

TANG,D
DZT-0003
TYPE: IQP
DATE: 5/01

49

RN: 0101161

Project Number: DZT-0003 - 49

0101161

Stock Market Simulation

An Interactive Qualifying Project

submitted to the Faculty

of the

WORCESTER POLYTECHNIC INSTITUTE

in partial fulfillment of the requirements for the

Degree of Bachelor of Science

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Date: April 11, 2001

Approved:

1. stocks
2. investing
3. simulation


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Abstract

A comprehensive study of the stock market was performed, including its history and components, as well as various strategies that are used to make profits. A simulation was then performed, so that the team members could gain a better understanding of the investment process, and apply some of the knowledge gained to a “real life” portfolio. It is hoped that this knowledge was conveyed in such a manner that a person with no previous investment experience could read through the report and gain enough insight to be able to begin investing.

Acknowledgements

The team would like to thank our advisor, Professor Dalin Tang, for his time, advice, and support during this endeavor.

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Chapter 1

Introduction

It has been proven time and time again that sound investments and investment strategies play a key role in personal financial success. Determining when to buy and sell, what percentage of a portfolio should be in stocks, what percentage in mutual funds, and which brokerage to use are but a few of the many questions that investors need to be able to answer intelligently in order to succeed in the market. It is with these statements in mind that this project will take place.

The objectives of the project are several. The first and most important is to develop a fundamental understanding of how the market works, including what types of investments are available (i.e., common stocks, bonds, options, mutual funds, etc.), various exchanges and what they are based on, and the investment process (getting started in different areas of the market, developing a portfolio, etc.). Once this objective is achieved, other, more detailed objectives can be accomplished.

The second objective of the project is to determine how to choose companies to invest in (i.e., weighing a company's background against current trends). Several methods are employed in completing this objective, including fundamental analysis, quantitative analysis, and screening. Each of these methods are explained in greater detail later in the report.

The third objective is to explore and develop personal buying and selling strategies. These strategies include buying and selling with undervalued stocks, so-called "momentum" stocks, and stable stocks. Also included in this area are timing (when to

buy and sell), how to read trends, and various techniques, such as “selling short”. While some of these items are very basic, others require careful attention and planning to execute properly, and in such a way that a profit is made.

The final objective is to, in documenting the previous objectives, provide the reader with a knowledge basis for entering the investing arena. Certain basic skills and tools are needed to begin investing, and the goal of this project is to compile enough information that an individual with no previous knowledge of the stock market could browse through this report and gain enough knowledge to begin investing him/herself.

An eight-week simulation was the means by which the objectives listed above were achieved. However, due to time constraints, it dealt only with several common stocks within one sector. Each individual in the group chose five common stocks within the technology sector, buying and selling only these stocks (so that tracking could be kept relatively simple). The goal in the simulation was to make a sizeable profit with respect to the initial amount invested. Once the simulation was finished, the data collected over the course of the eight-weeks was put into the form of charts, graphs, and reports, and it was analyzed so that conclusions about investment and strategy choices could be drawn. Also, a section on company backgrounds has been included in the appendix.

Chapter 2 provides a basic background of the stock market. The topics of the history of the market, basic terminology, and major indices are all covered here. Chapter 3 covers basic research techniques, ways of finding information about companies, and basic tools that are helpful in the investing process. Topics such as fundamental analysis and quantitative analysis are covered here. Chapter 4 includes information about various investing strategies. Items such as selling short, limit orders, and stop orders are covered

in this chapter. Chapters 5 through 7 are focused on the simulation, and how each individual in the group invested the “money” allotted. Each of these chapters has its own results, analysis and conclusion sections.

Chapter 2

Stock Market Background

2.1 Introduction

The background of the stock market involves several different areas that together make the stock market what it is. The first area is the stocks themselves that make up the stock market as a whole. Next you have the processes that take place that dictate the way the stock market works. These processes include how the prices of stocks are determined and how the trading of these stocks takes place. Then you have the stock market indexes, which help to analyze the stock market by using averages and groupings. Finally you have the rules of the stock market to prevent fraudulent activity, and protect the investors.

2.2 Types of Stock

There are two main types of stock; these are common stock and preferred stock. Both of these types of stock have their own benefits for the investor. Common stock allows the owner to have a private interest in the assets of a company and benefit from the company's earnings. This also allows the owner to lose money when the company loses money. The changes in the stock can be affected greatly by news about the company, be it good or bad. Good news can result in a large price increase, but at the same time bad news can result in a large price decrease. Because of this volatility, money can be made or lost very quickly by owning common stock. This volatility is what makes this type of stock so popular with most investors. Most investors want to see a large return on their money in a very short period of time. Some common stock has an

added benefit; this is the payment of dividends to the shareholder. These dividends represent a share in the company's profits. Whether or not a common stock pays dividends is up to the company that the stock is issued by. The amount of money received from these dividends is determined each year by the company's board of directors.

Preferred stock like common stock allows the owner to have a private interest in the assets of a company and benefit from the company's earnings. The difference is that preferred stock pays out higher dividends to the owner and gives their share in the company a higher priority over the owners of common stock. Preferred stock is issued in much smaller amounts than common stock, which results in less trading. Because there is less trading the price of preferred stock is much more stable than common stock, which appeals to some investors. At the same time this is unappealing to investors who want to make a lot of money quickly.

2.3 Processes of the Stock Market

2.3.1 Pricing and Trading

Stocks have two prices the bid price and the ask price. The bid price is the price at which shares of particular stock can be sold for. The ask price is the price at which the stock can be purchased for. The bid price is always lower than the ask price, this difference in price is referred to as the spread. These prices change with supply and demand, which change with news about the company. When a particular stock becomes popular and people begin buying up shares of the stock the price rises. When a particular stock becomes unpopular and people start selling shares of the stock the price decreases.

To make trading and tracking of stocks easier, each company is issued its own unique symbol that its stock can be identified by. These symbols range from being one to four letters long and usually are an abbreviation for the company they represent. By using these symbols it makes it easier for traders to identify these stocks. Having a shortened name also makes it easier to display information about these stocks, especially when they are being displayed on a ticker.

2.3.2 How Stocks Are Traded

Before a company's stock can be traded it has to be introduced to the stock market. This introduction is called an initial public offering or IPO for short; IPO's take place after a series of procedures. When a company decides to go public so it can raise capital it must call upon the services of an investment banker. An investment banker helps the company go through the IPO process. The first step is to examine the company to see if it is in the right condition to go public, i.e. whether it is financially solid and has potential to be profitable. If the company is in the right condition to go public the stock market is next examined to see if it can handle the company going public, i.e. are there enough potential investors to support the IPO. Next, a price must be determined to initially offer the stock for. This is based on the estimated demand for the company's stock. If the price is set too high no one will buy the stock, making the IPO worthless. The next step is to negotiate an agreement for underwriting the stock with the investment banker. This involves the underwriter buying all the shares of stock, and then reselling it to investors. This takes the burden of dealing with the distribution of the shares off of the company's hands.

For the individual investor to buy shares of a stock they must go through a middleman that purchases the shares of stock for them. This middleman is called a stockbroker. Stockbrokers are licensed by the Securities and Exchange Commission so that they are aware of the rules and regulations of securities trading. These stockbrokers usually work for a large investment company that has employees on the stock exchange floor to take care of the actual buying and selling of the stocks. Those employees are called floor brokers and they trade with floor brokers of other investment companies who are trying to sell or buy stocks that they are trying to sell or buy.

2.4 Stock Market Indexes

Stock market indexes are a collection of stocks that are used to come up with an average to determine how the stock market is doing as a whole or how an individual sector is doing. When indexes are created there are three different factors that are incorporated into setting up the index. These are sampling, weighting, and averaging; these determine how the index works. Utilizing different methods of these three factors determines how the number representing the indexes value is calculated.

Sampling is the method in which the stocks of the index are chosen. The sampling can vary depending on how many stocks are used and how they are selected. In most cases where sampling is used stocks are selected in a way that represents a larger group accurately. This isn't always the case since you can't predict that a group of stocks selected are always going to represent the larger group. On average this group of stocks will provide a good representation. A way to eliminate this is to develop an index that

takes the prices of all the stocks into consideration. This is usually done when an index is used to represent a whole stock exchange.

Weighting is used to determine how much an individual stock impacts the index that it is included in. This is used when an index is developed from a sampling of stocks and when a whole exchange is used. There are two different weighting techniques that are used; the first uses the market value of the stock to determine its weight. This technique takes the current price of a stock and adds to the current prices of the rest of the stocks that are used. This value is then divided by the number of stocks that are used to determine the index. This approach gets very complicated when stock splits are involved because the divisor must be adjusted to account for the change in stock price. The other method used for weighting stocks is assigning equal weights to equal relative price changes. This means that an equal amount of money is assumed to be invested in each stock, so when a stock price changes its weight changes by the percentage change. This approach makes it much easier to deal with stock splits because nothing has to be adjusted.

Averaging is used to come up with the final value that represents the index from the value that is calculated after weighting the stocks. There are two methods that are currently used to come up with the average. The first method uses an arithmetic mean to calculate this final value. This technique is the one most commonly used and is utilized by the larger more common indexes. With the arithmetic mean the final value is basically an average of the stock values that were achieved through weighting. This form of averaging is claimed to have an upward bias. This is because the average has a tendency to gain quickly and lose slowly. This is based on having stocks that have gains

and losses that are similar in percentage of the current price. As a stock gains in price a same percentage gain will actually show the average gaining a greater amount each time and losses of the same percentages will show the averaging losing less each time. The second method of averaging uses a geometric mean to determine its value. This method is much more complicated to calculate and as a result is used less. Because of the way a geometric mean calculates and average it is said to have a downward bias being the opposite of the arithmetic mean. If you were to use both methods on the same group of stocks the arithmetic mean would yield a higher value then the geometric mean. Listed below are the major indexes that are used today.

The Dow Jones Industrial Average

The Dow Jones Industrial Average (DJI) is made up of thirty stocks that are considered to be in the industrial sector. This average uses an arithmetic average to determine how each stock affects its value. This index is the most popular, but is also the most misunderstood because of the averaging that is used.

The Standard & Poor's 500 Composite

The Standard & Poor's 500 Composite is made up of 400 industrial stocks, 40 utility stocks, 20 transportation stocks, and 40 financial stocks. Because of the number of stocks used to comprise this index it has a much broader coverage of the market then the DJI. This type of index uses the value of the outstanding shares to determine the importance of a particular stock. This type of weighting is called "base-weighted aggregative". This type of weighting has several advantages that make this index seem to be a more accurate indicator then the DJI. These advantages also help when it comes to

dealing with stock splits; since this index uses the value of shares outstanding no adjustment needs to be made when a split occurs.

The New York Stock Exchange Composite

The New York Stock Exchange Composite is comprised of all the stocks traded on the New York Stock Exchange. Like the Standard & Poor's 500 this index uses a value weighted price index to determine the weighting of each stock. What makes this different is that because there are always new stocks being traded on the New York Stock Exchange the index always has to be adjusted to accommodate these new stocks. This is done by adjusting the weighting so that when the new stock is added the index has the same value as before it was added. This is also done when a stock is no longer traded on the exchange.

The American Stock Exchange Price Level Index

The American Stock Exchange Price Level Index is comprised of all the stocks traded on the American Stock Exchange. The way this index works is the same way the New York Stock Exchange Composite works.

NASDAQ Composite Index

The NASDAQ Composite Index is comprised of more than 2,000 over the counter stocks and uses value weighting. The majority of these stocks have very low prices so the 100 or so largest stocks have the most influence on its value.

The Wilshire 5,000

The Wilshire 5,000 is comprised of 5,000 stocks from the New York Stock Exchange, the American Stock Exchange, and some over the counter stocks. It's value weighted to determine its value and covers more stocks than any other index.

2.5 Investor Protection

To protect investors from being misinformed the U.S. government has special regulations that promotes honest and fair practices when it comes to supplying information about companies. One of the regulations states that the investor must be provided with what is called full disclosure. This means that publicly held companies must publish financial and other critical information that would affect their stock value. The first U.S. government regulation regarding securities was the Security Act of 1933, which required new securities to register with the SEC. This means the security must be approved by the SEC before it can go public. This prevents a bogus company from selling stock in its company. The Security Act of 1934 took this a step further by requiring all companies registered with the SEC to submit up to date information to the SEC every year. The SEC has regulations that prohibit investors from making money through a practice known as insider trading. This involves an individual who has secret information about a company that will drastically change the stock price when it makes the news public, the individual then acts on this information and buys the companies stock. Doing this is considered a criminal offense and can involve fines and jail time.

2.6 Conclusion

The information provided in this chapter should give the reader a brief generalization of some of the basic practices of the stock market. With this information the reader should be able to better understand what is talked about in the following chapters. This information also should enable the reader to have enough of an understanding of the stock market to be able to invest in it.

Chapter 3

Stock Selection

Selecting a company in which to invest one's hard-earned money can be an intimidating task, given the sheer number of companies that are traded on Wall Street. While there are those who choose their investments based solely on the price per share of a company on any given day, the majority of successful investors perform a significant amount of background research on a company before purchasing its stock. This chapter will attempt to explain several methods of selection, as well as basic research that should be performed before purchasing stock in a company. Several tools for the research process will also be discussed. The assumption will be made that the investor plans on "holding" stock in a particular company for at least a few months.

3.1 Research

3.1.1 Fundamental Analysis

The term "Fundamental Analysis" is a catch-all phrase that is used for any type of price-of-stock-vs.-actual-value analysis that is based on the company's past performance and potential for growth. This is a qualitative method (as opposed to quantitative methods described later) of evaluation. There are as many ways to do this as there are investors, as each investor has his or her own opinion as to what adds value to a company. The result of a fundamental analysis is said to be a company's "intrinsic value", taking into consideration cost of operations, anticipated future revenue and growth, and the structure of the company, among other things. Other items that are

commonly involved in fundamental analysis are price/earnings ratios, dividend yields, market value, and book value, as well as other, more subjective items such as the management of a company, market saturation, competition, etc. Each of these will be explained in detail later in the chapter.

Depending on the techniques an investor wishes to use, he or she may be looking for different results in fundamental analysis. For example, after screening (described below) several companies for a price range of stocks, a so-called “value” investor may perform a fundamental analysis to determine which of the “screened” companies has the best potential for overcoming its “under-value”. At the same time a “momentum” investor will look at the same screened companies and use a fundamental analysis to determine which stock prices have been growing at a reasonable rate, corresponding with the company’s earnings.

The ultimate goal of performing a fundamental analysis of a company is to determine what the fair market value is for the company’s stock. Generally speaking, the price will fluctuate about the actual intrinsic value of the company. Thus if one were basing trades solely on fundamental analysis, he or she would buy if the price per share is below what is believed to be the intrinsic value, and sell if it is above.

The following are a list of “non-numerical” items that should be taken into consideration:

- What are the products and/or services? Will there be a continuing need for them? Are they (is it) something that customers buy once or repeatedly? Does the competition offer a better product/service?

