stock price of $\$ 26.98$. Having bought 2747 shares of stock in Intel, I experienced a loss of \$886 on that investment. Despite Intel's small drop over the week it still shows potential. I will continue to hold this stock pending a more drastic drop in price.

Niku's price at the beginning of the week was $\$ 15.81$. At market close time on Friday, June 10, Niku's price was $\$ 20.72$. Having bought 3,160 shares of Niku, I experienced a gain of $\$ 15,475$. Niku had a very successful week. This was my most productive stock this week. I will continue to ride this stock until it levels off and shows no further promise.

Adtran's price at the beginning of the week was $\$ 23.75$. At market close on Friday, June 10, Adtran's price was $\$ 27.00$. Having bought 2105 shares of Adtran, I experienced a gain of $\$ 6835$. Adtran, like Niku, had a productive week. I will hold this one as long as it proves productive.

H \& R Block's price at the beginning of the week was \$50.79. At market close time on Friday, June 10, H \& R Block's price was \$56.20. Having bought

984 shares of H \& R Block, I experienced a gain of $\$ 5300$. This stock increased the most this week. I will continue to ride this one as long as I can.

Brinker's price at the beginning of the week was $\$ 37.80$. At market close time on Friday, June 10, Brinker's price was $\$ 40.98$. Having bought 661 shares of Brinker, I experienced a gain of $\$ 2087$. Brinker, like the rest of my stocks had a real solid week. I am not looking to make any moves until these stocks prove to be no longer productive.

## Week 2

The second week of trading using the five initial stocks I invested in was decent but not nearly as good as week one. A trade or two will be made within the next few days to drop dead weight and cut losses. Intel turned it around this week and is up $\$ 0.20$ but still down $\$ 0.12$ overall. At the beginning of my trading week, Intel had a stock price of $\$ 26.92$. On Friday, June 17 , when the market closed, Intel had a stock price of $\$ 27.12$. I experienced a gain of $\$ 384.64$ on that investment with a net loss of $\$ 501$ over the first two weeks. I will hold out one more week and unless there is a large gain I will divert to a stock holding more promise.

Niku price at the beginning of the week was $\$ 20.71$. At market close time on Friday, June 17, Niku's price was $\$ 20.73$. I experienced a gain of $\$ 31.80$ and a net gain of $\$ 15,506$. Niku appears to have leveled off. If the stock price holds
steady over the next few days I will sell and look for an investment with more future promise.

Adtran price at the beginning of the week was $\$ 26.85$. At market close on Friday, June 17, Adtran's price was $\$ 25.45$. I experienced a drop of $\$ 3,262$ and a net gain of $\$ 3,572$. Adtran had a very disappointing week. If it continues in this direction I may have to invest somewhere else, possibly a shift to H \& R Block which has had continued success.

H \& R Block price at the beginning of the week was \$56.44. At market close time on Friday, June 17, H \& R Block's price was $\$ 59.20$. I experienced a gain of $\$ 2,953$ and a net gain of $\$ 8,253$. H \& R Block has proved to be my most successful stock. Its continued success has me seriously considering dumping deadweight and increasing my investment in $\mathrm{H} \& \mathrm{R}$ Block. I am losing out on my moneymaking potential due to my low amount of shares.

Brinker price at the beginning of the week was $\$ 41.05$. At market close time on Friday, June 17, Brinker's price was $\$ 41.75$. Having bought 1553 shares of Brinker, I experienced a gain of $\$ 510$ and a net gain of $\$ 2,596$. Brinker is showing decreased productivity but I hold hope for the future. My trading method dictates holding for longer periods so I do not want to make any premature moves while productivity is still there.

The third week of trading using the five initial stocks I invested in was not very successful. Three of my stocks, Intel, H \& R Block, and Brinker, experienced a small loss while the fourth, Niku, broke even. My fifth stock, Adtran, experienced a small gain before I sold the holdings on Tuesday. At the begirning of my trading week, Intel had a stock price of $\$ 26.92$. On Friday, June 24, when the market closed, Intel had a stock price of $\$ 26.10$. I experienced a net loss of $\$ 3296$ over the first three weeks. Despite Intel's slow but steady depreciation over the three weeks it still shows potential. I will continue to hold this stock until there is a drastic drop in price.

Niku's price at the beginning of the week was $\$ 20.74$. At market close time on Friday, June 24, Niku's price was $\$ 20.74$. Niku broke even. I will continue to hold this stock and hope for more production in the future.

Adtran's price at the beginning of the week was $\$ 25.45$. At market close on Tuesday, June 21, Adtran's price was $\$ 25.65$. After little recent production from this holding I decided to sell all Adtran holdings on June 21 for $\$ 53993.25$ in proceeds, a $\$ 3993.25$ profit.

H \& R Block's price at the beginning of the week was \$58.65. At market close time on Friday, June 24, H \& R Block's price was $\$ 58.17$. On June 23, I purchased 66 more shares. This has been one of my best performing stocks and my lack of shares was blunting profits.

Brinker's price at the beginning of the week was $\$ 41.50$. At market close time on Friday, June 24, Brinker's price was $\$ 40.20$. All around this was an unproductive week but I will make no further moves at the current time.

