

STOCK MARKET SIMULATION

An Interactive Qualifying Project Report:

submitted to the Faculty

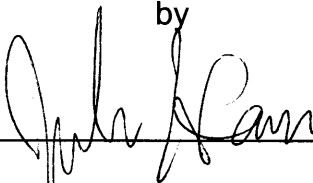
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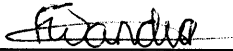
In partial fulfillment of the requirements for the

Degree of Bachelor of Science

by



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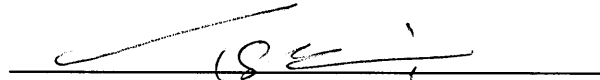
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ABSTRACT

The intent of this project is to learn more about the stock market by simulating stock ownership in three individual portfolios for a six-week period. By using various investment strategies, diversifying our portfolio over three separate sectors, and examining our experiences, we hope to provide ourselves and the readers with helpful insights about investing in general, about how the stock market works, and what methods can be used to invest successfully.

ACKNOWLEDGMENTS

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1.0 INTRODUCTION

1.1 Project Overview

At the center of the United States economy is Wall Street. Almost every large company is publicly traded on one of numerous exchanges such as the New York Stock Exchange (NYSE) and the American Stock Exchange (AMEX). The stock market affects the entire workings of the economy and its effect is not just limited to those who have actually invested money. The stock market moves up and down depending on a number of factors. Right now the economy is going into a recession and this means there is a bear market (a market that is generally moving down). This will mean that it will be harder for us to make capital gains than it would have been two years ago when there was a bull market (a market that is generally moving up). We will need to select stocks very carefully and keep track of various factors that can influence the market as a whole and, more specifically, our stocks.

One of the factors that can affect the price of a stock is the performance of the company. Usually, if a company is very profitable and meets or exceeds its financial goals, the demand for its stock will increase, causing it to rise in price. Alternatively, if the company's estimated profits are not met, its stock price could decrease. Publicity also affects stock prices. Companies tend to publicize their good news for example, technological breakthroughs, as this can cause their stock prices to rise. On the other hand, any adverse publicity may cause the price of the stock to decline.

Another factor that affects stock prices is the state of the economy. If there is more money floating around, there is more flowing into companies making their prices rise. Yet another factor is time of year, and publicity. Many stocks are seasonal,

meaning they do well during certain parts of the year, and worse during others. World events can also greatly affect the market. For example, the tragic events of September 11th caused the US stock market to drop by a large margin.

All these different factors make for a very interesting project because we will need to stay up-to-date on not only company news, but industry, market and world events too. The movements of the stock market cannot always be accurately predicted but hopefully, this simulation will allow us to recognize different trends and give us a better understanding of what causes changes in the market.

1.2 Goals

During the project initiation phase a number of goals for this project were established. These are as follows:

- To gain a general understanding of the stock market and to learn how it works
- To learn different investment strategies that can be used to increase the value of one's portfolio
- To learn what to look out for when deciding which stocks to buy and which stocks to sell
- To maximize our profit
- To provide the reader with an insight into the stock market and some specific industries through our experiences, both good and bad, during this project

1.3 Methodology

We decided to reduce our risks by diversifying our portfolio. Each group member picked a specific sector in which to trade. The three industries that were invested in were the oil and petroleum industry, the technology industry and the automotive industry. Each person initially invested \$500,000 into 4-6 companies in their respective sector. It is important to note that each group member chose a different strategy to invest with and therefore styles across individual member chapters, chapters three, four, and five, may not be exactly the same. This is not a matter of inconsistency; rather each style reflects the approach to trading that member has taken.

To aid in the investment simulation, we used VirtualStockExchange.com <<http://www.virtualstockexchange.com>>. VirtualStockExchange.com is a free website that provides tools to create and manage stock portfolios. Users are able receive up-to-the-minute information stock information and are able to buy and sell stocks in simulated real world trading situation.

2.0 BACKGROUND INFORMATION

2.1 The Stock Market

The following section contains various terms that are often seen in the market and it discusses the meanings and relevance of each.

2.1.1 Stocks

The first thing we need to know is what a stock is. The technical definition is: a stock is an instrument that signifies an ownership position, or equity, in a corporation, and represents a claim on its proportionate share in the corporation's assets and profits. In essence, a stock is a small portion of a company that the holder of the stock owns. Why would anybody want to own a stock? The most popular answer is that they hope to make more money by owning or reselling the stock than they paid for the stock in the first place. For money to be made, the price of the stock must increase.

We must now look a little deeper into how and why the price of stock may increase. Stock price details will be discussed in a moment, but right now, we should assume that the stock price reflects the earnings of the company. When a company increases their earnings by decreasing their costs or increasing their efficiency, the stock price should, in theory, reflect the increase. This should happen because the overall value of the company should be divided between all the owners, each getting their proportionate share based on what percentage of the company they own.

2.1.2 Initial Public Offerings (IPOs)

How does a company initially get stock? If a company wants to raise some capital without creating debt, one of its options is to issue stock. If a company whose stock is not publicly traded wants to offer the stock to the general public, this is done in an Initial Public Offering, or IPO. The company asks an “underwriter,” usually an investment banking company, to help it in the process. The underwriter agrees to buy a certain number of stocks from the issuer at a certain price, jointly determined by the underwriter and issuer, and it must resell those shares to buyers that are usually clients of the underwriting firm.

A date is set for the release and then the company issues financial and business information in a “prospectus.” Finally, the stock is released to the underwriter and they, in turn, release it to the public. It is the underwriter’s responsibility to sell all the shares or they will be stuck with what remains.

It is very difficult for most of the public to buy the stock at the release price. For most casual investors, it’s very difficult to get in on an IPO at all. One would need a good relationship with their broker who would need to be part of one of the companies buying from the underwriter. It is always possible to buy the stock after it has started trading on the open market.

2.1.3 Price Basis For Stocks

We can now delve a little deeper into what a stock is actually worth. A stock's price is equal to the net present value, or NPV, of all expected future dividends (dividends will be addressed further in just a moment). Basically, the stock is worth all the income that it will generate in the future. This is a real equation that can be used to find the value with the one problem that it requires the knowledge of the future. If we knew what would happen in the market in the future, we would all be quite a bit richer.

It is also true, however, that the value of the stock is whatever somebody is willing to pay for it. This is a capitalist society and supply and demand determines the price of all goods that are bought or sold. So which of these two cases is right? Actually, they both are. There is no reason why the equation and the real-world price cannot be the same.

2.1.4 Dividends

As we mentioned above, the price of a stock is the NPV of all future dividends. So what are dividends? A dividend is a taxable payment declared by a company's board of directors and given to its shareholders out of the company's current or retained earnings, usually given as cash, but it can also take the form of stock or other property. Now, in English, a dividend is simply a bonus, a certain amount per stock, given to the shareholders that comes out of the company's earnings.

The Board of Directors of a company decides if it will declare dividends, how often it will declare them, and the dates associated with them. Quarterly payment is the most common but there are also annual, semi-annual, or no dividend payment at all. A company can decide to use its earnings for things other than dividend payment such as expansion or donation to a cause, but it may also decide to build a cash reserve. If a company does this, the stockholders tend to expect higher dividends.

As a final note, it is possible for a company to pay dividends that are greater than their earnings. Doing this pushes the price of the stock up, but if this is done continually, the company will lose money and they will be forced to stop or go bankrupt. The types of companies that do this are usually seasonal companies or utilities.

2.1.5 Market Capitalization

The market capitalization (or "cap") of a stock is simply the market value of all outstanding (publicly owned) shares. We can determine this number by multiplying the current market price of the stock by the number of outstanding shares. There are basic guidelines that tell us which category a company is in dependent on the value of their cap.

- Large-cap: Over \$5 billion
- Mid-cap: \$500 million to \$5 billion
- Small-cap: \$150 million to \$500 million
- Micro-cap: Below \$150 million

Although technically, the size of the company you invest in is inconsequential, it is important information. It tells you the general size of the companies you invest in and this can be important in mutual funds where the micromanaging is done for you.

2.1.6 Market Indices

Market indices show us how the market is doing as a whole. There are three different types of indices, but we will only address the two most common here. The first is the equally weighted price index. An example of this type of index is the Dow Jones Industrial Average (DJIA). This average is computed by averaging the 30 stocks and dividing them by the “divisor,” which originally began at 30 but has been adjusted periodically to reflect splits in stock over the years (it is about 0.2 now). The DJIA started with 12 stocks in 1896. It was increased to 20 in 1916, and finally became 30 in 1928 where it has remained ever since.

The Dow Jones Industrial Average is computed from the following 30 stocks: Alcoa, American Express, Boeing, Caterpillar, CitiGroup, Disney, Du Pont, Eastman Kodak, General Electric, General Motors, Hewlett-Packard, Home Depot, Honeywell, Intel, International Business Machines, International Paper, Johnson & Johnson, JP Morgan Bank, Coca Cola, McDonalds, Microsoft, Minnesota Mining and Manufacturing (3M), Philip Morris, Merck, Proctor and Gamble, SBC Communications, AT&T, United Technologies, WalMart Stores, Exxon Mobil.

There is also the market capitalization weighted index and an example of this type of index would be the S&P 500 Industrial Average. The equation for this type of index is:

Figure 2.1: Market Cap Weighted Index

$$\text{Index} = \frac{\sum \{ \text{company market capitalization} * \text{price} \} \text{ over } N \text{ companies}}{\text{Market capitalization for these } N \text{ companies}}$$

This type of index is considered to be more financially sound than the equally weighted price index for numerous reasons. First, this system benefits from using a larger number of companies, 500 for the S&P 500 versus 30 for the DJIA, and this allows us to get a better picture of overall market performance. Next, as opposed to the DJIA, a weighted portfolio of the S&P 500 gives the investor the highest return possible for its risk. Finally, a great property of this index is that it is easily applied to industry indices. This means that if we apply the same equation for this index to computer manufacturing companies, we would get the computer manufacturer's index. This makes for especially easy comparison between the overall market and individual portions of it.

2.2 Investing Basics

2.2.1 Risk vs. Return

Balancing risk and return can be a tricky operation when investing. Everyone who invests wants to maximize their return, while minimizing the risk involved. Some investments are certainly more risky than others, but no investment is risk free. There are a number of various types of risk. Here are some:

Capital Risk - Losing your invested cash

Inflationary Risk - Investments rate of return does not keep pace with inflation rate

Interest Rate Risk: - A drop in an investments interest rate

Market Risk - Selling an investment at an unfavorable price

Liquidity Risk - Limitations on the availability of funds for a specific period of time

Legislative Risk - Changes in tax laws may make certain investments less advantageous

Default Risk - The failure of the institution where an investment is made

It is important to remember that risk can never be eliminated, but it can be managed. The best way to manage risk is to diversify your portfolio with different types of investments.

2.2.2 Diversification

As explained in the previous section, an investor wants their investment work for them (create return) while maintaining low risk. Diversifying your portfolio will make your overall portfolio less risky.

The basic idea of diversification involves spreading a portfolio over many investments to avoid excessive exposure to a single source of risk. This basically suggests not putting all your eggs into one basket. This is the very essence of investing. In fact, all portfolio principles are directed towards achieving diversification to minimize risk.

Proper diversification must take at least three factors into account. The first factor is the time factor. A person's choice of investment should partly depend on his investment timeframe. The second and third factors are tied together. Investors must decide how much return they want to aim at and what kind of risk acceptance they have towards the investment.

These diversification principles can be applied to different investment classes including stocks, bonds, and options. One way of diversifying and reducing risk is to buy a combination of stocks, bonds and Certificates of Deposit (CDs).

2.3 Investment Strategies

There are several strategies that investors use to determine the best stocks to buy. These are:

2.3.1 Dogs of the Dow

The Dow Jones Industrials represent an elite club of thirty titans of industry such as Exxon, IBM, ATT, DuPont, Philip Morris, and Proctor & Gamble. From time to time, some companies are dropped from the Dow as new ones are added. By investing in stocks from this exclusive list, you know you are buying quality companies. The idea behind the "Dogs of the Dow" strategy is to buy those companies with the lowest P/E ratios and highest dividend yields. By doing so, you are selecting those Dow stocks that are cheapest relative to their peers. At the beginning of the year, buy equal dollar amounts of the 10 DJI stocks with the highest dividend yields. Hold these companies exactly one year. At the end of the year, adjust the portfolio to have just the current "Dogs of the Dow." What you are doing is buying good companies when they are temporarily out of favor and their stock prices are low.

2.3.2 Dollar Cost Averaging

Dollar-cost averaging is a strategy in which a person invests a fixed dollar amount on a regular basis, usually a monthly purchase of shares in a mutual fund. When the fund's price declines, the investor receives slightly more shares for the fixed investment amount and slightly fewer when the share price is up. It turns out that this strategy results in lowering the average cost slightly, assuming the fund fluctuates up and down.

Value averaging is a strategy in which a person adjusts the amount invested, up or down, to meet a prescribed target. An example should clarify: Suppose you are going to invest \$200 per month in a mutual fund, and at the end of the first month, thanks to a decline in the fund's value, your \$200 has shrunk to \$190. Then you add in \$210 the next month, bringing the value to \$400 ($2 \times \200). Similarly, if the fund is worth \$430 at the end of the second month, you only put in \$170 to bring it up to the \$600 target. What happens is that compared to dollar cost averaging, you put in more when prices are down, and less when prices are up.

2.3.3 Hedging

Hedging is a way of reducing some of the risk involved in holding an investment. There are many different risks against which one can hedge and many different methods of hedging. When someone mentions hedging, think of insurance. A hedge is just a way of insuring an investment against risk.

Consider a simple case. Much of the risk in holding any particular stock is market risk; i.e. if the market falls sharply, chances are that any particular stock will fall too. So if you own a stock with good prospects but you think the stock market in general is overpriced, you may be well advised to hedge your position.

2.3.4 Offshore Holdings

“Offshore” refers to a collage of asset structuring strategies whose common denominator is that they occur outside of a person's home country. Each is sound, tested, and legal. The goals individuals seek to accomplish through offshore channels include tax reduction, asset protection, confidentiality, and diversification of investment. Offshore jurisdictions, alternatively known as tax havens, offer tax incentives to foreign investors. The benefits that tax havens have on outside investors vary, but in every case are designed to promote a healthy investment environment, which will attract outside wealth. In many cases, no tax is imposed on local corporate entities so long as they do not transact local business. When this is coupled with the tax-exempt status that foreign corporations enjoy when they invest in United States markets, it is clear that investments made through foreign corporations hold a distinct advantage over investing as an individual.

2.3.5 Put Options

When you write a put option you are giving the buyer of that option the right (but not the obligation) to sell their stock to you at a predetermined price at any time until a certain date. For giving the buyer this luxury, he or she will in turn pay you a premium at the time you write a premium at the time you write (i.e., sell) the option. If the buyer decides to exercise the option then you must purchase the stock; conversely, if the option expires unexercised then you still have the premium as your profit.

2.3.6 Socially Responsible Investing

Investors who pursue a strategy of socially responsible investing (SRI) are making sure that their capital is used in a manner that aligns with their personal ethical values--taking responsibility for what their money is doing to the world around them. There are many different definitions of what it means for an investment to be socially responsible, but basically the strategy is to avoid companies that damage the environment (either by treating nature or people poorly), and to favor companies that provide positive goods and services. One of the simplest examples of a socially responsible investment is a mutual fund that avoids so-called "sin" investments, namely companies that are involved with liquor, tobacco, or gambling.

2.3.7 Value and Growth

The value strategy attempts to find shares of companies that represent good value (i.e., value stocks). In other words, their stock prices are lower than comparable companies, perhaps because the shares are out of favor with Wall Street. Eventually, they believe, the market will recognize the true value of the stock and run up the price. People who believe in this strategy are sometimes called fundamentalists because they focus on the fundamentals of the company. The growth strategy attempts to find shares of companies that are growing and will continue to grow rapidly (i.e., growth stocks). In other words, their earnings are increasing nicely and the stock price is increasing along with those earnings. People who believe in this strategy are sometimes called momentum investors.

The ultimate goal of all these investment strategies is to maximize the value of one's portfolio. Throughout the course of this project, some of these strategies will be put into practice as we try to maximize profit.

3.0 SIMULATED TRADING IN THE PETROLEUM INDUSTRY

3.1 Market Sector Analysis

The petroleum industry is an interesting one to analyze, as stock prices tend to fluctuate often as the supply and demand of this important product changes. Earlier in the year (beginning of 2001), oil prices had been going down in the worldwide market but in March, increased as demand rose before OPEC's next meeting March 16th when the organization was expected to reduce oil production. Recently, Iraqi Oil Minister Amer Rasheed, in Ankara for talks with Turkish officials, said consensus was building for a cut in OPEC production of crude oil. The United States consumes such a large share of the world's energy and buys a tremendous amount of products from other countries. If production drops off, that affects the demand for energy. All this turbulence that surrounds the oil industry makes it a very interesting case study. There will initially be seven stocks picked within this industry, but these will be traded throughout the course of the 6-week simulation although all the trading will remain in this specific industry.

3.2 Portfolio Simulation Results & Analysis

3.2.1 Trading Week 1 (9/24/01-9/28/01)

The initial investment date was Monday, September 24th, 2001. This was exactly one week after the New York Stock Exchange reopened after the terrorist attacks that occurred in the United States on September 11th, 2001. When the markets reopened, stock prices fell drastically, making this a good opportunity to buy stocks. After that first week, the prices have slowly begun to stabilize again.

An initial amount \$ 495,176.99 was invested using the website discussed in the introduction: <http://www.virtualstockexchange.com>. The following pages contain information about the seven companies that were originally selected for the portfolio.

3.2.1.1 Frontier Oil Corporation (FTO)

Frontier Oil Corporation is an independent oil refining and marketing company with complex refineries located in Wyoming and Kansas. Frontier's primary products of gasoline, diesel and asphalt are marketed in the Rocky Mountain and Plains States. Frontier Oil Corporation is headquartered in Houston, Texas. The subsidiary company Frontier Refining & Marketing, Inc. is located in Denver, Colorado.

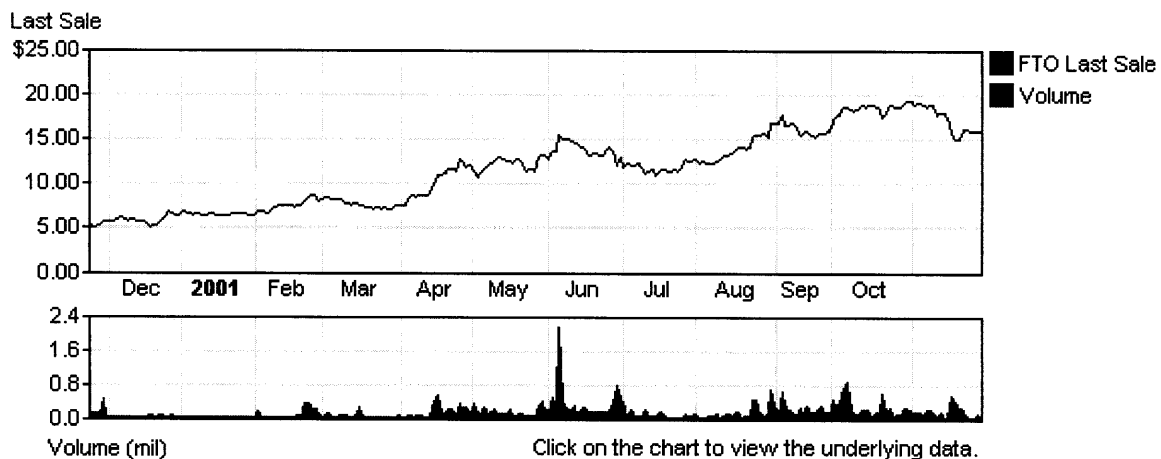
52 week high: \$17.99

52 week low: \$ 5.12

Investment: 3500 shares at \$16.15 each

Sold: 3500 shares at \$17.40 each

Figure 3.1: 52 Week Chart for FTO



3.2.1.2 Suncor Energy, Inc. (SU)

Suncor Energy is a growing Canadian-based integrated energy company with more than \$6.8 billion in assets. The company produces about 141,000 barrels of oil per day. Suncor is a world leader in mining and extracting crude oil from the vast oil sands deposits of northern Alberta. They also explore for, develop and market natural gas, operate a refining and marketing business in Ontario under the Sunoco brand, and are actively involved in the development of alternative and renewable energy sources.

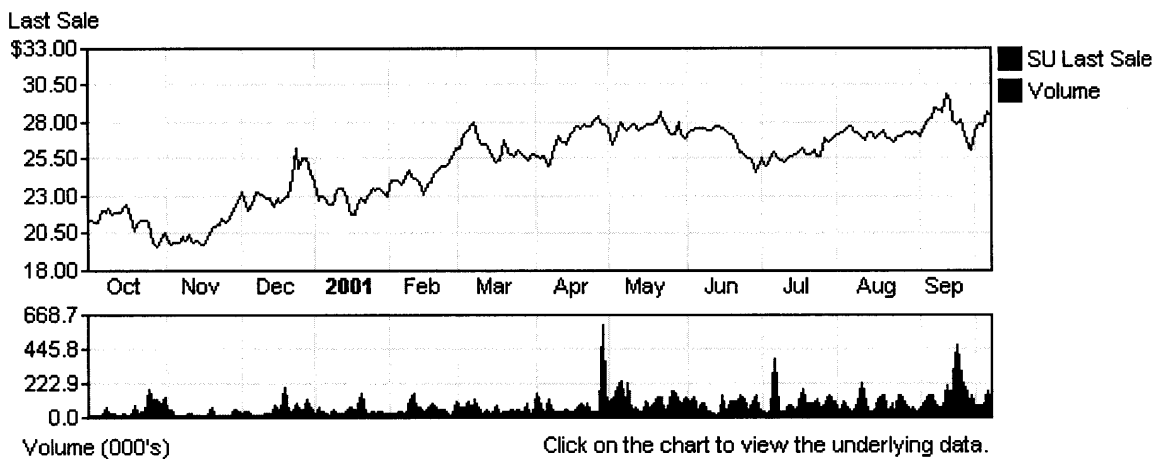
52 week high: \$30.23

52 week low: \$19.38

Investment: 3500 shares at \$27.27 each

Sold: 3500 shares at \$28.00 each

Figure 3.2: 52 Week Chart for SU



3.1.2.3 Exxon-Mobil Corporation (XOM)

On November 30th, 1999, Exxon Corporation and Mobil Corporation formally merged to form Exxon-Mobil Corporation. Headquartered in Irving, Texas, Exxon-Mobil is a worldwide leader in the petroleum and petrochemicals business. In combining these two companies, their vision was to create a new kind of company able to distinguish itself in terms of its unique abilities and its performance - one that is different from either of its components and from any other company in the energy industry today.

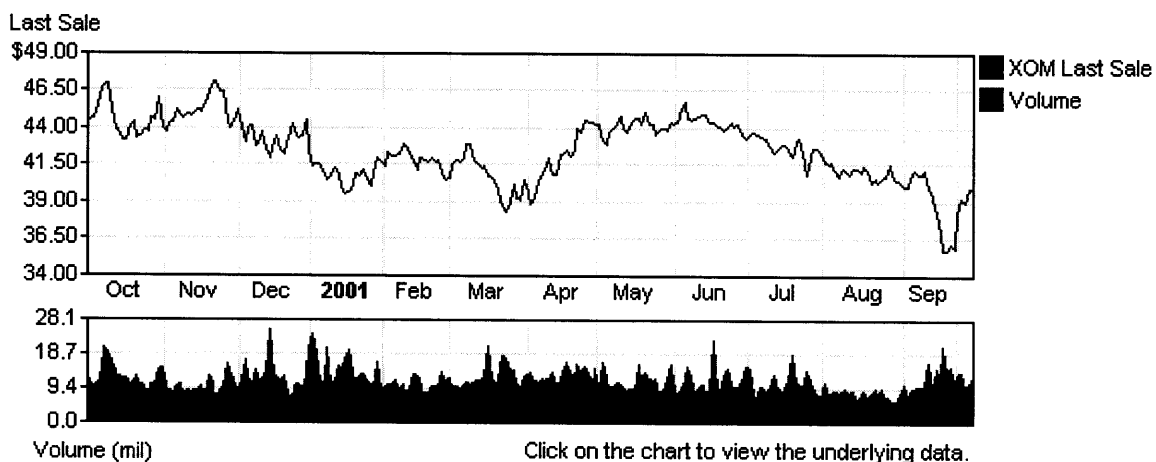
52 week high: \$ 47.72

52 week low: \$ 35.01

Investment: 1000 shares at \$35.35 each

Sold: 1000 shares at 39.25 each

Figure 3.3: 52 Week Chart for XOM



3.2.1.4 Murphy Oil Corporation (MUR)

Murphy Oil Corporation has been a steady producer of petroleum products for half a century. Murphy's refining and marketing operations are conducted through wholly-owned subsidiaries including Murphy Oil USA, Inc. based in El Dorado, Arkansas and Murco Petroleum Inc, a U.K. subsidiary serviced by Murphy Eastern Oil Company, based in London, England

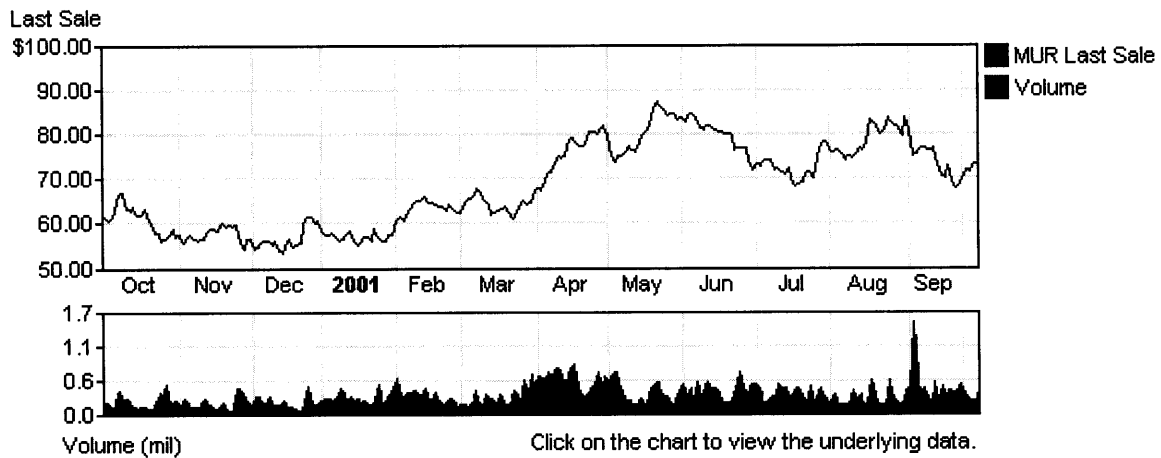
52 week high: \$87.85

52 week low: \$ 53.38

Investment: 1500 shares at \$68.21 each

Sold: 1500 shares at \$72.36 each

Figure 3.4: 52 Week Chart for MUR



3.2.1.5 Giant Industries, Inc. (GI)

Giant Industries, Inc., headquartered in Scottsdale, Arizona, is a refiner and marketer of petroleum products. Giant is also the parent company of Phoenix-based Phoenix Fuel Co., Inc., Arizona's largest independent petroleum products distributor.

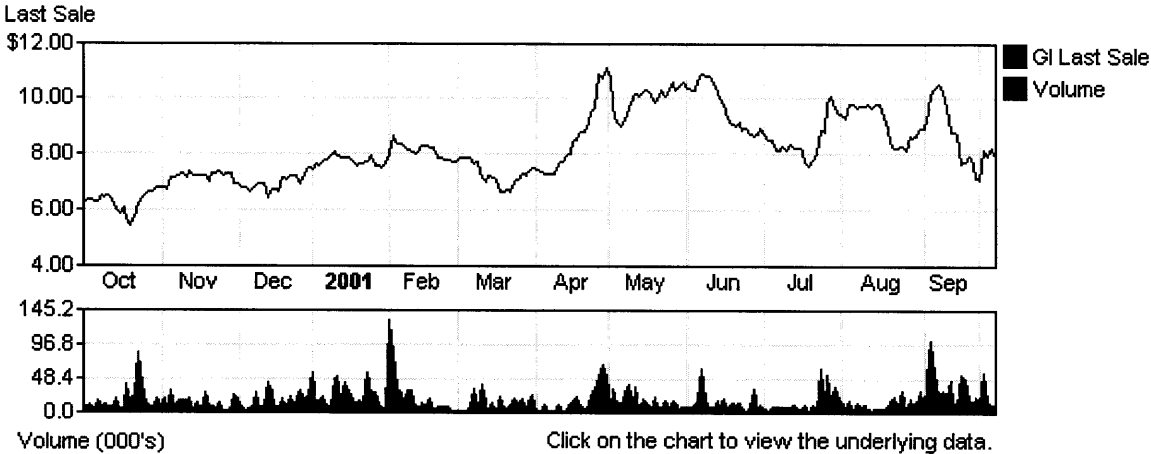
52 week high: \$11.40

52 week low: \$5.13

Investment: 2000 shares at \$7.80 each

Sold: 2000 shares at \$7.68 each

Figure 3.5: 52 Week Chart for GI



3.2.1.6 Amerada Hess Corporation (AHC)

Amerada Hess is one of the world's largest corporations. At home and abroad, they explore millions of promising acres both onshore and offshore. Thousands of wells produce oil and gas from their substantial reserves. The company's refineries produce quality fuel oils, gasoline and other petroleum products.