- Can the company defend its position in their market? Do they have copyrights or other devices that will help them defend their position? How does the company compare to the competition?
- What is the future outlook for both the company and the industry? Does the company have new products/services coming?
- What is the management team like? Is the company able to attract and keep highly skilled personnel?
- Does the company have a global presence?
- How consistent has the company been in its policies, performance, and operation?

3.1.2 Quantitative Research Methods

Investors that base their approach to investing solely on numbers and hard data (i.e. past trends, income, earnings, etc.) are said to be “quantitative” investors. This approach is relatively new, and is quite different from the fundamental analysis approach. By focusing entirely on the numbers, it allows the investor to use computers and algorithms to develop a strategy that will result in maximum profit.

One major drawback to this style is that it does not take into account the fact that there will always be a large portion of investors that use the fundamental analysis approach, and that there are also a large portion of investors that don't have a set strategy. Thus, the price of stock in a particular company may vary greatly depending on announcements and warnings of economy slow-down. Such things cannot be accurately accounted for in a numerical analysis method. As a result many investors use a

quantitative approach to guide them, or to narrow the number of companies that they are looking at to a few choice companies, and then use fundamental analysis to determine which are the most solid companies that are likely to show strong growth in the future.

There are many mathematical models that can be used to help determine the intrinsic value of a company as calculated by numbers. Here are a couple of examples:

For constant dividends:

$$P = Dt / k_e$$

where:

P = intrinsic value

Dt = expected dividend

k_e = appropriate discount factor for the investment

For constant dividend growth:

$$P = Dt / (k_e - g)$$

where:

P = intrinsic value

Dt = expected dividend

k_e = appropriate discount factor for the investment

g = constant dividend growth rate

These examples are really nothing more than back-of-the-envelope calculations, and may or may not be accurate enough to base investments on (this depends on the investor). However, numerical algorithms used by investors may be much more in-depth, and may take into consideration such items as earnings growth, revenue growth, tax figures, cash flow, and debt, to name just a few.

The following are a list of numerical items that should be taken into consideration:

- Earnings growth
- Revenue growth
- Margins
- R&D spending
- Number of common shares outstanding

- Cash flow
- Debt (Debt to equity ratio)
- Cash relative to annual sales
- Return on Equity
- Receivables and Inventory
- Current ratio of assets to liabilities

All items on this list can be found on a company's annual report (explained in section 3.2.1).

3.2 Research Tools

3.2.1 Annual Report.

The annual report is the most important tool that an investor can use to gather information about a company. A copy is sent to each stockholder following the close of the fiscal year. Many companies also post it online so that potential investors may view it as well. There are a few examples of annual reports provided in the appendix. All pertinent numerical data can be found here, including revenue, debt, and everything in between. Also found here is the management's discussion and analysis which can be used to help interpret the numbers (why earnings dropped during a particular time period, for example). By spending a few minutes sorting through the information provided by a company's annual report, an investor can get a general idea of how strong the company is, as well as how efficient it is.

3.2.2 Screens.

Several techniques of investing require the use of "screens", or numerical criteria, to help in the selection process. For example, an investor who wishes to purchase under-

valued stock may use a P/E (price-to-earnings) ratio screen, that is, a number that the P/E ratio must fall below, and further examine companies that meet this criterion. Another screen that may be used is one to determine the size of the companies in which one wishes to invest; i.e. a net earnings screen.

While some techniques of investing require the use of screens exclusively, they are, more often than not, used as an aid, or for general selection purposes. They can be (and often are) used in conjunction with quantitative analysis of a company, as an aid in determining a company's intrinsic value. Most often they are applied to numbers that can be found in an annual report.

3.2.3 Index and Sector Trends

Stock indexes were put in place as a means to measure the market in general, but they also provide something against which to measure an individual company's performance. For example, if a company has consistently outperformed the "market" (meaning the index), even when the economy is slow, then there is a good chance that it is a company worth investing in. This is particularly true of the Dow Jones Industrial Average and the S & P 500. Because the NASDAQ has been so volatile in recent years, it is not as good an indicator.

Sector trends are another means by which to measure a company. If a sector is doing particularly poorly during a given time period, but a company within that sector is doing particularly well, even if it is only outperforming the trend, then it might be a company to consider. One exception to this may be the technology sector in which prices fluctuate so much that it is virtually impossible to tell whether a company is

outperforming a trend. For example, Company XYZ may begin a week way above a trend, but within hours, or even minutes, it could nose dive.

Indexes and sector trends provide something against which to measure a company's performance; the equivalent of a "curve" in a college course, and are thus an important tool when searching for companies in which to invest.

3.2.4 Announcements and Earnings Warnings

Announcements and earnings warnings that are made by a company can have a significant impact on stock price fluctuation, not only for that company, but also for others in its sector. This is not a significant cause of worry for the long-term investor who is looking mostly for strong dividend yields (unless, of course, the announcement indicates that dividends will be significantly less than originally stated). For the investor who is interested in an increase in capital appreciation, these announcements may be of more importance. Several examples of announcements include mergers, increase in dividend earnings, decrease in dividend earnings, change in management, and new products or services. Announcements of mergers and new products/services generally push stock prices higher, while announcements that bring uncertainty, such as a change in management, generally knock prices down.

Announcements by third parties also tend to have an effect on stock prices. Such parties include the federal government (regarding interest rate changes) and major players in a particular sector of industry. A particularly good example of this is the drop of prices of many companies in the technology sector when Microsoft announced that personal computer sales were lower than expected during the holiday season of 2000. This

announcement caused anxiety in investors who had money in suppliers, software developers, and e-commerce corporations, because each of these is affected by computer sales. A second example is the announcement made by the government to decrease national interest rates. This meant that more people were likely to take out loans, which meant that more people were spending money, which meant that the economy would continue to grow. As a result, many stock prices went up.

Announcements such as the Microsoft example cause stock prices to move all the time. Generally speaking, announcements by any company that will directly affect sales and revenue of another company will cause that other company's price to move.

While announcements may not be considered "tools" in the general sense of the word, they can indicate what kind of short-term performance one can expect from a company. Looking at past announcements can help an investor get a sense of what kinds of uncertainties the company is likely to face in the future, as well as where the company's strengths and weaknesses lie.

3.3 Conclusion

While one could easily throw darts at the stock listings page and get lucky, a little bit of research before sinking money into a company can go a long way. Even using one of the simple mathematical models given earlier can give a general idea of a company's intrinsic value, and thus help in determining whether to buy stock in the company at the current market price. If the tools described are taken advantage of to the fullest extent, an investor could stand to make a large profit.

Chapter 4

Buying and Selling Strategies

4.1. Introduction

In starting a study of stock analysis, it is most likely to start with its progenitor, Charles Dow, the originator of market averages and their first interpreter. Dow never organized his thoughts in a book although he was urged to do so by his admirers. One of these, Samuel Nelson introduced his friend's principles in a book called "The ABC of Stock Market Speculation" in which he designated several chapters as Dow Jones. Another one of these, was William Hamilton, who came to the editorship of the Wall Street Journal and started to expand upon Dow's premises so much that what is known as Dow theory is really Hamilton's version of the original. Dow Theory is a mechanical technique for recognizing trends, using previous high and low points in averages as benchmarks. It consists of a rather loose set of precepts which, taken together, provide a framework for judging the future of the market from its past performance. In this chapter we are going to talk about the trends, time, and the strategy, of buying and selling in the stock market.

4.2. The Trend

Another pillar in the Dow structure is that "a primary movement once established remains in force until definitely cancelled by the actions of both averages". The market cannot be expected to produce new indications of trend every day, and, unless there is

positive evidence to the contrary, the Dow Theory postulates the continuation of the existing trend. The established trend remains the controlling factor for the price progression. In periods of uncertainty, especially during secondary reactions, followers of the theory are committed to the belief that the established trend will recommence unless a reversal signal is emitted by the system.

It should be said that most of the false signals of the method have been created in the matter of resumption of trend. After a primary move had been in progress for many months, a secondary reaction on several occasions has culminated in deceptive movement beyond the preceding peak. Observations reveal that reconfirmations are often unreliable even when positively confirmed by the concomitant average. Such false signals were given in June 1963 and in June 1946.

Finally there is one last technical observation that must be made. The market starts an advance when it starts going up, and starts declining by going down. During a reversal trend the average fails to reach a new high and then retreats lower than its previous reaction. With such action the primary trend is considered changed from “bullish” to “bearish”. In this case the economy is in a deep recession and the market has dropped a long way from its peak. The bull market begins when the stocks start going up.

In late 1974, conditions were developing to suggest a market bottom might be close. The stock market was in a recession and the stock prices went down by almost fifty percent. The fed was making expansive moves and short-term interest rates were dropping. Stocks prices kept going down but on October 3 the S&P 500 average hit a low for the cycle \$62.28. Prices rallied in November then went down in early December at

\$65.01. By mid October prices started going up sharply and another market advance begun. The clue was that the December low was higher than the October lows.

4.3 Market Timing

Another large school of investment professionals advocates investing based on timing the overall cycle. In their view the most important investment judgment is to distinguish the bull markets from the bear markets. If it is a bull market the prices are going to rally and it is easy to make money. In a bear market almost every stock will decline. In short, the credo of the market timing is to buy low sell high, which is followed by a large number of investors directly or indirectly.

Graham's Security Analysis has a chapter critical of market analysis. He outlined their views on the shortcomings of the market timing, taking shots at chart reading and the like. They take particular pride in disputing one Colonel Ayres, who in 1922 suggested that the stock prices usually reach a bottom when blast furnaces in operation decline through 60 percent of the total. Conversely, security prices usually top when blast furnaces in operation pass through a 60 percent mark on the upswing. The virtues of buying low and selling high are obvious. While the methods for deciding what is high and what is low may differ, Security Analysis advocates this approach indirectly. Buying stocks below their intrinsic values and selling them when prices soar far above intrinsic values is simply a variation of buying low and selling high. If there are few stocks around that seem to be selling below their intrinsic values, perhaps the market as a whole is overvalued. Intrinsic value is just another form of market timing.

Colonel Ayres and his 1922 treatise on blast furnaces is another form. The stock market has a tendency to rally during an expansion in the general economy and to drop during the declines in the economy. The relation ship is not precise, as the market tends to lead the economy. The U.S Department of Commerce classifies the stock market as a leading indicator of the economy. Ayres suggested selling when sixty percent or more of available blast furnaces were in operation. Market advances and economic expansions don't last forever. Long before the economic expansion has run its course, the stock market begins to see the coming economic peak and starts down. The market starts to drop while the expansion keeps on growing. In Ayres's day, only sixty percent of the blast furnaces were in operation and the market peak was near.

The monetary approach is a closely related component if market timing. An expansion Federal Reserve Board policy, especially in the face of a weak economy, is usually positive for the stock market. On the other hand, tight money almost invariably leads to declining stock prices. The reasons of this have to do with how the monetary policy affects the economy and the fact that the market leads the economy. Indeed, it is this close interrelationship the makes the monetary and the fiscal policy argument so difficult to resolve.

Where are we in any particular market cycle? If the answer is early in the advance that probably means the market has recently been to very low levels and is in the early stage of recovery. Economic pessimism is now giving way to a growing optimism. Profits show signs of turning around and interest rates start going down. As a result, the market is probably doing rather well, undergoing a broadly based advance with many stocks participating. If this is the case the time is favorable for a move to the market. This

means that the odds are unusually favorable. If you are going to be in the stock market at all this is the time.

4.4 Trading Strategies

It is much easier to become a good investor in securities, that is a buyer, than it is to become a good seller. There are all kinds of reasons for selling securities. Some of these have a certain degree of validity, for example, if one has a large gain and have to pay a tax. Occasionally there is a reason for selling stocks. That is you know of another investment that does better. An equally compelling reason is to build up reserves is so that you will have funds when the next bargain in the market occurs. There is no formula for successful trading in the market, but there are a number of helpful techniques one can use. An especially helpful method is the dollar averaging. This method is really helpful in meandering sideways markets where there is no trend. It is a good way to start a portfolio, but is of less use afterwards.

For individuals in high tax brackets it probably pays to regularly take any short-term losses you may have at the end of the year. Some investors who wish to keep the position double up and then sell the high-cost stock after 30 days. For individuals who concentrate a good deal of their investment funds in the emerging growth stock area of the market, stop-loss order may be a good precaution. That is an order is given to the broker to sell when the stock prices go down to predetermined level. They are usually put in 12 to 15 percent below the current market. If the stock rises, the stop-loss order price is accordingly increased.

Another technique is to sell call options against a stock when you think it has reached a level where it is no longer a really good value, but not a price that makes it a clear-cut sale. A call option means that the seller contracts to sell a stock at an agreed on price at any time prior to an expiration date in return for cash payment. There are also puts, in which the seller agrees to buy a stock on an agreed price prior to an expiration date. The seller of puts and calls does well when stock prices don't change appreciably. These methods are of limited usefulness for most investors.

An effective strategy is the large portfolio. Each month, he calculated the percent profit or loss in each holding of more than a year, and divided the number by the number of months he had held it. This procedure warns you when a good selection of some time back is no longer helping the portfolio. The challenge is to always keep the list of holdings in tune with the market and economic conditions.

4.5 Technicians

Still another component of market timing is a social measurement, considering the behavior of various investors under different market conditions. The market is dominated at times by greed and at other times by fear and panic selling. Many investment professionals pay close attention to these trends as clues to the future course of the market. They tend to look on greed as a sign that the bull market is about to end and a bear market is about to begin. These tend to be periods when the stock prices sell far above intrinsic values and, when the economic outlook is particularly positive. Investor optimism and an economic boom result in overpriced stocks; a market peak is not far from sight.

Technicians consider investor fear and panic selling as a great buying opportunity. They reason that when everyone is panicking, usually because the economic outlook is poor, stock prices are usually undervalued and it is time to buy. This is correct unless what is happening is a collapse of the economic system, as many will be saying at all points of severe market decline.

The technicians believe that the stock market reflects the collective wisdom, ignorance, or human behavior of millions of investors. By watching the easily documented decisions unfold, they hope to detect the changes in the investors interest in a stock. Technicians would look for growing investor's interest in a stock and when they find it they will recommend the purchase of that stock without knowing the investors motivation in buying it. Technicians hope to anticipate the fundamental analyst, the one looking at individual companies. By watching price and volume changes, they hope to buy before fundamental changes become widely known. Technical analysis applies to both the stock market as a whole and to individual stocks. Technicians usually have charts of both the overall market and hundreds of stocks. They analyze hundreds of trading factors and make judgments without regard to the economy. They believe that that the market knows before economic and fundamental analyst ever catch on.

Ultimately there are as many technical approaches as there are technicians. All of the technicians agree that experience and judgment must be applied with the charts for one cannot make a decision blindly on the number of patterns alone. Nevertheless, an example of methods used by one leading technician in evaluating the prospect of the stock market maybe of some interest.