## Week 4

The fourth week of trading using the four remaining stocks I invested in was decent, showing increases in all stocks. I am currently searching for a fifth stock to replace Adtran. Intel showed improvement this week. At the begirining of my trading week, Intel had a stock price of $\$ 25.86$. On Friday, July 1, when the market closed, Intel had a stock price of $\$ 26.21$. I feel confident that Intel will begin to produce for me.

Niku price at the beginning of the week was $\$ 20.72$. At market close time on Friday, July 1, Niku's price was $\$ 20.89$. Niku is beginining to rise again. I feel confident that l'll be able to produce some decent returns from Niku if I give it enough time.

H \& R Block price at the beginning of the week was \$58.13. At market close time on Friday, July 1, H \& R Block's price was \$58.50. H \& R Block was my most successful stock once again. I may be looking to sell some shares of my other stocks to free up money to buy even more shares of H \& R Block.

Brinker price at the beginning of the week was $\$ 39.70$. At market close time on Friday, July 1, Brinker's price was $\$ 39.98$. Brinker is still showing productivity. Things are looking up for my current holdings.

## Week 5

The fifth week of trading using the four remaining stocks I invested in was decent, showing increases in 3 of 4 stocks. I am still searching for a fifth stock. Intel showed improvement this week. At the beginning of my trading week, Intel had a stock price of $\$ 26.13$. On Friday, July 8, when the market closed, Intel had a stock price of $\$ 27.28$. Intel is beginning to reward me for not selling it while it was down.

Niku price at the beginning of the week was $\$ 20.89$. At market close time on Friday, July 8, Niku's price was $\$ 20.83$. Niku is down slightly. I feel it will rebound strong if I give it enough time.
$H \& R$ Block price at the beginning of the week was \$58.30. At market close time on Friday, July 8, H \& R Block's price was \$59.08. H \& R Block continues to stay strong and rise steadily. I am still looking to sell some shares of my other stocks to free up money to buy more shares of H \& R Block.

Brinker price at the beginning of the week was $\$ 40.00$. After dipping midweek, Brinker's price was up to $\$ 40.19$ by market close time on Friday, July 8. Brinker is still showing productivity. Though there were no major rises in prices this week, my current holdings are doing well.

## Week 6

The sixth week of trading, by busiest week yet, was very successful, showing increases in all stocks. Over the course of the week I acquired Amazon.com and Hasbro and by weeks end had sold all of my holdings. At the beginning of my trading week, Intel had a stock price of $\$ 27.39$. On Friday, July 15, when I sold all 2724 shares, Intel had a stock price of $\$ 28.30$. I made a profit of $\$ 2,747$ from this holding.

Niku price at the beginning of the week was $\$ 20.89$. I sold all 3160 shares for $\$ 66,012.40$ in proceeds and a profit of $\$ 16,052.80$. I purchased 3000 shares of Amazon to replace it. I then sold all shares of Amazon.com on Friday, July 15, for $\$ 111,570$, a profit of $\$ 2,640$.
$H \& R$ Block's price at the beginning of the week was $\$ 59.15$. At market close time on Friday, July 15, H \& R Block's price was \$59.61. H \& R Block is still rising steadily. I will buy more shares of H \& R Block on Monday.

Brinker price at the beginning of the week was $\$ 40.05$. Brinker was my best stock this week and by Wednesday, July15, when I sold all 661 shares, Brinker's price was up to $\$ 40$. 45. Brinker made me a profit of $\$ 1,751.65$. I used The money made from the sale of Brinker to purchase 1,615 shares of Hasbro. I then sold all shares of Hasbro for $\$ 34,690.20$, and a profit of $\$ 613.70$.

In the seventh and final week of trading I acquired and sold three new stocks. Early in the week I acquired both Brookfield and Xerox. On Monday, when I purchased both stocks, Brookfield was $\$ 45.37$ a share and Xerox was
$\$ 13.75$ per share. When I sold them midweek, on July 20, Brookfield was up to $\$ 47.92$ and Xerox was $\$ 14.12$, making me a combined profit of $\$ 6648.31$.

On July 21, I purchased 4938 shares of Time Warner for $\$ 16.20$ a share. I then sold all shares the next day for 16.64 a share earning me a profit of $\$ 2172.72$. My total profit for the week was $\$ 8821.03$. Over the course of the trading period I turned a profit of $\$ 45,422.35$. The technical analysis graphs of all stocks from the trading period are displayed below:


Figure 5.6: INTC 3 Mo. History


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Figure 5.7: NIKU 3 Mo. History