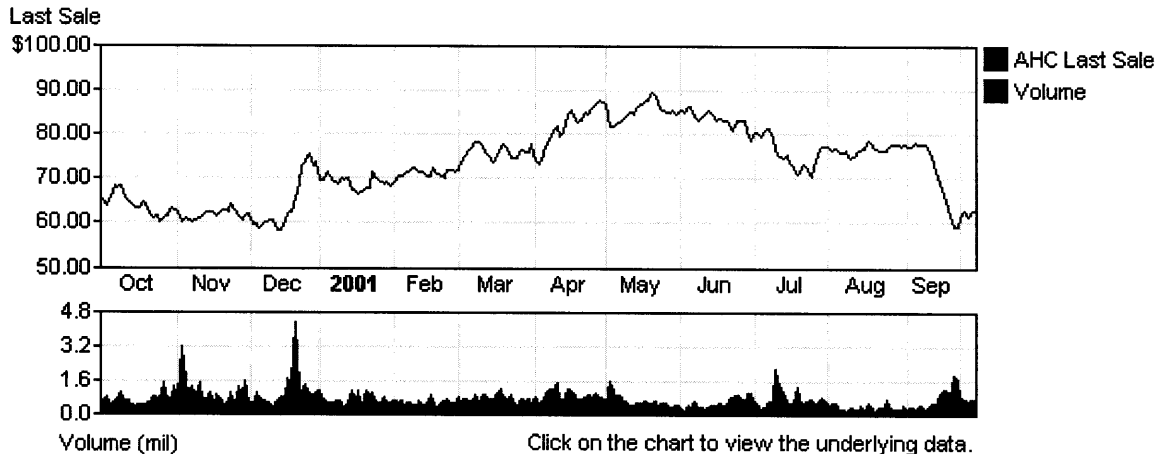
52 week high: \$90.40

52 week low: \$58.13

Investment: 1000 shares at \$61.68 each

Sold: 1000 shares at \$63.40 each

Figure 3.6: 52 Week Chart for AHC



3.2.1.7 Chevron Corporation (CHV)

Chevron Corporation, one of the world's largest integrated petroleum companies, is involved in every aspect of the industry, from exploration and production to transportation, refining and retail marketing, as well as chemicals manufacturing and sales. It is active in more than 90 countries and employs about 28,000 people worldwide.

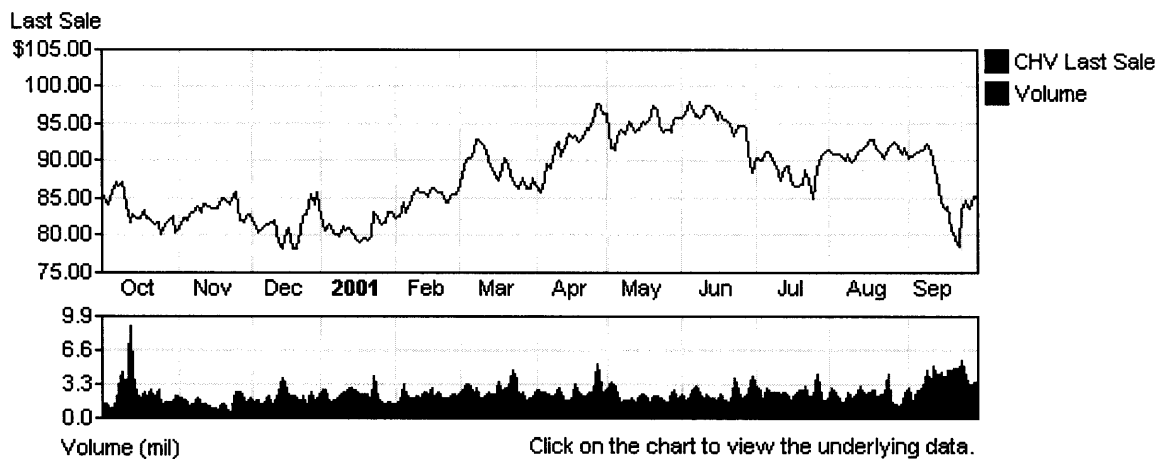
52 week high: \$98.49

52 week low: \$ 78.19

Investment: 1500 shares at \$80.50 each

Sold: 1500 shares at \$83.85 each

Figure 3.7: 52 Week Chart for CHV



3.2.2 Trading Week 2 (10/1/01-10/5/01)

On October 2nd, 2001 the Federal Reserve Board cut interest rates to 2.5%, the lowest level in nearly 40 years. Overnight, the Dow Jones industrial average topped 9,000 for the first time since September 17th, 2001 and the NASDAQ composite index rose more than 5 percent. This has not led to a significant increase in the value of the oil and petroleum stocks but it is hoped that with this added stimulus to the market, the stocks will also move up.

In the news, Iran's Oil Minister Bizhan Namdar-Zanganeh said on Tuesday, October 2nd, 2001 that OPEC was carefully watching latest developments in the oil market, which has been skittish since the September 11th attacks in the U.S. He said the Organization of the Petroleum Exporting Countries was discussing ways to return stability to the oil market through the help of non-OPEC members. OPEC ministers agreed at a meeting in Vienna last week to leave output unchanged, but signaled they would cut output in the coming weeks if oil prices remained weak. If output were cut, the oil prices would go up and hopefully, so would the stock prices, though this will need to be closely monitored. Energy prices across the board, from gasoline to heating fuels, are expected to be sharply lower this winter, the Energy Department said Thursday. Gasoline prices, which normally dip in the winter months, were projected to decline on a national average to below \$1.35 a gallon. The average price at gas pumps has tumbled 11 cents a gallon nationally in the three weeks since the September 11th terrorist attacks.

At the end of the first week, the portfolio had realized a gain of approximately \$24,000. All the stocks were up and they were all sold. Week 2 begun with the selection of seven different stocks but this time, the investment was \$253,250 and this leaves a

cash position of about \$275,000. After consulting with Professor Tang, it was determined that the best strategy would be to sell those stocks that had made a significant profit and buy those that were down, in the hope that they will rise. This is a good strategy as this is a very short-term investment period and the method used is day trading. This basically means that I take the money and run, as opposed to buying and holding the same stocks. In selecting some of the stocks, I used a method similar to the Dogs of the Dow, in that I chose very large and relatively stable stocks. A rise of 5% in the price of a stock is enough to warrant its sale. The following pages contain information about the seven stocks were selected in week two.

3.2.2.1 Tatneft (TNT)

Tatneft, one of Russia's largest oil companies, explores for, produces, refines, and markets oil and gas. It is the first privatized Russian Oil Company to trade on the New York Stock Exchange. The company has formed joint ventures and strategic alliances with Russian and Western oil and gas companies. The company is also increasing its refining operations.

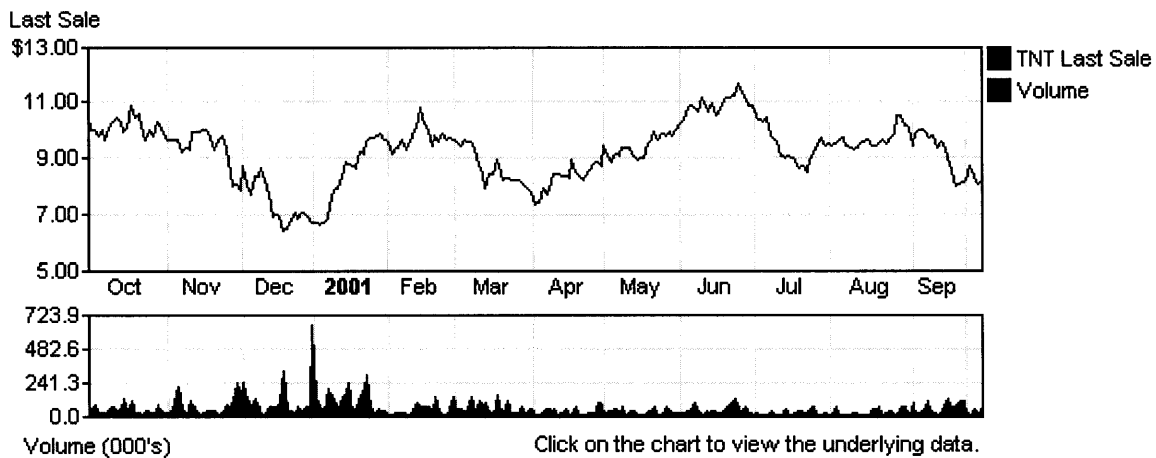
52 week high: \$11.77

52 week low: \$ 6.25

Investment: 4000 shares at \$8.25 each

Sold: \$8.85 each

Figure 3.8: 52 Week Chart for TNT



3.2.2.2 Swift Energy Corporation (SFY)

Swift Energy Company is an independent oil and natural gas company engaged in the exploration, exploitation, acquisition, and operation of oil and gas properties, with a primary focus on U.S. onshore natural gas reserves. Founded in 1979 with headquarters in Houston, Texas, the Company has achieved an average compounded growth rate in proved oil and gas reserves of approximately 34% per year during the last five years.

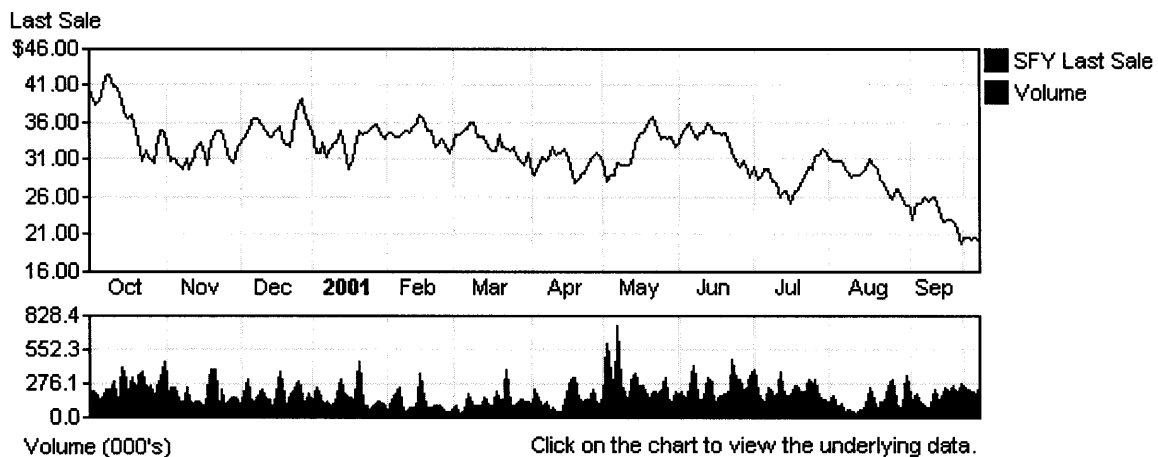
52 week high: \$43.50

52 week low: \$19.00

Investment: 2000 shares at \$20.57 each

Sold: \$21.75 each

Figure 3.9: 52 Week Chart for SFY



3.2.2.3 Getty Petroleum Marketing, Inc. (GTY)

Getty Petroleum Marketing Inc. is one of the nation's largest marketers of petroleum products and has sold and distributed on average one billion gallons of petroleum products per year over the past five years. The Company operates in a twelve-state area in the Northeast and Mid-Atlantic regions of the United States.

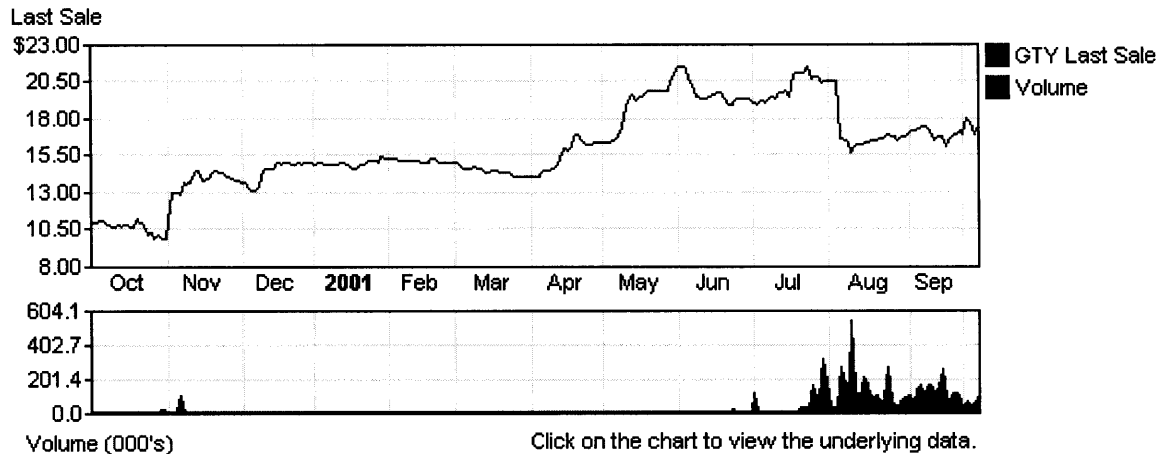
52 week high: \$22.05

52 week low: \$9.88

Investment: 2000 shares at \$17.45 each

Sold: \$16.91 each

Figure 3.10: 52 Week Chart for GTY



3.2.2.4 Texaco, Inc. (TX)

Texaco, the U.S.'s #3 oil and gas firm, produces crude oil and natural gas and operates 24 refineries globally. It markets fuel and lubricants at 23,000 gas stations and operates transportation, trading, and distribution facilities. It markets branded products in the U.S. through Equilon Enterprises (a 44%-owned venture with Shell), and Motiva Enterprises (a 33%-owned venture with Saudi Arabian Oil Company), and Shell Oil.

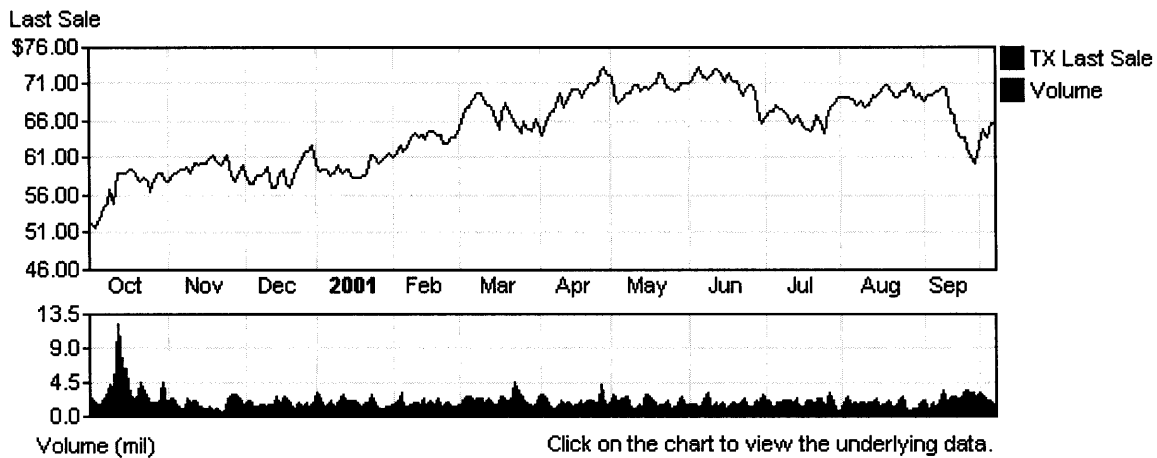
52 week high: \$73.90

52 week low: \$50.81

Investment: 1000 shares at \$64.47 each

Sold: \$ 68.57 each

Figure 3.11: 52 Week Chart for TX



3.2.2.5 Lyondell Petrochemical Company (LYO)

Lyondell Petrochemical Company is a major chemical and refining company, with majority ownership positions in the premier olefins, polymers and refining companies in North America. Lyondell is the largest producer of ethylene, propylene and polyethylene in North America and a leading producer of high value-added specialty polymers, color concentrates and polymeric powder through its 57% interest in Equistar Chemicals, LP.

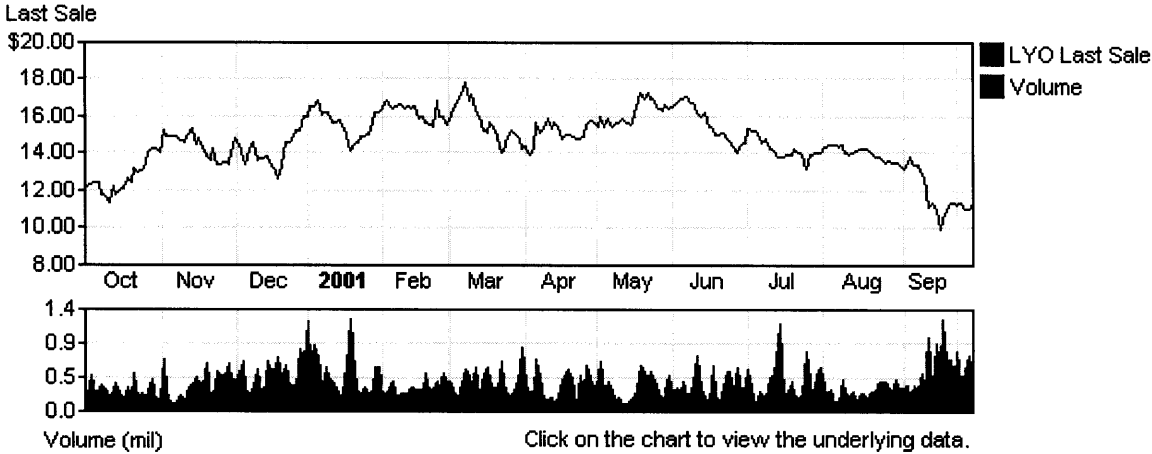
52 week high: \$17.95

52 week low: \$9.45

Investment: 2000 shares at \$10.94 each

Sold: \$12.20 each

Figure 3.12: 52 Week Chart for LYO



3.2.2.6 Wilshire Oil Company Of Texas (WOC)

Wilshire Oil Company of Texas is engaged in the exploration and production of oil and natural gas in the U.S. and Canada. WOC real estate division owns investment real estate properties in AZ, TX, FL, GA and NJ.

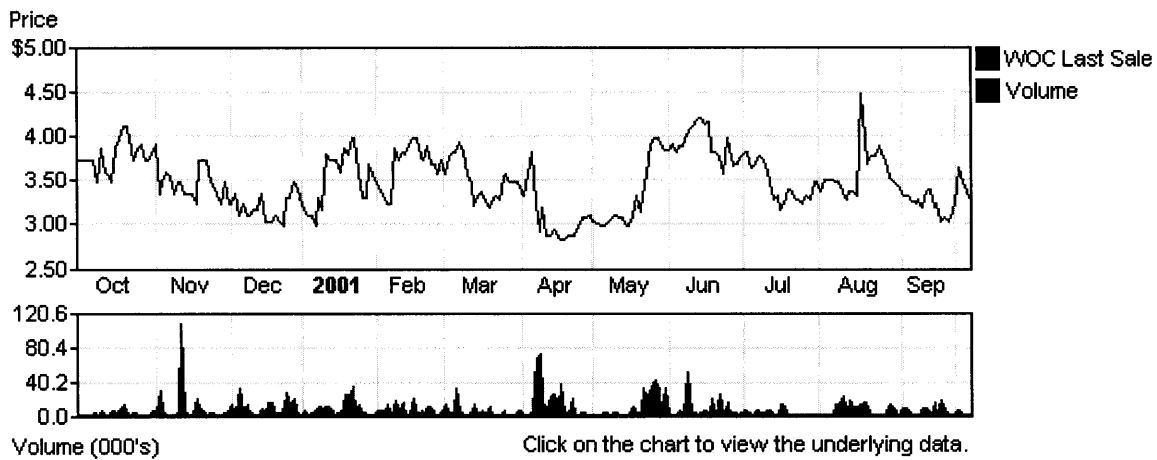
52 wee high: \$4.49

52 week low: \$2.50

Investment: 1000 shares at \$3.40 each

Sold: \$3.30 each

Figure 3.13: 52 Week Chart for WOC



3.2.2.7 Sunoco, Inc. (SUN)

Sunoco, Inc., headquartered in Philadelphia, Pa., is a leading manufacturer and marketer of petroleum and petrochemical products. Sunoco operates five domestic refineries with approximately 730,000 barrels per day of crude oil processing capacity. The company markets gasoline under the Sunoco brand through approximately 3,900 Sunoco outlets primarily in 18 states from Maine to Virginia and west to Indiana, and has interests in over 10,000 miles of petroleum and crude oil pipelines and terminals.

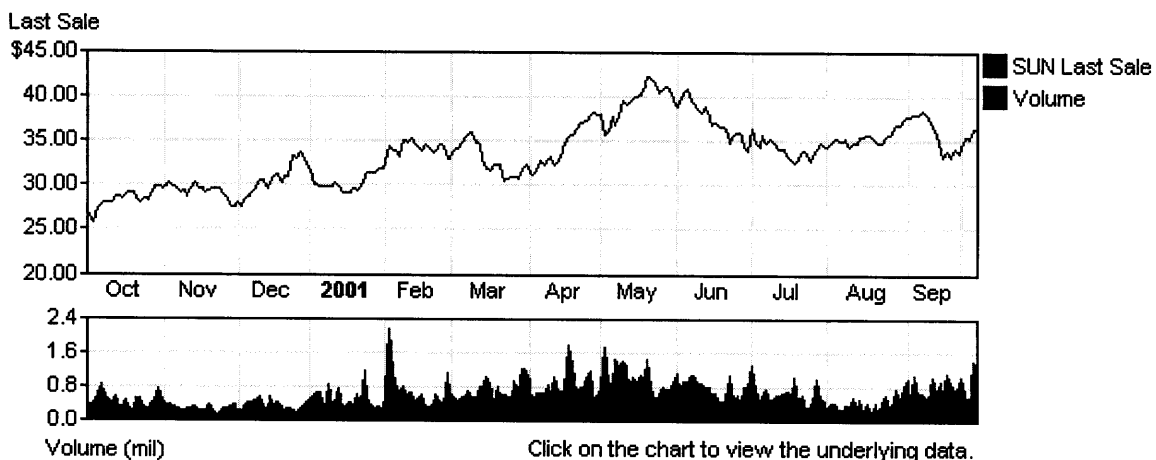
52 week high: \$42.73

52 week low: \$26.00

Investment: 1500 shares at \$36.36 each

Sold: \$38.44 each

Figure 3.14: 52 Week Chart for SUN



3.2.3 Trading Week 3 (10/8/01-10/12/01)

In the news this week, a group of OPEC ministers is set to meet key non-OPEC producers next Friday in Lisbon to discuss cooperation on propping up slumping crude prices, according to an OPEC source. Oil prices rose on growing signs that the OPEC cartel may be preparing for its fourth production cut this year. Buyers were also encouraged by news that the world's biggest oil exporter, Saudi Arabia, has reduced its crude allocations for key European customers in November. Industry analysts said it was a sign that Riyadh will tighten compliance to curbs set by the Organization of the Petroleum Exporting Countries. European benchmark Brent Blend crude oil rose by 40 cents to \$22.41 per barrel, while U.S. oil futures climbed 47 cents to \$23.00. Expectations of a fourth OPEC oil supply cut this year were kept alive by Venezuelan President Hugo Chavez, who said that he was trying to organize a meeting of OPEC and producers outside the group in Lisbon to address falling prices.

As far as trading goes, it was established earlier on that a gain of about 5% in the price of a stock is satisfactory enough to warrant the sale of that particular stock. This week, 5 stocks realized gains of over 5%:

- Sunoco Inc.
- Tatneft
- Texaco Inc.
- Lyondell Petrochemical Company
- Swift Energy Corporation

All of these stocks were sold and this has increased the value of the portfolio.

3.2.4 Trading Week 4 (10/15/01-10/19/01)

All the stocks that were sold during the previous trading week decreased in value. October 12th, 2001 marked what is popularly known as 'Black Friday' and the market had gone down by the end of the day. The stocks were sold on Thursday therefore allowing me to acquire capital gains just in time. However, this decline meant that it was a good time to buy stocks, as they were cheaper than they had been in previous weeks. The following pages contain information about the stocks that were bought during trading week 4.

3.2.4.1 China Petroleum and Chemical Corporation (SNP)

China Petroleum & Chemical is an integrated petroleum and petrochemical company with upstream, midstream and downstream operations. The company is the largest refiner, distributor and marketer of gasoline, diesel, jet fuel and other major refined products in China and in Asia. It is also the largest producer and distributor of petrochemicals in China.

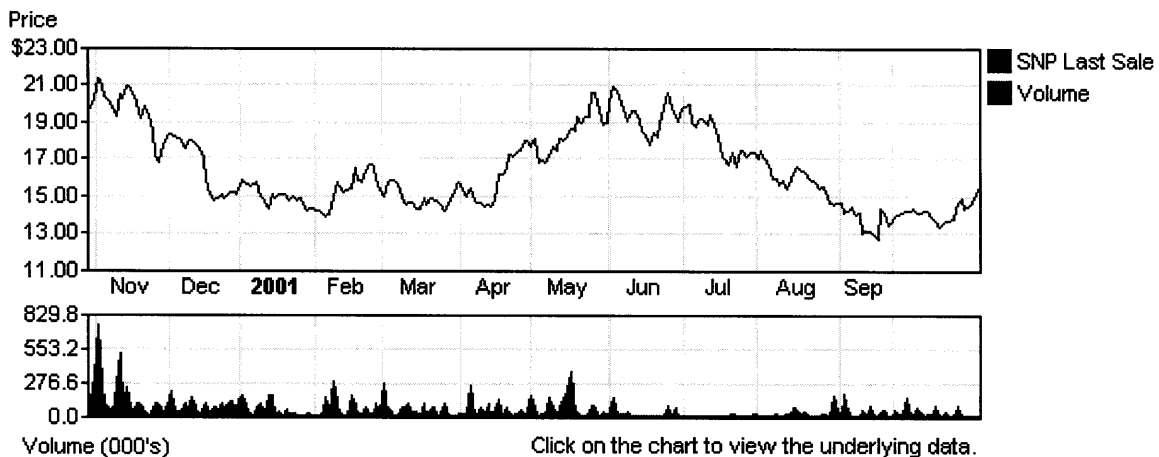
52 week high: \$21.56

52 week low: \$12.54

Investment: 2000 shares at \$13.50 each

Sold: \$15.18 each

Figure 3.15: 52 Week Chart for SNP



3.2.4.2 Exxon Mobil (XOM)

(See company information on page 23)

52 week high: \$ 47.72

52 week low: \$ 35.01

Investment: 1000 shares at \$41.75 each

Sold: \$39.76 each

3.2.4.3 Sunoco Oil Company (SUN)

(See company information on page 36)

52 week high: \$42.73

52 week low: \$26.00

Investment: 1000 shares at \$37.95 each

Sold: \$37.37 each

3.2.4.4 Ashland, Inc. (ASH)

The company is the largest provider of highway construction services in the U.S.; the largest distributor of chemicals and plastics in North America; a significant manufacturer of specialty chemicals worldwide; a leading marketer of automotive products (Valvoline); and is a partner in one of the largest petroleum refining and marketing companies in the U.S.

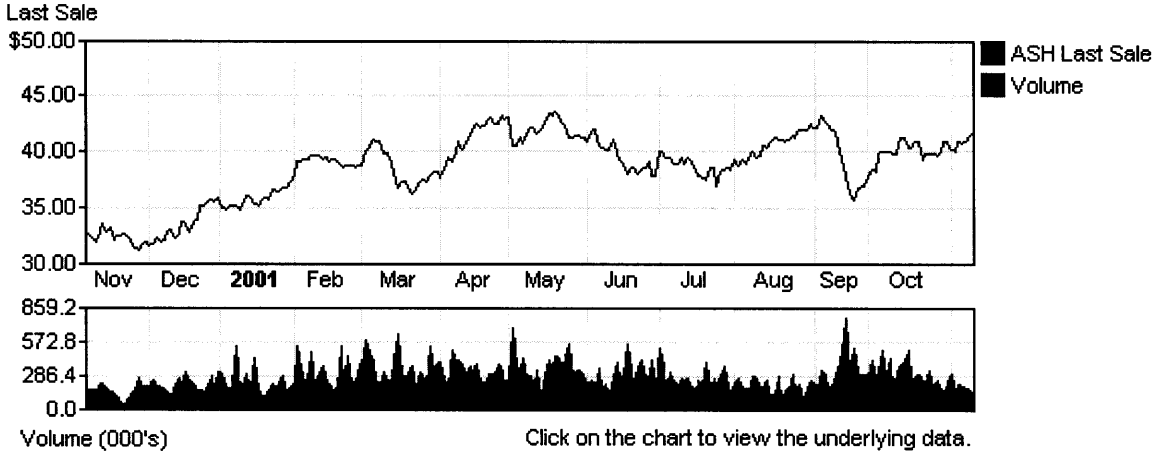
52 week high: \$ 44.25

52 week low: \$ 30.62

Investment: 1000 shares at \$41.14 each

Sold: \$40.95 each

Figure 3.16: 52 Week Chart for ASH



3.2.5 Trading Week 5 (10/22/01-10/26/01)

This was a very slow week for trading. The stocks in my portfolio have not had any drastic fluctuations in price but have all made relatively small decreases in value (decreases between 0.13% and 3.5%). As such I have held on to these stocks in the hope that their value will increase.