Chapter 5

Under Valued Technology Stocks

5.1 Introduction

This chapter deals with running a stock simulation based on the purchasing of under valued technology stocks. The reason these types of stocks were chosen was because they tend to be a risky group; mainly stocks that have lost a great deal of value in a short period of time. Picking these stocks from the technology sector was decided because at the time of the simulation the technology sector was very volatile. Since the simulation period was only eight weeks long, which is a relatively short time period, the more volatile the stocks the more interesting the simulation. From this simulation we will see what kind of results can be seen from investing in these stocks and how to decide when to buy and sell can impact the results greatly.

5.2 Selection

In choosing the stocks for this simulation I had to look at several different factors to make sure the stocks met the definition of being under valued. At the same time I also had to make sure that the stocks weren't going to continue to go down in price. The first step I took in selecting these stocks was to find stocks that were in the technology sector. To do this I concentrated on the NASDAQ, which is made up of primarily technology stocks. After coming up with a group of stocks that was divided up into several smaller groups of different types of technologies, I began to sort through the stocks to see if they

met my criteria. This didn't take very long since, at the time of the selection technology stocks weren't doing to well. After finding a stock that was very close to its 52 week low I checked on its yearly chart. By looking at the chart I was able to see if the stock was on a continual downward trend or had somewhat bottomed out. If it seemed to have bottomed out I felt this was a good thing because it was less likely the stock was just going downhill. Next I checked to see how the analysts had been recently rating this stock, in this I looked to see if the stock was currently being rated as a buy and strong buy. This helped to back up my feeling that this stock wasn't unstable.

Vitech America is a company in the computer based systems industry that engages in the manufacture and distribution of computer equipment and related products as well as the financing of the purchase thereof, in the Federal Republic of Brazil. When looking at this stock I first noticed that it had been at the 52 week low in the past few days. Then by looking at the chart of the stock's performance over the past year, I noticed that the stock had been heading downward recently, but had seemed to bottom out. The recent decline made me a little skeptical about this, but I then took a look at how the analysts had been evaluating the stock. Several analysts had recently given this stock a rating of either a buy or strong buy, with most being a strong buy. After seeing this I felt more comfortable with the stock and decided to buy it.

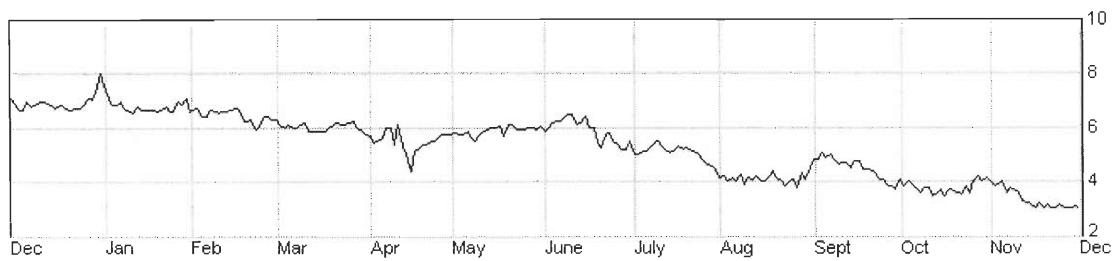


Figure 5.1 Vitech America's stock value ranging from 12/1/99 to 12/1/00.

Blue Wave Systems is a company in the computer based systems industry that designs, develops and markets programmable digital signal processing computing sub-systems that are used in telecommunications, communications analysis, medical imaging, radar, sonar and other systems. When I looked at this stock it was a little above its 52 week low which had been set the month before. From looking at the one-year performance chart of this stock I could see that it had increased a little in value since October but had return to the value it was at in early October. The chart showed that the stock price had been bouncing around its 52 week low since mid August. This seemed to be a safe buy; it may not see a great increase in the next couple of weeks, but this bouncing around would allow me to buy the stock on a low bounce and sell it after it has bounced high. By doing this several times I could potentially show a very good return. To double-check my feelings about this stock I checked how the analysts had recently rated it. These ratings were very good, being either a buy or a strong buy.

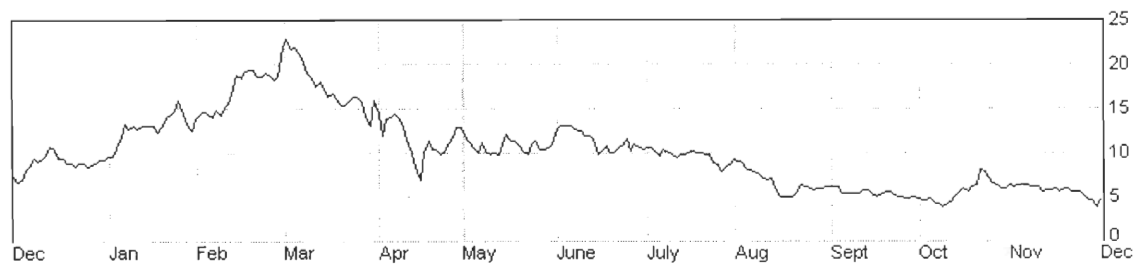


Figure 5.2 Blue Wave Systems' stock value ranging from 12/1/99 to 12/1/00.

Credence Systems is a company in the semiconductor equipment/material industry that designs, manufactures, sells, and services automatic test equipment used for testing semiconductor integrated circuits. It also develops, licenses and distributes related software products. When I looked at this stock it was just above its 52 week low and had been at this low a few days before. When looking at the one-year performance chart of this stock I was able to see that since early October the stock's price had stayed very close to its 52 week low. Before hitting this low the stock had been on a downward trend since the beginning of September and had lost over 60% of its value in this time. From seeing this, I was hoping that the stock would soon begin to gain back some of its lost value. Even if this wasn't going to be the case, the stock didn't seem to be at a big risk of going down much further. To confirm my conclusions I checked the analysts' recent rating of the stock and found that they were either a buy or strong buy.

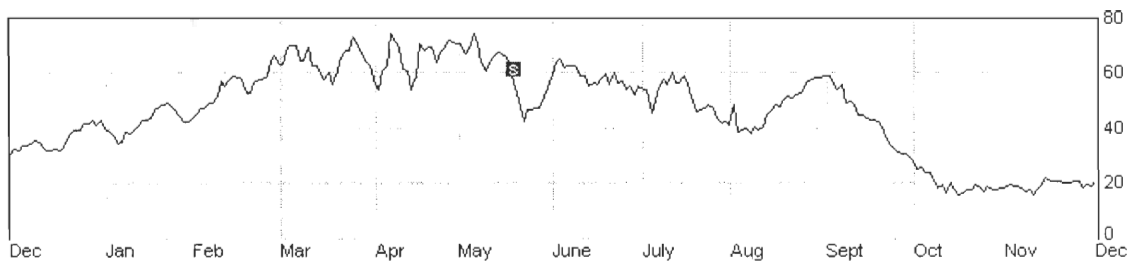


Figure 5.3 Credence Systems' stock value ranging from 12/1/99 to 12/1/00.

Conexant Systems is a company in the semiconductor-broad line and is the world's largest independent company focused exclusively on providing semiconductor products for communications electronics. It provides semiconductor integrated circuit products and system-level solutions for a broad range of communications applications. When I looked at this stock it was a little above its 52 week low which it had reached about 3 weeks before. From looking at the one-year performance chart of this stock I could see that the value had been on a slow downward trend since February, but had started to level out since August. The stock value had also been very volatile, jumping around a lot. This seemed to me to be a good thing since it would allow me to buy and sell on the lows and highs respectively. I next proceeded to double-check my conclusion with the recent analysts' ratings of the stock. These consisted of several buy and strong buy ratings and a couple of hold ratings. I still felt comfortable purchasing this stock, in spite of the hold ratings.

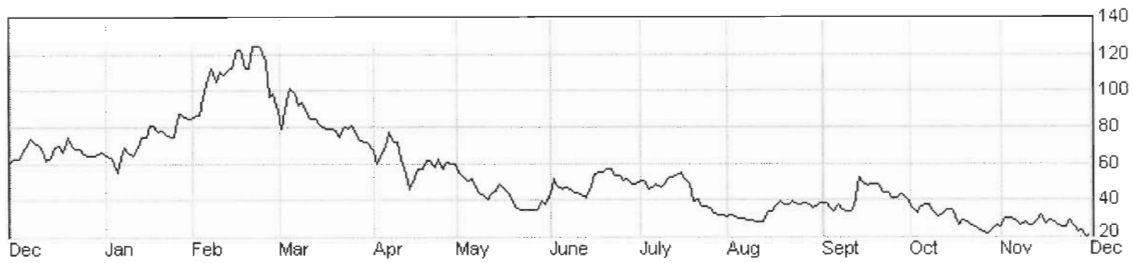


Figure 5.4 Conexant Systems' stock value ranging from 12/1/99 to 12/1/00.

Pericom Semiconductor Corporation is a company in the networking and communication devices industry that designs, develops and markets high-performance interface integrated circuits (ICs) used in many of today's advanced electronic systems. When I first looked at this stock the price was a bit above the 52 week low, but the stock hadn't been this low in over 6 months. The one-year performance chart of this stock was also a little different then my previous picks because it had only been at this low in the last week, so this didn't quite meet the "bottom-out" criteria. I was skeptical because of this, but I decide to take a little more risk when picking my last stock. I then proceeded to check the recent ratings from the analysts to make sure this stock was not receiving sell ratings. The ratings I saw were all strong buy ratings with the exception of one buy rating so I decided to take the chance and go with this stock.

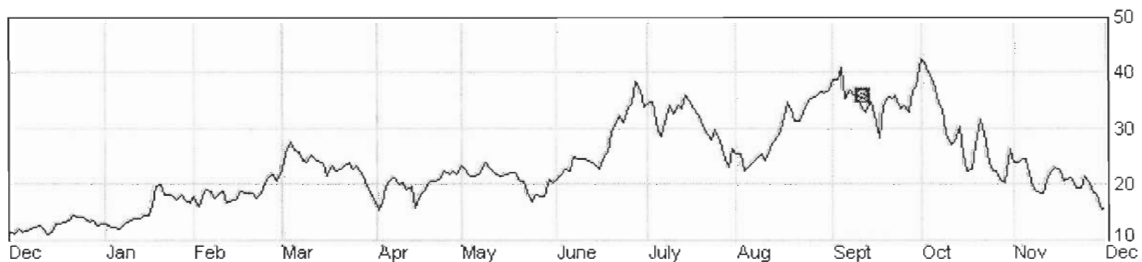


Figure 5.5 Pericom Semiconductor Corporation stock value ranging from 12/1/99 to 12/1/00.

5.3 Simulation

Stocks Purchased:

VTCH - Vitech America

BWSI – Blue Wave Systems

CMOS – Credence Systems

CNXT – Conexant Systems

PSEM – Pericom Semiconductor Corp.

11/20/00 Buy 3,100 of VTCH @ 3.25

11/20/00 Buy 1,779 of BWSI @ 5.125

11/20/00 Buy 495 of CMOS @ 20.1875

11/20/00 Buy 346 of CNXT @ 28.875

11/20/00 Buy 495 of PSEM @ 20.0625

12/06/00 12:30 PM Sell 495 of CMOS @ 24.50

12/21/00 6:30 PM Buy 614 of CMOS @ 19.75

12/29/00 6:00 PM Sell 3,100 of VTCH @ 3.9375

01/04/01 5:00 PM Sell 614 of CMOS @ 28.3125

01/12/01 5:00 PM Sell 1,779 of BWSI @ 6.875

01/12/01 5:00 PM Sell 346 of CNXT @ 19.9375

01/12/01 5:00 PM Sell 495 of PSEM @ 22.125

5.4 Analysis

Throughout the simulation period the stock market was very volatile and for the most part it was headed on a downward trend. This doesn't seem to be the most ideal situation when trying to make money through the purchase of stocks. This isn't the case though because I found that money could be made relatively easily if the decisions to buy and sell were made correctly. Of course making these decisions isn't easy, but you have to set limits to when you will sell and buy before you need to make these decisions. This means that you have to decide at what percentage gain you are going to say its time to sell. When running this simulation I felt that a ten percent gain on a particular was more than adequate to justify selling. I tried to stick with this general rule throughout the simulation.

Vitech America was a very inexpensive stock when I first purchased it at \$3.25 a share. Because of its low price it seemed to move a lot more day to day in terms of percentage. Unfortunately it usually was up one day and the next day it fell even lower, which made it very hard to justify selling. In the first few weeks that I owned this stock it was holding strongly just below the price I had purchased it for. On December 7th the stock price increased significantly to a price over fifteen percent more than the purchase price. At this point I should have stuck with my original plans and sold the stock making a decent on my purchase. Unfortunately I didn't because I wasn't paying enough attention to it and was hoping it would go up even farther. This wasn't the case and it soon dropped below my original purchase price. As you can see from the graph and chart below the stock price never came up much above the original purchase price until the end of December. At this point it rose above a gain of twenty percent and I decided not to

wait it out like the last time so this time I sold all my shares. This gave me a very good return on the money I had invested in this stock. For the next two weeks the stock was on a steady downward trend so I never decided to repurchase any shares.

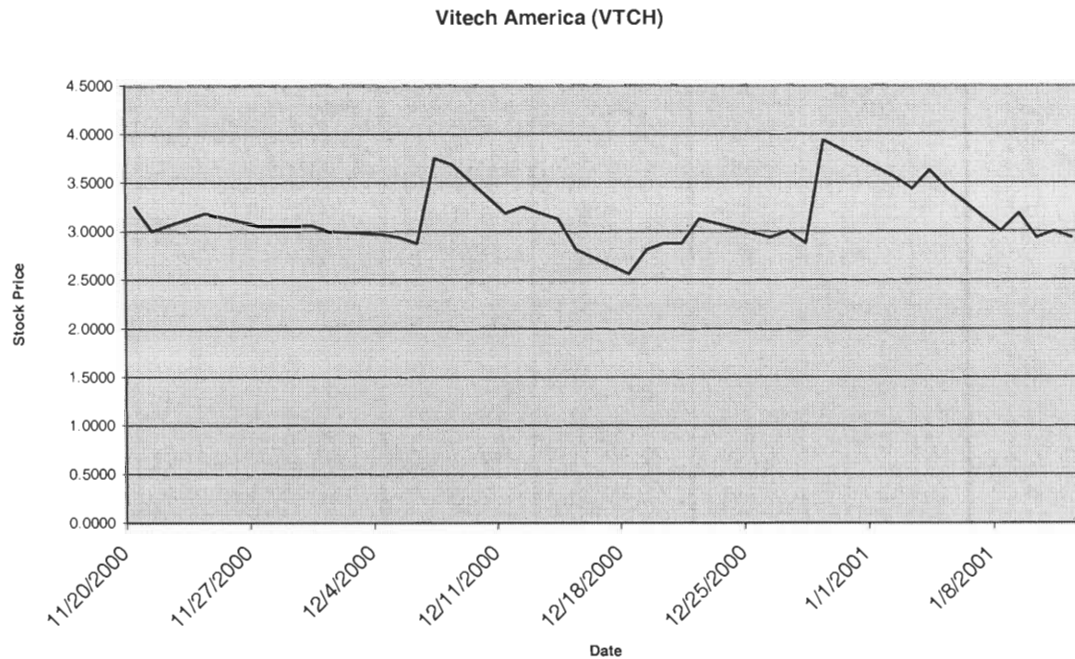


Figure 5.6 Vitech America stock price from 11/20/00-1/12/01.