Figure 5.8: ADTN 3 Mo. History


Figure 5.9: HRB 3 Mo. History


Figure 5.10: EAT 3 Mo. History


Figure 5.11: AMZN 3 Mo. History


Figure 5.12: HAS 3 Mo. History


Figure 5.13: BHS 3 Mo. History


Figure 5.14: XRX 3 Mo. History


Figure 5.15: TWX 3 Mo. History

### 5.4 Trades

| Date | Symbol | buy/ <br> Sell | Price | Shares | Net Cost/ <br> Proceeds | Profit/Loss | Total <br> Cash | Total <br> Asset |
| :---: | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $06 / 07 / 05$ | INTC | Buy | 27.30 | 2747 | 74993.10 | 0 | 90.39 | 250000.00 |
| $06 / 07 / 05$ | NIKU | Buy | 15.81 | 3160 | 49959.60 | 0 | 90.39 | 250000.00 |
| $06 / 07 / 05$ | ADTN | Buy | 23.75 | 2105 | 49993.75 | 0 | 90.39 | 250000.00 |
| $06 / 07 / 05$ | HRB | Buy | 50.79 | 984 | 49977.36 | 0 | 90.39 | 250000.00 |
| $06 / 07 / 05$ | EAT | Buy | 37.80 | 661 | 24985.80 | 0 | 90.39 | 250000.00 |
| $06 / 21 / 05$ | ADTN | Sell | 25.65 | 2105 | 53993.25 | 3999.50 | 54089.89 | 279151.50 |
| $06 / 23 / 05$ | HRB | Buy | 57.92 | 66 | 3822.72 | 0 | 50267.17 | 277238.48 |
| $07 / 11 / 05$ | NIKU | Sell | 20.89 | 3160 | $66,012.40$ | $16,052.80$ | 116279.57 | 280100.45 |
| $07 / 12 / 05$ | AMZN | Buy | 36.31 | 3000 | 108930 | 0 | 7349.57 | 281239.44 |
| $07 / 13 / 05$ | EAT | Sell | 40.45 | 661 | 26737.45 | 1751.65 | 10.52 | 281493.25 |
| $07 / 13 / 05$ | HAS | Buy | 21.10 | 1615 | 34076.50 | 0 | 10.52 | 281493.25 |
| $07 / 14 / 05$ | AMZN | Sell | 37.19 | 3000 | 111570 | 2640 | 111580.52 | 284733.73 |
| $07 / 15 / 05$ | INTC | Sell | 28.30 | 2747 | 77740.1 | 2747 | 286601.32 | 286601.32 |
| $07 / 15 / 05$ | HAS | Sell | 21.48 | 1615 | 34690.20 | 613.70 | 286601.32 | 286601.32 |
| $07 / 15 / 05$ | HRB | Sell | 59.61 | 1050 | 62590.50 | 8790.42 | 286601.32 | 286601.32 |
| $7 / 18 / 05$ | BHS | Buy | 45.37 | 1763 | 79987.31 | 0 | 126616.51 | 286601.32 |
| $7 / 18 / 05$ | XRX | Buy | 13.75 | 5818 | 79997.50 | 0 | 126616.51 | 286601.32 |
| $7 / 20 / 05$ | BHS | Sell | 47.92 | 1763 | 84482.96 | 4495.65 | 293249.63 | 293249.63 |
| $7 / 20 / 05$ | XRX | Sell | 14.12 | 5818 | 82150.16 | 2152.66 | 293249.63 | 293249.63 |
| $7 / 21 / 05$ | TWX | Buy | 16.20 | 4938 | 79995.60 | 0 | 213254.03 | 293249.63 |
| $7 / 22 / 05$ | TWX | Sell | 16.64 | 4938 | 82168.32 | 2172.72 | 295422.35 | 295422.35 |

Table 5.1: Trade Record 06/07/05-07/22/05

### 5.5 Conclusion

I obtained an understanding of the stock market far exceeding that which I previously had during my 7 week trading period. Using stock price history, the news, and my knowledge of profitable fortune 500 comparies, I was able to pick some very profitable stocks. This was an excellent project for me because I was a novice in the truest sense coming into this project. I lacked knowledge of how
the stock market operates and how to check stocks and decide when to buy or sell: a deficiency retained several weeks into the project. The initial stocks I picked performed very well for me, showing that despite my lack of knowledge of the market I was able to pick very good stocks. Many of my stocks lasted very deep into the trading period. ADTRAN was a rather poor performer almost right out of the gate leading me to sell in the third week of trading. I had no real tough decisions along the way. When I finally did sell my initial stocks it was rather reluctantly because I still had confidence in them to continue rising. I acquired a few stocks towards the end of the period that I would have liked to hold longer. I did not feel I gave them a real chance to be productive nor did it hold true to my trading method.

I found trend following to be a very productive methodology. It taught me patience and discipline and showed me how to hang in there even when a stock is not performing well for a brief time. It is very important not to sell too quickly after a drop in price without giving the stock proper time to rise back to what it once was.

My investments did very well and this chapter is a good example of how trend following can be very prosperous for even a beginner trader. As long as its main principles are followed and its focus is on price and not predicting the future, trend following is a fairly risk-free, profitable trading method.

## Chapter 6: Nate's Investing Strategy

### 6.1 Introduction

You have now read about several different trading strategies, but one fact of the stock market remains: there is no sure way to play your investments in the market for a definite profit. Instinct and intuition play a very large role in another common strategy, the investor's own individual method. In this section I will play my stocks according to my own strategy which incorporates some aspects of the before-mentioned strategies as well as my own instincts. This section will be very interesting for beginner traders who may not be ready to trade according to an advanced strategy such as one in a previous chapter. It should provide some insight into the effectiveness of trading by simply observing basic trends in the long and short term history of each stock's market activity.