3.2.6 Trading Week 6 (10/29/01-11/02/01)

This was another slow week for trading. Only one of the stocks in my portfolio has realized a gain of over 5% (China Petroleum and Chemical Corporation-SNP- gain of 10.12%) and has since been sold. However, all the others have made small losses. I have held on to these stocks in the hope that their prices will rise. However, as the 6-week simulation period is coming to an end, I will not wait for a rise of 5% but hope they will at least rise to the price at which they were bought.

Oil prices in the U.S. have continued to fall. U.S. Energy Department data showed a 2.5 million barrel increase in national crude oil stockpiles in the week to October 26th. Wednesday's price slide ups the pressure on OPEC producers to make good on their plans to turn down the taps for a fourth time this year to defend prices in the group's \$22-\$28 target range. OPEC's oil now is valued at only \$19.00 a barrel compared to \$27.60 on average last year.

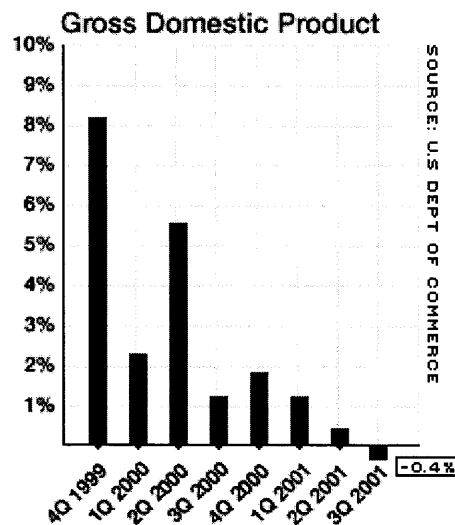
The outlook for the U.S. economy is not very positive right now. U.S. stock investor confidence was shaken at midday Tuesday after a worse-than-expected consumer sentiment number exacerbated fears that an economic recovery is farther away than has been previously anticipated. The Conference Board said that its October Consumer Confidence Index fell to a 7-1/2 year low of 85.5 from a revised 97 in September.

Following a month of national security issues, anthrax scares and corporate layoffs, a decline was hardly unexpected, but the extent of the decline far surpassed estimates. The Federal Reserve has cut interest rates nine times this year, twice since September 11th, in the hopes of fueling the economy and investor confidence. The

consumer confidence report is just one of several key economic indicators due this week. The U.S. economy shrank in the third quarter, its worst performance in more than 10 years, the government said Wednesday, as the United States edged closer to a recession.

Gross domestic product (GDP), the broadest measure of the world's largest economy, fell at a 0.4 percent rate in the quarter after growing at a 0.3 percent rate in the second quarter, the Commerce Department said in its first reading of the economy's third-quarter performance. Economists surveyed by Briefing.com expected GDP to fall by 1.0 percent.

Figure 3.17: GDP Report



The department also said its future revisions of the GDP number probably would not fall by more than 1.0 percent, meaning it was unlikely to fall below economists' initial forecasts. Nevertheless, it was the weakest performance since the economy shrank 2.0

percent in the first quarter of 1991, at the end of the last recession. Economists said they still expected the fourth quarter to be much worse.

U.S. stock prices rose briefly after the better-than-expected report before giving up their gains in midday trading, while most Treasury bond prices jumped after the government said it was ending its use of 30-year bonds to raise money.

3.3 Overall Summary

At the end of the trading period, the value of the portfolio has risen to \$540,230.14 from an initial value of \$500,000. This is a gain of 8.046%, quite a significant profit considering the uncertain outlook for stock prices of oil companies. Oil prices worldwide have continued to drop and OPEC has stated that they do not want to become involved in a price war. While this is good news for consumers, stockholders of oil producing companies may not be as thrilled. Even if it is unclear which way prices are headed, big swings have some fairly predictable effects on producers and consumers of energy. The oil producing companies are divided into the following two categories:

Oil Services Stocks

The smaller companies that operate rigs and make drilling equipment are among the most vulnerable when oil prices drop. This is because their customers, big oil companies, will spend less on looking for new oil if they do not think they can produce that oil for a profit. These stocks are already down 40 percent since May. Bigger companies like Halliburton or Schlumberger may be better able to weather a downturn, but if oil prices go lower, so will their stock prices.

Major Oil Companies

Obviously, if oil prices fall, these so-called "integrated" oil companies make less money, which is why analysts have downgraded many of these stocks since hopes of OPEC production cuts faded to worries about a price war. But Merrill Lynch analyst

Steven Pfeifer thinks these stocks may hold up in a price slide better than they did in 1998 — when oil prices averaged \$14.50 a barrel, the lowest in 25 years. Savings at merged companies like Exxon-Mobil, Chevron-Texaco, and BP (the combination of British Petroleum, Amoco and ARCO), he says, have cut the average cost of producing each new barrel of oil. That means their breakeven point is lower than the last oil price slide. Other majors, like Phillips Petroleum, have expanded their sources of revenues since the last downturn, he says. (Phillips bought Tosco Corp., a major oil refiner and marketer earlier this year).

4.0 SIMULATED TRADING IN THE TECHNOLOGY INDUSTRY

4.1 Market Sector Analysis

The technology industry is composed of many different sectors including cable, chip manufacturers, computer makers/sellers, the internet, networking, satellite, software, telecommunications, and wireless. It's hard to argue that in the future, technology will play more and more of a role in our lives. This speaks well for the industry in that we know it will expand in the immediate and distant future.

That being said, the tech industry has suffered a huge loss over the past year and a half. After investors lost confidence in the "dot coms," the entire NASDAQ market has been readjusting to where many think it should be. The market has been in a steady decline for the past year and nobody really knows if we are currently at the bottom or if the fall will continue. In the week of September 17th, the market hit a three-year low, mostly due to the terrorist attacks on September 11th. Although nobody can be sure that the market will not go lower, the long-term outlook is very promising. The markets have all risen in the past and it seems almost fact that they will continue to do so in the future. My hope is that the market will make a recovery in the coming weeks and this will be reflected in stock prices, allowing me to make a little money. Since October is historically the worst month to invest in, this poses another challenge because a majority of our investment time is during that month. Despite all that has happened in this industry and the tragic events that took place just before our investment period began, I have an optimistic outlook for my portfolio.

4.2 Trading Strategy

The trading method I decided to use is a modification of the “Dogs of the Dow” strategy. The “Dogs” strategy advises the investor to buy a number (usually 10) of the 30 companies the DJIA is based on that are currently undervalued compared to their peers. This is determined by looking at their PE ratios and dividend yields. The investor should adjust their portfolio at the end of every year to hold the current “Dogs of the Dow.” The theory is that since these companies are well established and have good holding power, they can ride out any difficult times and their prices will soon rise.

My strategy uses the same idea, but the timeline is compressed. Instead of adjusting my portfolio yearly, I do so weekly. This is based on the idea that the NASDAQ index will rise over time, as will all of the companies that the index is composed of, meaning that stocks have a tendency to rise. Using the 10 companies determined below as a basis, I choose the 6 that have fallen the farthest (or gone up the least) in the previous week. I invest varying amounts of equity in each company ranging from 10% to 20% depending on how much they have fallen in the previous week. Since, as will be pointed out below, the companies I have chosen have a favorable review from varying investors, the companies should have good holding power and should be able to recover from a dip in price.

The whole idea of this IQP is to test a strategy to see if it works. Although I am hopeful that it will work, I cannot guarantee that it will. The main issue I have with my own strategy is that I don't know if our simulation is long enough for any company to recover from a problem. This means that a stock could decline every week and not

recover for another month or two. I believe this would work much better if we had a longer simulation time, but I am still optimistic on how it will work out.

4.3 Research Basis for Company Selection

Since my interests lie in the technology sector, it seemed only natural to invest in the NASDAQ market. I used the NASDAQ web site <<http://www.nasdaq.com>> almost exclusively for my research since they provide a plethora of information about every company traded on the market. The decision I first made was to limit my stock selection to companies on the NASDAQ-100 index. Since I wanted to begin by looking at financially sound companies across the board, I decided to base most of my decision on guru analysis provided by the site.

Each of these investors look at different items including P/E ratio, price sales ratio, inventory sales ratio, growth rate, and many others, so the selected companies would appear to have a wide foundation of positive marks. Since there are a total of 9 gurus that invest with a variety of strategies ranging from growth and value investors to momentum and contrarian investors, it seems logical that if any company were to receive high marks across the board, this company would be financially sound. I proceeded to total the reviews from each of the investors that ranged from 0 to 100% and determined a cutoff that left me 10 companies. These companies were the 10 companies that I have chosen to follow and buy or sell when the time becomes appropriate.

Although this method may not be the best for such a short-term analysis, I believe that investing based upon these marks is an intelligent decision. Hopefully, since these companies appear to have a good foundation, any troubling times or bad news will not overwhelm the company and a quick recovery can take place.

4.4 Company Backgrounds

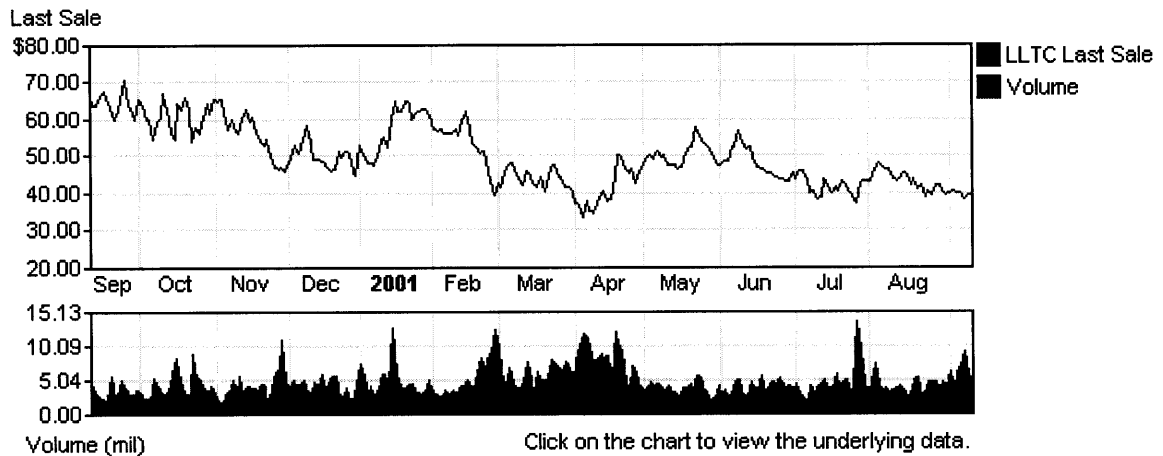
4.4.1 Linear Technology Corporation (LLTC)

Linear Technology Corporation designs, manufactures, and markets a line of high performance linear integrated circuits. The principal product categories include amplifiers, voltage regulators, data converters, and linear circuits. These parts are used in many different electronics items for use all over the world. The 52-week chart is shown below.

52-Week High – \$71.00

52-Week Low – \$31.02

Figure 4.1: 52 Week Chart for LLTC



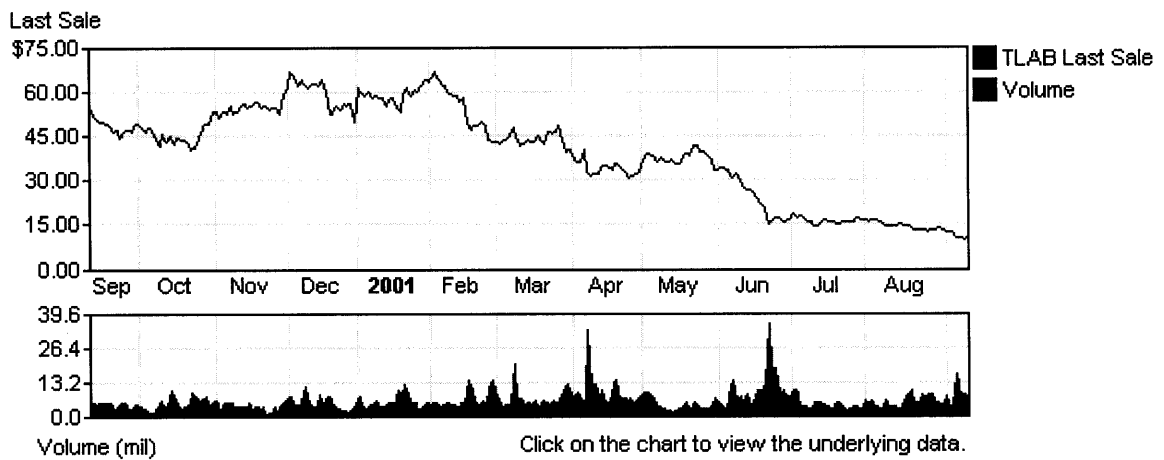
4.4.2 Tellabs (TLAB)

Tellabs is a member of the networking sector, involved in optical networking, broadband access, voice quality enhancement, and global network services. Most telephone calls and Internet sessions in the United States are routed through equipment from Tellabs. As we can see in the 52-week chart, Tellabs has been hit harder than most other companies on the NASDAQ market.

52-Week High – \$68.50

52-Week Low – \$9.56

Figure 4.2: 52 Week Chart for TLAB



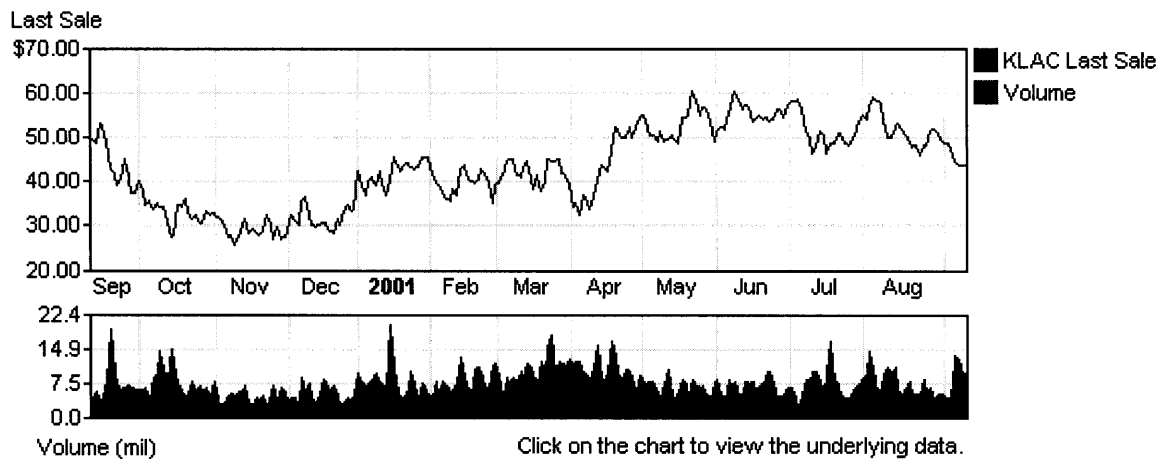
4.4.3 KLA Tencor (KLAC)

KLA Tencor is a member of the chip-making sector. This company provides software, systems, and expertise for other companies involved in the manufacture of integrated circuits. Unfortunately, this particular sector of the technology market has been in a worldwide decline because of decreased demand recently.

52-Week High – \$61.00

52-Week Low – \$25.50

Figure 4.3: 52 Week Chart for KLAC



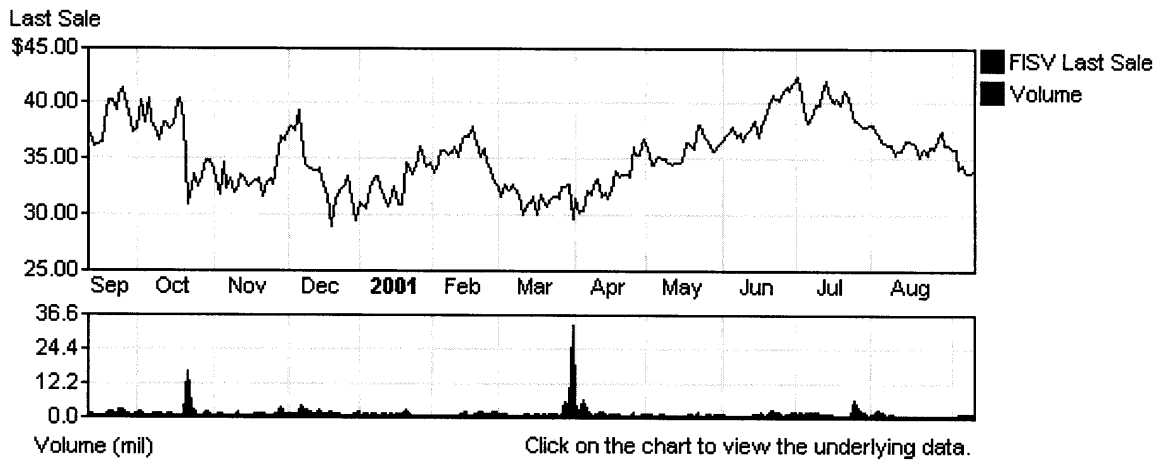
4.4.4 Fiserv (FISV)

Fiserv is a provider of information management services through computer software. This allows their customers to expand without having to worry about the technology and infrastructure to support them while they adapt. Clients can chose to manage their own data by using licensed software, or they can send their data to a Fiserv data processing center and have the work done for them.

52-Week High – \$43.09

52-Week Low – \$28.96

Figure 4.4: 52 Week Chart for FISV



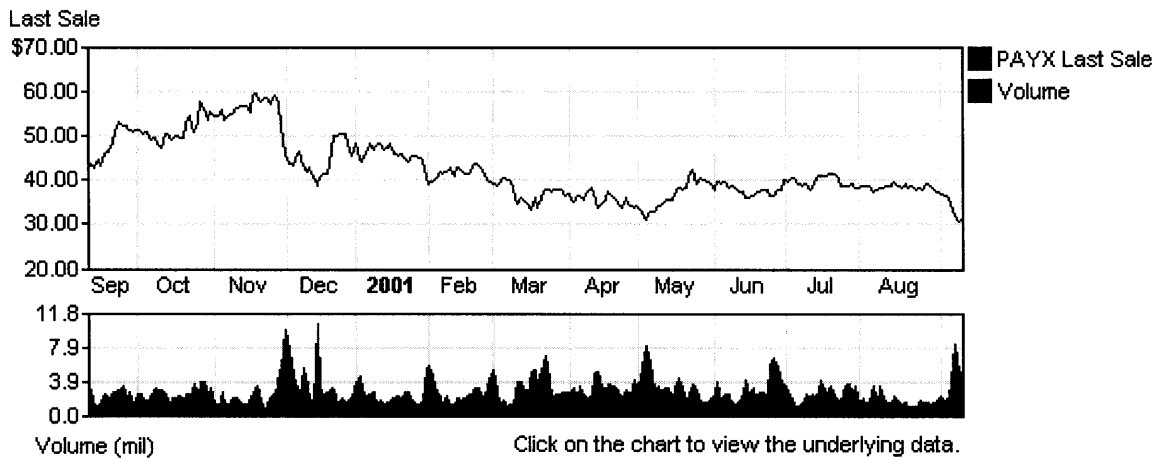
4.4.5 Paychex (PAYX)

Paychex is a payroll processing, human resource, and benefits service provider for small to medium sized businesses. The 52-week chart for Paychex can be seen below.

52-Week High – \$61.25

52-Week Low – \$28.27

Figure 4.5: 52 Week Chart for PAYX



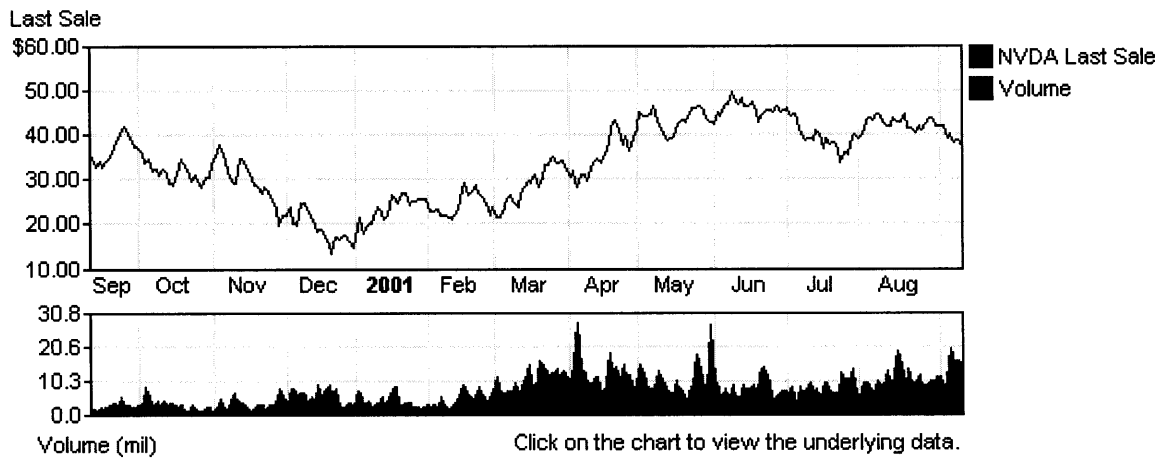
4.4.6 NVidia (NVDA)

NVidia is another member of the chip-producing sector in the technology department. They mainly produce graphics processors and media communications devices. Nvidia is one of the best-known names in computer graphics in desktops and now in laptops through the mobile GPU (Graphics Processing Unit). This company has managed to raise its stock price in the past year regardless of the difficult times.

52-Week High – \$49.80

52-Week Low – \$13.75

Figure 4.6: 52 Week Chart for NVDA



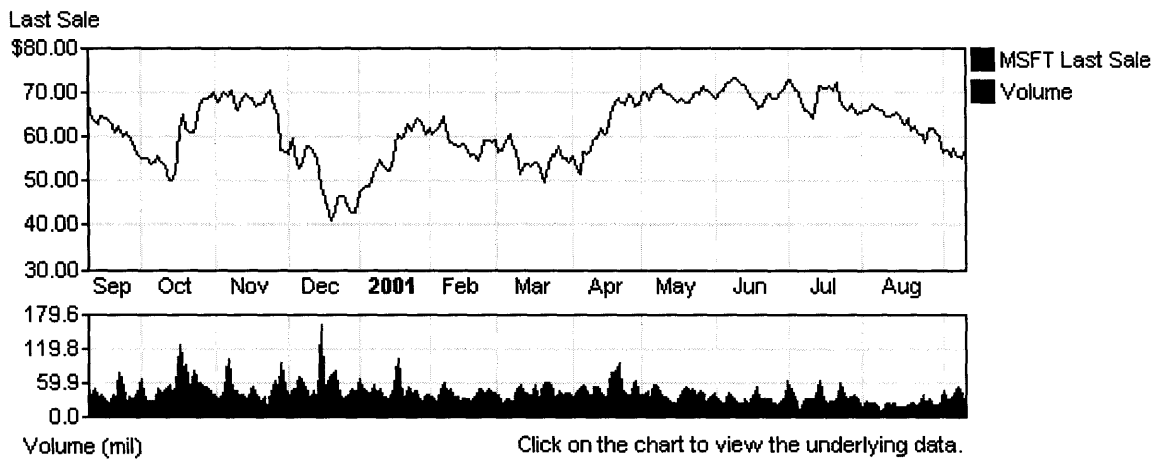
4.4.7 Microsoft (MSFT)

Microsoft is probably one of the world's most infamous software producers. It is most famous for the Windows operating system and Internet Explorer but it has roots in cell phones, console gaming, and many other areas. There has been recent controversy as to whether it is a monopoly or not, and whether the government should split it up. This issue has yet to be resolved. By looking at the 52-week chart, we can see that Microsoft has done better than most other companies on NASDAQ in the past year.

52-Week High – \$76.15

52-Week Low – \$40.25

Figure 4.7: 52 Week Chart for MSFT



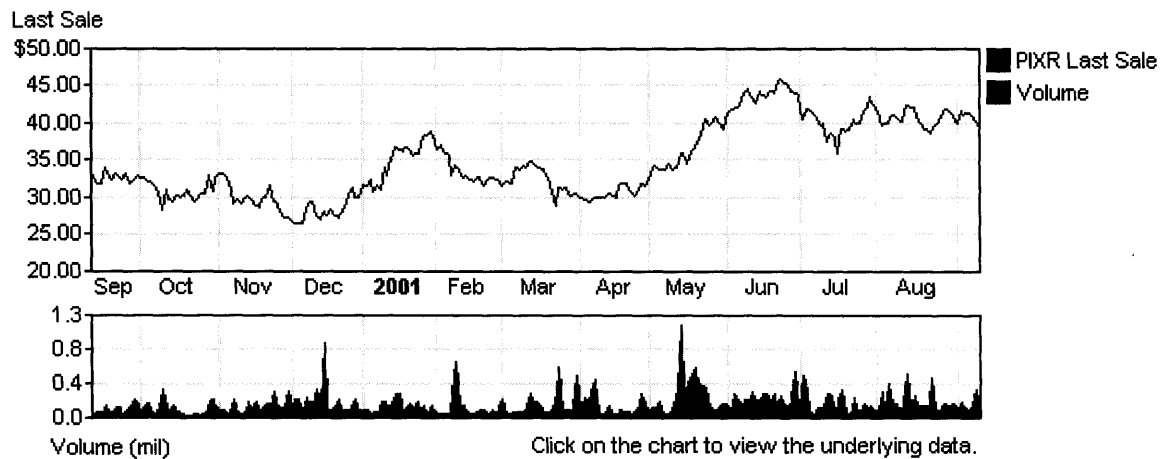
4.4.8 Pixar (PIXR)

Pixar is computer animation studio that has produced such movies as Toy Story, Toy Story 2, and A Bug's Life. We can see that Pixar has actually gone up in price by a significant amount in the past year. This is a feat that has been extremely rare in NASDAQ because of the difficulties the entire technology market has gone through recently.

52-Week High – \$46.49

52-Week Low – \$25.63

Figure 4.8: 52 Week Chart for PIXR



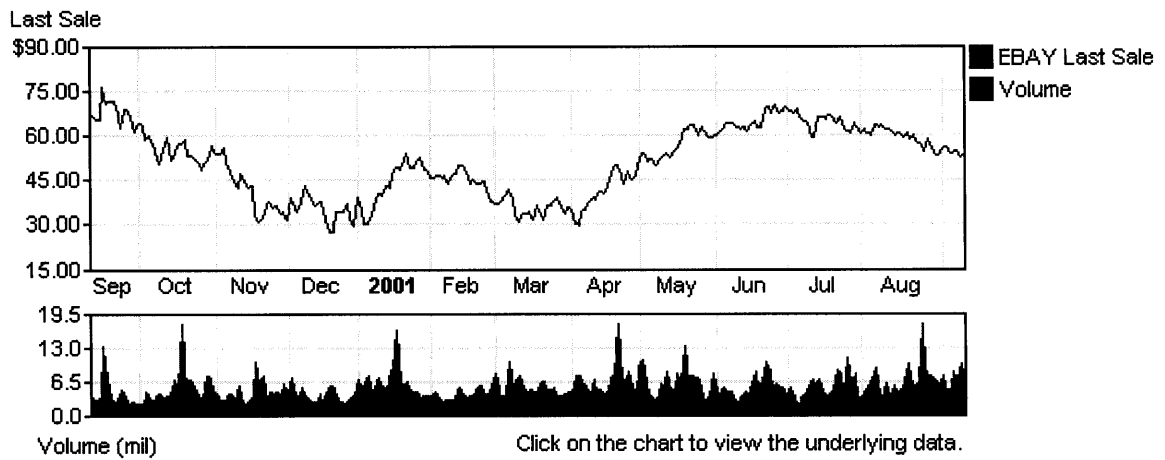
4.4.9 eBay (EBAY)

eBay is an Internet site <<http://www.ebay.com>> that allows people to buy and sell almost anything. If you want to buy it, you can probably find it on eBay. The 52-week chart for eBay can be seen below.

52-Week High – \$77.56

52-Week Low – \$26.75

Figure 4.9: 52 Week Chart for EBAY



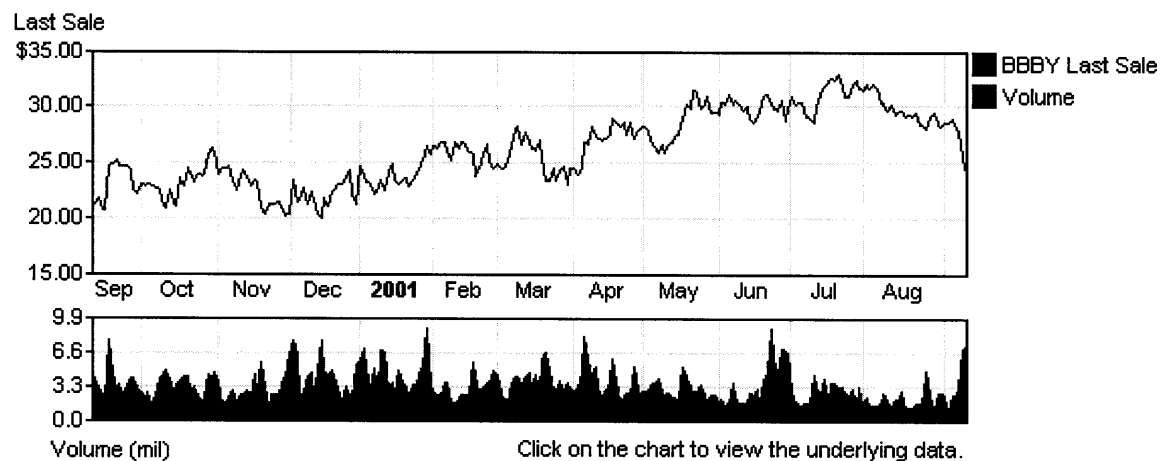
4.4.10 Bed Bath, & Beyond (BBBY)

Bed Bath, & Beyond is a retail store chain that sells items for your home. The merchandise ranges from bedding and bathroom supplies to kitchen and dining supplies as well. This is another company of few that has managed to keep their stock price up in the past year as can be seen here.