Date	Shares	Current Price	% Change	Today's Gain	Overall Gain	% Gain	Current Value
11/20/00	3100	3.2500					\$10,075.00
11/21/00	3100	3.0000	-7.69%	-\$775.00	-\$775.00	-7.69%	\$9,300.00
11/22/00	3100	3.0675	2.25%	\$209.25	-\$565.75	-5.62%	\$9,509.25
11/24/00	3100	3.1875	3.91%	\$372.00	-\$193.75	-1.92%	\$9,881.25
11/27/00	3100	3.0625	-3.92%	-\$387.50	-\$581.25	-5.77%	\$9,493.75
11/28/00	3100	3.0625	0.00%	\$0.00	-\$581.25	-5.77%	\$9,493.75
11/29/00	3100	3.0625	0.00%	\$0.00	-\$581.25	-5.77%	\$9,493.75
11/30/00	3100	3.0625	0.00%	\$0.00	-\$581.25	-5.77%	\$9,493.75
12/1/00	3100	3.0000	-2.04%	-\$193.75	-\$775.00	-7.69%	\$9,300.00
12/4/00	3100	2.9688	-1.04%	-\$96.88	-\$871.88	-8.65%	\$9,203.13
12/5/00	3100	2.9375	-1.05%	-\$96.88	-\$968.75	-9.62%	\$9,106.25
12/6/00	3100	2.8750	-2.13%	-\$193.75	-\$1,162.50	-11.54%	\$8,912.50
12/7/00	3100	3.7500	30.43%	\$2,712.50	\$1,550.00	15.38%	\$11,625.00
12/8/00	3100	3.6875	-1.67%	-\$193.75	\$1,356.25	13.46%	\$11,431.25
12/11/00	3100	3.1875	-13.56%	-\$1,550.00	-\$193.75	-1.92%	\$9,881.25
12/12/00	3100	3.2500	1.96%	\$193.75	\$0.00	0.00%	\$10,075.00
12/13/00	3100	3.1875	-1.92%	-\$193.75	-\$193.75	-1.92%	\$9,881.25
12/14/00	3100	3.1250	-1.96%	-\$193.75	-\$387.50	-3.85%	\$9,687.50
12/15/00	3100	2.8125	-10.00%	-\$968.75	-\$1,356.25	-13.46%	\$8,718.75
12/18/00	3100	2.5625	-8.89%	-\$775.00	-\$2,131.25	-21.15%	\$7,943.75
12/19/00	3100	2.8125	9.76%	\$775.00	-\$1,356.25	-13.46%	\$8,718.75
12/20/00	3100	2.8750	2.22%	\$193.75	-\$1,162.50	-11.54%	\$8,912.50
12/21/00	3100	2.8750	0.00%	\$0.00	-\$1,162.50	-11.54%	\$8,912.50
12/22/00	3100	3.1250	8.70%	\$775.00	-\$387.50	-3.85%	\$9,687.50
12/26/00	3100	2.9375	-6.00%	-\$581.25	-\$968.75	-9.62%	\$9,106.25
12/27/00	3100	3.0000	2.13%	\$193.75	-\$775.00	-7.69%	\$9,300.00
12/28/00	3100	2.8750	-4.17%	-\$387.50	-\$1,162.50	-11.54%	\$8,912.50
12/29/00	3100	3.9375	36.96%	\$3,293.75	\$2,131.25	21.15%	\$12,206.25
1/2/01	0	3.5625	-9.52%	\$0.00	\$0.00		\$0.00
1/3/01	0	3.4375	-3.51%	\$0.00	\$0.00		\$0.00
1/4/01	0	3.6250	5.45%	\$0.00	\$0.00		\$0.00
1/5/01	0	3.4375	-5.17%	\$0.00	\$0.00		\$0.00
1/8/01	0	3.0000	-12.73%	\$0.00	\$0.00		\$0.00
1/9/01	0	3.1875	6.25%	\$0.00	\$0.00		\$0.00
1/10/01	0	2.9375	-7.84%	\$0.00	\$0.00		\$0.00
1/11/01	0	3.0000	2.13%	\$0.00	\$0.00		\$0.00
1/12/01	0	2.9375	-2.08%	\$0.00	\$0.00		\$0.00

Figure 5.7 Vitech America stock price and other values from 11/20/00-1/12/01.

Blue Wave Systems was also a fairly inexpensive stock when I purchased it at \$5.125 a share. From the graph and chart below you can see the Blue Wave System's stock price when back and forth between being twenty percent higher and twenty percent lower than the original purchase price. This would have made for a very good opportunity to make a lot of money in a short time period off of this stock. Unfortunately I never acted fast enough to sell my shares when the stock had an up day. Luckily at the end of the eight-week simulation period the stock was up almost forty percent from my original purchase price so I still managed to make a good return on my investment

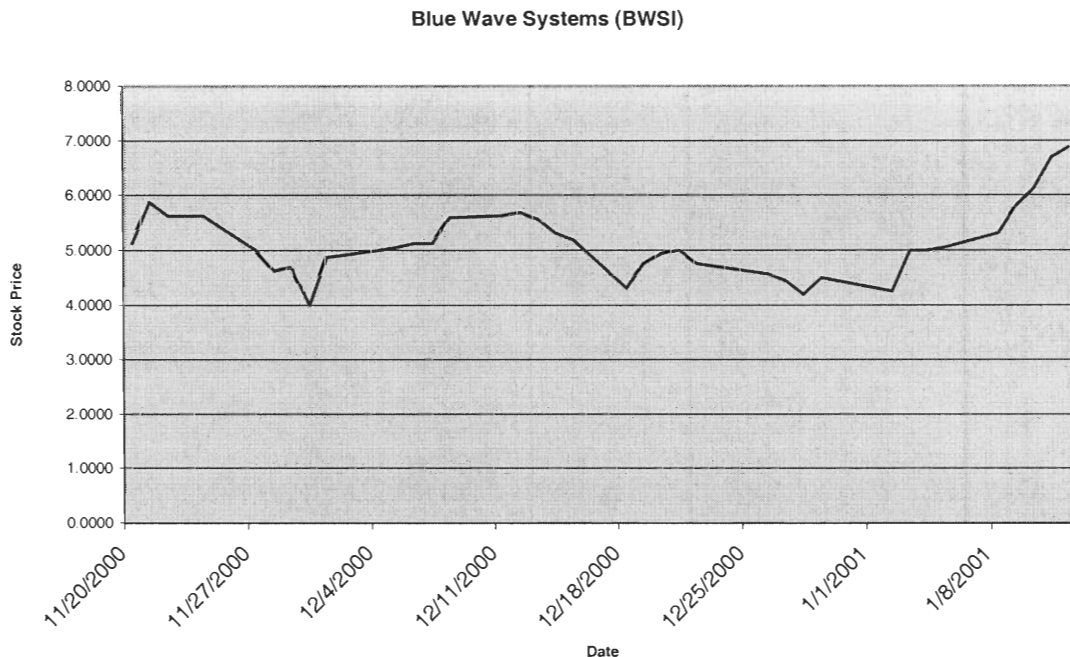


Figure 5.8 Blue Wave Systems stock price from 11/20/00-1/12/01.

Date	Shares	Current Price	% Change	Today's Gain	Overall Gain	% Gain	Current Value
11/20/00	1779	5.1250					\$9,117.38
11/21/00	1779	5.8750	14.63%	\$1,334.25	\$1,334.25	14.63%	\$10,451.63
11/22/00	1779	5.6250	-4.26%	-\$444.75	\$889.50	9.76%	\$10,006.88
11/24/00	1779	5.6250	0.00%	\$0.00	\$889.50	9.76%	\$10,006.88
11/27/00	1779	5.0000	-11.11%	-\$1,111.88	-\$222.38	-2.44%	\$8,895.00
11/28/00	1779	4.6250	-7.50%	-\$667.13	-\$889.50	-9.76%	\$8,227.88
11/29/00	1779	4.6875	1.35%	\$111.19	-\$778.31	-8.54%	\$8,339.06
11/30/00	1779	4.0000	-14.67%	-\$1,223.06	-\$2,001.38	-21.95%	\$7,116.00
12/1/00	1779	4.8750	21.88%	\$1,556.63	-\$444.75	-4.88%	\$8,672.63
12/4/00	1779	5.0000	2.56%	\$222.38	-\$222.38	-2.44%	\$8,895.00
12/5/00	1779	5.0625	1.25%	\$111.19	-\$111.19	-1.22%	\$9,006.19
12/6/00	1779	5.1250	1.23%	\$111.19	\$0.00	0.00%	\$9,117.38
12/7/00	1779	5.1250	0.00%	\$0.00	\$0.00	0.00%	\$9,117.38
12/8/00	1779	5.5938	9.15%	\$833.91	\$833.91	9.15%	\$9,951.28
12/11/00	1779	5.6250	0.56%	\$55.59	\$889.50	9.76%	\$10,006.88
12/12/00	1779	5.6875	1.11%	\$111.19	\$1,000.69	10.98%	\$10,118.06
12/13/00	1779	5.5625	-2.20%	-\$222.38	\$778.31	8.54%	\$9,895.69
12/14/00	1779	5.3125	-4.49%	-\$444.75	\$333.56	3.66%	\$9,450.94
12/15/00	1779	5.1875	-2.35%	-\$222.38	\$111.19	1.22%	\$9,228.56
12/18/00	1779	4.3125	-16.87%	-\$1,556.63	-\$1,445.44	-15.85%	\$7,671.94
12/19/00	1779	4.7500	10.14%	\$778.31	-\$667.13	-7.32%	\$8,450.25
12/20/00	1779	4.9375	3.95%	\$333.56	-\$333.56	-3.66%	\$8,783.81
12/21/00	1779	5.0000	1.27%	\$111.19	-\$222.38	-2.44%	\$8,895.00
12/22/00	1779	4.7500	-5.00%	-\$444.75	-\$667.13	-7.32%	\$8,450.25
12/26/00	1779	4.5625	-3.95%	-\$333.56	-\$1,000.69	-10.98%	\$8,116.69
12/27/00	1779	4.4375	-2.74%	-\$222.38	-\$1,223.06	-13.41%	\$7,894.31
12/28/00	1779	4.1875	-5.63%	-\$444.75	-\$1,667.81	-18.29%	\$7,449.56
12/29/00	1779	4.5000	7.46%	\$555.94	-\$1,111.88	-12.20%	\$8,005.50
1/2/01	1779	4.2500	-5.56%	-\$444.75	-\$1,556.63	-17.07%	\$7,560.75
1/3/01	1779	5.0000	17.65%	\$1,334.25	-\$222.38	-2.44%	\$8,895.00
1/4/01	1779	5.0000	0.00%	\$0.00	-\$222.38	-2.44%	\$8,895.00
1/5/01	1779	5.0613	1.23%	\$108.96	-\$113.41	-1.24%	\$9,003.96
1/8/01	1779	5.3125	4.96%	\$446.97	\$333.56	3.66%	\$9,450.94
1/9/01	1779	5.8125	9.41%	\$889.50	\$1,223.06	13.41%	\$10,340.44
1/10/01	1779	6.1250	5.38%	\$555.94	\$1,779.00	19.51%	\$10,896.38
1/11/01	1779	6.6875	9.18%	\$1,000.69	\$2,779.69	30.49%	\$11,897.06
1/12/01	1779	6.8750	2.80%	\$333.56	\$3,113.25	34.15%	\$12,230.63

Figure 5.9 Blue Wave Systems stock price and other values from 11/20/00-1/12/01.

Credence Systems was one of the higher priced stocks that I invested in with the original share price being \$20.1875. This stock was the most productive stock I purchased, meaning I made the greatest return on my investment from this stock. This stock had a similar pattern of movement as Vitech America, but for the most part the stock price was always greater than what I had purchased it at. From the graph and chart below you can see that on December 6th the stock price had reached \$24.50, which was an increase of over twenty percent. This met my qualifications for selling the stock so I sold all my shares. On December 21st the stock had fallen to a price of \$19.75, which was just below my original purchase price, so I decide to reinvest my money in the stock. By January 4th the stock price had risen too \$28.3125, which was an increase of over forty percent. The stock price never dropped enough during the next week so I never reinvested.

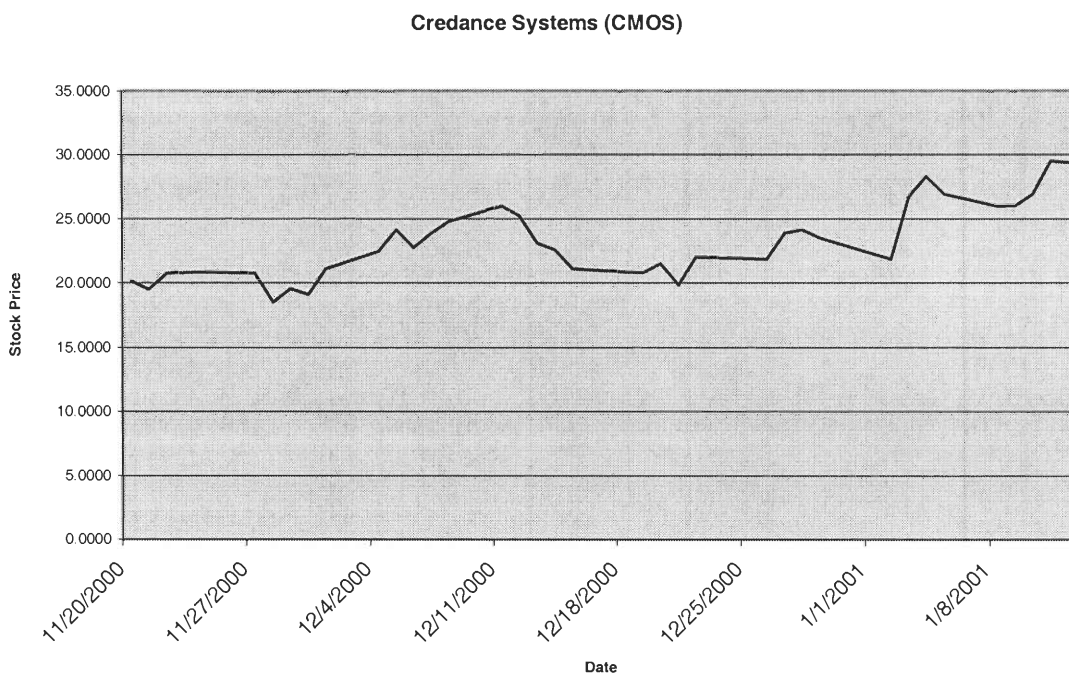


Figure 5.10 Credence Systems stock price from 11/20/00-1/12/01.