### 6.2 Stock Selection

A beginner trader has no extensive market experience to fall back on when choosing which stocks to invest his money in. It is always wise to do some preliminary research into various businesses, both well-known and ones that you have encountered or learned of through personal experience. One should check the history of the stock's market performance, both the numbers and charts. Often a trend or pattern can be observed when examining the stock's history,
and one can discern through this pattern whether the given stock is on the verge of an upswing, or a downswing. On a long term scale, it may seem that the stock is either increasing or decreasing on an overall basis, and if you are in for a long term commitment, you can play your money accordingly. Always remember that there is no exact science to playing the stock market, so you will want to check your stock's performance frequently to monitor against uncharacteristic drops in price that inevitably occur.

I began the week by researching into the company with which I am currently employed, Rogers Corporation. It is an international corporation on the NYSE based in Rogers, Connecticut. It deals in the sale and manufacture of specialty polymer composite materials and components. The company operates in three segments or divisions, high performance foams, printed circuit materials, and polymer materials and components [5].

The foams are used in the imaging, communications, computer, transportation, and consumer markets; printed circuit materials are typically sold to independent and captive printed circuit board manufacturers. The polymer materials division manufactures a wide variety of products which are sold through its own distributors worldwide [5]. Its projected growth for next year is well above its current dollar value, and the six-month chart shows that its stock price could increase up to five more dollars in the next few weeks [5]. This would be an optimum sell point. A copy of the last six months of Rogers Corp. stock performance is shown below.


Figure 6.1: ROG 6 Mo. History

As you can see, Rogers Corp. is a versatile company with strong goals and a history of profitable performance. I will initially invest \$150,000 dollars of my money into this stock, which on Tuesday, June 7, at the market prices of $\$ 41.96$, buys me 3574 shares.

Comcast Corp. is company based in Philadelphia, Pennsylvania which deals in the development, management, provision, and operation of broadband cable and internet in the United States. It has invested itself in many cable networks such as E! Entertainment Television, Style Network, Comcast SportsNets, Digital Video Recording Systems, and other related ventures. Comcast Corp. also owns and manages several venues for live events [5]. I was interested in Comcast Corp. because it is the cable provider to which my mother subscribes to at our home and broadband cable and internet have experienced a
recent business boom and are beginning to become common household and business services. The six month stock chart for Comcast is shown below:


Figure 6.2: CMCSA 6 Mo. History

The company has experienced a downward swing but has begun to level off in the last few weeks. It looks as though the stock price may begin to increase in the next six weeks, our target range, and hopefully I can get a piece of that. If the stock price does not increase in the next week I will sell and invest money in a new stock before to much of our trading period passes. I will invest $\$ 50,000$ into Comcast Corp., which at the stock price of $\$ 31.75$ on Tuesday, June 7, buys me 1574 shares.

General Electric Company is based in Fairfield, CT, and is involved in the development, manufacture, and marketing of a wide variety of products ranging
from the generation to the utilization of electricity. Through the 11 segments under which GE operates, it provides network television services, internet, multimedia programming, financial services, consumer financing, real estate financing, insurance services and more [5]. GE is a company which is involved in almost everything you do and almost every product segment the average person interacts with on any given day. While this could be a very hard company to gage financially, it will be interesting to see how the stocks react in the next week. The six month stock history for GE is shown below:


Figure 6.3: GE 6 Mo. History

The stock has for the most part been stable but looks as if it may swing upward soon when observing the fluctuation of the prices from May05 to present. This being an initial stock we will use GE to get a feel for the market right now. I
will invest $\$ 50,000$ into GE, which, at GE's stock price on June 7, 2005 of $\$ 36.77$, buys me 1359 shares.