52-Week High – \$33.95

52-Week Low – \$18.70

Figure 4.10: 52 Week Chart for BBBY



4.5 Trading Summaries

4.5.1 Trading Week 1 (9/24/01-9/28/01)

The outcome of the first week of trading was not as positive as I had hoped it would be. In total I lost 0.39% of the money I had invested. The NASDAQ index managed to rise 5.313% during the entire week but on the first day it went up 5.512%. This means that after the first day, the market hardly changed at all. By looking at these facts, it is easy to see why I lost money. I actually bought my stocks the day before trading started at the virtual stock exchange site. When you buy before the market opens, it simply waits and buys at the opening market price. This is the reason I lost money. In the pre-trading market, all of the stocks I was planning on buying rose in price and it turns out that this was the majority of the rise for that day and similarly, the week.

Out of the total of 6 stocks I bought on Monday morning, the individual increases during the day was \$1.19 for FISV, \$0.48 for KLAC, \$1.96 for LLTC, \$0.76 for TLAB, \$0.56 for PAYX, and \$3.03 for NVDA. The total was \$7.98. The amount gained in pre-trading on that morning totaled was \$5.11 meaning that over 64% of the increase in price took place before I was able to buy. If I was able to buy at the prices of the close on Friday, I would have been in positive numbers for the week. That being said, my stocks still managed to do worse than the NASDAQ index from that point on. The index managed to rise and stay there after four more days of trading while my stocks dropped and didn't recover enough in the final two days to make any money. Hopefully this will be different in the upcoming weeks.

The strategy I plan to use during this trading period was not used to choose my stocks for this first week because I was not following stock prices in the previous week. My strategy is to take the biggest losers in the previous week and use them as my stocks in the next week with the assumption that they will recover. Whether or not this is a false assumption, I have yet to prove, but I am able to make the correct choices based on my strategy for next week. I have chosen the biggest losers in this past week and invested an amount ranging from 10% to 20% of my equity into them depending on the amount they have fallen or risen. I am sure next week will yield more tangible results for analysis of my strategy.

I did make a number of mistakes while investing this past week that I think it are important to mention. First of all, I did not save any cash equity that I did not invest. The calculations made were at weekend prices and I tried to get as close as possible to the \$500,000 we are given by the virtual stock exchange site. I have decided to keep an amount of about 10% of my equity (about \$50,000) in cash in future weeks which will be adjusted every week depending on if my stocks have risen or fallen. This cash gives me a little leeway in case I want to buy a stock in a spur-of-the-moment decision.

Another mistake I made stemmed from buying based on weekend prices. Since, as mentioned above, prices rose in pre-trading on Monday morning, the money I spent on stocks was actually more than I wished. I ended up buying close to \$524,000 worth of stocks instead of the \$495,000 I had hoped. Since the website allows users \$250,000 to borrow (margin), this did not cause any problems except the fact that I have to pay interest on the money borrowed. This is another reason I should leave some of

my equity in cash, just in case the prices rise before I buy. This means I would not have to pay interest on borrowed money, rather, it would just dip into my cash reserves.

4.5.2 Trading Week 2 (10/1/01-10/05/01)

This week turned out to be very positive for tech stocks. The stocks I chose to invest in this week were FISV, LLTC, TLAB, NVDA, MSFT, and EBAY. After the first two days I was rather disappointed because I was down over 4% but things soon became much better. There were increases of 10%, 5.5%, and 2.5% in the closing days of the week, bolstering all of my stock prices into positive territory for the week. After close on Friday my total increase for the week was 14.5%, amounting to over \$60,000, while NASDAQ as a whole only gained 7%.

There was widespread good news in my individual stocks and in tech stocks in general, which may have helped push prices up. Dell and Cisco both announced that they were expecting to meet earnings predictions made earlier. This had a big effect on the NASDAQ index because of the drooping economy and low stock prices in general. When these two well-known companies said they were doing well, by expecting to meet earnings potential, many interpreted it as a sign of the tech market as a whole. These announcements pushed up the indices in Europe and Asia, as well as the United States.

As for individual stock news, Tellabs announced cost cutting technology breakthroughs that would benefit them greatly. It turns out that in this past week, Tellabs had the greatest percentage increase of any of the stocks I am following, going up 24.5% in this week alone. News about eBay reports that it has combined with a partner in Argentina, allowing greater access to customers. There were also reports of stock experts giving eBay a "strong buy" rating, further encouraging investors about this stock. eBay was up almost 17% this week. Finally, nVidia announced the release of its

latest graphics processor this week, establishing an even stronger hold on this market. The stock price for nVidia rose almost 20% this week, the second largest increase in my portfolio.

There was also bad news for one of my companies at the end of last week that affected my buying decisions for this week. It was reported KLA Tencor and the chip sector are in a serious industry recession. Further reports this week cautioned investors because of high risk and earnings cuts for the fourth quarter. Because of this information, I chose to not buy this stock even though my strategy would dictate the opposite. The stock did rise close to 6% over the week, but 5 of the 6 stocks I chose to invest in performed more positively. Because of this, I am happy I made this decision at the start of the week.

This week I followed up on my decision to hold more cash equity. I ended up holding about \$55,000, or about 11%, of my total worth in cash. In retrospect, it would have been wiser to invest all of my equity in stocks because of the large increases this week, but there was no way to know this information ahead of time. I will continue to hold about 10% of my equity in cash in case I want to buy on a whim, protect myself from a major plummet, or whatever the case may be.

4.5.3 Trading Week 3 (10/08/01-10/12/01)

The stocks I invested in during this week were FISV, LLTC, TLAB, PAYX, BBBY, and PIXR. I once again decided against investing in KLA Tencor because of the bad news in the previous week and chose Tellabs as a replacement. This decision was not, in retrospect, a smart thing to do. Although I had good reason to make the decision, KLAC ended up rising a total of 17% this week while Tellabs gained only 12%. I hoped that the good news from last week would bolster Tellabs prices, and although it may have, it would have been wiser to stick with my strategy in this case.

This week turned out to be an up and down week that resulted in an overall gain of about 4% for my portfolio. The week started off slowly, dropping the value of my portfolio 1% on Monday, then 2% on Tuesday. There was a significant recovery on Wednesday, however, and my total worth increased more than 5%. On Thursday, I increased my value another 3%, and a milestone was reached. Thursday was the first day the market closed higher than it did before the terrorist attacks on September 11th. Friday started out slowly, and fell significantly when a case of anthrax was reported in New York, but before the end of the day, the market was into positive territory. I ended up dropping just over 1% of my value on Friday; however, as all of the stocks I was holding closed in the red for the day.

Out of the ten stocks I am following, the two best performers were nVidia and KLA Tencor, both of which I decided not to purchase. The increases on the week were 23% and 17%, respectively. I would have liked very much to own these stocks and it was unfortunate buying them was not dictated by my strategy. Only two stocks declined

on the week, Pixar, which I was holding, and Microsoft, which I was not holding. Pixar declined about 4% on the week while Microsoft declined slightly more than 2%.

Individual company news on the week was, for the most part, slow. There was a small amount of good news for Linear Technology stating that it was leading a comeback for the semiconductor industry. Apparently this news did not affect the stock prices as it increased less than 1% in value this week. This stock has been the poorest performer of all of my stocks, increasing only about 5% in these past three weeks while every other stock I am following has increased at least 10%. This may influence my purchases next week and I may decide to stray from my strategy to purchase a more promising stock. There was also good news for nVidia this week pertaining to its high quality and industry leading graphics processors. Again, it is unfortunate I did not own this stock because it gained significant value this week perhaps as a result of this good news. It is important to note that the news reported may or may not influence prices and it is difficult for me, a relative newcomer to the stock market, to determine which stories may actually impact the stock price.

4.5.4 Trading Week 4 (10/15/01-10/19/01)

The stocks I decided to hold this week were FISV, PAYX, MSFT, EBAY, BBY, and PIXR. There were no special exceptions made to any particular stocks based on company or industry news this week. Rather, I decided to stick to my strategy and buy the six worst performers from the previous week. eBay suffered horribly on Friday, losing 12% of its value and this seems to be the deciding factor in the overall loss on the week for my portfolio. All the other stocks increased or decreased within reasonable margins (5%). FISV and MSFT both increased slightly while PAYX, BBY, and PIXR all dropped a small amount.

This week was a rather slow one that ended in the loss of about 1.7% from the value of my portfolio. The first two days were very steady and I did manage to make gains on both days, but the total was only about half a percent after Tuesday. Wednesday was a different story, however, and my portfolio value dropped close to 2.6% on that day alone. On Thursday my portfolio remained virtually unchanged and on Friday, I managed to regain another half percent. We can see that Wednesday was the day that killed a relatively slow but steady week that would have resulted in an overall gain. Of course, I still may have made a gain on the week if eBay did not drop 12% of its value on Friday. If eBay had managed to drop only 5%, I would have done at least 1% better on the week.

There was some significant news this week that appears to have influenced the price of one of my stocks. eBay reported better than expected third quarter results this week and as a result, the price dropped about 10% mid-session. I do not understand this reaction fully, but from what I have read, analysts expect the company to rally

during the fourth quarter and first quarter next year to make up for the loss this week. It seems to me that the reaction would be more positive immediately, but this is apparently not how things work. It seems as though the net result from the news will be positive, but since the next two quarters are historically the strongest for eBay, the overall price increase will happen during those quarters.

There was also significant news in the four stocks I was not holding this week that may provide some insight as to what will happen next week. KLA Tencor, after bad news at the beginning of the week, announced good earnings reports that may boost their price next week. Since I will actually be holding this stock in the upcoming week, it should be exciting to watch. Linear Technology also beat estimates for quarter one of next year and they continue to be profitable despite reduced revenues. This stock will also be in my portfolio come next week, so this should also be an interesting scenario to follow. Finally, Tellabs received some bad news this week that said the optical networking industry is in the midst of a slump and there was a sales drop for this company in particular. I will also be holding this stock next week, and it should be interesting to see if this bad news affects the price as we would think.

4.5.5 Trading Week 5 (10/22/01-10/26/01)

The stocks I decided to hold this week were KLAC, LLTC, TLAB, PAYX, EBAY, and BBBY. This week turned out to be one of my best. After the close on Friday, I was up a total of about 11% on the week. Five of the six stocks I chose to buy were the best choices of my ten options (in retrospect), and two stocks rose over 20%. The week started off nicely on Monday with an increase of over 3% but the increases leveled off on Tuesday, hardly increasing at all. Wednesday was another good day, increasing my total value about 2.5%. Thursday was by far the best day of the week. The market actually started off quite slowly, but the initial losses were chipped away throughout the day, with a large charge in the closing hours. The NASDAQ index itself only increased about 2.5% on the day, but my portfolio went up a total of 6% with KLAC and TLAB increasing 10% and 18%, respectively. Friday was an up-and-down day that eventually closed with a loss of just under 1% for my portfolio. This one day could not dampen the overall results of the week, however, with my portfolio posting fairly large increases in all but one of my stocks (BBBY).

The company news this week was rather slow. Only two companies, Tellabs and KLA Tencor, had any news that seemed particularly positive. Tellabs was commended for a new optical switching product that won an industry award while KLA Tencor announced a successful beta test of a new error checking process for integrated circuits, both being announced on Wednesday. We can see that the increases on Wednesday were not anything significant and it appears as though this news had little effect, if any, on the stock prices. Most of the other companies had no news at all or the news that was announced seemed to be relatively unimportant.

It seems as though there must be some explanation for the large increase on Thursday. In my own novice opinion, I think it has to do with the fact that there were many companies that exceeded earnings expectations this week. There were approximately twice as many companies that exceeded earnings expectations as there were companies that failed to meet expectations. Although the amount of companies that exceeded their earnings expectations may not have been very large, I think the mere fact that businesses were still managing to function normally after what took place on September 11th encouraged investors. Throughout the day, investors decided that the news was good enough to warrant buying, and as a result, the prices increased.

4.5.6 Trading Week 6 (10/29/01-11/02/01)

The stocks I decided to hold this week were FISV, PAYX, NVDA, MSFT, BBBY, and PIXR. This week turned out to be a bit on the negative side and my portfolio value decreased about 1% by the closing on Friday. This was quite a bit better than I expected the results, especially after the loss on Monday of about 5%. The NASDAQ index dropped a total of 4% on Monday, proving that it wasn't just my stocks that were on the decline. Tuesday leveled off and I was virtually unchanged but my portfolio took a small hit on Wednesday, dropping about half a percent. I was rather unhappy about how the week was going by the start of the open on Thursday, but it turned out that my stocks and the market as a whole recovered quite nicely. My stocks increased over 3% on Thursday, erasing much of the losses incurred earlier in the week. While Friday ended down for the index, my stocks managed to do significantly better than the market, rising about 1.5%, erasing a majority of the remaining debt from the first few days of the week. Individual stocks were, for the most part, rather steady. Pixar was a large part of the reason I lost money on the week as it lost over 7.5% on the week while Paychex also dropped about 4%. If I were holding other stocks (like KLAC or LLTC), I would have surely been positive for the week.

Again, this week turned out to be relatively slow in terms of news. There was some positive news for FISV on Tuesday as Zacks Investment Research said they were on of a few companies that should generate strong returns in the future. These announcements by Zacks are made every week and the data is gathered from successful analysts across the country. It was also announced on Wednesday that nVidia swept the top 10 for gaming graphics boards in PC World, a respected

computing magazine that I happen to have a prescription to. This shows that the nVidia offers a range of graphics products for all different kinds of consumers with different price ranges, proving their widespread appeal and significant presence in the graphics processing market. Microsoft has, of course, recently released Windows XP and there is always news about the monopoly battle, but there is nothing conclusively positive or negative in the news from this week in my opinion. Pixar released their new movie, Monsters, Inc., on Friday but it would be difficult to speculate how this affected the stock price. For the record, however, the stock price of Pixar did rise about \$1 or 2.5% on Friday. Whether or not this was a result of the movie release, I would be unable to say.

4.6 Portfolio Simulation Results & Analysis

4.6.1 Individual Stock Analysis

The following pages contain the graphs for each of the ten companies I decided to follow during the investment period. Each blue portion shows the high and the low for the day, along with the opening and closing values indicated by the protrusions on each side of the blue columns. For easy examination, I have altered the graphs to easily identify the time periods for which I owned each particular stock. The x-axis contains the dates for the six-week investment period. When the background for the dates is black with white numbering or lettering, this indicates I owned the stock on that date. For example, on the graph for Fiserv (FISV), I owned the stock during weeks one through four, along with week six. I have also included the NASDAQ index on each company graph for simple comparison to the overall market during the entire investment period, or over each week.