Date	Shares	Current Price	% Change	Today's Gain	Overall Gain	% Gain	Current Value
11/20/00	495	20.1875					\$9,992.81
11/21/00	495	19.5000	-3.41%	-\$340.31	-\$340.31	-3.41%	\$9,652.50
11/22/00	495	20.7500	6.41%	\$618.75	\$278.44	2.79%	\$10,271.25
11/24/00	495	20.8750	0.60%	\$61.88	\$340.31	3.41%	\$10,333.13
11/27/00	495	20.7500	-0.60%	-\$61.88	\$278.44	2.79%	\$10,271.25
11/28/00	495	18.5000	-10.84%	-\$1,113.75	-\$835.31	-8.36%	\$9,157.50
11/29/00	495	19.5625	5.74%	\$525.94	-\$309.38	-3.10%	\$9,683.44
11/30/00	495	19.1250	-2.24%	-\$216.56	-\$525.94	-5.26%	\$9,466.88
12/1/00	495	21.1250	10.46%	\$990.00	\$464.06	4.64%	\$10,456.88
12/4/00	495	22.4375	6.21%	\$649.69	\$1,113.75	11.15%	\$11,106.56
12/5/00	495	24.1250	7.52%	\$835.31	\$1,949.06	19.50%	\$11,941.88
12/6/00	495	22.7500	-5.70%	-\$680.63	\$1,268.44	12.69%	\$11,261.25
12/7/00		23.8750	4.95%	\$0.00	\$0.00		\$0.00
12/8/00		24.8125	3.93%	\$0.00	\$0.00		\$0.00
12/11/00		26.0000	4.79%	\$0.00	\$0.00		\$0.00
12/12/00		25.2500	-2.88%	\$0.00	\$0.00		\$0.00
12/13/00		23.1250	-8.42%	\$0.00	\$0.00		\$0.00
12/14/00		22.6250	-2.16%	\$0.00	\$0.00		\$0.00
12/15/00		21.1250	-6.63%	\$0.00	\$0.00		\$0.00
12/18/00		20.8750	-1.18%	\$0.00	\$0.00		\$0.00
12/19/00		20.8125	-0.30%	\$0.00	\$0.00		\$0.00
12/20/00		21.5000	3.30%	\$0.00	\$0.00		\$0.00
12/21/00	614	19.8750	-7.56%	\$0.00	\$0.00		\$12,203.25
12/22/00	614	22.0000	10.69%	\$1,304.75	\$1,112.88	8.98%	\$13,508.00
12/26/00	614	21.8750	-0.57%	-\$76.75	\$1,036.13	8.36%	\$13,431.25
12/27/00	614	23.8750	9.14%	\$1,228.00	\$2,264.13	18.27%	\$14,659.25
12/28/00	614	24.1250	1.05%	\$153.50	\$2,417.63	19.50%	\$14,812.75
12/29/00	614	23.5000	-2.59%	-\$383.75	\$2,033.88	16.41%	\$14,429.00
1/2/01	614	21.8750	-6.91%	-\$997.75	\$1,036.13	8.36%	\$13,431.25
1/3/01	614	26.7500	22.29%	\$2,993.25	\$4,029.38	32.51%	\$16,424.50
1/4/01	614	28.3125	5.84%	\$959.38	\$4,988.75	40.25%	\$17,383.88
1/5/01		26.9375	-4.86%	\$0.00	\$0.00		\$0.00
1/8/01		26.0000	-3.48%	\$0.00	\$0.00		\$0.00
1/9/01		26.0625	0.24%	\$0.00	\$0.00		\$0.00
1/10/01		26.9375	3.36%	\$0.00	\$0.00		\$0.00
1/11/01		29.5000	9.51%	\$0.00	\$0.00		\$0.00
1/12/01		29.4375	-0.21%	\$0.00	\$0.00		\$0.00

Figure 5.11 Credence Systems stock price and other values from 11/20/00-1/12/01.

Conexant Systems was one stock that I should not have invested in. It was actually the only stock that I had a negative return on. As you can see from the graph and chart below there was only two days throughout the eight-week simulation period where this stock was higher than my purchase price. If I had sold on December 11th, the day on which the stock was at it highest price I would have seen a gain of about ten percent. This would have actually met my original cutoff to sell, but I didn't act quickly enough and the stock price soon fell below my purchase price. Over the next five weeks I watched this stock hoping it would strengthen and regain its losses. This never happened though, and I ended up taking a sixty seven percent loss. This was a very significant loss and made me realize that in my original plans I should have made a cutoff of when to sell if the stock price was down.

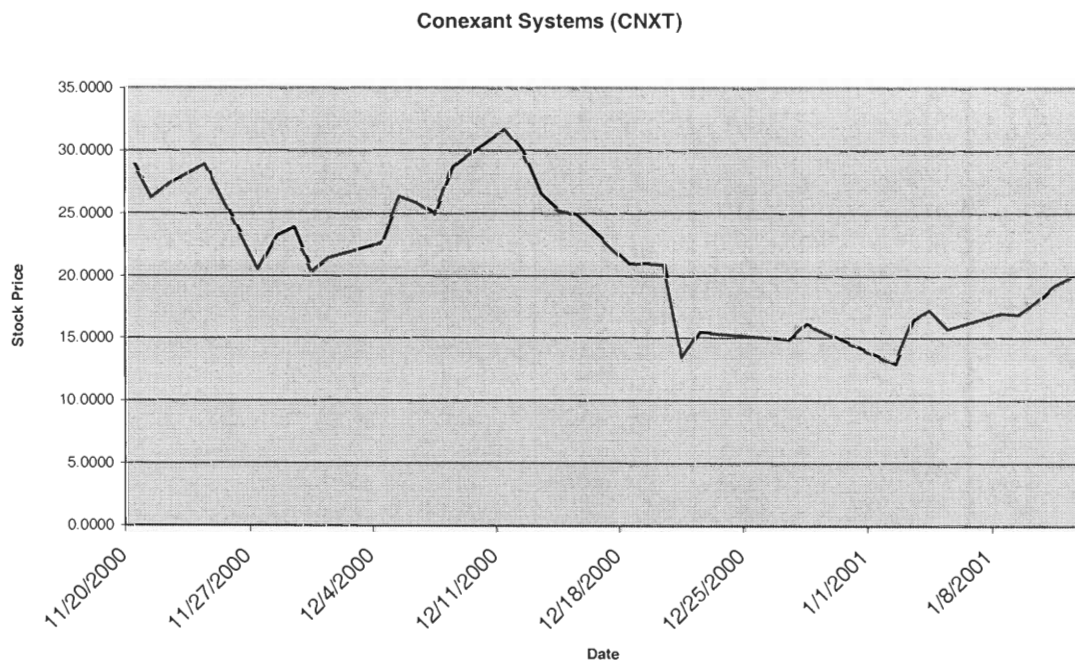


Figure 5.12 Conexant Systems stock price from 11/20/00-1/12/01

Date	Shares	Current Price	% Change	Today's Gain	Overall Gain	% Gain	Current Value
11/20/00	346	28.8750					\$9,990.75
11/21/00	346	26.2500	-9.09%	-\$908.25	-\$908.25	-9.09%	\$9,082.50
11/22/00	346	27.3750	4.29%	\$389.25	-\$519.00	-5.19%	\$9,471.75
11/24/00	346	28.9375	5.71%	\$540.63	\$21.63	0.22%	\$10,012.38
11/27/00	346	20.5625	-28.94%	-\$2,897.75	-\$2,876.13	-28.79%	\$7,114.63
11/28/00	346	23.2188	12.92%	\$919.08	-\$1,957.05	-19.59%	\$8,033.70
11/29/00	346	23.8750	2.83%	\$227.05	-\$1,730.00	-17.32%	\$8,260.75
11/30/00	346	20.3125	-14.92%	-\$1,232.63	-\$2,962.63	-29.65%	\$7,028.13
12/1/00	346	21.4375	5.54%	\$389.25	-\$2,573.38	-25.76%	\$7,417.38
12/4/00	346	22.6250	5.54%	\$410.88	-\$2,162.50	-21.65%	\$7,828.25
12/5/00	346	26.3750	16.57%	\$1,297.50	-\$865.00	-8.66%	\$9,125.75
12/6/00	346	25.8750	-1.90%	-\$173.00	-\$1,038.00	-10.39%	\$8,952.75
12/7/00	346	24.9375	-3.62%	-\$324.38	-\$1,362.38	-13.64%	\$8,628.38
12/8/00	346	28.6875	15.04%	\$1,297.50	-\$64.88	-0.65%	\$9,925.88
12/11/00	346	31.7500	10.68%	\$1,059.63	\$994.75	9.96%	\$10,985.50
12/12/00	346	29.9375	-5.71%	-\$627.13	\$367.63	3.68%	\$10,358.38
12/13/00	346	26.5000	-11.48%	-\$1,189.38	-\$821.75	-8.23%	\$9,169.00
12/14/00	346	25.2500	-4.72%	-\$432.50	-\$1,254.25	-12.55%	\$8,736.50
12/15/00	346	24.8750	-1.49%	-\$129.75	-\$1,384.00	-13.85%	\$8,606.75
12/18/00	346	20.9375	-15.83%	-\$1,362.38	-\$2,746.38	-27.49%	\$7,244.38
12/19/00	346	21.0000	0.30%	\$21.63	-\$2,724.75	-27.27%	\$7,266.00
12/20/00	346	20.8750	-0.60%	-\$43.25	-\$2,768.00	-27.71%	\$7,222.75
12/21/00	346	13.5000	-35.33%	-\$2,551.75	-\$5,319.75	-53.25%	\$4,671.00
12/22/00	346	15.5000	14.81%	\$692.00	-\$4,627.75	-46.32%	\$5,363.00
12/26/00	346	15.0000	-3.23%	-\$173.00	-\$4,800.75	-48.05%	\$5,190.00
12/27/00	346	14.8750	-0.83%	-\$43.25	-\$4,844.00	-48.48%	\$5,146.75
12/28/00	346	16.1250	8.40%	\$432.50	-\$4,411.50	-44.16%	\$5,579.25
12/29/00	346	15.5000	-3.88%	-\$216.25	-\$4,627.75	-46.32%	\$5,363.00
1/2/01	346	12.9375	-16.53%	-\$886.63	-\$5,514.38	-55.19%	\$4,476.38
1/3/01	346	16.4375	27.05%	\$1,211.00	-\$4,303.38	-43.07%	\$5,687.38
1/4/01	346	17.2500	4.94%	\$281.13	-\$4,022.25	-40.26%	\$5,968.50
1/5/01	346	15.7500	-8.70%	-\$519.00	-\$4,541.25	-45.45%	\$5,449.50
1/8/01	346	17.0000	7.94%	\$432.50	-\$4,108.75	-41.13%	\$5,882.00
1/9/01	346	16.9375	-0.37%	-\$21.63	-\$4,130.38	-41.34%	\$5,860.38
1/10/01	346	17.9375	5.90%	\$346.00	-\$3,784.38	-37.88%	\$6,206.38
1/11/01	346	19.1875	6.97%	\$432.50	-\$3,351.88	-33.55%	\$6,638.88
1/12/01	346	19.9375	3.91%	\$259.50	-\$3,092.38	-30.95%	\$6,898.38

Figure 5.13 Conexant Systems stock price and other values from 11/20/00-1/12/01.

Pericom Semiconductor Corp. was a very active stock over the eight-week simulation period, but didn't cause me too lose or gain much money. I actually had a gain of about ten percent on this stock, which I was more than happy with. As you can see from the graph and chart below over the eight weeks this stock was down most of the time and only had a few times where I was seeing a gain. At one point the price was down about twenty-five percent, luckily this wasn't the case when the eight-week period ended. With this stock, like the last, I just watched the price for the eight weeks hoping that it would strengthen and show a good size gain. This never really happened though and I just sold it at the end of the eight weeks and fortunately it was showing a gain at that time.

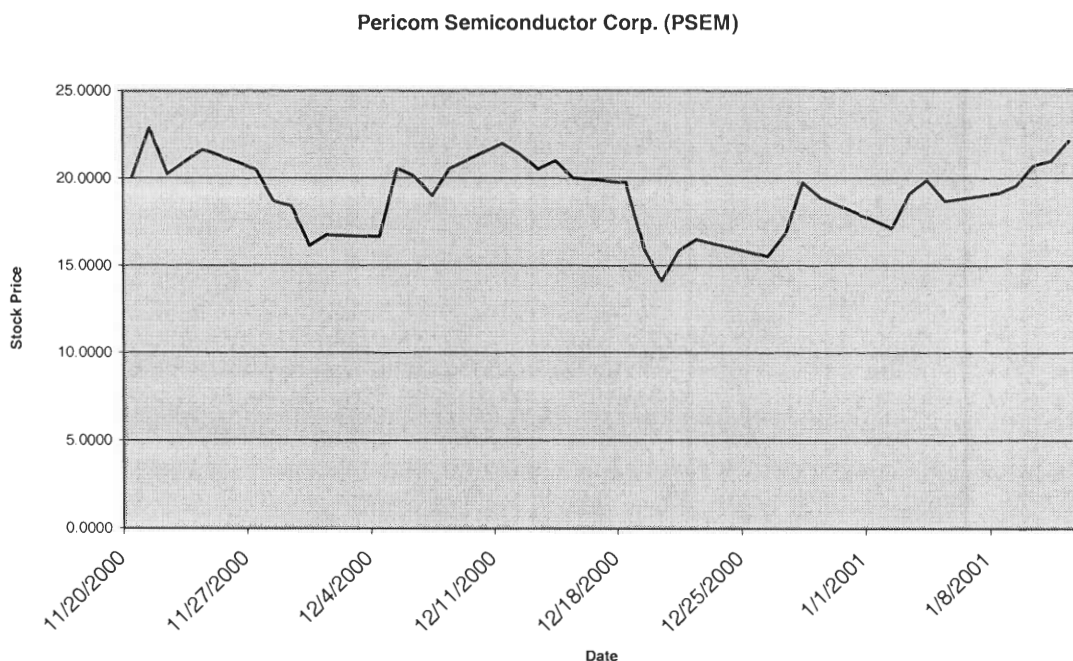


Figure 5.14 Pericom Semiconductor Corp. stock price from 11/20/00-1/12/01.