### 6.3 Trades

| Date | Symbol | Buy/Sell | Price | Shares | Net Cost/ <br> Proceeds | Profit/ <br> Loss | Total Cash | Total Asset |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $6 / 7 / 2005$ | ROG | Buy | $\$ 41.96$ | 3574 | $\$ 149,965.04$ | $\$ 0.00$ | $\$ 100,034.96$ | $\$ 250,000.00$ |
| $6 / 7 / 2005$ | CMCSA | Buy | $\$ 31.75$ | 1574 | $\$ 49,974.50$ | $\$ 0.00$ | $\$ 50,060.46$ | $\$ 250,000.00$ |
| $6 / 7 / 2005$ | GE | Buy | $\$ 36.77$ | 1359 | $\$ 49,970.43$ | $\$ 0.00$ | $\$ 90.03$ | $\$ 250,000.00$ |
| $6 / 13 / 2005$ | CMCSA | Sell | $\$ 31.79$ | 1574 | $\$ 50,037.46$ | $\$ 62.96$ | $\$ 50,127.49$ | $\$ 250,062.96$ |
| $6 / 13 / 2005$ | GE | Sell | $\$ 36.62$ | 1359 | $\$ 49,766.58$ | $\$ 203.85$ | $\$ 99,894.07$ | $\$ 249,859.11$ |
| $6 / 13 / 2005$ | DCX | Buy | $\$ 40.89$ | 1222 | $\$ 49,967.58$ | $\$ 0.00$ | $\$ 49,926.49$ | $\$ 249,859.11$ |
| $6 / 13 / 2005$ | G | Buy | $\$ 52.20$ | 953 | $\$ 49,746.60$ | $\$ 0.00$ | $\$ 179.89$ | $\$ 249,859.11$ |
| $6 / 16 / 2005$ | ROG | Sell | $\$ 44.16$ | 3574 | $\$ 157,827.84$ | $\$ 7,862.80$ | $\$ 158,007.73$ | $\$ 257,721.91$ |
| $6 / 16 / 2005$ | XOM | Buy | $\$ 59.25$ | 2531 | $\$ 149,961.75$ | $\$ 0.00$ | $\$ 8,045.98$ | $\$ 257,721.91$ |
| $6 / 20 / 2005$ | G | Sell | $\$ 52.00$ | 953 | $\$ 49,556.00$ | $\$ 190.60$ | $\$ 57,601.98$ | $\$ 257,531.31$ |
| $6 / 21 / 2005$ | XOM | Sell | $\$ 59.51$ | 2531 | $\$ 150,619.81$ | $\$ 658.06$ | $\$ 208,221.79$ | $\$ 258,189.37$ |
| $6 / 21 / 2005$ | GOOG | Buy | $\$ 288.07$ | 694 | $\$ 199,920.58$ | $\$ 0.00$ | $\$ 8,301.21$ | $\$ 258,189.37$ |
| $6 / 24 / 2005$ | DCX | Sell | $\$ 40.74$ | 1222 | $\$ 49,784.28$ | $\$ 183.30$ | $\$ 58,085.49$ | $\$ 258,006.07$ |
| $6 / 28 / 2005$ | GOOG | Sell | $\$ 302.00$ | 694 | $\$ 209,588.00$ | $\$ 9,667.42$ | $\$ 267,673.49$ | $\$ 267,673.49$ |
| $6 / 28 / 2005$ | GM | Buy | $\$ 33.88$ | 2951 | $\$ 99,979.88$ | $\$ 0.00$ | $\$ 167,693.61$ | $\$ 267,673.49$ |
| $6 / 28 / 2005$ | CHS | Buy | $\$ 33.15$ | 3016 | $\$ 99,980.40$ | $\$ 0.00$ | $\$ 67,713.21$ | $\$ 267,673.49$ |
| $6 / 28 / 2005$ | URBN | Buy | $\$ 56.07$ | 891 | $\$ 49,958.37$ | $\$ 0.00$ | $\$ 17,754.84$ | $\$ 267,673.49$ |
| $7 / 8 / 2005$ | GM | Sell | $\$ 34.68$ | 2951 | $\$ 102,340.68$ | $\$ 2,360.80$ | $\$ 120,095.52$ | $\$ 270,034.29$ |
| $7 / 8 / 2005$ | URBN | Sell | $\$ 58.29$ | 891 | $\$ 51,936.39$ | $\$ 1,978.02$ | $\$ 172,031.91$ | $\$ 272,012.31$ |
| $7 / 8 / 2005$ | WMT | Buy | $\$ 49.38$ | 1519 | $\$ 75,008.22$ | $\$ 0.00$ | $\$ 97,023.69$ | $\$ 272,012.31$ |
| $7 / 11 / 2005$ | GME | Buy | $\$ 35.65$ | 1402 | $\$ 49,981.30$ | $\$ 0.00$ | $\$ 47,042.39$ | $\$ 272,012.31$ |
| $7 / 11 / 2005$ | RATE | Buy | $\$ 20.64$ | 2279 | $\$ 47,038.56$ | $\$ 0.00$ | $\$ 3.83$ | $\$ 272,012.31$ |
| $7 / 14 / 2005$ | GME | Sell | $\$ 35.37$ | 1402 | $\$ 49,588.74$ | $\$ 392.56$ | $\$ 49,592.57$ | $\$ 271,619.75$ |
| $7 / 14 / 2005$ | PLCE | Buy | $\$ 48.16$ | 1029 | $\$ 49,556.64$ | $\$ 0.00$ | $\$ 35.93$ | $\$ 271,619.75$ |
| $7 / 18 / 2005$ | WMT | Sell | $\$ 49.99$ | 1519 | $\$ 75,934.81$ | $\$ 926.59$ | $\$ 75,970.74$ | $\$ 272,546.34$ |
| $7 / 22 / 2005$ | CHS | Sell | $\$ 39.90$ | 3016 | $\$ 120,338.40$ | $\$ 20,358.00$ | $\$ 196,309.14$ | $\$ 292,904.34$ |
| $7 / 22 / 2005$ | RATE | Sell | $\$ 22.58$ | 2279 | $\$ 51,459.82$ | $\$ 4,421.26$ | $\$ 247,768.96$ | $\$ 297,325.60$ |
| $7 / 22 / 2005$ | PLCE | Sell | $\$ 46.64$ | 1029 | $\$ 47,992.56$ | $\$ 1,564.08$ | $\$ 295,761.52$ | $\$ 295,761.52$ |