Figure 4.11: 6 Week Chart for FISV

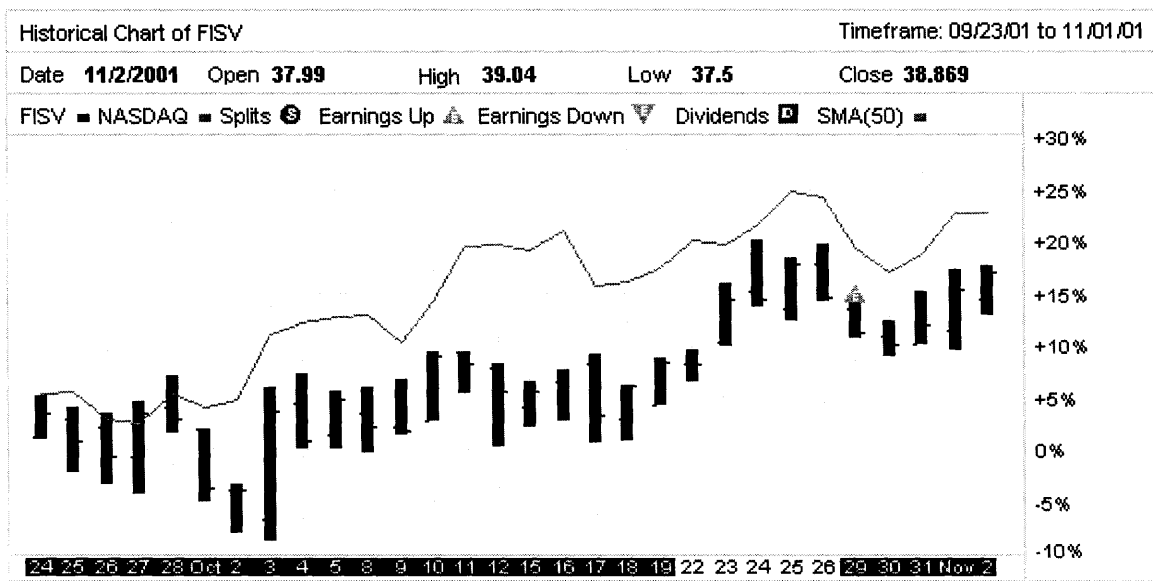


Figure 4.12: 6 Week Chart for KLAC

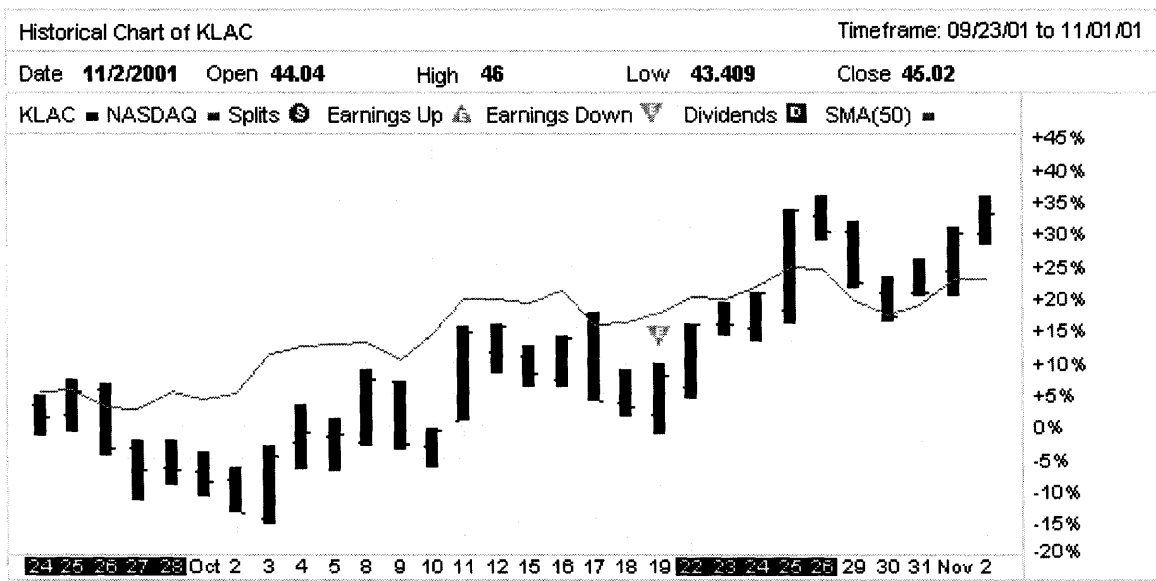


Figure 4.13: 6 Week Chart for LLTC

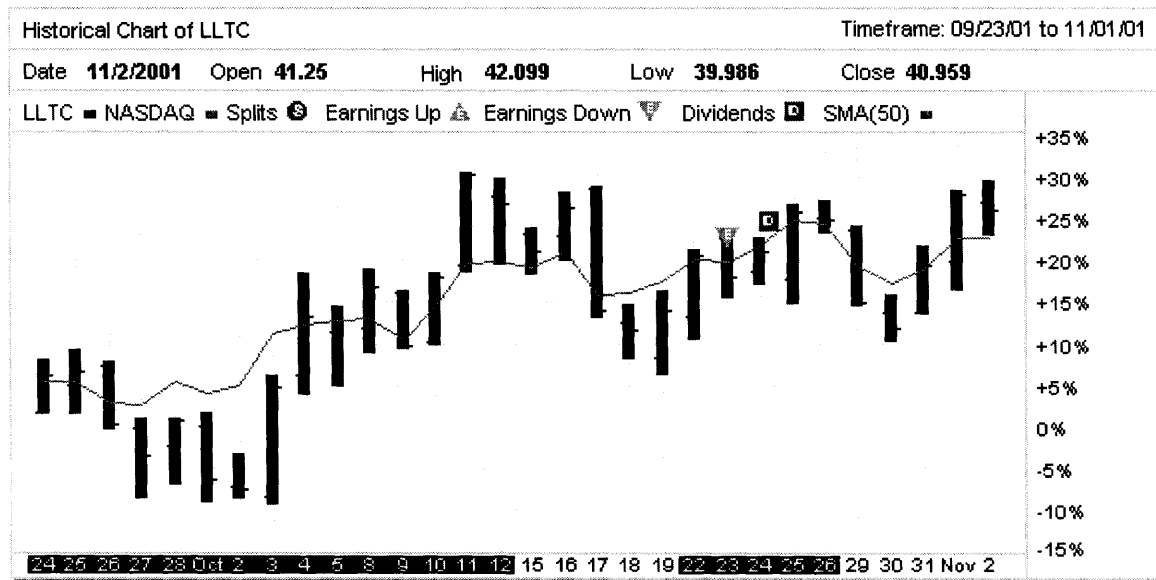


Figure 4.14: 6 Week Chart for TLAB

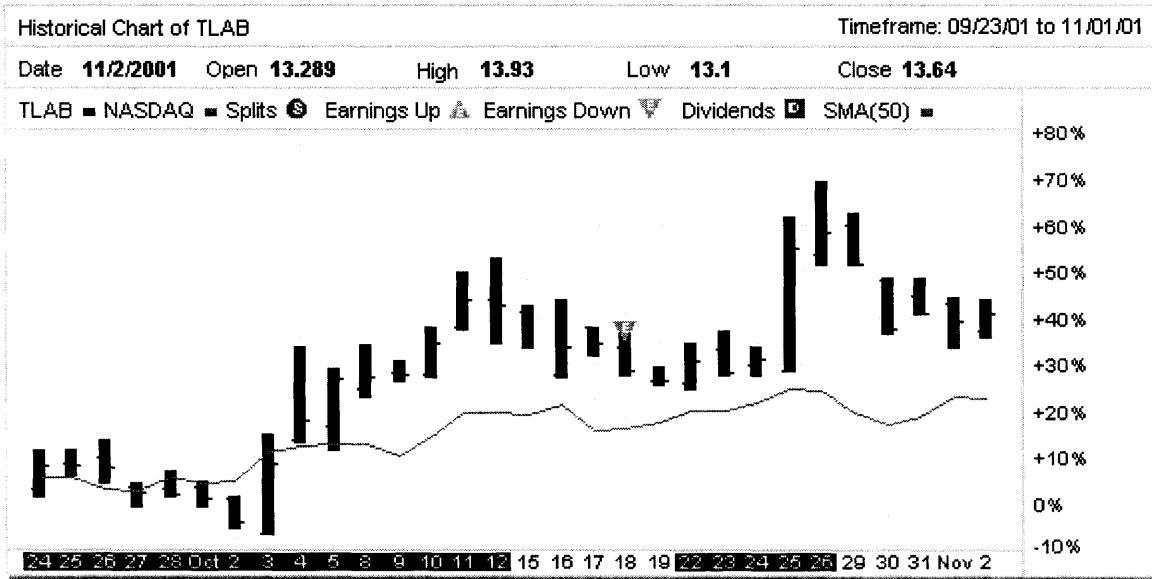


Figure 4.15: 6 Week Chart for PAYX

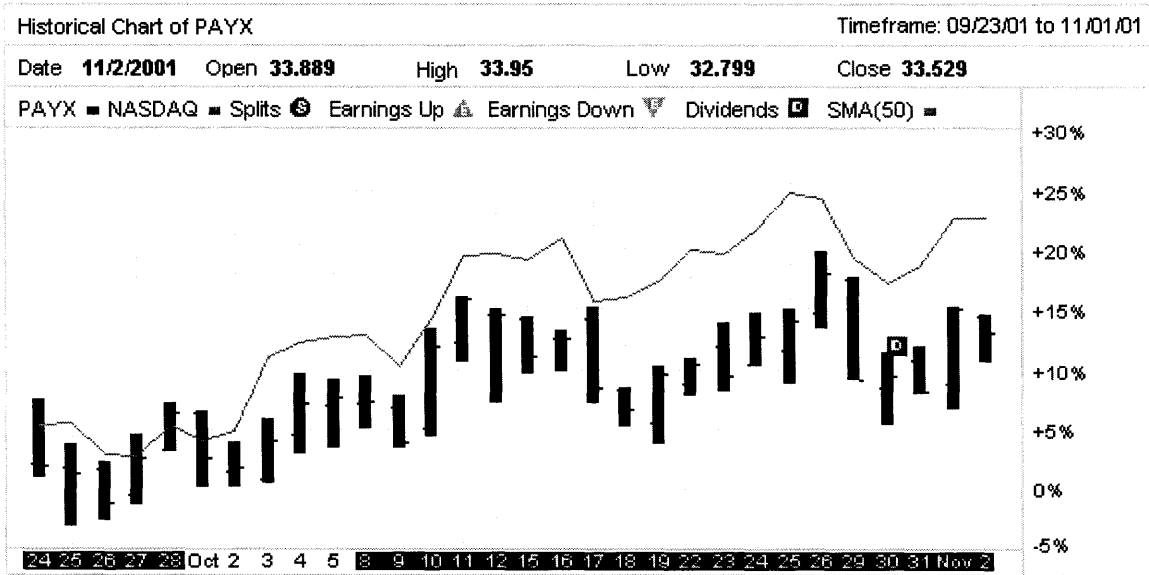


Figure 4.16: 6 Week Chart for NVDA

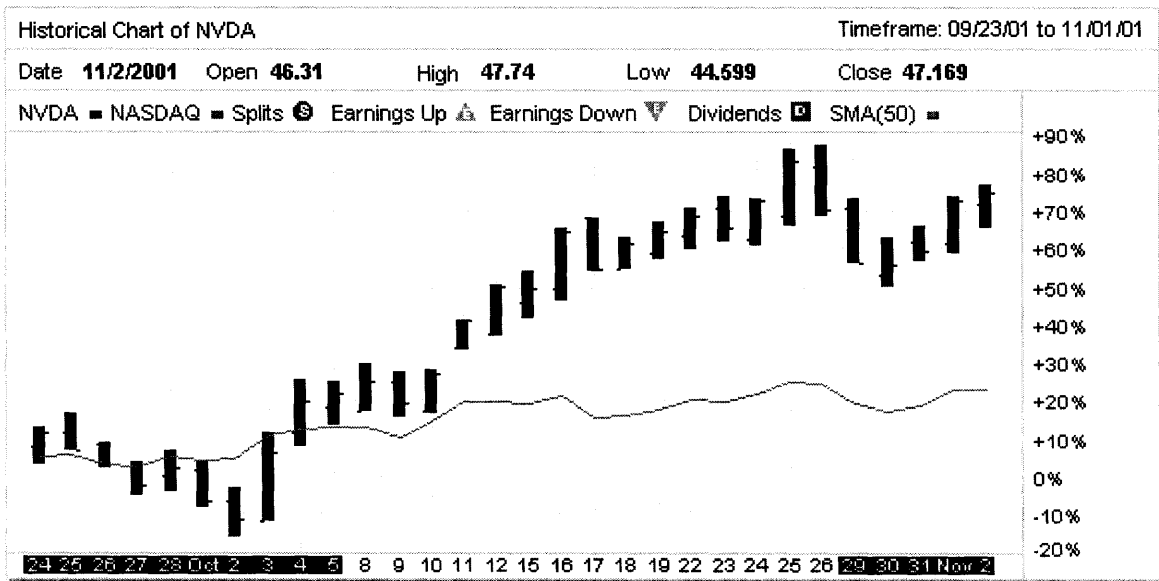


Figure 4.17: 6 Week Chart for MSFT

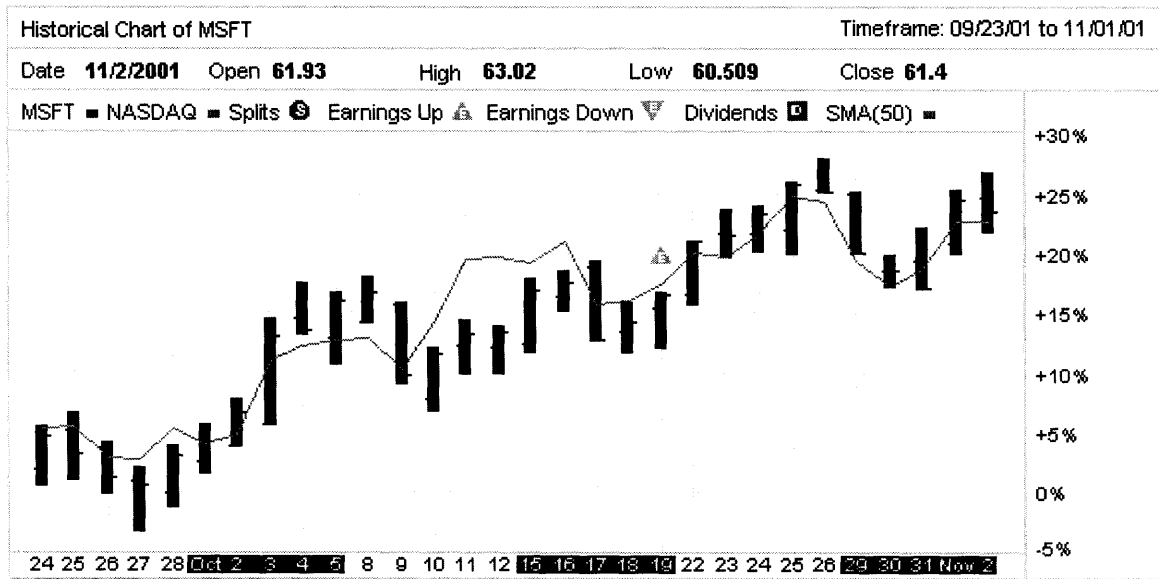


Figure 4.18: 6 Week Chart for EBAY

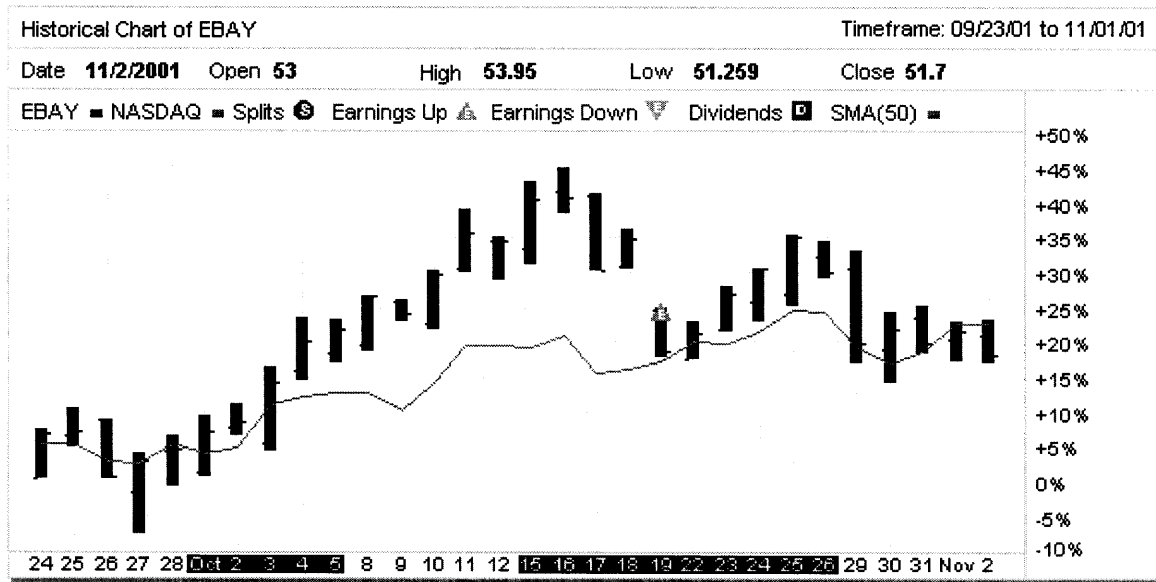
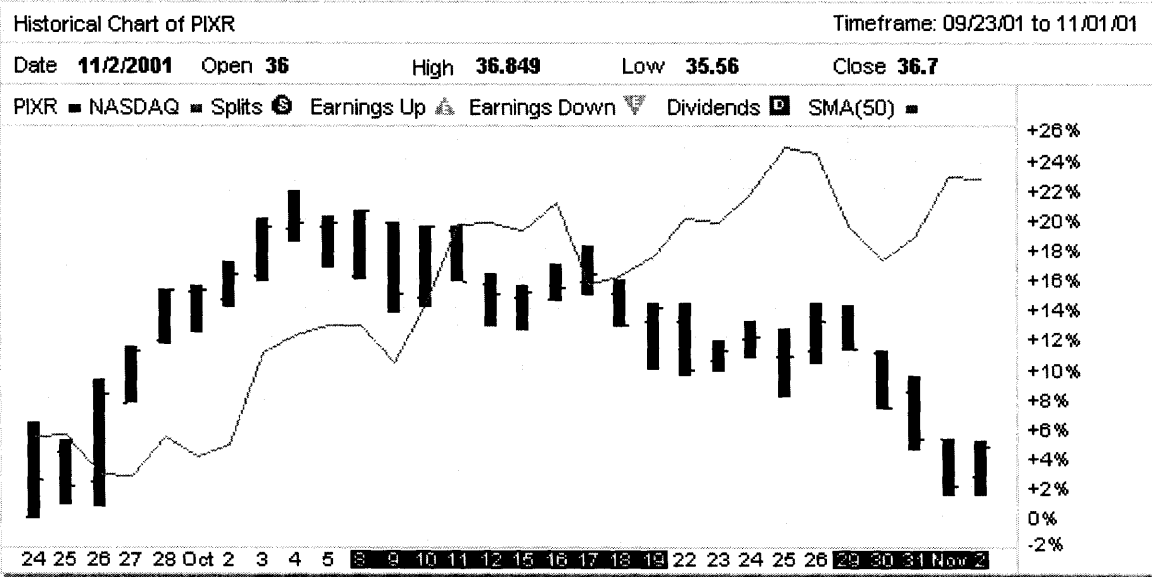


Figure 4.19: 6 Week Chart for BBBY



Figure 4.20: 6 Week Chart for PIXR



4.6.2 Portfolio Analysis

My portfolio did very well as a whole, increasing just under 28% for the six week investment period. Although this seems extremely high, we must put the gains in perspective by looking at the market as a whole. Because of the terrorist attacks, the market dropped a total of 16% in the week before we decided to invest. Basically, the market had nowhere to go but up and this was shown during our investment period with the NASDAQ index rising almost 23%. Now the increases made during these six weeks seem a bit more reasonable, only exceeding the market's growth by 5%. This increase is still quite impressive and I am extremely pleased my portfolio did this well.

Figure 4.21: Table Showing Value Over Six Week Simulation Period

	stock value	cash value	total value	
start	0.00	500,000.00	500,000.00	0.00%
9/24	536,674.99	-24,484.93	512,190.06	2.44%
9/25	534,272.99	-24,488.95	509,784.03	-0.47%
9/26	519,128.99	-24,492.98	494,636.01	-2.97%
9/27	511,240.99	-24,497.00	486,743.99	-1.60%
9/28	522,154.99	-24,501.02	497,653.96	2.24%
10/1	427,950.54	55,520.85	483,471.39	-2.85%
10/2	421,253.49	55,526.93	476,780.42	-1.38%
10/3	469,372.14	55,533.01	524,905.15	10.09%
10/4	498,474.29	55,539.09	554,013.38	5.55%
10/5	511,898.99	55,545.17	567,444.16	2.42%
10/8	508,805.16	54,099.86	562,905.02	-0.80%
10/9	496,703.64	54,105.79	550,809.42	-2.15%
10/10	525,220.52	54,111.71	579,332.23	5.18%
10/11	542,566.90	54,117.64	596,684.54	3.00%
10/12	534,647.46	54,123.56	588,771.02	-1.33%
10/15	533,525.28	57,251.17	590,776.44	0.34%
10/16	534,737.99	57,257.44	591,995.42	0.21%
10/17	519,018.19	57,263.71	576,281.90	-2.65%
10/18	518,899.86	57,269.98	576,169.84	-0.02%
10/19	521,359.23	57,276.25	578,635.48	0.43%
10/22	541,567.87	55,910.83	597,478.70	3.26%
10/23	542,197.55	55,916.95	598,114.50	0.11%
10/24	557,035.93	55,923.08	612,959.01	2.48%
10/25	593,676.01	55,929.20	649,605.21	5.98%
10/26	589,339.01	55,935.33	645,274.33	-0.67%
10/29	547,325.21	65,823.12	613,148.33	-4.98%
10/30	547,344.73	65,830.33	613,175.06	0.00%
10/31	544,823.50	65,837.54	610,661.04	-0.41%
11/1	564,711.76	65,844.75	630,556.51	3.26%
11/2	573,637.86	65,851.96	639,489.82	1.42%

The more important question is if my stock choices and investment strategy resulted in the increases or if it was just blind luck. I actually believe the answer is a mix of both. I think that my method for choosing my ten base stocks was very sound. Trusting the opinions of a range of experts who have spent their entire lives studying the market and using their opinions as a basis for selection seems to be a logical choice for someone such as myself. The strategy I used would need to be used for an extended

period of time, preferably a number of years, before any definite results could be determined as to whether it is successful or not. What I can conclude, however, is that the strategy worked for me during the time we chose to invest. The strategy worked very well in two of my investment weeks in particular, weeks two and five. These two weeks resulted in increases of about 15% and 11% respectively, with five of six stock choices being the best possible choices in both weeks. Each other week resulted in a small increase or decrease, but nothing significantly positive or negative.

By following the stock market for a number of weeks, I believe I have learned quite a bit. It seems like I have developed more of a sense when I should buy or sell, whether the idea is based on company news or past performance. Unfortunately, because of the strategy I chose to use, I could not act on these impulses as I would have liked to. It would be fun to invest using a more active trading strategy so I would have been able to follow through on my hunches. With all of the background information we have collected, I have a much better understanding of what to look for when choosing companies to invest in and trading strategies to use to buy and sell the stocks at hopefully optimum times. I have certainly learned exactly how one trades using the internet and I am much more familiar with what takes place during trading hours both on and off the floor. I believe all of these factors make this project a success.

4.6.3 Stock Tables

The following pages contain individual stock information for my ten stocks over the entire investment period. I kept track of the daily change and daily percentage change, as well as the weekly change and weekly percentage change. The NASDAQ index has also been recorded in the last of these tables.

Figure 4.22: Six Week Data for FISV and KLAC

prices	FISV					KLAC				
end 9/21	33.2	Chnge	%	w chg	w %	33.91	chnge	%	w chg	w %
end 9/24	34.39	1.19	3.584	1.19	3.584	34.39	0.48	1.416	0.48	1.416
end 9/25	33.47	-0.92	-2.68	0.27	0.813	35.65	1.26	3.664	1.74	5.131
end 9/26	32.97	-0.5	-1.49	-0.23	-0.69	32.68	-2.97	-8.33	-1.23	-3.63
end 9/27	34.39	1.42	4.307	1.19	3.584	31.57	-1.11	-3.4	-2.34	-6.9
end 9/28	34.2	-0.19	-0.55	1	3.012	31.58	0.01	0.032	-2.33	-6.87
end 10/1	31.99	-2.21	-6.46	-2.21	-6.46	30.9	-0.68	-2.15	-0.68	-2.15
end 10/2	31.93	-0.06	-0.19	-2.27	-6.64	29.31	-1.59	-5.15	-2.27	-7.19
end 10/3	34.42	2.49	7.798	0.22	0.643	32.24	2.93	9.997	0.66	2.09
end 10/4	33.51	-0.91	-2.64	-0.69	-2.02	33.55	1.31	4.063	1.97	6.238
end 10/5	34.81	1.3	3.879	0.61	1.784	33.41	-0.14	-0.42	1.83	5.795
end 10/8	33.89	-0.92	-2.64	-0.92	-2.64	36.36	2.95	8.83	2.95	8.83
end 10/9	33.82	-0.07	-0.21	-0.99	-2.84	32.92	-3.44	-9.46	-0.49	-1.47
end 10/10	36.15	2.33	6.889	1.34	3.849	33.66	0.74	2.248	0.25	0.748
end 10/11	35.9	-0.25	-0.69	1.09	3.131	38.86	5.2	15.45	5.45	16.31
end 10/12	35.05	-0.85	-2.37	0.24	0.689	39.17	0.31	0.798	5.76	17.24
end 10/15	35.02	-0.03	-0.09	-0.03	-0.09	36.63	-2.54	-6.48	-2.54	-6.48
end 10/16	35.12	0.1	0.286	0.07	0.2	38.52	1.89	5.16	-0.65	-1.66
end 10/17	34.27	-0.85	-2.42	-0.78	-2.23	35.21	-3.31	-8.59	-3.96	-10.1
end 10/18	35.22	0.95	2.772	0.17	0.485	34.88	-0.33	-0.94	-4.29	-11
end 10/19	36.01	0.79	2.243	0.96	2.739	36.51	1.63	4.673	-2.66	-6.79
end 10/22	35.92	-0.09	-0.25	-0.09	-0.25	39.25	2.74	7.505	2.74	7.505
end 10/23	38.01	2.09	5.818	2	5.554	39.2	-0.05	-0.13	2.69	7.368
end 10/24	38	-0.01	-0.03	1.99	5.526	40.86	1.66	4.235	4.35	11.91
end 10/25	39.11	1.11	2.921	3.1	8.609	45.25	4.39	10.74	8.74	23.94
end 10/26	38.03	-1.08	-2.76	2.02	5.61	44.16	-1.09	-2.41	7.65	20.95
end 10/29	36.9	-1.13	-2.97	-1.13	-2.97	41.38	-2.78	-6.3	-2.78	-6.3
end 10/30	36.55	-0.35	-0.95	-1.48	-3.89	39.66	-1.72	-4.16	-4.5	-10.2
end 10/31	37.19	0.64	1.751	-0.84	-2.21	40.86	1.2	3.026	-3.3	-7.47
end 11/1	38.3	1.11	2.985	0.27	0.71	44	3.14	7.685	-0.16	-0.36
end 11/2	38.87	0.57	1.488	0.84	2.209	45.02	1.02	2.318	0.86	1.947

Figure 4.23: Six Week Data for PAYX and PIXR

prices	PAYX					PIXR				
end 9/21	29.64	chnge	%	w chg	w %	35.07	chnge	%	w chg	w %
end 9/24	30.2	0.56	1.889	0.56	1.889	35.91	0.84	2.395	0.84	2.395
end 9/25	30	-0.2	-0.66	0.36	1.215	35.78	-0.13	-0.36	0.71	2.025
end 9/26	29.28	-0.72	-2.4	-0.36	-1.21	37.98	2.2	6.149	2.91	8.298
end 9/27	30.38	1.1	3.757	0.74	2.497	39	1.02	2.686	3.93	11.21
end 9/28	31.51	1.13	3.72	1.87	6.309	40.4	1.4	3.59	5.33	15.2
end 10/1	30.39	-1.12	-3.55	-1.12	-3.55	40.4	0	0	0	0
end 10/2	30.14	-0.25	-0.82	-1.37	-4.35	40.8	0.4	0.99	0.4	0.99
end 10/3	30.83	0.69	2.289	-0.68	-2.16	41.91	1.11	2.721	1.51	3.738
end 10/4	31.75	0.92	2.984	0.24	0.762	41.97	0.06	0.143	1.57	3.886
end 10/5	31.91	0.16	0.504	0.4	1.269	42	0.03	0.071	1.6	3.96
end 10/8	31.79	-0.12	-0.38	-0.12	-0.38	42.25	0.25	0.595	0.25	0.595
end 10/9	30.8	-0.99	-3.11	-1.11	-3.48	40.3	-1.95	-4.62	-1.7	-4.05
end 10/10	33.17	2.37	7.695	1.26	3.949	41.88	1.58	3.921	-0.12	-0.29
end 10/11	34.33	1.16	3.497	2.42	7.584	40.59	-1.29	-3.08	-1.41	-3.36
end 10/12	33.95	-0.38	-1.11	2.04	6.393	40.3	-0.29	-0.71	-1.7	-4.05
end 10/15	32.94	-1.01	-2.97	-1.01	-2.97	40.35	0.05	0.124	0.05	0.124
end 10/16	33.37	0.43	1.305	-0.58	-1.71	40.45	0.1	0.248	0.15	0.372
end 10/17	32.16	-1.21	-3.63	-1.79	-5.27	40.77	0.32	0.791	0.47	1.166
end 10/18	31.6	-0.56	-1.74	-2.35	-6.92	39.58	-1.19	-2.92	-0.72	-1.79
end 10/19	32.47	0.87	2.753	-1.48	-4.36	40	0.42	1.061	-0.3	-0.74
end 10/22	32.75	0.28	0.862	0.28	0.862	38.51	-1.49	-3.73	-1.49	-3.73
end 10/23	32.45	-0.3	-0.92	-0.02	-0.06	39	0.49	1.272	-1	-2.5
end 10/24	33.4	0.95	2.928	0.93	2.864	39.28	0.28	0.718	-0.72	-1.8
end 10/25	33.83	0.43	1.287	1.36	4.188	38.82	-0.46	-1.17	-1.18	-2.95
end 10/26	34.99	1.16	3.429	2.52	7.761	39.69	0.87	2.241	-0.31	-0.78
end 10/29	32.35	-2.64	-7.55	-2.64	-7.55	39.03	-0.66	-1.66	-0.66	-1.66
end 10/30	32.42	0.07	0.216	-2.57	-7.34	37.62	-1.41	-3.61	-2.07	-5.22
end 10/31	32.06	-0.36	-1.11	-2.93	-8.37	36.9	-0.72	-1.91	-2.79	-7.03
end 11/1	34.09	2.03	6.332	-0.9	-2.57	35.78	-1.12	-3.04	-3.91	-9.85
end 11/2	33.53	-0.56	-1.64	-1.46	-4.17	36.7	0.92	2.571	-2.99	-7.53

Figure 4.24: Six Week Data for LLTC and TLAB

prices	LLTC					TLAB				
end 9/21	32.54	chnge	%	w chg	w %	9.7	chnge	%	w chg	w %
end 9/24	34.5	1.96	6.023	1.96	6.023	10.46	0.76	7.835	0.76	7.835
end 9/25	34.67	0.17	0.493	2.13	6.546	10.5	0.04	0.382	0.8	8.247
end 9/26	32.61	-2.06	-5.94	0.07	0.215	10.45	-0.05	-0.48	0.75	7.732
end 9/27	31.39	-1.22	-3.74	-1.15	-3.53	9.89	-0.56	-5.36	0.19	1.959
end 9/28	32.8	1.41	4.492	0.26	0.799	9.88	-0.01	-0.1	0.18	1.856
end 10/1	30.45	-2.35	-7.16	-2.35	-7.16	9.77	-0.11	-1.11	-0.11	-1.11
end 10/2	30.1	-0.35	-1.15	-2.7	-8.23	9.3	-0.47	-4.81	-0.58	-5.87
end 10/3	34.07	3.97	13.19	1.27	3.872	10.51	1.21	13.01	0.63	6.377
end 10/4	36.83	2.76	8.101	4.03	12.29	11.42	0.91	8.658	1.54	15.59
end 10/5	36.68	-0.15	-0.41	3.88	11.83	12.3	0.88	7.706	2.42	24.49
end 10/8	37.95	1.27	3.462	1.27	3.462	12.34	0.04	0.325	0.04	0.325
end 10/9	35.69	-2.26	-5.96	-0.99	-2.7	12.36	0.02	0.162	0.06	0.488
end 10/10	38.39	2.7	7.565	1.71	4.662	13.03	0.67	5.421	0.73	5.935
end 10/11	42.36	3.97	10.34	5.68	15.49	13.92	0.89	6.83	1.62	13.17
end 10/12	41.21	-1.15	-2.71	4.53	12.35	13.83	-0.09	-0.65	1.53	12.44
end 10/15	39.35	-1.86	-4.51	-1.86	-4.51	12.97	-0.86	-6.22	-0.86	-6.22
end 10/16	41.13	1.78	4.524	-0.08	-0.19	12.97	0	0	-0.86	-6.22
end 10/17	37.04	-4.09	-9.94	-4.17	-10.1	13.03	0.06	0.463	-0.8	-5.78
end 10/18	36.32	-0.72	-1.94	-4.89	-11.9	12.46	-0.57	-4.37	-1.37	-9.91
end 10/19	37.04	0.72	1.982	-4.17	-10.1	12.24	-0.22	-1.77	-1.59	-11.5
end 10/22	39.19	2.15	5.805	2.15	5.805	12.68	0.44	3.595	0.44	3.595
end 10/23	38.33	-0.86	-2.19	1.29	3.483	12.41	-0.27	-2.13	0.17	1.389
end 10/24	39.35	1.02	2.661	2.31	6.237	12.71	0.3	2.417	0.47	3.84
end 10/25	40.86	1.51	3.837	3.82	10.31	15	2.29	18.02	2.76	22.55
end 10/26	40.58	-0.28	-0.69	3.54	9.557	15.33	0.33	2.2	3.09	25.25
end 10/29	37.4	-3.18	-7.84	-3.18	-7.84	14.7	-0.63	-4.11	-0.63	-4.11
end 10/30	36.34	-1.06	-2.83	-4.24	-10.4	13.31	-1.39	-9.46	-2.02	-13.2
end 10/31	38.8	2.46	6.769	-1.78	-4.39	13.65	0.34	2.554	-1.68	-11
end 11/1	41.57	2.77	7.139	0.99	2.44	13.5	-0.15	-1.1	-1.83	-11.9
end 11/2	40.96	-0.61	-1.47	0.38	0.936	13.64	0.14	1.037	-1.69	-11

Figure 4.25: Six Week Data for BBBY and EBAY

prices	BBBY					EBAY				
end 9/21	20.74	chnge	%	w chg	w %	43.79	chnge	%	w chg	w %
end 9/24	23.18	2.44	11.76	2.44	11.76	46.78	2.99	6.828	2.99	6.828
end 9/25	22.96	-0.22	-0.95	2.22	10.7	46.89	0.11	0.235	3.1	7.079
end 9/26	25.09	2.13	9.277	4.35	20.97	44.04	-2.85	-6.08	0.25	0.571
end 9/27	25.82	0.73	2.91	5.08	24.49	45.11	1.07	2.43	1.32	3.014
end 9/28	25.46	-0.36	-1.39	4.72	22.76	45.75	0.64	1.419	1.96	4.476
end 10/1	24.79	-0.67	-2.63	-0.67	-2.63	46.97	1.22	2.667	1.22	2.667
end 10/2	25.84	1.05	4.236	0.38	1.493	47.49	0.52	1.107	1.74	3.803
end 10/3	28.25	2.41	9.327	2.79	10.96	49.95	2.46	5.18	4.2	9.18
end 10/4	26.66	-1.59	-5.63	1.2	4.713	52.56	2.61	5.225	6.81	14.89
end 10/5	27.52	0.86	3.226	2.06	8.091	53.4	0.84	1.598	7.65	16.72
end 10/8	26.92	-0.6	-2.18	-0.6	-2.18	55.42	2.02	3.783	2.02	3.783
end 10/9	26.6	-0.32	-1.19	-0.92	-3.34	54.39	-1.03	-1.86	0.99	1.854
end 10/10	27.14	0.54	2.03	-0.38	-1.38	56.88	2.49	4.578	3.48	6.517
end 10/11	29.1	1.96	7.222	1.58	5.741	59.44	2.56	4.501	6.04	11.31
end 10/12	28.66	-0.44	-1.51	1.14	4.142	58.91	-0.53	-0.89	5.51	10.32
end 10/15	28.54	-0.12	-0.42	-0.12	-0.42	61.57	2.66	4.515	2.66	4.515
end 10/16	28.19	-0.35	-1.23	-0.47	-1.64	61.6	0.03	0.049	2.69	4.566
end 10/17	27.22	-0.97	-3.44	-1.44	-5.02	57.09	-4.51	-7.32	-1.82	-3.09
end 10/18	26.75	-0.47	-1.73	-1.91	-6.66	59.06	1.97	3.451	0.15	0.255
end 10/19	27.53	0.78	2.916	-1.13	-3.94	51.95	-7.11	-12	-6.96	-11.8
end 10/22	26.81	-0.72	-2.62	-0.72	-2.62	53.08	1.13	2.175	1.13	2.175
end 10/23	26.84	0.03	0.112	-0.69	-2.51	55.58	2.5	4.71	3.63	6.987
end 10/24	26.88	0.04	0.149	-0.65	-2.36	57.18	1.6	2.879	5.23	10.07
end 10/25	27.26	0.38	1.414	-0.27	-0.98	59.13	1.95	3.41	7.18	13.82
end 10/26	26.87	-0.39	-1.43	-0.66	-2.4	57	-2.13	-3.6	5.05	9.721
end 10/29	24.3	-2.57	-9.56	-2.57	-9.56	52.6	-4.4	-7.72	-4.4	-7.72
end 10/30	24.97	0.67	2.757	-1.9	-7.07	53.41	0.81	1.54	-3.59	-6.3
end 10/31	25.06	0.09	0.36	-1.81	-6.74	52.48	-0.93	-1.74	-4.52	-7.93
end 11/1	25.88	0.82	3.272	-0.99	-3.68	53.24	0.76	1.448	-3.76	-6.6
end 11/2	26.92	1.04	4.019	0.05	0.186	51.7	-1.54	-2.89	-5.3	-9.3

Figure 4.26: Six Week Data for MSFT and NVDA

prices	MSFT					NVDA				
end 9/21	49.71	chnge	%	w chg	w %	26.97	chnge	%	w chg	w %
end 9/24	52.01	2.3	4.627	2.3	4.627	30	3.03	11.23	3.03	11.23
end 9/25	51.3	-0.71	-1.37	1.59	3.199	28.83	-1.17	-3.9	1.86	6.897
end 9/26	50.27	-1.03	-2.01	0.56	1.127	27.79	-1.04	-3.61	0.82	3.04
end 9/27	49.94	-0.33	-0.66	0.23	0.463	26.25	-1.54	-5.54	-0.72	-2.67
end 9/28	51.17	1.23	2.463	1.46	2.937	27.47	1.22	4.648	0.5	1.854
end 10/1	51.75	0.58	1.133	0.58	1.133	25.14	-2.33	-8.48	-2.33	-8.48
end 10/2	53.05	1.3	2.512	1.88	3.674	23.88	-1.26	-5.01	-3.59	-13.1
end 10/3	56.25	3.2	6.032	5.08	9.928	28.58	4.7	19.68	1.11	4.041
end 10/4	56.44	0.19	0.338	5.27	10.3	32.29	3.71	12.98	4.82	17.55
end 10/5	57.74	1.3	2.303	6.57	12.84	32.9	0.61	1.889	5.43	19.77
end 10/8	58.05	0.31	0.537	0.31	0.537	33.64	0.74	2.249	0.74	2.249
end 10/9	54.56	-3.49	-6.01	-3.18	-5.51	32.18	-1.46	-4.34	-0.72	-2.19
end 10/10	55.51	0.95	1.741	-2.23	-3.86	34.25	2.07	6.433	1.35	4.103
end 10/11	56.32	0.81	1.459	-1.42	-2.46	37.96	3.71	10.83	5.06	15.38
end 10/12	56.38	0.06	0.107	-1.36	-2.36	40.43	2.47	6.507	7.53	22.89
end 10/15	58.06	1.68	2.98	1.68	2.98	40.25	-0.18	-0.45	-0.18	-0.45
end 10/16	58.45	0.39	0.672	2.07	3.672	44.3	4.05	10.06	3.87	9.572
end 10/17	56.03	-2.42	-4.14	-0.35	-0.62	41.7	-2.6	-5.87	1.27	3.141
end 10/18	56.75	0.72	1.285	0.37	0.656	43.46	1.76	4.221	3.03	7.494
end 10/19	57.9	1.15	2.026	1.52	2.696	44.36	0.9	2.071	3.93	9.721
end 10/22	60.16	2.26	3.903	2.26	3.903	45.41	1.05	2.367	1.05	2.367
end 10/23	60.43	0.27	0.449	2.53	4.37	44.61	-0.8	-1.76	0.25	0.564
end 10/24	61.32	0.89	1.473	3.42	5.907	46.58	1.97	4.416	2.22	5.005
end 10/25	62.56	1.24	2.022	4.66	8.048	49.31	2.73	5.861	4.95	11.16
end 10/26	62.2	-0.36	-0.58	4.3	7.427	45.79	-3.52	-7.14	1.43	3.224
end 10/29	59.64	-2.56	-4.12	-2.56	-4.12	42.07	-3.72	-8.12	-3.72	-8.12
end 10/30	58.88	-0.76	-1.27	-3.32	-5.34	42	-0.07	-0.17	-3.79	-8.28
end 10/31	58.15	-0.73	-1.24	-4.05	-6.51	42.86	0.86	2.048	-2.93	-6.4
end 11/1	61.84	3.69	6.346	-0.36	-0.58	46.52	3.66	8.539	0.73	1.594
end 11/2	61.4	-0.44	-0.71	-0.8	-1.29	47.17	0.65	1.397	1.38	3.014

Figure 4.27: Six Week Data for NSDQ

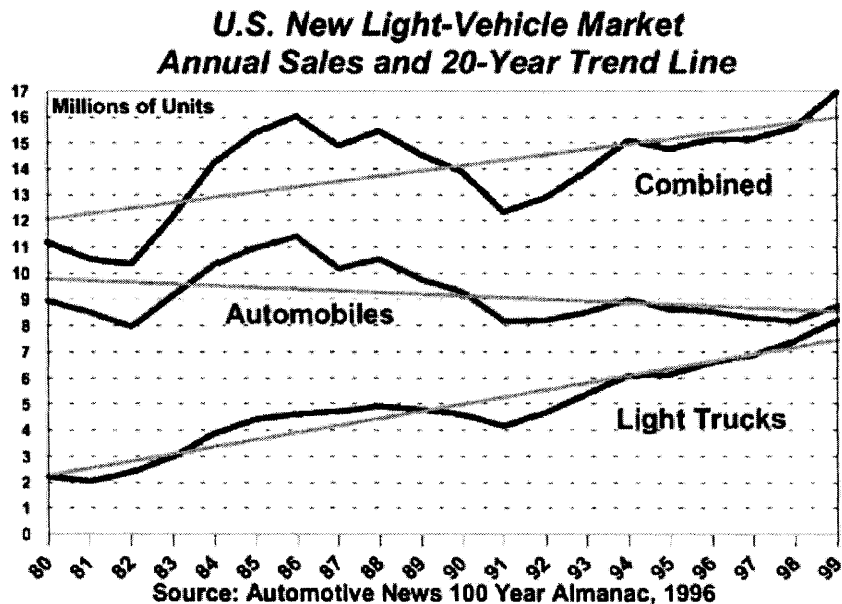
prices	NSDQ				
end 9/21	1423.19	chnge	%	w chg	w %
end 9/24	1499.4	76.21	5.355	76.21	5.355
end 9/25	1501.64	2.24	0.149	78.45	5.512
end 9/26	1464.04	-37.6	-2.5	40.85	2.87
end 9/27	1460.71	-3.33	-0.23	37.52	2.636
end 9/28	1498.8	38.09	2.608	75.61	5.313
end 10/1	1480.45	-18.3	-1.22	-18.3	-1.22
end 10/2	1492.33	11.88	0.802	-6.47	-0.43
end 10/3	1580.81	88.48	5.929	82.01	5.472
end 10/4	1597.31	16.5	1.044	98.51	6.573
end 10/5	1605.3	7.99	0.5	106.5	7.106
end 10/8	1605.95	0.65	0.04	0.65	0.04
end 10/9	1570.19	-35.8	-2.23	-35.1	-2.19
end 10/10	1626.26	56.07	3.571	20.96	1.306
end 10/11	1701.47	75.21	4.625	96.17	5.991
end 10/12	1703.4	1.93	0.113	98.1	6.111
end 10/15	1696.31	-7.09	-0.42	-7.09	-0.42
end 10/16	1722.07	25.76	1.519	18.67	1.096
end 10/17	1646.34	-75.7	-4.4	-57.1	-3.35
end 10/18	1652.72	6.38	0.388	-50.7	-2.98
end 10/19	1671.31	18.59	1.125	-32.1	-1.88
end 10/22	1708.08	36.77	2.2	36.77	2.2
end 10/23	1704.44	-3.64	-0.21	33.13	1.982
end 10/24	1731.54	27.1	1.59	60.23	3.604
end 10/25	1775.47	43.93	2.537	104.2	6.232
end 10/26	1768.96	-6.51	-0.37	97.65	5.843
end 10/29	1699.52	-69.4	-3.93	-69.4	-3.93
end 10/30	1667.41	-32.1	-1.89	-102	-5.74
end 10/31	1690.2	22.79	1.367	-78.8	-4.45
end 11/1	1746.3	56.1	3.319	-22.7	-1.28
end 11/2	1745.73	-0.57	-0.03	-23.2	-1.31

5.0 SIMULATED TRADING IN THE AUTOMOTIVE INDUSTRY

5.1 Market Sector Analysis

In just over the last one hundred years, the automotive industry in the United States has grown to be one of the most important industries in our economy today. According to the Commerce Department's Department of Automotive Affairs, consumers and business purchases in the U.S. automotive industry soared to an estimated \$400 billion in the year 2000. This figure can be attributed to the record sales slightly over 17 million vehicles - adding to the 300 million cars on the roads already today. As shown in figure 5.1, this sales trend has been in apparent for the last decade and seems to be continuing.