Date	Shares	Current Price	% Change	Today's Gain	Overall Gain	% Gain	Current Value
11/20/00	495	20.0625					\$9,930.94
11/21/00	495	22.8750	14.02%	\$1,392.19	\$1,392.19	14.02%	\$11,323.13
11/22/00	495	20.2500	-11.48%	-\$1,299.38	\$92.81	0.93%	\$10,023.75
11/24/00	495	21.6250	6.79%	\$680.63	\$773.44	7.79%	\$10,704.38
11/27/00	495	20.5000	-5.20%	-\$556.88	\$216.56	2.18%	\$10,147.50
11/28/00	495	18.6875	-8.84%	-\$897.19	-\$680.63	-6.85%	\$9,250.31
11/29/00	495	18.4375	-1.34%	-\$123.75	-\$804.38	-8.10%	\$9,126.56
11/30/00	495	16.1250	-12.54%	-\$1,144.69	-\$1,949.06	-19.63%	\$7,981.88
12/1/00	495	16.7500	3.88%	\$309.38	-\$1,639.69	-16.51%	\$8,291.25
12/4/00	495	16.6250	-0.75%	-\$61.88	-\$1,701.56	-17.13%	\$8,229.38
12/5/00	495	20.5625	23.68%	\$1,949.06	\$247.50	2.49%	\$10,178.44
12/6/00	495	20.1250	-2.13%	-\$216.56	\$30.94	0.31%	\$9,961.88
12/7/00	495	19.0000	-5.59%	-\$556.88	-\$525.94	-5.30%	\$9,405.00
12/8/00	495	20.5625	8.22%	\$773.44	\$247.50	2.49%	\$10,178.44
12/11/00	495	22.0000	6.99%	\$711.56	\$959.06	9.66%	\$10,890.00
12/12/00	495	21.3750	-2.84%	-\$309.38	\$649.69	6.54%	\$10,580.63
12/13/00	495	20.5000	-4.09%	-\$433.13	\$216.56	2.18%	\$10,147.50
12/14/00	495	21.0000	2.44%	\$247.50	\$464.06	4.67%	\$10,395.00
12/15/00	495	20.0000	-4.76%	-\$495.00	-\$30.94	-0.31%	\$9,900.00
12/18/00	495	19.7500	-1.25%	-\$123.75	-\$154.69	-1.56%	\$9,776.25
12/19/00	495	16.0000	-18.99%	-\$1,856.25	-\$2,010.94	-20.25%	\$7,920.00
12/20/00	495	14.1250	-11.72%	-\$928.13	-\$2,939.06	-29.60%	\$6,991.88
12/21/00	495	15.8750	12.39%	\$866.25	-\$2,072.81	-20.87%	\$7,858.13
12/22/00	495	16.5000	3.94%	\$309.38	-\$1,763.44	-17.76%	\$8,167.50
12/26/00	495	15.5000	-6.06%	-\$495.00	-\$2,258.44	-22.74%	\$7,672.50
12/27/00	495	16.8750	8.87%	\$680.63	-\$1,577.81	-15.89%	\$8,353.13
12/28/00	495	19.7500	17.04%	\$1,423.13	-\$154.69	-1.56%	\$9,776.25
12/29/00	495	18.8750	-4.43%	-\$433.13	-\$587.81	-5.92%	\$9,343.13
1/2/01	495	17.1250	-9.27%	-\$866.25	-\$1,454.06	-14.64%	\$8,476.88
1/3/01	495	19.1250	11.68%	\$990.00	-\$464.06	-4.67%	\$9,466.88
1/4/01	495	19.8750	3.92%	\$371.25	-\$92.81	-0.93%	\$9,838.13
1/5/01	495	18.6875	-5.97%	-\$587.81	-\$680.63	-6.85%	\$9,250.31
1/8/01	495	19.1250	2.34%	\$216.56	-\$464.06	-4.67%	\$9,466.88
1/9/01	495	19.5625	2.29%	\$216.56	-\$247.50	-2.49%	\$9,683.44
1/10/01	495	20.6875	5.75%	\$556.88	\$309.38	3.12%	\$10,240.31
1/11/01	495	21.0000	1.51%	\$154.69	\$464.06	4.67%	\$10,395.00
1/12/01	495	22.1250	5.36%	\$556.88	\$1,020.94	10.28%	\$10,951.88

Figure 5.15 Pericom Semiconductor Corp. stock price and other values from 11/20/00-1/12/01.

5.5 Results

Date	Uninvested Cash	% Change	Today's Gain	Overall Gain	% Gain	Current Total Value
11/20/00	\$0.00					\$49,106.88
11/21/00	\$0.00	1.43%	\$702.88	\$702.88	1.43%	\$49,809.75
11/22/00	\$0.00	-1.06%	-\$526.88	\$176.00	0.36%	\$49,282.88
11/24/00	\$0.00	3.36%	\$1,655.13	\$1,831.13	3.73%	\$50,938.00
11/27/00	\$0.00	-9.85%	-\$5,015.88	-\$3,184.75	-6.49%	\$45,922.13
11/28/00	\$0.00	-3.83%	-\$1,758.98	-\$4,943.73	-10.07%	\$44,163.14
11/29/00	\$0.00	1.68%	\$740.42	-\$4,203.31	-8.56%	\$44,903.56
11/30/00	\$0.00	-8.50%	-\$3,816.94	-\$8,020.25	-16.33%	\$41,086.63
12/1/00	\$0.00	7.43%	\$3,051.50	-\$4,968.75	-10.12%	\$44,138.13
12/4/00	\$0.00	2.55%	\$1,124.19	-\$3,844.56	-7.83%	\$45,262.31
12/5/00	\$0.00	9.05%	\$4,096.19	\$251.63	0.51%	\$49,358.50
12/6/00	\$0.00	-2.34%	-\$1,152.75	-\$901.13	-1.84%	\$48,205.75
12/7/00	\$11,261.25	3.80%	\$1,831.25	\$930.13	1.89%	\$50,037.00
12/8/00	\$11,261.25	5.42%	\$2,711.09	\$3,641.22	7.41%	\$52,748.09
12/11/00	\$11,261.25	0.52%	\$276.78	\$3,918.00	7.98%	\$53,024.88
12/12/00	\$11,261.25	-1.19%	-\$631.56	\$3,286.44	6.69%	\$52,393.31
12/13/00	\$11,261.25	-3.89%	-\$2,038.63	\$1,247.81	2.54%	\$50,354.69
12/14/00	\$11,261.25	-1.64%	-\$823.50	\$424.31	0.86%	\$49,531.19
12/15/00	\$11,261.25	-3.67%	-\$1,815.88	-\$1,391.56	-2.83%	\$47,715.31
12/18/00	\$11,261.25	-8.00%	-\$3,817.75	-\$5,209.31	-10.61%	\$43,897.56
12/19/00	\$11,261.25	-0.64%	-\$281.31	-\$5,490.63	-11.18%	\$43,616.25
12/20/00	\$11,261.25	-1.02%	-\$444.06	-\$5,934.69	-12.09%	\$43,172.19
12/21/00	\$0.00	-1.46%	-\$632.31	-\$6,567.00	-13.37%	\$42,539.88
12/22/00	\$0.00	6.20%	\$2,636.38	-\$3,930.63	-8.00%	\$45,176.25
12/26/00	\$0.00	-3.67%	-\$1,659.56	-\$5,590.19	-11.38%	\$43,516.69
12/27/00	\$0.00	4.22%	\$1,836.75	-\$3,753.44	-7.64%	\$45,353.44
12/28/00	\$0.00	2.59%	\$1,176.88	-\$2,576.56	-5.25%	\$46,530.31
12/29/00	\$0.00	6.05%	\$2,816.56	\$240.00	0.49%	\$49,346.88
1/2/01	\$12,206.25	-6.48%	-\$3,195.38	-\$2,955.38	-6.02%	\$46,151.50
1/3/01	\$12,206.25	14.15%	\$6,528.50	\$3,573.13	7.28%	\$52,680.00
1/4/01	\$12,206.25	3.06%	\$1,611.75	\$5,184.88	10.56%	\$54,291.75
1/5/01	\$29,590.13	-1.84%	-\$997.84	\$4,187.03	8.53%	\$53,293.91
1/8/01	\$29,590.13	2.06%	\$1,096.04	\$5,283.07	10.76%	\$54,389.94
1/9/01	\$29,590.13	1.99%	\$1,084.44	\$6,367.51	12.97%	\$55,474.38
1/10/01	\$29,590.13	2.63%	\$1,458.81	\$7,826.32	15.94%	\$56,933.19
1/11/01	\$29,590.13	2.79%	\$1,587.88	\$9,414.19	19.17%	\$58,521.07
1/12/01	\$29,590.13	1.96%	\$1,149.94	\$10,564.13	21.51%	\$59,671.01

Figure 5.16 Under valued stock performance from 11/20/00-1/12/01.

Overall this simulation showed to be very popular with a gain of twenty-one and a half percent. Had real money been involved, the investor would have been very happy by the outcome. The results here are a good indication of what can be expected from investing in under valued stocks. There may be some exceptions to the results seen here depending on the condition the stock market is in at the time the investments are made. Differences in results may also be seen depending on the investor, because of the difference in decision making in different people. The one thing that the results of this simulation reinforce is that investing in under valued stocks can make a significant amount of money.

5.6 Conclusions

From this simulation we see that the investing of under valued stocks can be a profitable experience. The key to this type of investing and to other investment strategies is too making a good plan before you actually invest. This plan should be something that determines when you will sell and buy the stocks you are investing in. In this case I made the decision to sell stocks once a ten percent gain had been reached. Although I didn't follow this fully I still used it as a guide. The one decision I should have made in the beginning was a cutoff of when to sell if a significant loss was occurring. Overall from the results I have seen in this simulation I wouldn't hesitate to try this strategy with real money. My decision-making may be influenced a little differently when using real money, but I still feel that a large return on a real investment would be realized.

Chapter 6

Steady Stocks

6.1. Stock Selection and Company Backgrounds

In this chapter I am going to talk a little about steady stocks and the behavior of their market. Steady stocks are stocks that will produce increasing returns over the long run without a high risk of loss. Investing in these easy to hold stocks saves you from the hassle of following the market's ups and downs on a daily basis. It is as safe and easy as putting your money in the bank. You'll also worry about your investment as little as you worry about money in the bank. The goal is to earn high returns over a long period of time. Here is a little background on the five stocks I followed through the past couple of months:

IBM operates primarily in a single industry using several segments that create value by offering a variety of solutions that include, singularly or in some combination, technologies, systems, products, services, software and financing. Organizationally, the company's major operations comprise three hardware product segments, Technology, Personal Systems and Server; a Global Services segment; a Software segment; a Global Financing segment and an Enterprise Investment segment. Here is a chart that shows the behavior of the company stock prices for the past year:



Figure 6.1 IBM's stock price from 2/14/00-2/13/01.

AT&T provides voice, data and video communications services to large and small businesses, consumers and government entities. AT&T Corporation and its subsidiaries furnish domestic and international long distance, regional, local and wireless communications services, cable television and Internet communications services. AT&T Corporation also provides billing, directory and calling card services to support its communications business. Here is a chart that shows us the behavior of the company stock prices for the past year:



Figure 6.2 AT&T's stock price from 2/14/00-2/13/01.

Sony develops designs, manufactures and sells electronic equipment, instruments and devices for consumer and professional markets. Sony develops, produces, manufactures and markets home-use entertainment hardware and software, principally through Sony Computer Entertainment. Sony also develops, produces, manufactures and distributes recorded music through Sony Music Entertainment Inc. and Sony Music Entertainment (Japan) Inc. The Company develops, produces, manufactures, markets, distributes and broadcasts image-based software, including film, video, television and new entertainment technologies through Sony Pictures Entertainment. Here is a chart that shows us the behavior of the company stock prices for the past year:

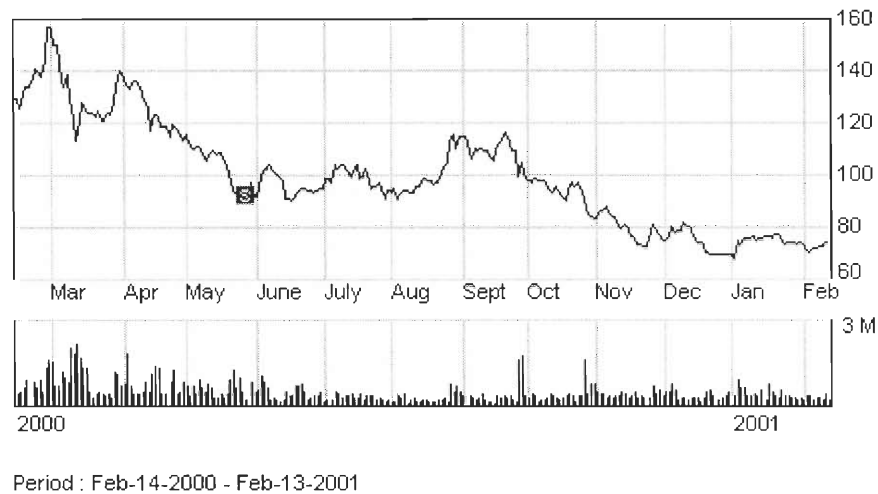


Figure 6.3 Sony's stock price from 2/14/00-2/13/01.

The merger of Bell Atlantic and GTE forms Verizon. It is one of the world's leading providers of communications services. Verizon companies are the largest providers of wireline and wireless communications in the United States, with 95 million access lines and 25 million wireless customers. Verizon's global presence extends to 40 countries in the Americas, Europe, Asia and the Pacific. Verizon is managed around four operating segments. Domestic Telecom, which provides domestic wireline communications services. Domestic Wireless, which provides domestic wireless communications services. International, which includes the Company's foreign wireline and wireless communications investments. Finally Information Services, which is responsible for the Company's domestic and international publishing businesses and electronic commerce services. Here is a chart that shows us the behavior of the company stock prices for the past year:

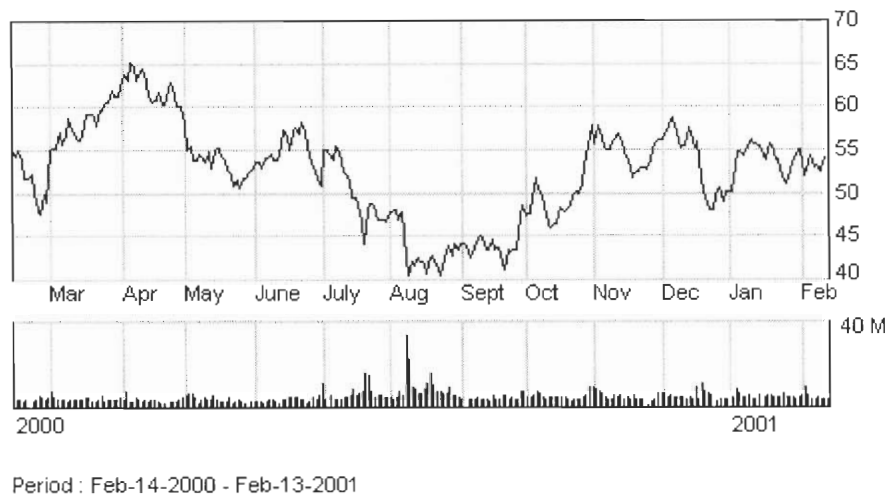


Figure 6.4 Verizon's stock price from 2/14/00-2/13/01.