Table 6.1: Trade Record

### 6.4 Trading Summary

## Week 1

The first week of trading using the three initial stocks I invested in was decent. One of my stocks, ROG experienced gain while the others, CMCSA and GE, experienced a small drop. At the beginning of my trading week, ROG had a stock price of $\$ 41.96$. On Friday, June 10, when the market closed, ROG had a stock price of $\$ 43.00$. Having bought 3574 shares of stock in ROG, I experienced a gain of $\$ 3,682$ on that investment. I will keep my $\$ 153,682$ invested in ROG until I notice an interruption in the upward movement of the stock price, perhaps checking more than once a day in order to stay on top of a potentially big moneymaker.

CMCSA's price at the beginning of the week was $\$ 31.75$. At market close time on Friday, June 10, CMCSA's price was $\$ 31.73$. Having bought 1574 shares of CMCSA, I experienced a drop of $\$ 31.48$. In the next week I will reinvest $\$ 49,968.52$, my investment in CMCSA into another more profitable stock.

GE's price at the beginning of the week was $\$ 36.77$. At market close on Friday, June 10, GE's price was $\$ 36.63$. Having bought 1359 shares of GE, I experienced a drop of $\$ 219.83$. In the next week, I will research other stock options to pursue, which may return a more profitable performance than this stock.

## Week 2

The first thing to do in week 2 was to sell off the weak stocks CMCSA and GE. I sold all shares of CMCSA at $\$ 31.79$ each on June 13 for a surprise net gain of $\$ 37.46$. I then sold all shares of GE on June 13 at $\$ 36.62$ for a loss of $\$ 233.42$. With $\$ 99,756.58$ to spend, I began researching other stocks from my preliminary pool. Daimler-Chrysler AG and Gillette Co. were the most profitable looking stocks at this time. Each had been steadily rising for the past several days to a few weeks and showed no graphical sign of a downward trend coming on soon. The historical stock price charts over the last six months for each company are shown below.


Figure 6.4: DCX 6 Mo. History

I estimate DCX to be a stock that I will keep for at least several days. The share volume is strong and is clearly on the verge of a rise from the technical graphical point of view. I invested $\$ 50,000$ into DCX at a stock price of $\$ 40.89$ which bought me 1222 shares.


Figure 6.5: G 6 Mo. History

I expect G to rise in the next couple days and then I will probably sell the stock. The share volume is low and the stock is unpredictable. The stock is actually at a high point right now and could begin falling at any time, but has been rising steadily for a few days. This will be a short term investment. I invested $\$ 49,746.60$ into G at a stock price of $\$ 52.20$ for 953 shares.

On June 16, I decided to sell off all my shares of ROG because I didn't want to lose the money I had made from it and the share price had sharply declined in the last two days. I sold all stocks for a net gain of $\$ 7,827.84$. Looking
for a new company to invest in, I noticed that Exxon Mobil Corp. had been on a steady increase in price since May 5. The one year target estimate is $\$ 5$ more a share than it is now [5]. This looks like a very important stock to invest in at this time. I invested \$149,961.75 into XOM at \$59.25 each for a total of 2531 shares.

## Week 3

This week provided the most interesting trading experience to date. DCX and XOM did quite well in the days immediately after I bought them, while G gained only a few cents in the days following my investment.

G hadn't been performing well after the modest gain it made in the days following my investment. On June 20, G had dropped below the amount that I invested. I had originally planned to hold onto G for only a short time hoping it wouldn't plateau after its recent success but this is a sign that it had reached a price peak. Selling now should save me from a potentially bigger investment loss. I sold all 953 shares at $\$ 52.00$ each for $\$ 49,556.00$, ending up with a $\$ 190.60$ loss.

On June 21, XOM took a price dip of $\$ 1.26$ after a decent gain of $\$ 1.63$ so I decided to sell. I had also been looking at an extremely profitable but expensive stock, GOOG for several days, and need more money to invest in a good number of shares. I sold all 2531 shares at $\$ 59.51$ each, ending up with a profit of \$658.06.

On June 21, I bought 694 shares of GOOG at $\$ 288.07$ each, investing a total of $\$ 199,920.58$. This stock has been booming for the last couple weeks and it's important that I capitalize on this boom before it recedes.


Figure 6.6: GOOG 6 Mo. History

At this time most stocks I have been dealing with have been dropping and I noticed that the market in general is taking a dive. Hopefully GOOG will continue resisting this market dip.

On June 24, I decided to sell all 1222 shares of DCX because its streak of gains had begun to level off and the price was going down. As I stated before, I noticed that most business on the NYSE and NASDAQ were doing not so well, and so I decided to keep this money to invest when it looks as though the prices are about to turn around. After the sale of 1222 shares for $\$ 49,784.28$, I have a
total of $57,915.08$. Hopefully the money I make off of GOOG will feed my profits without even having all my money invested.