Figure 5.1: 20-Year Trend of Automobile Sales



In actual fact, in 1999, record sales of light vehicles (passenger cars, station wagons, vans, sport utilities, pick-up trucks and “cross-over vehicles”) surprised everyone. Instead of an expected decline, the market rose by nearly 9% to a historical high of 16.9 million units. This surpassed 1986’s previous record of 16.1 million vehicles by almost 5%.

The U.S. automobile industry was expected to perform well in 2000, infused with the energy of both a hearty domestic market, as well as renewed demand from the Asian nations. High levels of U.S. employment, consumer confidence, unprecedented advances in manufacturing and office productivity, and purchasing power were also predicted all of which were supported by the wealth engine of the U.S. stock market. The year 2000 marked the first time in U.S. history that a consecutive 6-year period included five years with sales above 15 million units annually.

Some analysts have predicted another record year in 2001 for the auto industry, with some forecasting sales as high as 17.7 million units. However, the U.S. economy is softening which should reduce sales to between 15.5 to 16.0 million units in 2001.

U.S. automobile manufacturers have continued to emphasize profitability over market share. Indeed, this objective is met by focusing on more profitable product lines such as sport utility vehicle (SUV) segments. However, profit margins are under pressure for both General Motors and Ford who generate a great deal of their business in this market. The main reasons for that are the slowing economic growth, large and negative consumer debt, tighter credit, and deteriorating consumer confidence. Any significant reduction in production volume will put these two company’s’ profits under severe pressure.

These days automotive companies tend to not rely of specific markets but rather diversify and acquire new divisions. In January 1999, Volvo agreed to sell its passenger automobile business to Ford Motor Company. The deal gave Ford Motor Company increased penetration into the European market. In addition, it adds another luxury brand to its portfolio of car models.

Daimler-Benz recently acquired the Chrysler Motor Company for \$56 billion. The acquisition gave Daimler-Benz (now Daimler-Chrysler) access to a broader worldwide distribution network. However, Daimler-Chrysler also had problems to deal with. First, Daimler-Chrysler's sales plummeted and they have announced massive layoffs. There's also continuing friction between the Daimler's home office and the Chrysler unit. This has been a distraction to the company. Further, a series of aggressive acquisitions (most notably Chrysler) and investments has eroded the company's financial resources.

With all of these figures, it is also no surprise that the U.S. automobile market is the world's largest consumer market for passenger vehicles. It is this reason coupled with the fact that there is constant news of mergers and other events that should make the automotive industry interesting to watch and trade stock in over the next six weeks.

5.2 Trading Strategy

After performing preliminary research on a variety of different stock trading strategies, it has been determined that a formally defined or even highly regarded trading strategy will not be used in this portion of the stock trading simulation. Instead, a fairly simple, yet seemingly effective strategy will be created and adopted for this stock trading simulation. This developed strategy is outlined below.

Once the initial investments are made in a number of companies within the automotive industry, their stock price will be tracked on a daily basis. At the end of each and every day during the trading simulation period, the stock's closing price will be examined and compared to the same stock's closing price on the previous day. If the stock price increases a few percent in one day, the stock will be sold. Inversely, if the stock price drops more than few percent in one day the stock will be bought.

Of course, this notion of buying when low and selling when high on a daily basis is merely a guideline for the trading simulation. Sometimes certain transactions might be conducted slightly outside of the strategy's guidelines. In those cases, the factors that influence those exceptional trading decisions could be things such as corporate news offerings, current events and even based on 'gut' feelings.

The actual decision to adopt such an unorthodox overall trading strategy, however, has been influenced by a number of other issues. These issues have varied from everything from the current economic state of the nation and the subsequent daily market fluctuations to the short six-week time frame of the simulation in which longer term strategies cannot be adopted.

In any event, it is uncertain whether or not this strategy will yield positive results or lead to financial disaster. Ideally, trading with those guidelines should, in theory, yield significant profitable results. However, since this strategy has basically been randomly developed and never before been tested, it is certainly a risky venture to say the least. The information contained in the next and subsequent sections should demonstrate the overall effectiveness or ineffectiveness of this chosen strategy.

5.3 Stock Selection Process

Based on the guidelines established by the group, an initial amount of \$500,000 will be invested into several companies within the group member's chosen industry – in this case the automotive industry. Figure 5.2 shows all of the heavily traded companies within the automotive industry.

Figure 5.2: Companies Traded in the Automotive Industry

SYMBOL	COMPANY NAME
ATAC	Aftermarket Technology Corp.
AXL	American Axle & Manufacturing Hldg., Inc.
ARGN	Amerigon, Inc.
ARM	Arvinmeritor, Inc.
ALV	Autoliv, Inc.
BDGA	Bandag, Inc.
BWA	Borg-Warner Automotive, Inc.
CBA	Brilliance China Auto Hldg., Ltd.
CKC	Collins & Aikman Corp.
CTB	Cooper Tire & Rubber Co.
CME	Core Materials Corp.
DCX	Daimlerchrysler Ag
DCN	Dana Corp.
DECA	Decoma International, Inc.
DPH	Delphi Automotive Systems Corp.
DES	Desc, S.A. de C.V.
DON	Donnelly Corp.
DRRA	Dura Automotive Systems CI A
EDEL	Edelbrock Corp.
EVRC	Evercel, Inc.
EX	Exide Corp.
FSCR	Federal Screw Works
FMO	Federal-Mogul Corp.
FIA	Fiat S.p.A.
FMST	FinishMaster, Inc.
F	Ford Motor Co., Del
GM	General Motors Corp.
GNTX	Gentex Corp.
GPC	Genuine Parts Co.
GLAR	Glas-Aire Industries Group, Ltd.
HMF	Hastings Manufacturing Co.
HAZ	Hayes Lemmerz International, Inc.
HMC	Honda Motor Co., Ltd.
IMCO	Impco Technologies, Inc.
INMT	Intermet Corp.
JCI	Johnson Controls, Inc.
LEA	Lear Corp.
LOJN	LoJack Corp.
LUND	Lund International Hldg., Inc.
MGA	Magna International, Inc.
CGUL	Margate Industries, Inc.
(cont.)	
MCLN	Mclaren Performance Technology, Inc.
MODI	Modine Manufacturing Co.
NER	Newcor, Inc.
NSANY	Nissan Motor Co., Ltd.
NOBL	Noble International, Ltd.
OE	Orbital Engine Corp., Ltd.
PDLPY	Pacific Dunlop, Ltd.
PZL	Pennzoil-Quaker State Co.
RBIN	R & B, Inc.
RAY	Raytech Corp. Del
SNSG	Sense Technologies, Inc.
SMTR	Smartire Systems, Inc.
SPRI	Sports Resorts International, Inc.
AJX	Standard Automotive Corp.
SMP	Standard Motor Products, Inc.
STCR	Starcraft Corp.
STRT	Strattec Security Corp.
SUP	Superior Industries International, Inc.
TO	Tech/Ops Sevcon, Inc.
TEN	Tenneco Automotive, Inc.
T SMA	Tesma International, Inc.
GT	Goodyear Tire & Rubber Co.
TWR	Tower Automotive, Inc.
TM	Toyota Motor Corp.
TPR	TransPro, Inc.
TRW	TRW, Inc.
TDI	Twin Disc, Inc.
UVSL	Universal Automotive Industries
UFMG	Universal Manufacturing Co.
VC	Visteon Corp.
WCST	Wecast Industries, Inc.
WMCO	Williams Controls, Inc.

Initially, after viewing the large number of companies that exist in the automotive industry, a few possible options are being considered. The first would be to day-trade all or most of the companies without really doing any in-depth research about them. This option would require a considerable amount of time solely devoted to just trading activities.

The other option is to carefully select a handful of seven to nine companies, perform slightly more detailed but sufficient research about them, and then just trade stocks within that group.

After contemplating this issue, it was determined that once again, due to the time constraints imposed on the group; the second option will be considered. This option should take a more feasible approach during the six week simulation because the overall information tracking function should be simplified. Also, since more detailed research will be performed about the selected companies, smarter trading decisions can be made which, hopefully, will lead to a greater return on investment.

In figure 5.3, the list of the eight companies that were selected to be traded is shown. These particular eight companies were selected for a variety of reasons. First and foremost, all eight of them are very large corporations with familiar names and familiar products. The familiarity of these companies can be associated to personal experience with them, to their success, and in some cases, to their mistakes which are often glorified by the unrelenting media. In any case, finding general corporate and financial information should be fairly easy.

Figure 5.3: Companies Selected For Trading

Symbol	Company Name
CTB	Cooper Tire & Rubber Co.
DCX	Daimler-Chrysler Ag.
F	Ford Motor Co.
GM	General Motors Corp.
GT	Goodyear Tire & Rubber Co.
HMC	Honda Motor Co., Ltd.
NSANY	Nissan Motor Co., Ltd.
TM	Toyota Motor Corp.

Furthermore, larger, better known companies should be more interesting to track in the market. Daily activities are almost always released to the press and in turn usually create interesting financial situations. Some of these activities such as the Daimler-Benz / Chrysler merger and Ford's acquisition of Volvo that were discussed earlier and are perfect examples of these large companies making news.

Some other reasons for selecting these eight companies were because the majority of background automotive industry research was performed with domestic companies and to be consistent, domestic manufacturers were chosen. That is not to say that the company has to be solely based in the United States. The company can be based internationally but it must have a large presence and produce goods and services here in the United States.

As mentioned earlier, now that the eight companies are selected, a detailed investigation will be performed about each and the results recorded. For some, the action of choosing the companies then researching them may seem strange. Just to clarify, this selection represents the group in which trading will occur, not necessarily the companies that were found to be financially better than others. Further analysis will determine which of the eight stocks will be traded.

5.4 Company Backgrounds

The following pages contain company background research that is being conducted primarily to gain a better understanding of what the company does as well as investigate the company's financial position. The majority of this information was obtained on the Internet from each company's corporate web page and from other various sources, such as:

FIS Online (<http://www.fisonline.com/>)

NASDAQ (<http://www.nasdaq.com>)

CBS Marketwatch (<http://cbs.marketwatch.com>)

For each company, a general overview will be given about their corporate structure and also a short summary about their products and services will be presented. Some of the key financial data that will be used to evaluate the company will also be displayed. The 52-Week high and low prices will be displayed as well as the Price to Earnings (P/E) ratio and the Earnings Per Share (EPS) figure. Finally, a chart showing the companies stock price and trade volume for the past year will be presented.

5.4.1 Cooper Tire & Rubber Company (CTB)

The Cooper Tire & Rubber Company is engaged in developing, manufacturing and marketing products for the transportation industry and its products are primarily rubber-based. The Cooper Tire & Rubber Company has two reportable segments - Tire and Automotive.

The Tire segment produces automobile, truck and motorcycle tires and inner tubes which are sold nationally and internationally in the replacement tire market to independent dealers, wholesale distributors and large retail chains, and supplies equipment and materials to the truck tire re-treading industry.

The Automotive segment produces body sealing systems, active and passive vibration control systems, and fluid handling systems primarily for the global automotive original equipment manufacturing (OEM) and replacement markets.

The company has international operations in the United Kingdom, Canada, Mexico, Brazil, Spain, France, Poland and Germany. International sales accounted for 16% of 2000 revenues. Tires and inner tubes accounted for 51% of 2000 revenues and sealing systems and hose assemblies, 49%.

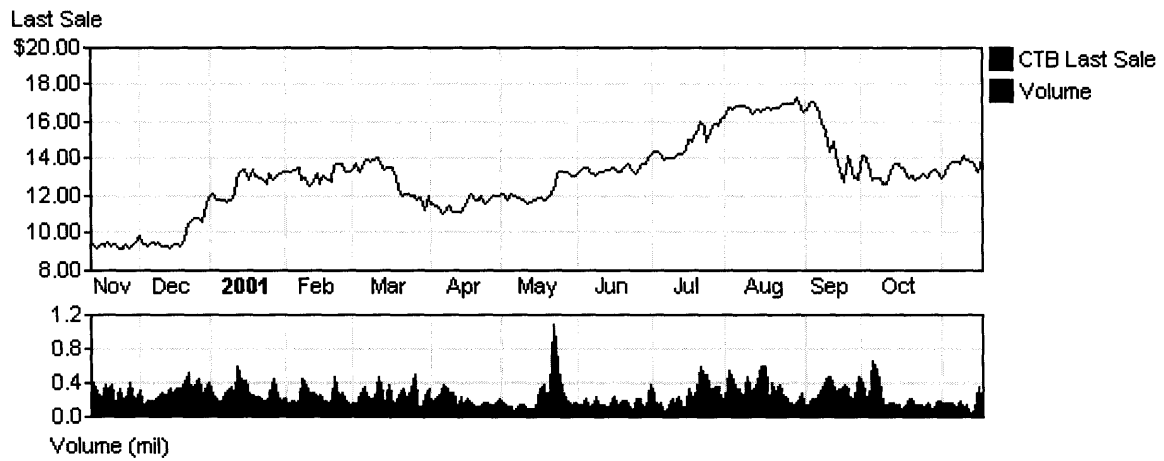
52- Week High - \$17.43

52- Week Low - \$9.19

P/E Ratio – 23.86

EPS - \$0.59

Figure 5.4: CTB 52-Week Stock Price & Volume



5.4.2 Daimler-Chrysler Ag. (DCX)

Daimler-Chrysler provides a wide range of transportation products, including passenger cars and commercial vehicles, commercial and military aircraft, rail systems, and also financial and information technology services. DaimlerChrysler operates in six business segments: Mercedes-Benz Passenger Cars & smart, Chrysler Group, Commercial Vehicles, Services, Aerospace, and Other.

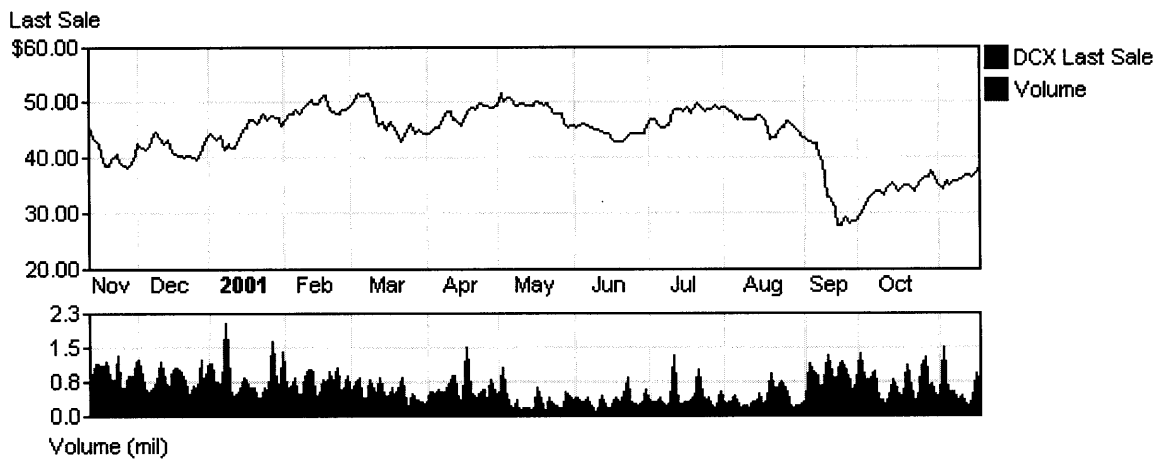
52-Week High - \$52.72

52-Week Low - \$25.60

P/E Ratio – 55.87

EPS - \$0.69

Figure 5.5: DCX 52-Week Stock Price & Volume



5.4.3 Ford Motor Company (F)

The Ford Motor Company is a producer of cars and trucks, and along with its subsidiaries, is engaged in other businesses, including manufacturing automotive components and systems and financing and renting vehicles and equipment. The principal activities of the company are within two principal business segments.

The Automotive segment consists of the design, manufacture, sale and service of cars, trucks, automotive components and systems. The Financial Services segment consists of vehicle-related financing, leasing and insurance, renting and leasing of cars and trucks and renting industrial and construction equipment and other activities.

Visteon Automotive Systems spun-off during the second quarter of 2000. On June 30th, 2000, the Company purchased the Land Rover business from the BMW Group. Automotive accounted for 83% of 2000 revenues; Ford Credit Services, 14% and rental of vehicle and equipment, 3%.

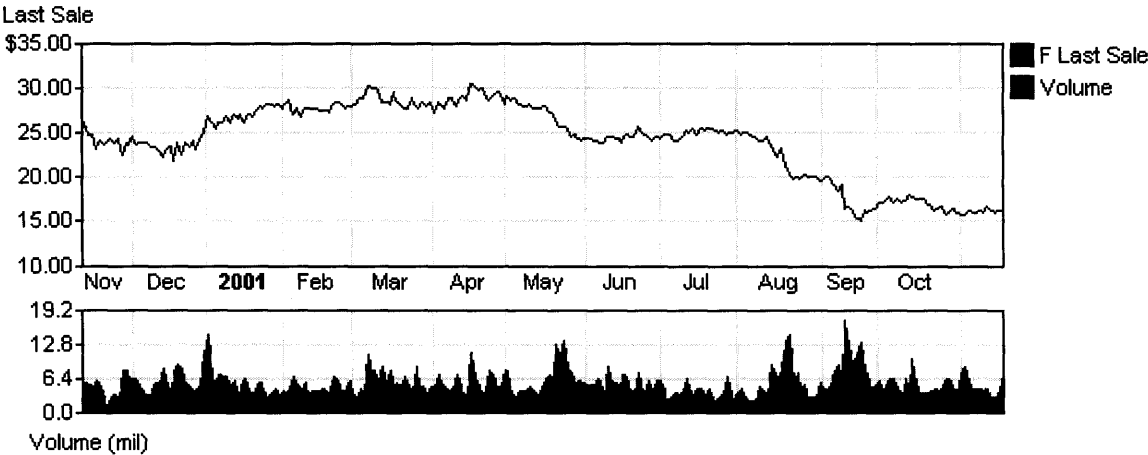
52-Week High - \$31.42

52-Week Low - \$14.70

P/E Ratio – 48.06

EPS - \$0.34

Figure 5.6: F 52-Week Stock Price & Volume



5.4.4 General Motors Corporation (GM)

The principal activities of The General Motors Company are divided into three business segments: Automotive, Communications Services and Other Operations. These segments consist of the design, manufacture and markets cars, trucks, locomotives and heavy-duty transmissions and related parts and accessories.

GM's automotive business operating segment, General Motors Automotive (GMA), is comprised of four regions: GM North America (GMNA), GM Europe (GME), GM Asia/Pacific (GMAP), and GM Latin America/Africa/Mid-East (GMLAAM). GMNA designs, manufactures, and markets vehicles primarily in North America under the following nameplates: Chevrolet, Pontiac, GMC, Oldsmobile, Buick, Cadillac, and Saturn. GME, GMAP and GMLAAM operate outside North America with vehicles designed, manufactured and marketed under the following nameplates: Opel, Vauxhall, Holden, Isuzu, Saab, Chevrolet, GMC, and Cadillac.

In the Communications Services segment, Hughes Electronics Corporation provides digital entertainment, information and communications services and satellite-based private business networks;

Finally, GM's Other Operations consist of Financing and Insurance Operations. The main segment here is General Motors Acceptance Corporation, which provides a range of financial services including consumer vehicle financing, full-service leasing and fleet leasing, dealer financing, car and truck extended service contracts, residential and commercial mortgage services, commercial, vehicle, and homeowners' insurance, and asset-based lending.

Automotive, communications services and other operations accounted for 87% of 2000 revenues and financing and insurance operations 13%.

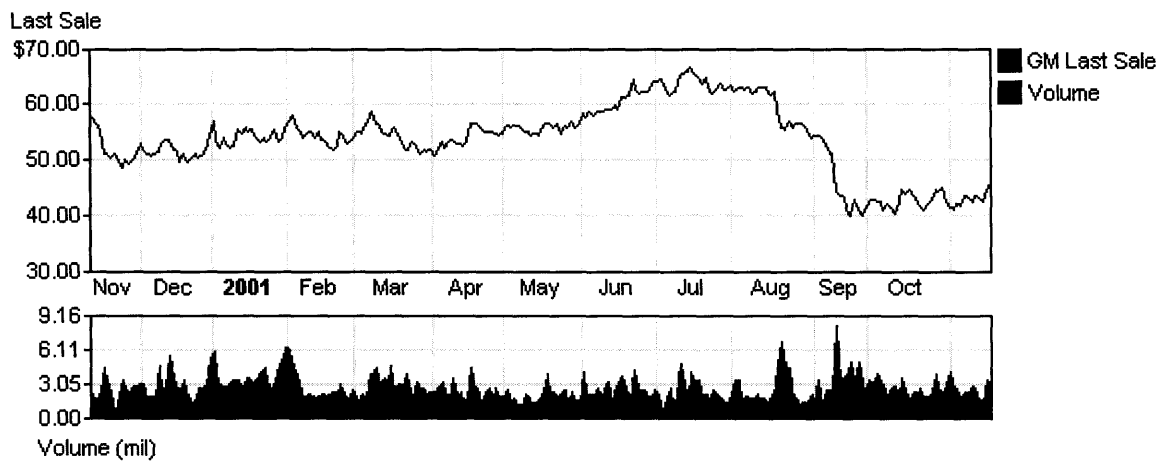
52-Week High – \$67.80

52-Week Low – \$39.17

P/E Ratio – 13.04

EPS - \$3.53

Figure 5.7: GM 52-Week Stock Price & Volume



5.4.5 Goodyear Tire & Rubber Company (GT)

The Goodyear Tire & Rubber Company operates in three operating business units: Tire Segments: consists of North America Tire, European Union Tire, Eastern Europe, Africa and Middle East Tire, Latin American Tire and Asia Tire. The Company's principal business is the development, manufacture, distribution and sale of tires and related products and services worldwide.

Goodyear also manufactures and markets several lines of rubber and other products for the transportation industry and various other industrial and consumer markets and numerous rubber-related chemicals for various applications, provides automotive repair and other services at retail and commercial outlets and sells various other products.

Goodyear also manufactures automotive belts and hoses, air springs, engine mounts, and various chassis parts for motor vehicles. Goodyear also produces various engineered rubber products, including: conveyor and power transmission belts; air, steam, oil, water, gasoline, materials handling and hydraulic hose for industrial applications; tank tracks; and various other products.

The principal customers of the Company include DaimlerChrysler, Ford, General Motors and others. The Tire segment accounted for 85% of 2000 revenues; engineered products, 8%; chemical products, 7% and other.

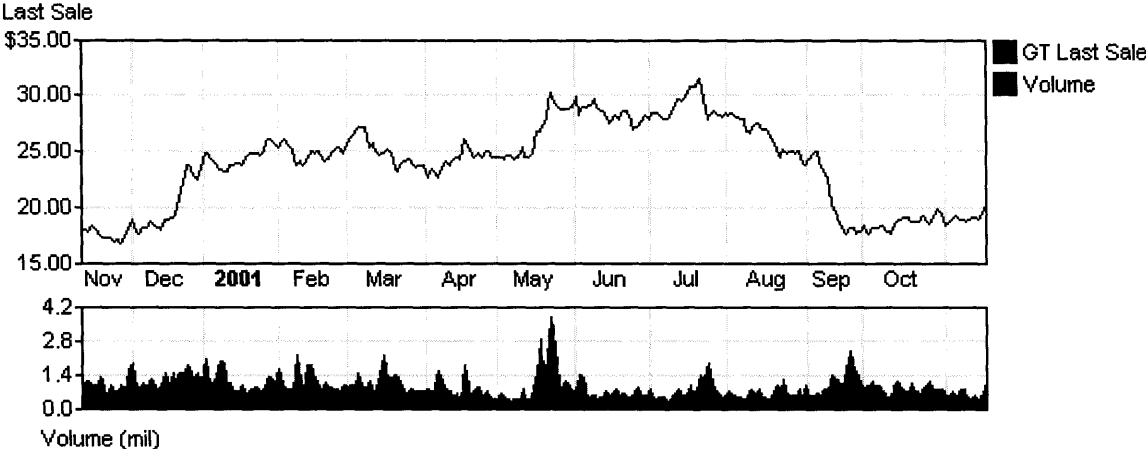
52-Week High – \$32.10

52-Week Low – \$16.70

P/E Ratio – 0.00

EPS - \$0.56

Figure 5.8: GT 52-Week Stock Price & Volume



5.4.6 Honda Motor Company (HMC)

Honda Motor Company manufactures automobiles, motorcycles and power products. Honda develops and manufactures a wide variety of products, ranging from small general purpose engines to specialty sports cars that incorporate their internal combustion engine technology. Some of their principal vehicles include: Accord, Accord Wagon, Civic, Prelude, Integra, NSX, Legend and CRV.

The company also provides financing for the sale of its motorcycles, automobiles and power products. There were approximately 11.5 million Honda engines sold worldwide during the fiscal year 2000. The company has subsidiaries throughout the world including North America, Pakistan, the Philippines, India, and South America & Europe. International revenues accounted for 70% of fiscal year 2001 revenues.

Automobile business accounted for 81% of fiscal year 2001 revenues; motorcycle business, 12%; financial services, 3% & other, 4%.