World Wrestling Federation Entertainment, Inc., of Stamford, Conn., is engaged in development, production and marketing of television programming, pay-per-view programming and live events, and the licensing and sale of branded consumer products featuring the company's highly successful World Wrestling Federation brand. Formerly known as Titan Sports, Inc., World Wrestling Federation Entertainment, Inc. has been involved in the sports entertainment business for over 20 years and has developed the brand into one of the most popular forms of entertainment today. The company is utilizing this experience in the creation of the XFL, a professional football league, which will begin its inaugural season in February 2001. Here is a chart that shows us the behavior of the company stock prices for the past year:

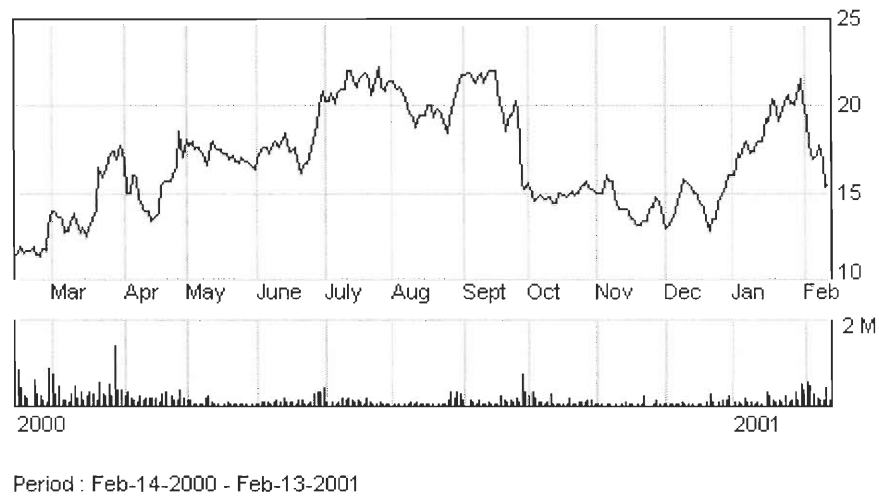


Figure 6.5 WWF's stock price from 2/14/00-2/13/01.

6.2 Stock Simulation

In this part of the chapter I am going to show the behavior of the five stocks I followed through the eight weeks period. I am also going to talk about the trades and the techniques I followed. Finally I am going to talk about the times I bought and sold these stocks with the calculation of the profit or loses I made assuming that I began with \$10,000 worth of shares in each stock.

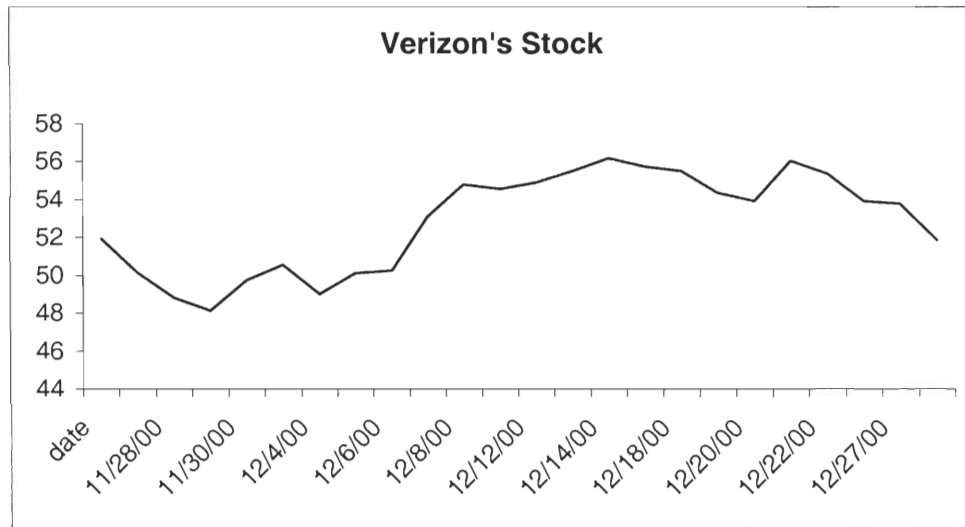


Figure 6.6 Verizon's stock price from 11/20/00-1/12/01.

This graph shows us the behavior of Verizon during the past eight-week period. As we notice that the company started at about \$53 and ended at \$52. During this time I bought and sold this stock few times. After buying this stock at \$53.69 I sold it on 12/7/00 at \$57.88. By investing \$10,000 I was able to make \$780.15 in profit. On 12/19/00 I bought this stock at \$51.94. After buying this stock at \$51.94 the stock kept going down for about two weeks until it reached \$48 a share. At the beginning of the New Year the price started recovering. It started going up as it reached its peak position \$56.19 on 12/18/00. After going back down to \$55.75 the next day and to \$55.50 the next day I ended up selling it at this price on 1/08/01. By selling this stock at \$55.50, I ended up making \$683. During this period of time I made about \$1465 in profit. This amount of profit cannot be considered the net profit, as there are fees such as broker fee and taxes that were not taken into consideration.

Date	Shares	Current Price	% Change	Today's Gain	Overall Gain	Current Value
11/20/00	186	\$53.69				\$9,986.34
11/21/00	186	\$55.00	2.44%	\$243.66	\$243.66	\$10,230.00
11/22/00	186	\$55.81	1.47%	\$150.70	\$394.36	\$10,380.70
11/24/00	186	\$56.19	0.68%	\$70.30	\$464.66	\$10,451.00
11/27/00	186	\$56.00	-0.33%	-\$35.00	\$429.66	\$10,416.00
11/28/00	186	\$57.00	1.79%	\$186.00	\$615.66	\$10,602.00
11/29/00	186	\$57.75	1.32%	\$139.50	\$755.16	\$10,741.50
11/30/00	186	\$58.75	1.73%	\$186.00	\$941.16	\$10,927.50
12/1/00	186	\$57.88	-1.48%	-\$161.80	\$779.36	\$10,765.70
12/4/00		16.6250	-71.28%			
12/5/00		20.5625	23.68%			
12/6/00		20.1250	-2.13%			
12/7/00		19.0000	-5.59%			
12/8/00		20.5625	8.22%			
12/11/00		22.0000	6.99%			
12/12/00		21.3750	-2.84%			
12/13/00	193	\$51.94	142.99%		\$779.36	\$10,024.40
12/14/00	193	\$50.13	-3.48%	-\$349.31	\$430.03	\$9,675.09
12/15/00	193	\$48.81	-2.64%	-\$255.09	\$174.94	\$9,420.00
12/18/00	193	\$48.13	-1.39%	-\$130.91	\$44.03	\$9,289.09
12/19/00	193	\$49.75	3.37%	\$312.66	\$356.69	\$9,601.75
12/20/00	193	\$50.56	1.63%	\$156.33	\$513.02	\$9,758.08
12/21/00	193	\$49.00	-3.09%	-\$301.08	\$211.94	\$9,457.00
12/22/00	193	\$50.13	2.31%	\$218.09	\$430.03	\$9,675.09
12/26/00	193	\$50.25	0.24%	\$23.16	\$453.19	\$9,698.25
12/27/00	193	\$53.13	5.73%	\$555.85	\$1,009.04	\$10,254.10
12/28/00	193	\$54.53	2.63%	\$269.40	\$1,278.44	\$10,523.50
12/29/00	193	\$54.28	-0.46%	-\$48.00	\$1,230.44	\$10,475.50
1/2/01	193	\$54.62	0.62%	\$65.30	\$1,295.74	\$10,540.80
1/3/01	193	\$55.50	1.62%	\$170.70	\$1,466.44	\$10,711.50
1/4/01	193	\$56.19	1.24%	\$133.20	\$1,599.64	\$10,844.70
1/5/01	193	\$55.75	-0.78%	-\$84.90	\$1,514.74	\$10,759.80
1/8/01	193	\$55.50	-0.45%	-\$48.30	\$1,466.44	\$10,711.50
1/9/01		55.38				
1/10/01		53.94				
1/11/01		53.81				
1/12/01		51.88				

Figure 6.7 Verizon's stock price and other values from 11/20/00-1/12/01.

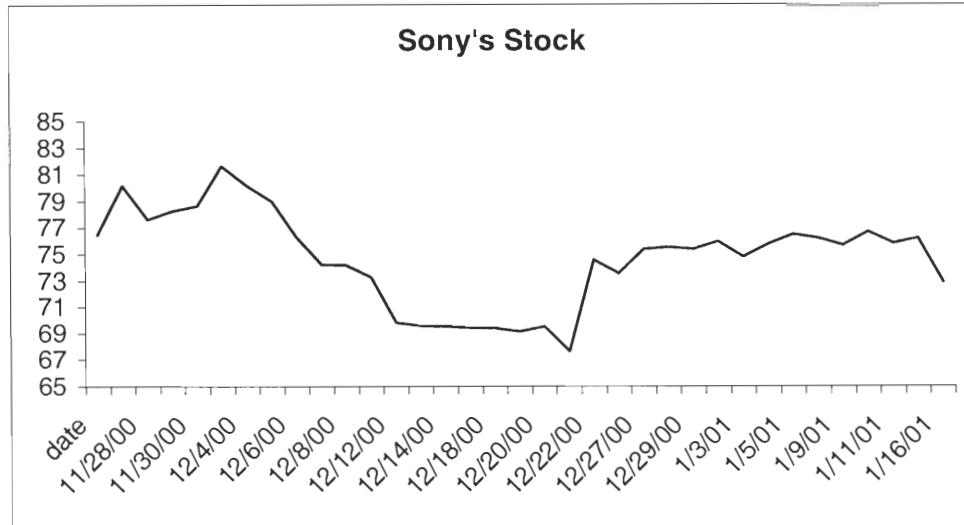


Figure 6.8 Sony's stock price from 11/20/00-1/12/01.

We notice that the company started at \$80.44 and ended at \$72.88. During this time I bought and sold this stock few times. After buying this stock at \$80.44 I sold it on 12/05/00 at \$81.63. This stock, as we are going to notice, was not as I expected; it kept going down and wasn't able to recover, so I had to sell as soon as it recovers or after its over what I bought by a few cents. By investing \$10,000 dollars I was able to make \$148 in profit. On 12/11/00 I bought this stock at \$74.25. After buying this stock at this price the stock kept on going down till 2/1/01 and it reached \$67 a share. After the stock recovered, I had to sell it to avoid losing money, so on 12/26/01 I sold this stock at \$74.56. By selling it at this price I wasn't able to make money, but it helped me get my money back. By selling this stock at this price I was able to make \$42 in profit. This amount of money cannot be considered as profit as there are some fees I had to pay. Ultimately this stock resulted in a \$186 in profit as a whole not taking any fees in consideration.

Date	Shares	Current Price	% Change	Today's Gain	Overall Gain	Current Value
11/20/00	124	\$80.44				\$9,974.56
11/21/00	124	\$79.56	-1.09%	-\$109.12	-\$109.12	\$9,865.44
11/22/00	124	\$77.19	-2.98%	-\$293.88	-\$403.00	\$9,571.56
11/24/00	124	\$74.50	-3.48%	-\$333.56	-\$736.56	\$9,238.00
11/27/00	124	\$75.50	1.34%	\$124.00	-\$612.56	\$9,362.00
11/28/00	124	\$76.50	1.32%	\$124.00	-\$488.56	\$9,486.00
11/29/00	124	\$80.19	4.82%	\$457.56	-\$31.00	\$9,943.56
11/30/00	124	\$77.63	-3.19%	-\$317.44	-\$348.44	\$9,626.12
12/1/00	124	\$78.25	0.80%	\$76.88	-\$271.56	\$9,703.00
12/4/00	124	\$78.63	0.49%	\$47.12	-\$224.44	\$9,750.12
12/5/00	124	\$81.63	3.82%	\$371.98	\$147.54	\$10,122.10
12/6/00		80.19	-1.76%			
12/7/00		79	-1.48%			
12/8/00		76.31	-3.41%			
12/11/00	135	\$74.25	-2.70%		\$147.54	\$10,023.80
12/12/00	135	\$74.19	-0.08%	-\$8.10	\$139.49	\$10,015.70
12/13/00	135	\$73.25	-1.27%	-\$126.95	\$12.54	\$9,888.75
12/14/00	135	\$69.81	-4.70%	-\$464.40	-\$451.86	\$9,424.35
12/15/00	135	\$69.56	-0.36%	-\$33.75	-\$485.61	\$9,390.60
12/18/00	135	\$69.44	-0.17%	-\$16.20	-\$501.81	\$9,374.40
12/19/00	135	\$69.38	-0.09%	-\$8.10	-\$509.91	\$9,366.30
12/20/00	135	\$69.13	-0.36%	-\$33.75	-\$543.66	\$9,332.55
12/21/00	135	\$69.50	0.54%	\$49.95	-\$493.71	\$9,382.50
12/22/00	135	\$67.63	-2.69%	-\$252.45	-\$746.16	\$9,130.05
12/26/00	135	\$74.56	10.25%	\$935.55	\$189.39	\$10,065.60
12/27/00		\$75.52	1.29%			
12/28/00		\$75.38	-0.19%			
12/29/00		\$75.94	0.74%			
1/2/01		\$74.81	-1.49%			
1/3/01		\$75.75	1.26%			
1/4/01		\$76.50	0.99%			
1/5/01		\$76.19	-0.41%			
1/8/01		\$75.69	-0.66%			
1/9/01		\$76.69	1.32%			
1/10/01		\$75.81	-1.15%			
1/11/01		\$76.19	0.50%			
1/12/01		\$72.88	-4.34%			

Figure 6.9 Sony's stock price and other values from 11/20/00-1/12/01.

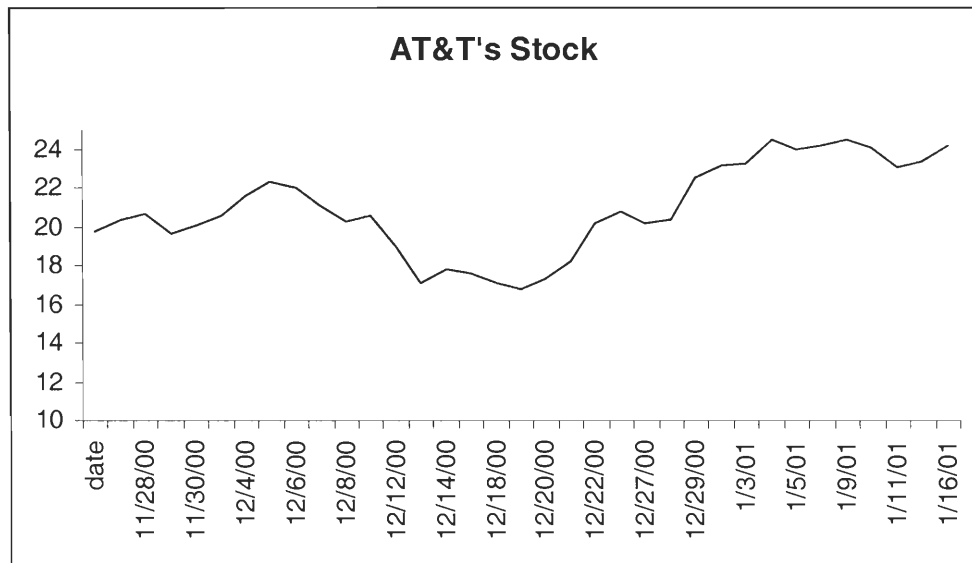


Figure 6.10 AT&T's stock price from 11/20/00-1/12/01.