## Week 4

Having most of my assets invested in GOOG at the beginning of this week, I was hoping for good performance from this stock until I could pick another one that looks profitable. The stock paid off as it experienced a very substantial gain of $\$ 13.93$ over the period of six days. I bought 694 shares of GOOG at $\$ 288.07$ apiece and sold all shares on June 28, 2005 for a net profit of $\$ 9,667.42$. This brought my net profit overall for this trading period to a total of $\$ 17,673.49$. At this point I searched for other stocks with a potential for short term growth. I read on Yahoo! Finance that GM is experiencing the best sales in 30 years on account of the Chevrolet Silverado full-size pickup [5]. I decided to invest $\$ 100,000$ in GM to see if the price of shares reflects this boom in sales. I bought 2951 shares at $\$ 33.88$ each. The six month history of the stock is shown below:


Figure 6.7: GM 6 Mo. History

I also read that clothes outfitters Chico's FAS (CHS) and Urban Outfitters (URBN) are doing extremely well and priced just right for the current market [5]. I bought 3016 shares of CHS at $\$ 33.15$ apiece. The history of CHS is shown below:


Figure 6.8: CHS 1 Yr. History

As you can see, CHS is in the middle of an upward swing over the past few months. Hopefully this will continue and reflect the same in the short term. I then bought 891 shares of URBN at $\$ 56.07$ apiece. The history of URBN is shown below:


Figure 6.9: URBN 6 Mo. History

URBN is still climbing but may be leveling off soon. I will have to watch this stock carefully.

## Week 5

Week 5 of trading was very successful. All three of the stocks I was invested in (URBN, CHS, and GM) did well and made me money.

CHS saw the most impressive gains of the three investments, rising \$4.84 from when I bought in on June 28 for $\$ 33.15$ / share. On July 8 the stock's only fall was $\$ .01$ from July 7, before which it had been rising steadily. I decided at this point to hold onto CHS for a few more days to see if this is the beginning of a real decline or if the rise in price trend will continue.

GM performed decently, making only $\$ .80$ cents on the share, a profit nonetheless. The surety of this stock's steadiness is not there at this point, and rather than risking a loss, I decided to sell all shares and take the profit. I will search for a new investment toward which to divert my assets. On July 8, I sold all share of GM at $\$ 34.68$ a share for a net profit of $\$ 2360.80$. This brings my net profit for the trading period to $\$ 20,034.29$.

URBN had gained $\$ 2.22$ since June 28. My decision here was to sell all shares; this stock has experienced falls to the order of a dollar almost every time it has reached $\$ 58$ for the last 3 weeks. I sold 891 shares of URBN at $\$ 58.29$ per share for a profit of $\$ 1,978.02$.

My buy for the week was Wal-mart, WMT. "WMT exceeded its samestore sales for the five week period ended July 1," a quote from Yahoo! Finance, indicated correctly that WMT's share price has been climbing steadily since June 23 [5]. I decided invest $\$ 75,000$ in WMT, which, at $\$ 49.38$ per share, bought me 1519 shares. WMT's 6 month stock summary is shown below:


Figure 6.10: WMT 6 Mo. History

## Week 6

I used this week to acquire stocks. I converted most of my remaining cash assets toward three investments which I read about on Yahoo! Finance. These stocks were predicted to have the potential to double their earnings for the second time by www.MotleyFool.com, an online investors' resource. The three stocks were Gamestop Corp. (GME), The Children's Place Retail Stores Inc. (PLCE), and Bankrate, Inc. (RATE). GME is an electronic entertainment chain retailer which recently acquired its main competitor, EB Games [7]. With the advent of new gaming systems emerging soon, and the success of the current systems right now, this is a solid investment with a lot of potential. GME's trading history is shown below:


Figure 6.11: GME 6 Mo. History

PLCE is a specialty retailer of merchandise for children from newborn to ten years old. The company also owns hundreds of Disney Stores [5]. PLCE's business and trade prices have been strong lately and I hope to benefit from its momentum. PLCE's trading history is shown below:


Figure 6.12: PLCE 6 Mo. History

RATE owns and operates an internet-based consumer banking marketplace. Its primary web-site from which it operates is www.Bankrate.com [5]. RATE has also enjoyed financial success lately and is speculated to see very good business in the near future [7]. RATE's history is shown below:


Figure 6.13: RATE 6 Mo. History

I began the week by buying 1402 shares of GME on July 11 for $\$ 35.65$ / share. This left me with $\$ 47,042.39$ in cash assets to invest in my last week of trading. I invested this money on July 11 in RATE, buying 2279 shares at $\$ 20.64$ / share. Having only $\$ 3.83$ left in cash assets, I decided to sell off my least productive stock and invest in something more profitable in order to get as much profit as I can in the last week of trading. I sold all shares of GME on July 14, as it wasn't rising in price as quickly as the other two recommended stocks. I sold 1402 shares $\$ 35.37$ / share, amounting to a loss of $\$ 392.56$. I used the resulting $\$ 49,592.57$ to invest in PLCE, buying 1029 shares at $\$ 48.16$ each and leaving me with $\$ 35.93$ in cash assets. My plan is to watch my four stocks for the duration of the final week, selling off any that begin a decline and to try to net as much profit as possible before my trading period ends.