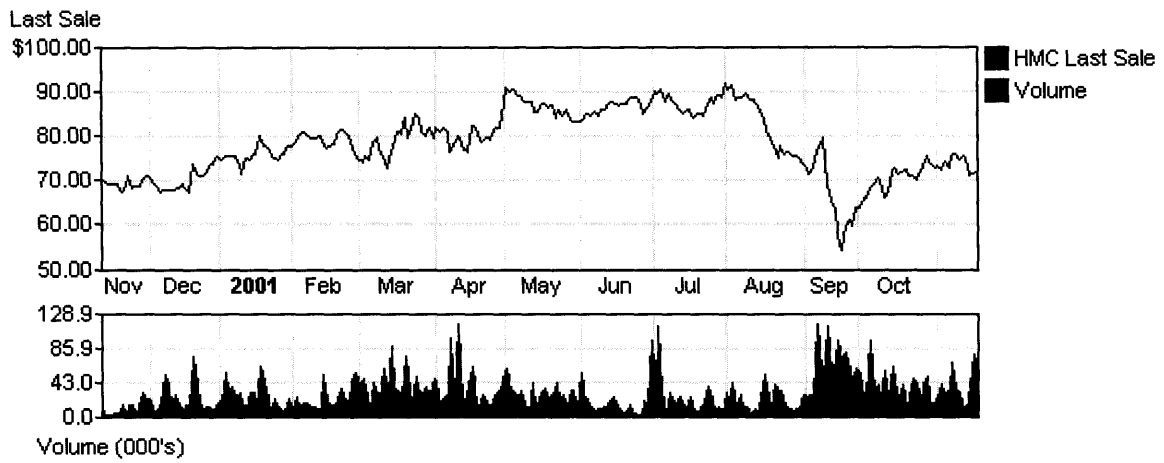
52-Week High – \$92.35

52-Week Low – \$54.59

P/E Ratio – 15.87

EPS - \$4.56

Figure 5.9: HMC 52-Week Stock Price & Volume



5.4.7 Nissan Motor Company (NSANY)

Nissan Motor Company's main operations consist of the manufacture of automobiles. The company is also engaged in the manufacturing of aerospace equipment, industrial machinery, marine products, textile machinery, and mobile communications products and engaged in the provision of financial services. Automotive operations accounted for 100% of fiscal year 2001 revenues.

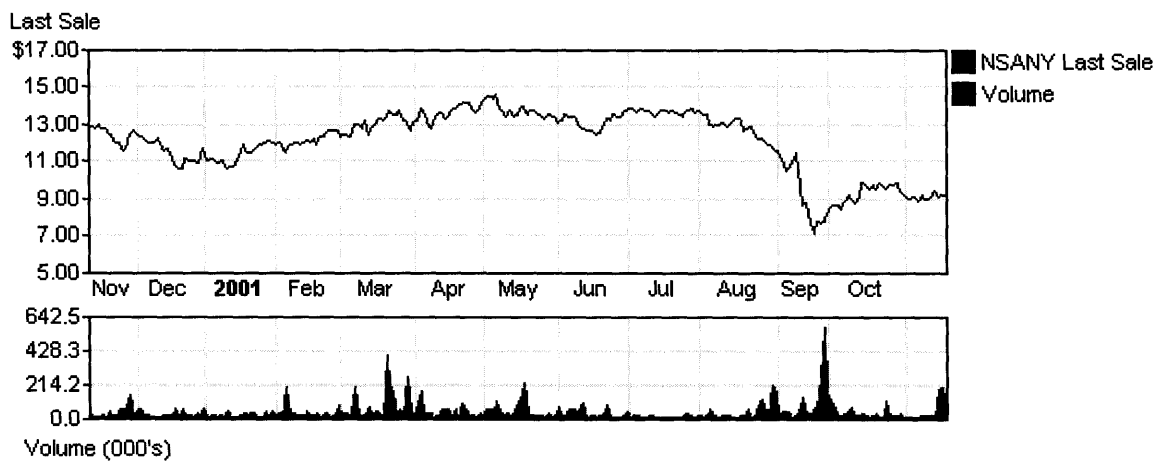
52-Week High – \$14.70

52-Week Low – \$7.01

P/E Ratio – 9.14

EPS – \$1.62

Figure 5.10: NSANY 52-Week Stock Price & Volume



5.4.8 Toyota Motor Company (TM)

Toyota Motor Company is divided into two divisions – Automobiles and Financial Services. Automobiles is engaged in the design, manufacture, sale, lease and repair of passenger cars, trucks, sports utility vehicles, recreational vehicles, buses, mini-vans and automobile parts. Some of the principal vehicles include: Camry, Avalon, Land Cruiser, Celica, Tacoma, and RAV4. Their Financial Services division provides leasing and rental service as well as other financial services and telecommunications functions.

Manufacture and sales of automobiles accounted for 89% of fiscal year 2001 revenues; financial services, 4% & other 7%.

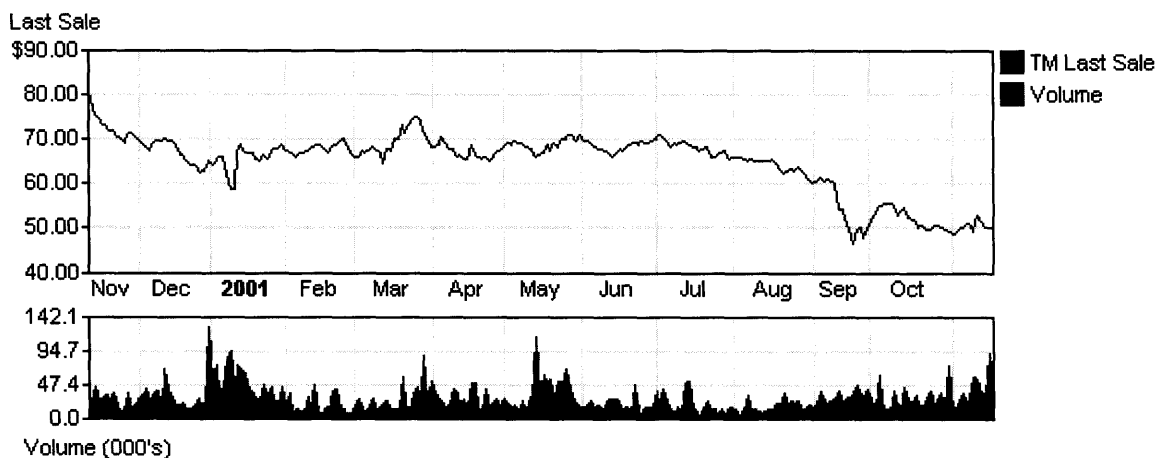
52-Week High – \$83.33

52-Week Low – \$46.60

P/E Ratio – 15.41

EPS – \$2.12

Figure 5.11: TM 52-Week Stock Price & Volume



5.5 Portfolio Simulation Results & Analysis

With sufficient research conducted about each company and a strategy in place, it was then time to actually start trading stocks. In the wake of the terrible tragedy of September 11th, 2001, financial markets across the world suffered. Fortunately, for the group, this was perceived to be an opportune time to buy stocks as their prices were significantly lower than the preceding weeks.

Initially, the group wanted to begin trading on September 17th, 2001. However, still shuddering after the initial impact of the tragedy, the markets suffered further losses that week. The group realized this and decided to postpone trading until the following week. So on September 24th, 2001, the group finally embarked on their six week stock trading simulation.

The following pages contain a detailed account of all of the activities involved with the trading that was done in the automotive industry. Along with the summary, information or events that influenced the trading will be given. Various tables, charts and graphs will also be used to illustrate the findings and conclusions will be drawn in the end.

5.5.1 Initial Activities

In anticipation of beginning trading the following week, even after the group's realized unfruitful attempt, a close eye was still kept on the market that week of 9/17/01 to 9/21/01 and specifically on the eight stocks in the automotive industry that were going to be traded. To expedite the process, the closing prices that were generated on 9/21/01 were used for the initial purchase prices for the stocks in the automotive industry. With these figures in hand, and the background research that was done on the companies, the following criteria were used to evaluate each stock and make the initial purchases.

- Relative Stock Value – HIGH, MED or LOW
- EPS – HIGH or LOW
- P/E Ratio – HIGH or LOW
- 52-Week H/L Differential
- 'Gut' Feelings

The following table summarizes all of the criteria for the initial stock purchases and suggests how much of each stock to purchase. Figure 5.12 continues the evaluation even further to give some reasoning behind the purchase decision.

Figure 5.12: Table Summarizing Initial Purchase Criteria

Symbol	Price	Relative Value	EPS	P/E	52-W High	52-W Low	Diff.	Buy Amt.
CTB	\$ 12.80	LOW	\$ 0.59	23.86	\$ 17.43	\$ 9.19	\$ 8.24	FEW
DCX	\$ 28.20	MED	\$ 0.69	55.87	\$ 52.72	\$ 25.60	\$ 27.12	SOME
F	\$ 15.34	MED	\$ 0.34	48.06	\$ 31.42	\$ 14.70	\$ 16.72	FEW
GM	\$ 40.25	HIGH	\$ 3.53	13.04	\$ 67.80	\$ 39.17	\$ 28.63	A BIT
GT	\$ 17.72	MED	\$(0.56)	0	\$ 32.10	\$ 16.70	\$ 15.40	FEW
HMC	\$ 54.83	HIGH	\$ 4.56	15.87	\$ 92.35	\$ 54.59	\$ 37.76	A BIT
NSANY	\$ 7.23	LOW	\$ 1.62	9.14	\$ 14.70	\$ 7.01	\$ 7.69	A LOT
TM	\$ 47.00	HIGH	\$ 2.12	15.41	\$ 83.33	\$ 46.60	\$ 36.73	SOME

Figure 5.13: Reasoning for Stock Purchase

Symbol	Reasoning
CTB	Low value and low EPS but P/E and inexpensive
DCX	Med value but low EPS and high P/E
F	Med value and low negative EPS but high P/E
GM	High value and high EPS and lower P/E, but relatively expensive
GT	Med value but negative EPS and no P/E
HMC	High value and high EPS and lower P/E, but relatively expensive
NSANY	Low value but decent EPS and inexpensive
TM	High value and high EPS and lower P/E, but relatively expensive

In the simple evaluation that was performed, even though ‘worded’ values for stock purchases were given (ie: FEW, SOME A BIT, A LOT), no actual numbers were defined. However, the group decided that their initial investment should not exceed \$500,000. With this in mind and with some ‘gut’ feelings, some calculations were performed based on the evaluation to determine the appropriate number of shares of each stock to buy. Initially, only buying large amounts of the 2 or 3 of the best performing stocks was considered. But eventually, it was decided that at least some of every stock should be purchased in an effort to diversify an ‘undiversified’ portfolio. Figure 5.14 below represents the stock initial purchases – how many shares were bought, for how much and what their value and the portfolio’s current value is.

Figure 5.14: Initial Purchases on 9/24/01

Symbol	Shares	Price	Value
CTB	500	\$12.80	\$ 6,400.00
DCX	2000	\$28.20	\$ 56,400.00
F	500	\$15.34	\$ 7,670.00
GM	2500	\$40.25	\$100,625.00
GT	500	\$17.72	\$ 8,860.00
HMC	2500	\$54.83	\$137,075.00
NSANY	4000	\$ 7.23	\$ 28,920.00
TM	2000	\$47.00	\$ 94,000.00
		TOTAL	\$439,950.00

All of the \$500,000 was deliberately not spent because it was determined that in case of some major blunder, at least some money would be saved. After making the initial purchases, all of the stocks were tracked daily and based on the adopted trading strategy; stocks were bought and sold for the next six weeks.

5.5.2 Overall Summary

Before trading actually began, some doubt was expressed about only trading a specific number of stocks in a specific market sector. Any article or text about personal finance would always suggest diversifying investments across a few market sectors as well as not strictly investing in stocks. However, with that being said, after this six week simulation of the stock market, quite a bit of money was made only investing in specific stocks in one sector.

Figure 5.15 summarizes the overall performance of all of the stocks during the six-week simulation period. The price for each stock was recorded on a daily basis and other figures such as the Daily \$ Change, Daily % Change, Overall \$ Change and Overall % Change were calculated using the stock price. Based on this information transactions were made and the buys and sells are also recorded on this chart.

As it is clearly visible on the chart, all of the eight stocks had posted significant positive gains by the end of the simulation (and consequently the value of the simulation portfolio had also increased – this will be discussed later).

This activity can be due in part to the fortunate time that the simulation was begun. Trading at such an opportune time offered a real insight on how the some markets can recover (or still continue to fail) after a financially significant event – in this case the terrorist attacks of September 11th, 2001. The automotive sector quickly recovered a large portion of its losses in the six weeks following the attacks.

Figure 5.15: Overall Stock Trading Summary

CTB					DCX					F					GM				
	#	\$	Trans.	Cashflow	#	\$	Trans.	Cashflow	#	\$	Trans.	Cashflow	#	\$	Trans.	Cashflow			
Initial	500	\$ 6,400.00		(\$6,400.00)	2000	\$ 56,400.00		(\$56,400.00)	500	\$ 7,870.00		(\$7,870.00)	2500	\$ 100,625.00		(\$100,625.00)			
24-Sep	500	\$ 7,130.00			2000	\$ 58,800.00			500	\$ 8,215.00			2500	\$ 108,075.00					
25-Sep	500	\$ 6,945.00			2000	\$ 57,080.00			500	\$ 8,060.00			2500	\$ 103,400.00					
26-Sep	500	\$ 6,500.00			2000	\$ 57,700.00			500	\$ 8,190.00			2500	\$ 100,250.00					
27-Sep	500	\$ 6,475.00			2000	\$ 57,600.00			500	\$ 8,280.00			2500	\$ 102,900.00					
28-Sep	500	\$ 7,120.00			2000	\$ 59,980.00			500	\$ 8,675.00			2500	\$ 107,250.00		\$107,250.00			
1-Oct	500	\$ 7,035.00			2000	\$ 61,800.00			500	\$ 8,620.00		\$8,620.00							
2-Oct	500	\$ 8,825.00		\$6,825.00	2000	\$ 64,520.00			1000	\$ 17,240.00		(\$17,240.00)							
3-Oct					2000	\$ 66,640.00			1000	\$ 17,670.00									
4-Oct					2000	\$ 67,880.00			1000	\$ 17,290.00									
5-Oct					2000	\$ 68,240.00		\$68,240.00	1000	\$ 17,550.00			2500	\$ 102,025.00		(\$102,025.00)			
6-Oct									1000	\$ 18,130.00			2500	\$ 107,400.00					
9-Oct	1000	\$ 12,710.00		(\$12,710.00)					1000	\$ 18,000.00			2500	\$ 112,325.00					
10-Oct	1000	\$ 13,300.00							1000	\$ 17,730.00			2500	\$ 110,450.00		\$112,250.00			
11-Oct	1000	\$ 13,780.00							1000	\$ 17,730.00			2500	\$ 112,250.00					
12-Oct	1000	\$ 13,740.00							1000	\$ 17,680.00									
15-Oct	1000	\$ 13,580.00							1000	\$ 17,680.00		\$17,130.00							
16-Oct	1000	\$ 13,500.00																	
17-Oct	1000	\$ 13,020.00																	
18-Oct	1000	\$ 13,100.00																	
19-Oct	1000	\$ 12,900.00			2500	\$ 85,150.00		(\$85,150.00)					2500	\$ 103,400.00		(\$103,400.00)			
22-Oct	1000	\$ 13,060.00			2500	\$ 87,575.00							2500	\$ 106,425.00					
23-Oct	1000	\$ 13,260.00			2500	\$ 89,650.00							2500	\$ 107,875.00					
24-Oct	1000	\$ 13,030.00			2500	\$ 92,000.00							2500	\$ 112,900.00					
25-Oct	1000	\$ 13,310.00			2500	\$ 91,500.00							2500	\$ 111,575.00		\$111,575.00			
26-Oct	1000	\$ 13,450.00			2500	\$ 94,175.00													
29-Oct	1000	\$ 13,350.00			2500	\$ 91,775.00		\$91,775.00											
30-Oct	1000	\$ 13,050.00																	
31-Oct	1000	\$ 13,210.00																	
1-Nov	1000	\$ 13,700.00																	
2-Nov	1000	\$ 13,900.00		\$13,900.00															
		Gain / (Loss)		\$1,615.00		Gain / (Loss)		\$18,465.00		Gain / (Loss)		\$840.00		Gain / (Loss)		\$25,025.00			

GT					HMC					NSANY					TM				
	#	\$	Trans.	Cashflow	#	\$	Trans.	Cashflow	#	\$	Trans.	Cashflow	#	\$	Trans.	Cashflow			
Initial	500	\$ 8,880.00		(\$8,880.00)	2500	\$ 137,075.00		(\$137,075.00)	4000	\$ 28,920.00		(\$28,920.00)	2000	\$ 94,000.00		(\$94,000.00)			
24-Sep	500	\$ 9,150.00			2500	\$ 150,225.00			4000	\$ 31,600.00			2000	\$ 100,500.00		\$0.00			
25-Sep	500	\$ 9,200.00			2500	\$ 153,250.00			4000	\$ 31,180.00			2000	\$ 100,980.00		\$0.00			
26-Sep	500	\$ 8,925.00			2500	\$ 150,875.00			4000	\$ 31,640.00			2000	\$ 96,500.00		\$0.00			
27-Sep	500	\$ 8,985.00			2500	\$ 158,950.00			4000	\$ 33,400.00			2000	\$ 101,100.00		\$0.00			
28-Sep	500	\$ 9,215.00			2500	\$ 160,625.00			4000	\$ 34,320.00			2000	\$ 103,700.00		\$0.00			
1-Oct	500	\$ 8,925.00			2500	\$ 166,250.00			4000	\$ 34,840.00			2000	\$ 107,800.00		\$0.00			
2-Oct	500	\$ 9,145.00			2500	\$ 166,575.00			4000	\$ 34,840.00			2000	\$ 110,900.00		\$0.00			
3-Oct	500	\$ 9,135.00			2500	\$ 171,250.00			4000	\$ 34,200.00			2000	\$ 111,020.00		\$0.00			
4-Oct	500	\$ 9,195.00			2500	\$ 173,625.00			4000	\$ 35,680.00			2000	\$ 112,200.00		\$0.00			
5-Oct	500	\$ 9,235.00		\$9,235.00	2500	\$ 177,500.00		\$213,000.00	4000	\$ 36,980.00			2000	\$ 112,000.00		\$112,000.00			
8-Oct									4000	\$ 36,080.00									
9-Oct	1000	\$ 17,850.00		(\$17,850.00)	2750	\$ 183,012.50		(\$183,012.50)	4000	\$ 35,280.00									
10-Oct	1000	\$ 18,180.00			2750	\$ 186,725.00			4000	\$ 36,760.00									
11-Oct	1000	\$ 18,930.00			2750	\$ 198,275.00			4000	\$ 39,600.00									
12-Oct	1000	\$ 19,140.00			2750	\$ 201,025.00			4000	\$ 39,200.00									
15-Oct	1000	\$ 19,150.00			2750	\$ 197,202.50			4000	\$ 38,240.00									
16-Oct	1000	\$ 19,270.00			2750	\$ 199,017.50			4000	\$ 39,240.00									
17-Oct	1000	\$ 18,930.00			2750	\$ 199,650.00		\$199,650.00	4000	\$ 38,560.00									
18-Oct	1000	\$ 18,860.00							4000	\$ 39,760.00									
19-Oct	1000	\$ 18,930.00							4000	\$ 38,760.00									
22-Oct	1000	\$ 19,500.00			3000	\$ 211,200.00		(\$211,200.00)	4000	\$ 38,360.00									
23-Oct	1000	\$ 18,930.00			3000	\$ 216,800.00			4000	\$ 39,240.00									
24-Oct	1000	\$ 18,790.00			3000	\$ 220,530.00			4000	\$ 39,400.00		\$39,400.00							
25-Oct	1000	\$ 19,230.00			3000	\$ 227,370.00													
26-Oct	1000	\$ 19,920.00		\$19,920.00	3000	\$ 221,700.00													
29-Oct					3000	\$ 219,630.00													
30-Oct					3000	\$ 221,610.00													
31-Oct					3000	\$ 217,800.00													
1-Nov					3000	\$ 223,950.00		\$223,950.00											
2-Nov																			
		Gain / (Loss)		\$2,445.00		Gain / (Loss)		\$105,312.50		Gain / (Loss)		\$10,480.00		Gain / (Loss)		\$18,000.00			

With the opening bell on the morning of Monday, September 24th, 2001 markets set off in a frenzied state of trading. By noon that day all of the eight companies' stock prices had increased significantly and by the closing bell all of the stocks' prices increased by 3% or more. This was quite a contrast from the previous week where significant losses were posted.

Regarding the actual simulation trading, the first breach of the trading strategy occurred at the end of the first day. None of the eight stocks were sold even though they all posted significant gains. This was done in part with the whole notion of 'just getting the feet wet' with the market and also due to the sheer overwhelming gains that were received. In a somewhat risky and greedy maneuver, it was decided to hold on to all of the stocks to see if their increasing share price trend would extend past the first day of trading and increase even more by the end of the second day.

For four of the eight stocks (CTB, DCX, F, GM), at the end of the second day of trading their prices had dropped a few percent from the previous days close but were still up on the whole. However, at the end of the week, all of the stocks, except GM (which was actually sold), were at their highest values since Monday morning.

After the first week of trading the information tracking process became much simpler and the familiarity of the stocks and the market increased. So over the next few weeks more and more trades were made.

5.5.3 Portfolio Analysis

Given the short timeframe involved with the simulation, significant trends could not really be noticed. However, all of the stocks performed relatively well. The next few pages contain price charts generated for each of the eight stocks during the simulation timeframe as well as a table summarizing all of the trading activity.