## Week 7

I ended up with a strong net profit at the end of the trading period which I am very happy with. I did end up losing $\$ 1,564.08$ on PLCE, having held on to it after signs of a decline. I cashed out all shares of WMT on July 18, selling at $\$ 49.99$ / share for a profit of $\$ 926.59$ from WMT. I cashed out the rest of my stock on Friday, July 22. I sold CHS at \$39.90, clearly my most profitable stock, earning a profit of $\$ 20,358.00$. I sold RATE at $\$ 22.58$ for a profit of $\$ 4,421.26$. I sold PLCE at $\$ 46.64$ for a loss of $\$ 1,564.08$.

I am very happy with my successful 7 week trading period. My net profit over 7 weeks was $\$ 45,761.52$, an $18.3 \%$ profit from my original $\$ 250,000$.

### 6.5 Conclusion

I learned a lot during my 7 week trading period. Using stock price history, the news, and tools available on Yahoo! Finance and other online sources, I was able to pick up on various trends and productive, up and coming stocks. This was a great project for me because I was a true beginner coming into this project. I had no previous knowledge of how the stock market operates and how to observe stocks and decide when to buy or sell. By buying into stocks that were on a clear and pronounced upward swing and selling at most after two consecutive drops in price, I developed a relatively safe strategy for trading in the short term. The longest and thus by my strategy the riskiest venture I made was
in CHS, which I held for 24 days. The next longest venture was DCX, which I held onto for 11 days. As you can see, my strategy was for short term stock holding and selling after two consecutive drops in closing price. Doing this, I never dropped below my original total asset amount, \$250,000.

From my experience, I can now say that patience and discipline are two qualities that a good stock trader must have. It is very easy to want to buy into a stock that you don't yet have enough information about or to want to sell a stock that makes a drop in price. A good trader needs the patience to be able to wait until the needed information on a stock is known before investing and the discipline to hold onto a stock through a price drop in the event that it may be a freak drop and the price will continue to rise afterwards.

Fortunately, my investments did very well and this chapter can be a good example for the beginner trader who wants to use a simple trading strategy to make some money in a way that isn't all too risky.

## Chapter 7: Conclusion

### 7.1 Project Summary

This concludes a three-month stock market simulation, during which we held a 7 -week trading period using several trading methods and strategies. The simulation resulted in our IQP project. The goals of the project were to learn about trading in the stock market, learn about different trading methods and their effectiveness, and, of course, to make "money." We each started out the project conducting research into the history and background of the stock market. We proceeded to select our own individual trading methods which we would use to buy and sell our stocks. Once our individual methods were selected, we began a 7-week trading simulation in which we all began with $\$ 250,000$ in total assets. In the following section, we will compare, contrast, and analyze the results of our respective methods with respect to each other.

### 7.2 Analysis of Trading Methods

| Method | Net Result |
| :---: | :---: |
| Big Dipper | $\$ 28,870.64$ |
| Short Trading | $\$ 119,619.85$ |
| Momentum Trading | $\$ 48,191.12$ |
| Trend Following | $\$ 45,422.35$ |
| Nate's Investing Strategy | $\$ 45,761.52$ |

Table 7.1: Net Results

Overall, Short trading did the best in this simulation. This is a $47.85 \%$ profit; more than twice the next gainful stock. The "Big Dipper" method of trading made a modest $11.55 \%$ profit, Momentum Trading made a profit of $19.28 \%$, Trend Following made $18.17 \%$ profit, and Nate's investing strategy made a profit of $18.30 \%$.

The "Big Dipper" method of trading probably did the worst for a couple of reasons. First of all, the choices of stocks could probably been a little better as far as the timing goes. The stocks may have been more profitable if they were purchased earlier or later. Overall though, this is still a quite reasonable profit for a 7 -week period. Trend following was very profitable considering the time period due to the fact that the success of the method depends on long-term holdings. Higher profits may have been reached if more time was allowed for the simulation.

Nate's investing strategy did as well as it did because so much research was done as far as what stocks were chosen. He read articles, performed company background checks, and read the historical prices on yahoo finance in order to choose his stocks. Also, when a drop in prices occurred twice in a row, the stocks were sold no matter what, so it was relatively safe.

Sean did very well because his strategy called for a lot of research into the market positions of the stocks he was interested in. Always picking well established stocks that were making big news or poised to make huge gains, Sean was able to minimize his loss and almost certainly secure a profit. Discipline and focus are important parts of his trading strategy, and if you display
those and stay on top of business news you will almost certainly make large sums of money.

Reverse trading clearly made the most money. We attribute some of it toward luck and good stock picks. In addition, Chris' method was great because it had the flexibility to allow him to incorporate aspects of our methods into his trading style.

### 7.3 Final Thoughts

The five of us have learned a vast amount from this project. We have each learned one specific trading method and have learned parts of each others through collaboration on this project. Now we know how to check prices of stocks, research them, and monitor them over a period of time. We also have learned about the history of the market and how thousands of dollars can be made or lost in minutes. With these skills all of us are more adept in dealing with the stock market. We look forward to using this knowledge to trade in the future.

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