Figure 5.16: CTB Stock Performance

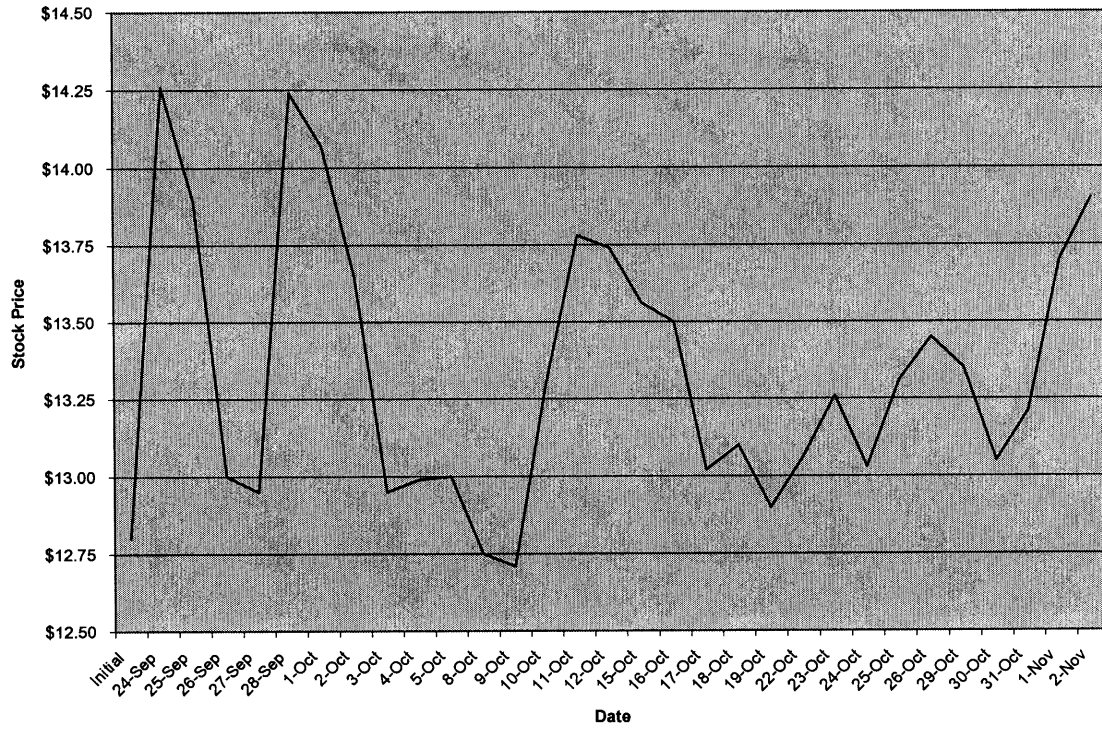


Figure 5.17: DCX Stock Performance

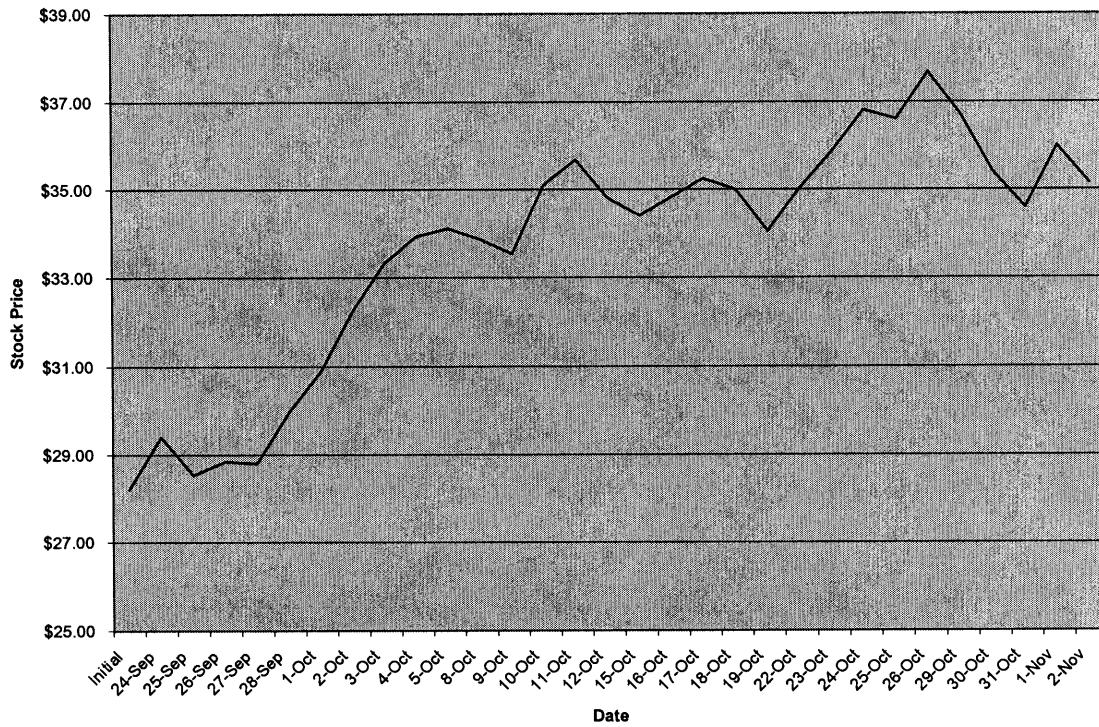


Figure 5.18: F Stock Performance

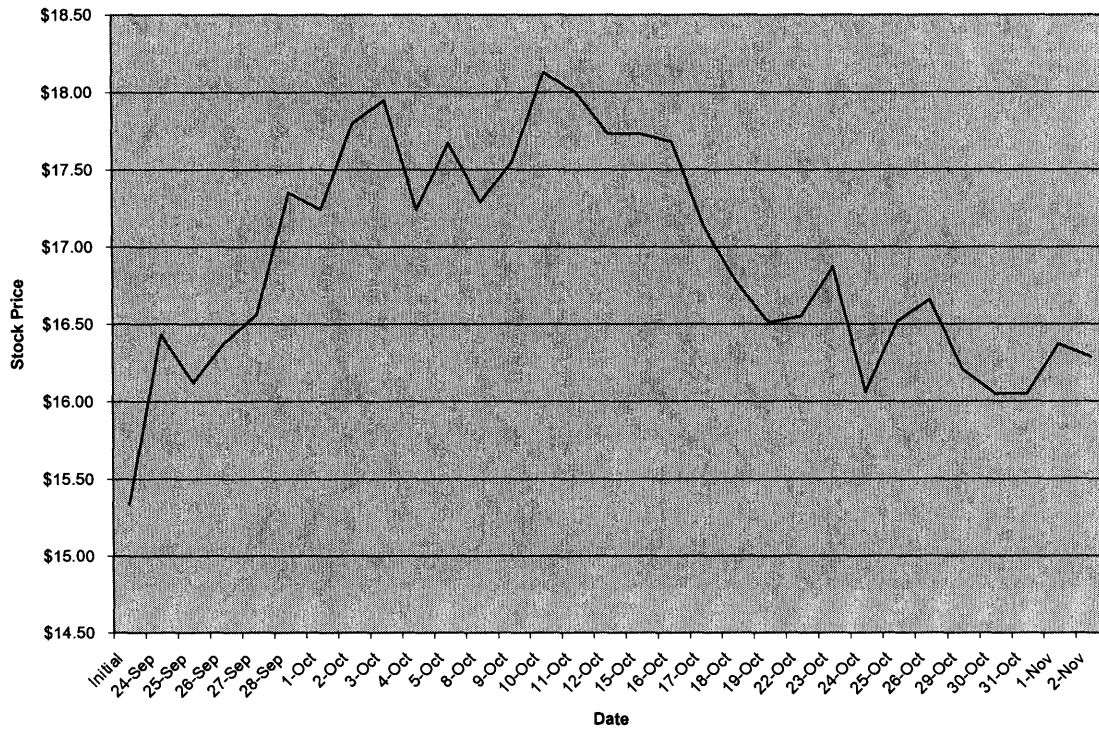


Figure 5.19: GM Stock Performance

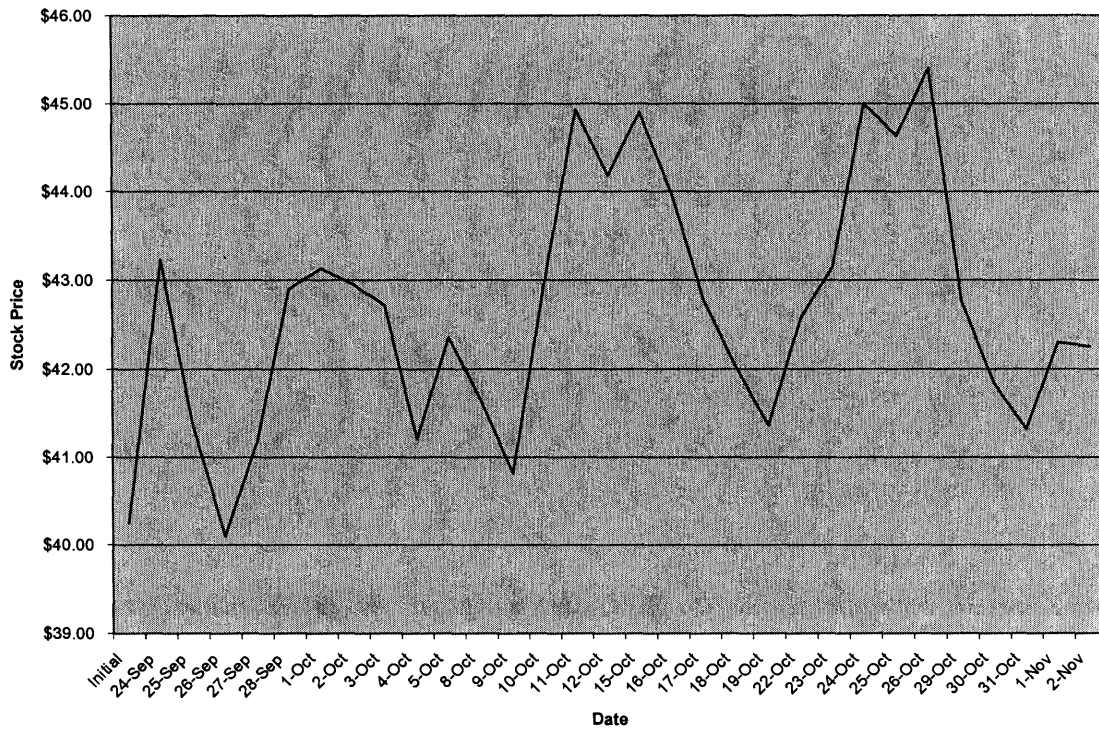


Figure 5.20: GT Stock Performance

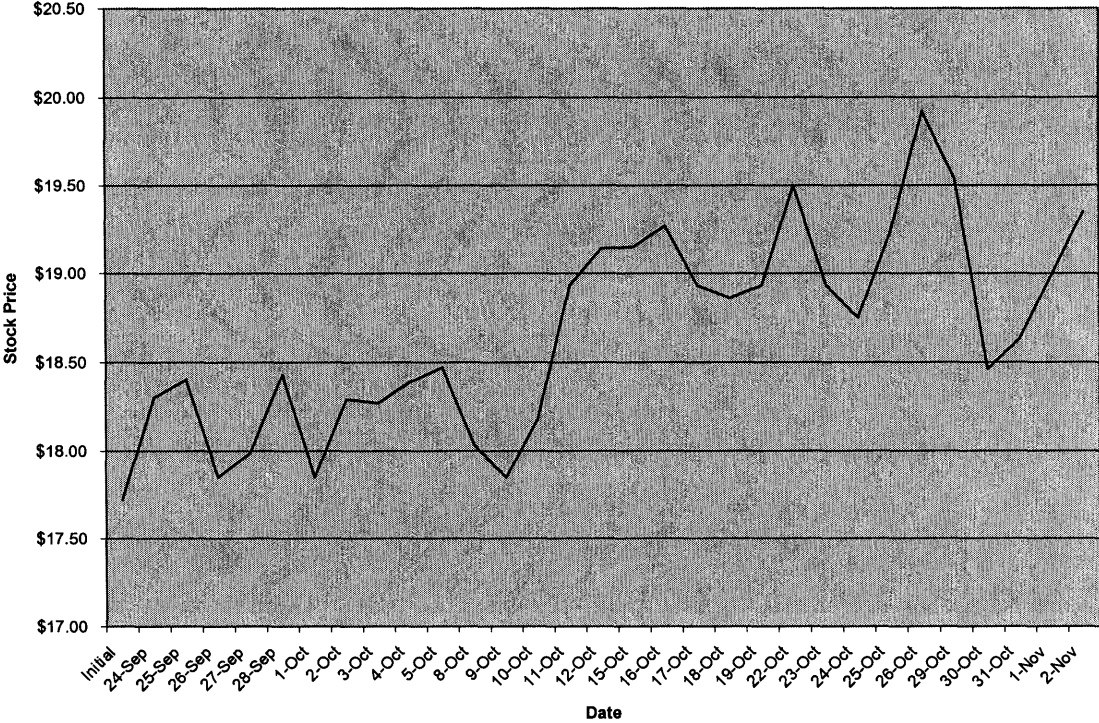


Figure 5.21: HMC Stock Performance

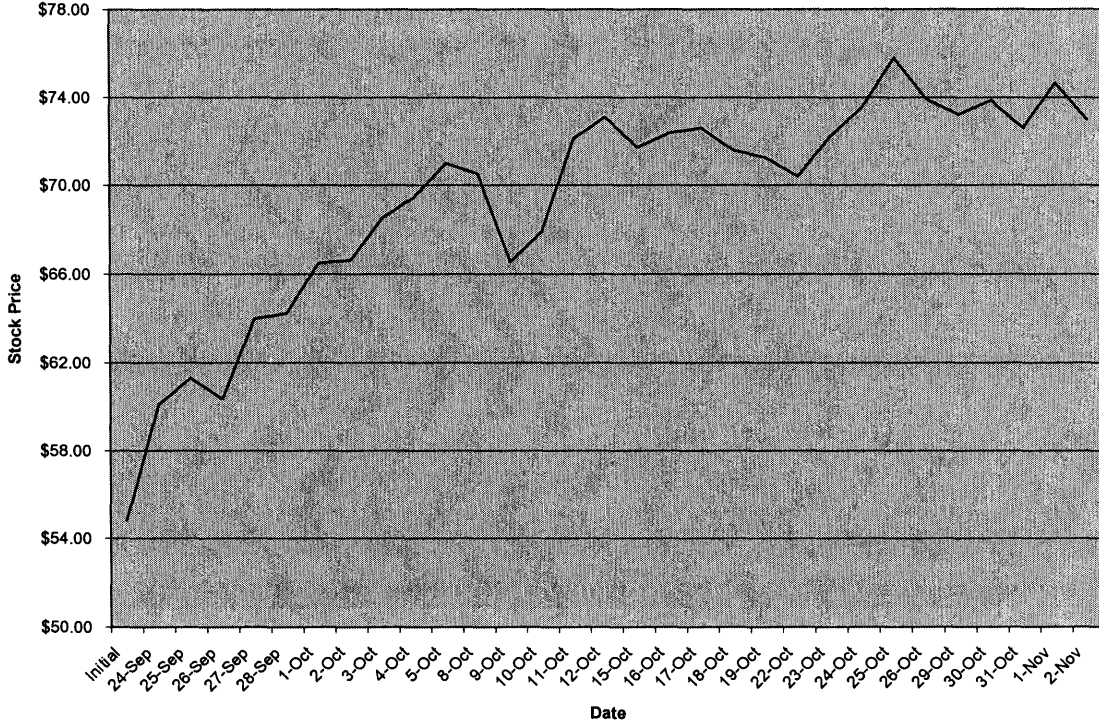


Figure 5.22: NSANY Stock Performance

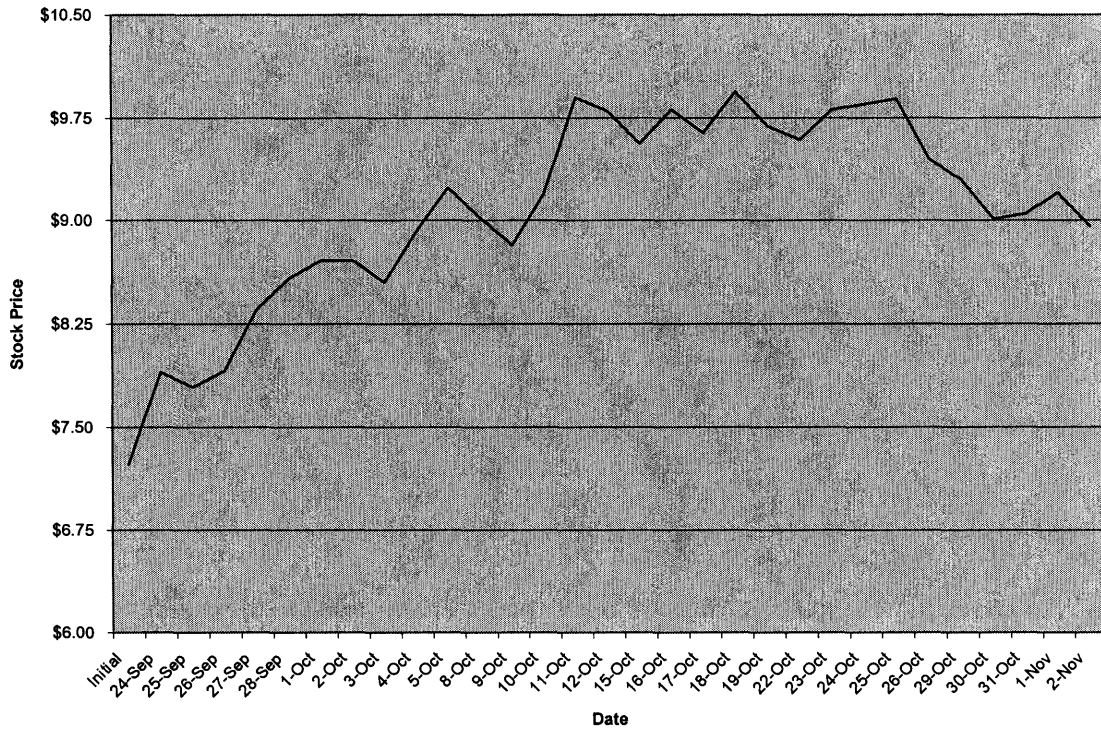


Figure 5.23: TM Stock Performance

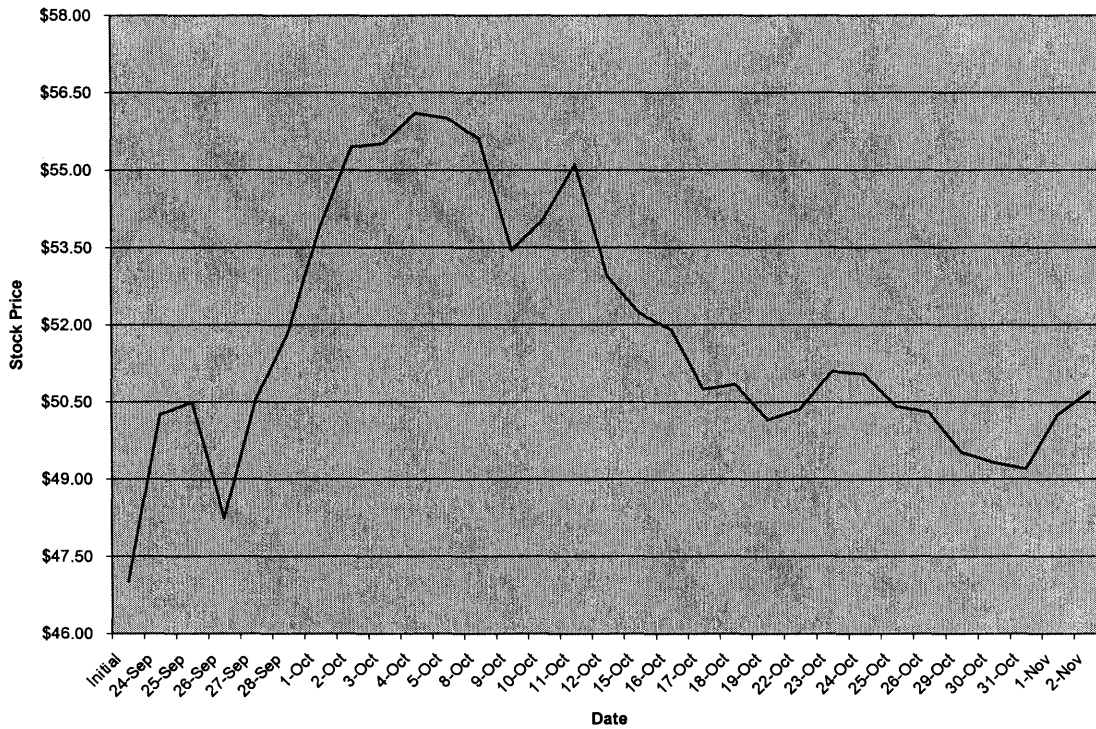


Figure 5.24: Overall Trading Summary for Six Week Simulation

Initial	24-Sep	25-Sep	26-Sep	27-Sep	28-Sep	1-Oct	2-Oct	3-Oct	4-Oct	5-Oct	8-Oct	9-Oct	10-Oct	11-Oct	12-Oct	15-Oct	16-Oct	17-Oct	18-Oct	19-Oct	22-Oct	23-Oct	24-Oct	25-Oct	26-Oct	28-Oct	30-Oct	31-Oct	1-Nov	2-Nov	
Initial	14.26	14.16	14.14%	14.46	14.14%	14.14%	14.14%	14.14%	14.14%	14.14%	14.14%	14.14%	14.14%	14.14%	14.14%	14.14%	14.14%	14.14%	14.14%	14.14%	14.14%	14.14%	14.14%	14.14%	14.14%	14.14%	14.14%	14.14%	14.14%	14.14%	
24-Sep	14.26	14.16	14.14%	14.46	14.14%	14.14%	14.14%	14.14%	14.14%	14.14%	14.14%	14.14%	14.14%	14.14%	14.14%	14.14%	14.14%	14.14%	14.14%	14.14%	14.14%	14.14%	14.14%	14.14%	14.14%	14.14%	14.14%	14.14%	14.14%	14.14%	
25-Sep	13.89	(0.37)	(2.56%)	13.09	(8.52%)	13.09	8.52%	13.09	8.52%	13.09	8.52%	13.09	8.52%	13.09	8.52%	13.09	8.52%	13.09	8.52%	13.09	8.52%	13.09	8.52%	13.09	8.52%	13.09	8.52%	13.09	8.52%	13.09	8.52%
26-Sep	13.89	(0.38)	(6.41%)	12.99	(1.95%)	12.99	1.95%	12.99	1.95%	12.99	1.95%	12.99	1.95%	12.99	1.95%	12.99	1.95%	12.99	1.95%	12.99	1.95%	12.99	1.95%	12.99	1.95%	12.99	1.95%	12.99	1.95%	12.99	1.95%
27-Sep	12.95	(0.95)	(0.38%)	10.14	(1.27%)	10.14	1.27%	10.14	1.27%	10.14	1.27%	10.14	1.27%	10.14	1.27%	10.14	1.27%	10.14	1.27%	10.14	1.27%	10.14	1.27%	10.14	1.27%	10.14	1.27%	10.14	1.27%	10.14	1.27%
28-Sep	14.24	1.29	9.89%	10.15	11.22%	10.15	11.22%	10.15	11.22%	10.15	11.22%	10.15	11.22%	10.15	11.22%	10.15	11.22%	10.15	11.22%	10.15	11.22%	10.15	11.22%	10.15	11.22%	10.15	11.22%	10.15	11.22%	10.15	11.22%
1-Oct	14.07	(0.17)	(1.19%)	11.27	6.84%	11.27	6.84%	11.27	6.84%	11.27	6.84%	11.27	6.84%	11.27	6.84%	11.27	6.84%	11.27	6.84%	11.27	6.84%	11.27	6.84%	11.27	6.84%	11.27	6.84%	11.27	6.84%	11.27	6.84%
2-Oct	12.95	(0.70)	(5.13%)	10.18	1.48%	10.18	1.48%	10.18	1.48%	10.18	1.48%	10.18	1.48%	10.18	1.48%	10.18	1.48%	10.18	1.48%	10.18	1.48%	10.18	1.48%	10.18	1.48%	10.18	1.48%	10.18	1.48%	10.18	1.48%
3-Oct	12.99	0.04	0.31%	10.18	1.48%	10.18	1.48%	10.18	1.48%	10.18	1.48%	10.18	1.48%	10.18	1.48%	10.18	1.48%	10.18	1.48%	10.18	1.48%	10.18	1.48%	10.18	1.48%	10.18	1.48%	10.18	1.48%	10.18	1.48%
4-Oct	13.00	0.01	0.09%	10.20	1.90%	10.20	1.90%	10.20	1.90%	10.20	1.90%	10.20	1.90%	10.20	1.90%	10.20	1.90%	10.20	1.90%	10.20	1.90%	10.20	1.90%	10.20	1.90%	10.20	1.90%	10.20	1.90%	10.20	1.90%
5-Oct	12.75	(0.25)	(1.92%)	10.05	(0.38%)	10.05	(0.38%)	10.05	(0.38%)	10.05	(0.38%)	10.05	(0.38%)	10.05	(0.38%)	10.05	(0.38%)	10.05	(0.38%)	10.05	(0.38%)	10.05	(0.38%)	10.05	(0.38%)	10.05	(0.38%)	10.05	(0.38%)	10.05	(0.38%)
8-Oct	13.30	0.59	4.84%	10.98	3.91%	10.98	3.91%	10.98	3.91%	10.98	3.91%	10.98	3.91%	10.98	3.91%	10.98	3.91%	10.98	3.91%	10.98	3.91%	10.98	3.91%	10.98	3.91%	10.98	3.91%	10.98	3.91%	10.98	3.91%
10-Oct	13.78	0.48	3.61%	10.98	7.68%	10.98	7.68%	10.98	7.68%	10.98	7.68%	10.98	7.68%	10.98	7.68%	10.98	7.68%	10.98	7.68%	10.98	7.68%	10.98	7.68%	10.98	7.68%	10.98	7.68%	10.98	7.68%	10.98	7.68%
12-Oct	13.74	(0.04)	(0.29%)	10.94	7.34%	10.94	7.34%	10.94	7.34%	10.94	7.34%	10.94	7.34%	10.94	7.34%	10.94	7.34%	10.94	7.34%	10.94	7.34%	10.94	7.34%	10.94	7.34%	10.94	7.34%	10.94	7.34%	10.94	7.34%
15-Oct	13.56	(0.18)	(1.31%)	10.78	5.64%	10.78	5.64%	10.78	5.64%	10.78	5.64%	10.78	5.64%	10.78	5.64%	10.78	5.64%	10.78	5.64%	10.78	5.64%	10.78	5.64%	10.78	5.64%	10.78	5.64%	10.78	5.64%	10.78	5.64%
16-Oct	13.50	(0.06)	(0.44%)	10.72	5.47%	10.72	5.47%	10.72	5.47%	10.72	5.47%	10.72	5.47%	10.72	5.47%	10.72	5.47%	10.72	5.47%	10.72	5.47%	10.72	5.47%	10.72	5.47%	10.72	5.47%	10.72	5.47%	10.72	5.47%
17-Oct	13.02	(0.48)	(3.55%)	10.22	1.72%	10.22	1.72%	10.22	1.72%	10.22	1.72%	10.22	1.72%	10.22	1.72%	10.22	1.72%	10.22	1.72%	10.22	1.72%	10.22	1.72%	10.22	1.72%	10.22	1.72%	10.22	1.72%	10.22	1.72%
18-Oct	13.10	0.08	0.61%	10.30	2.34%	10.30	2.34%	10.30	2.34%	10.30	2.34%	10.30	2.34%	10.30	2.34%	10.30	2.34%	10.30	2.34%	10.30	2.34%	10.30	2.34%	10.30	2.34%	10.30	2.34%	10.30	2.34%	10.30	2.34%
19-Oct	12.80	(0.20)	(1.53%)	10.10	0.78%	10.10	0.78%	10.10	0.78%	10.10	0.78%	10.10	0.78%	10.10	0.78%	10.10	0.78%	10.10	0.78%	10.10	0.78%	10.10	0.78%	10.10	0.78%	10.10	0.78%	10.10	0.78%	10.10	0.78%
22-Oct	13.08	0.16	1.24%	10.28	2.03%	10.28	2.03%	10.28	2.03%	10.28	2.03%	10.28	2.03%	10.28	2.03%	10.28	2.03%	10.28	2.03%	10.28	2.03%	10.28	2.03%	10.28	2.03%	10.28	2.03%	10.28	2.03%	10.28	2.03%
23-Oct	13.26	0.20	1.53%	10.48	3.59%	10.48	3.59%	10.48	3.59%	10.48	3.59%	10.48	3.59%	10.48	3.59%	10.48	3.59%	10.48	3.59%	10.48	3.59%	10.48	3.59%	10.48	3.59%	10.48	3.59%	10.48	3.59%	10.48	3.59%
24-Oct	13.03	(0.23)	(1.73%)	10.23	1.80%	10.23	1.80%	10.23	1.80%	10.23	1.80%	10.23	1.80%	10.23	1.80%	10.23	1.80%	10.23	1.80%	10.23	1.80%	10.23	1.80%	10.23	1.80%	10.23	1.80%	10.23	1.80%	10.23	1.80%
25-Oct	13.31	0.28	2.15%	10.55	3.88%	10.55	3.88%	10.55	3.88%	10.55	3.88%	10.55	3.88%	10.55	3.88%	10.55	3.88%	10.55	3.88%	10.55	3.88%	10.55	3.88%	10.55	3.88%	10.55	3.88%	10.55	3.88%	10.55	3.88%
26-Oct	13.45	0.14	1.05%	10.65	5.08%	10.65	5.08%	10.65	5.08%	10.65	5.08%	10.65	5.08%	10.65	5.08%	10.65	5.08%	10.65	5.08%	10.65	5.08%	10.65	5.08%	10.65	5.08%	10.65	5.08%	10.65	5.08%	10.65	5.08%
28-Oct	13.95	0.50	3.57%	10.75	4.30%	10.75	4.30%	10.75	4.30%	10.75	4.30%	10.75	4.30%	10.75	4.30%	10.75	4.30%	10.75	4.30%	10.75	4.30%	10.75	4.30%	10.75	4.30%	10.75	4.30%	10.75	4.30%	10.75	4.30%
29-Oct	13.05	(0.20)	(1.45%)	10.25	1.95%	10.25	1.95%	10.25	1.95%	10.25	1.95%	10.25	1.95%	10.25	1.95%	10.25	1.95%	10.25	1.95%	10.25	1.95%	10.25	1.95%	10.25	1.95%	10.25	1.95%	10.25	1.95%	10.25	1.95%
30-Oct	13.21	0.16	1.23%	10.41	3.20%	10.41	3.20%	10.41	3.20%	10.41	3.20%	10.41	3.20%	10.41	3.20%	10.41	3.20%	10.41	3.20%	10.41	3.20%	10.41	3.20%	10.41	3.20%	10.41	3.20%	10.41	3.20%	10.41	3.20%
1-Nov	13.70	0.49	3.71%	11.10	8.59%	11.10	8.59%	11.10	8.59%	11.10	8.59%	11.10	8.59%	11.10	8.59%	11.10	8.59%	11.10	8.59%	11.10	8.59%	11.10	8.59%	11.10	8.59%	11.10	8.59%	11.10	8.59%	11.10	8.59%
2-Nov	13.70	0.20	1.45%	11.10	8.59%	11.10	8.59%	11.10	8.59%	11.10	8.59%	11.10	8.59%	11.10	8.59%	11.10	8.59%	11.10	8.59%	11.10	8.59%	11.10	8.59%	11.10	8.59%	11.10	8.59%	11.10	8.59%	11.10	8.59%

LEGEND
Positive change
(Negative change)

By extracting the information from figure 5.24, the following table was made to show the entire portfolio performance. For each day, the portfolio value, daily cash flow total, cash on hand is given and the final return on investment (ROI) also shown.

Figure 5.25: Portfolio Summary

	Cash	Cash Flow	Portfolio Value
Start	\$ 500,000.00	\$0.00	\$ -
Initial	\$ 60,050.00	(\$439,950.00)	\$ 439,950.00
24-Sep	\$ 60,050.00	\$0.00	\$ 473,695.00
25-Sep	\$ 60,050.00	\$0.00	\$ 470,055.00
26-Sep	\$ 60,050.00	\$0.00	\$ 460,580.00
27-Sep	\$ 60,050.00	\$0.00	\$ 478,700.00
28-Sep	\$ 167,300.00	\$107,250.00	\$ 490,865.00
1-Oct	\$ 175,920.00	\$8,620.00	\$ 395,270.00
2-Oct	\$ 182,745.00	\$6,825.00	\$ 392,805.00
3-Oct	\$ 182,745.00	\$0.00	\$ 392,245.00
4-Oct	\$ 165,505.00	(\$17,240.00)	\$ 415,800.00
5-Oct	\$ 567,980.00	\$402,475.00	\$ 421,605.00
8-Oct	\$ 567,980.00	\$0.00	\$ 53,370.00
9-Oct	\$ 252,382.50	(\$315,597.50)	\$ 368,427.50
10-Oct	\$ 252,382.50	\$0.00	\$ 380,495.00
11-Oct	\$ 252,382.50	\$0.00	\$ 400,910.00
12-Oct	\$ 252,382.50	\$0.00	\$ 401,285.00
15-Oct	\$ 364,632.50	\$112,250.00	\$ 398,132.50
16-Oct	\$ 364,632.50	\$0.00	\$ 288,707.50
17-Oct	\$ 581,412.50	\$216,780.00	\$ 287,290.00
18-Oct	\$ 581,412.50	\$0.00	\$ 71,720.00
19-Oct	\$ 392,862.50	(\$188,550.00)	\$ 259,140.00
22-Oct	\$ 181,662.50	(\$211,200.00)	\$ 476,120.00
23-Oct	\$ 181,662.50	\$0.00	\$ 485,555.00
24-Oct	\$ 221,062.50	\$39,400.00	\$ 496,210.00
25-Oct	\$ 332,637.50	\$111,575.00	\$ 462,985.00
26-Oct	\$ 352,557.50	\$19,920.00	\$ 349,245.00
29-Oct	\$ 444,332.50	\$91,775.00	\$ 324,755.00
30-Oct	\$ 444,332.50	\$0.00	\$ 234,660.00
31-Oct	\$ 444,332.50	\$0.00	\$ 231,010.00
1-Nov	\$ 668,282.50	\$223,950.00	\$ 237,650.00
2-Nov	\$ 682,182.50	\$13,900.00	\$ -
Total	\$ 682,182.50	\$182,182.50	
	ROI	36%	

5.6 Lessons Learned

In conclusion of this simulated trading activity, on top of earning significant financial gains of almost 36% on the initial investment, a lot was learned about the stock market in general as well as about the individual companies and trading actual stocks. I would even venture to say that if given the resources, I would be confident enough to invest with real money.

6.0 CONCLUSIONS

The first thing that should be pointed out is that we all made profits over our investment period. Any investor must be happy when they manage to increase their initial investment. If we were able to make gains in real money instead of in a simulation, we would all be even more pleased with our investments and I'm sure we would all be living a bit more luxuriously. It is extremely important to note, however, that even if we had not managed to make profits, this project would still have been a success.

We were able to learn about the market and hopefully have helped our readers learn through our successes and our failures. All of us started out on this project with minimal knowledge about the stock market, but we have learned a bit more every week and have actually become relatively experienced investors. We have slowly learned the different factors that affect stock prices such as company news, actions of competitors, and world events.

A special note should be made about the last item on this list. We began our investing one week after the reopening of the American stock exchanges following the tragedies that took place on September 11th. The market showed promise for all of us when it was able to bounce back from the losses incurred as a result of these horrible events, even in the midst of a poor economy. This showed us that we shouldn't be afraid to invest, but should seize the opportunity and try to make the best the situation, no matter how dire.

In fact, the market was quite volatile during our investment period. There were many days of large increases or decreases as a result of breaking news on world events that stemmed from September 11th. Stocks reacted strongly in one direction or the other, making our investment period particularly exciting. There were many chances to buy and sell, motivating us to take advantage of opportunities as they arose to beat the overall market.

One of the biggest successes of this project is the fact that it was able to truly interest us in the market. We are more concerned about the market and we will certainly watch it with much more enthusiasm than we did before performing this project. This interest is not only in the market as a whole, but also in the individual market sectors that we chose to invest in. We are now able to make more responsible decisions and draw more intelligent conclusions about world events as a direct result from our work in the market.

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