This stock was a very profitable stock. AT&T's stock started at around \$13 at the beginning of our simulation and ended at around \$21. This stock reached \$24 (peak position) at 1/12/01. Starting with \$10,000 value on 20/11/01 I was able to sell this stock on 12/05/00 for \$10,933. This was a profit of a \$1,000. On the 14th of that month I bought a stock value for another \$10,000. The stock went down and wasn't able to recover until the 27th of that month. I waited on this stock until the January 3rd and sold it for a value of \$11,880. This was a profit of about \$1,800. Ultimately, I was able to make about \$3,000 in profit from the AT&T stock as it went up from \$13 minimum to a maximum of \$24 during this period of time.

Date	Shares	Current Price	% Change	Today's Gain	Overall Gain	Current Value
11/20/00	530	\$18.88				\$10,006.40
11/21/00	530	\$18.69	-1.01%	-\$100.70	-\$100.70	\$9,905.70
11/22/00	530	\$19.00	1.66%	\$164.30	\$63.60	\$10,070.00
11/24/00	530	\$19.63	3.32%	\$333.90	\$397.50	\$10,403.90
11/27/00	530	\$19.88	1.27%	\$132.50	\$530.00	\$10,536.40
11/28/00	530	\$19.75	-0.65%	-\$68.90	\$461.10	\$10,467.50
11/29/00	530	\$20.38	3.19%	\$333.90	\$795.00	\$10,801.40
11/30/00	530	\$20.69	1.52%	\$164.30	\$959.30	
12/1/00	530	\$19.69	-4.83%	-\$530.00	\$429.30	\$10,435.70
12/4/00	530	\$20.06	1.88%	\$196.10	\$625.40	\$10,631.80
12/5/00	530	\$20.63	2.84%	\$302.10	\$927.50	\$10,933.90
12/6/00						
12/7/00						
12/8/00						
12/11/00						
12/12/00						
12/13/00						
12/14/00	528	\$18.94			\$927.50	\$10,000.30
12/15/00	528	\$17.06	-9.93%	-\$992.62	-\$65.14	\$9,007.68
12/18/00	528	\$17.81	4.40%	\$396.00	\$330.86	\$9,403.68
12/19/00	528	\$17.63	-1.01%	-\$95.04	\$235.82	\$9,308.64
12/20/00	528	\$17.06	-3.23%	-\$300.96	-\$65.14	\$9,007.68
12/21/00	528	\$16.75	-1.82%	-\$163.68	-\$228.82	\$8,844.00
12/22/00	528	\$17.25	2.99%	\$264.00	\$35.18	\$9,108.00
12/26/00	528	\$18.25	5.80%	\$528.00	\$563.18	\$9,636.00
12/27/00	528	\$20.13	10.30%	\$992.60	\$1,555.78	\$10,628.60
12/28/00	528	\$20.75	3.08%	\$327.40	\$1,883.18	\$10,956.00
12/29/00	528	\$20.19	-2.70%	-\$296.00	\$1,587.18	\$10,660.00
1/2/01	528	\$22.50	11.44%	\$1,220.00	\$2,807.18	\$11,880.00
1/3/01		24.44				
1/4/01		24				
1/5/01		24.13				
1/8/01		24.5				
1/9/01		24.04				
1/10/01		23				
1/11/01		23.31				
1/12/01		24.19				

Figure 6.11 AT&T's stock price and other values from 11/20/00-1/12/01.

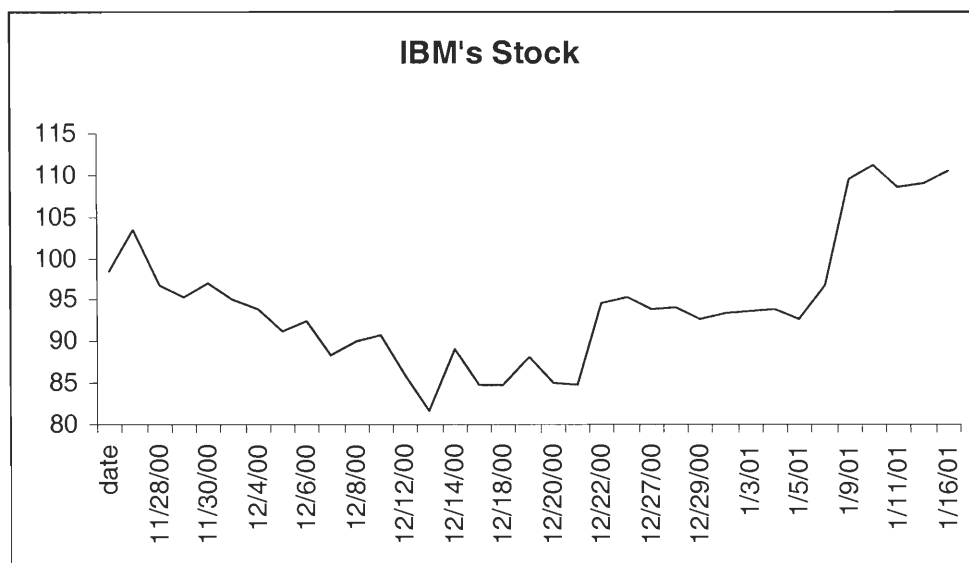


Figure 6.12 IBM's stock price from 11/20/00-1/12/01.

On the 20th of November I invested \$10,000 in the IBM stock. The stock was steady for the first couple weeks. On the 29th of the same month I sold my sticks as the amount of money invested in this stock was up to \$10441.40. After the 5th of December the stock went down to \$96.75 at the 6th, so I ended up reinventing the same amount of money. The stock started going down for most of our simulation period. It declined to a minimum of \$82 after reaching a maximum of \$93. By the beginning of the New Year the stock started recovering sharply to reach \$113 a share on the 4th of January. At the 4th of that month I sold this stock for a value of \$11,278 allowing me to make about \$1,300 in profit. Finally, during this period I bought and sold this stock couple times allowing me to make about \$1,700 in profit.

Date	Shares	Current Price	% Change	Today's Gain	Overall Gain	Current Value
11/20/00	101	\$98.44				\$9,942.44
11/21/00	101	\$97.88	-0.57%	-\$56.56	-\$56.56	\$9,885.88
11/22/00	101	\$99.80	1.96%	\$194.12	\$137.56	\$10,080.00
11/24/00	101	\$93.50	-6.31%	-\$636.50	-\$498.94	\$9,443.50
11/27/00	101	\$97.63	4.42%	\$417.13	-\$81.81	\$9,860.63
11/28/00	101	\$98.38	0.77%	\$75.75	-\$6.06	\$9,936.38
11/29/00	101	\$103.38	5.08%	\$505.02	\$498.96	\$10,441.40
11/30/00						
12/1/00	103	\$96.75			\$498.96	\$9,965.25
12/4/00	103	\$95.38	-1.42%	-\$141.11	\$357.85	\$9,824.14
12/5/00	103	\$97.00	1.70%	\$166.86	\$524.71	\$9,991.00
12/6/00	103	\$95.00	-2.06%	-\$206.00	\$318.71	\$9,785.00
12/7/00	103	\$93.88	-1.18%	-\$115.36	\$203.35	\$9,669.64
12/8/00	103	\$91.25	-2.80%	-\$270.89	-\$67.54	\$9,398.75
12/11/00	103	\$92.44	1.30%	\$122.57	\$55.03	\$9,521.32
12/12/00	103	\$88.31	-4.47%	-\$425.39	-\$370.36	\$9,095.93
12/13/00	103	\$90.06	1.98%	\$180.25	-\$190.11	\$9,276.18
12/14/00	103	\$90.81	0.83%	\$77.25	-\$112.86	\$9,353.43
12/15/00	103	\$86.00	-5.30%	-\$495.43	-\$608.29	\$8,858.00
12/18/00	103	\$81.56	-5.16%	-\$457.32	-\$1,065.61	\$8,400.68
12/19/00	103	\$89.00	9.12%	\$766.32	-\$299.29	\$9,167.00
12/20/00	103	\$84.81	-4.71%	-\$431.57	-\$730.86	\$8,735.43
12/21/00	103	\$84.69	-0.14%	-\$12.36	-\$743.22	\$8,723.07
12/22/00	103	\$88.06	3.98%	\$347.11	-\$396.11	\$9,070.18
12/26/00	103	\$85.00	-3.47%	-\$315.18	-\$711.29	\$8,755.00
12/27/00	103	\$84.81	-0.22%	-\$19.57	-\$730.86	\$8,735.43
12/28/00	103	\$95.25	12.31%	\$1,075.32	\$344.46	\$9,810.75
12/29/00	103	\$94.10	-1.21%	-\$118.45	\$226.01	\$9,692.30
1/2/01	103	\$92.76	-1.42%	-\$138.02	\$87.99	\$9,554.28
1/3/01	103	\$93.81	1.13%	\$108.15	\$196.14	\$9,662.43
1/4/01	103	\$96.89	3.28%	\$317.24	\$513.38	\$9,979.67
1/5/01	103	\$109.50	13.01%	\$1,298.83	\$1,812.21	\$11,278.50
1/8/01		109.5				
1/9/01		111.25				
1/10/01		108.56				
1/11/01		109.06				
1/12/01		110.44				

Figure 6.13 IBM's stock price and other values from 11/20/00-1/12/01.

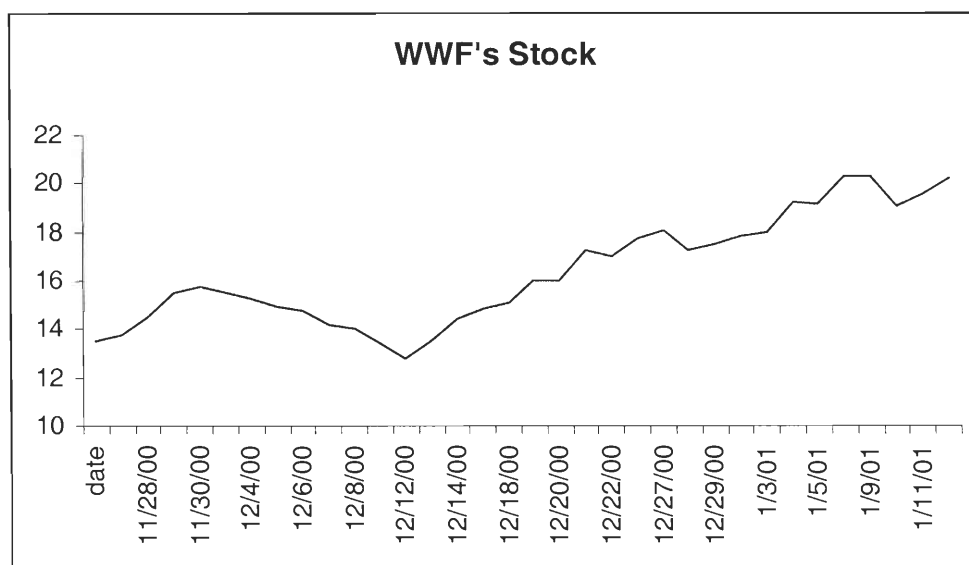


Figure 6.14 WWF's stock price from 11/20/00-1/12/01.

This is the WWF's Stock chart during our simulation period. This stock was a very profitable stock for me as it went up from a \$3.00 a share at the beginning of our simulation to \$20.00 peak value in the last few weeks of the simulation. On the 20th of November I invested \$10,000 in this stock. By the 5th of December this stock value went up to \$10,974 allowing me to make about \$1,000 in profit. On the 15th of December I reinvested the same amount of money after the stock went down to \$13.50 a share. I kept holding on this stock until the 29th of December. On the 29th this stock closed at \$17.50 and forced me to sell it at this price allowing me to make about \$4,000 in profit. I wasn't able to reinvest any money in this stock as it kept on going up during the rest of the simulation period. As I said before this stock was very profitable to me as I made about \$5000 in profit. Finally, I made a lot of money after investing in this stock, but I would have been able to do more as it kept on going up to reach a peak value at \$20.00 by the end of simulation period.

Date	Shares	Current	%	Today's	Overall	Current
		Price	Change	Gain	Gain	Value
11/20/00	708	\$14.13				\$10,004.40
11/21/00	708	\$14.75	4.38%	\$438.60	\$438.96	\$10,443.00
11/22/00	708	\$14.50	-1.69%	-\$177.00	\$261.96	\$10,266.00
11/24/00	708	\$13.56	-6.48%	-\$665.52	-\$403.56	\$9,600.48
11/27/00	708	\$13.38	-1.33%	-\$127.44	-\$531.00	\$9,473.04
11/28/00	708	\$13.88	3.74%	\$354.00	-\$177.00	\$9,827.04
11/29/00	708	\$13.13	-5.40%	-\$531.00	-\$708.00	\$9,296.04
11/30/00	708	\$13.50			-\$446.04	
12/1/00	708	\$13.81			-\$226.56	\$9,777.48
12/4/00	708	\$14.50	5.00%	\$488.52	\$261.96	\$10,266.00
12/5/00	708	\$15.50	6.90%	\$708.00	\$969.96	\$10,974.00
12/6/00						\$0.00
12/7/00						\$0.00
12/8/00						\$0.00
12/11/00						\$0.00
12/12/00						\$0.00
12/13/00						\$0.00
12/14/00						\$0.00
12/15/00	744	\$13.43			\$969.96	\$9,991.80
12/18/00	744	\$14.15	5.39%	\$538.20	\$1,508.04	\$10,530.00
12/19/00	744	\$15.14	6.96%	\$733.20	\$2,241.24	\$11,263.20
12/20/00	744	\$15.60	3.05%	\$343.20	\$2,584.44	\$11,606.40
12/21/00	744	\$15.86	1.68%	\$195.00	\$2,779.44	\$11,801.40
12/22/00	744	\$16.77	5.75%	\$678.60	\$3,458.04	\$12,480.00
12/26/00	744	\$16.77	0.00%	\$0.00	\$3,458.04	\$12,480.00
12/27/00	744	\$18.08	7.81%	\$975.00	\$4,433.04	\$13,455.00
12/28/00	744	\$17.82	-1.45%	-\$195.00	\$4,238.04	\$13,260.00
12/29/00	744	\$18.61	4.41%	\$585.00	\$4,823.04	\$13,845.00
1/2/01		17.81				
1/3/01		17.94				
1/4/01		19.19				
1/5/01		19.13				
1/8/01		20.25				
1/9/01		20.31				
1/10/01		19.06				
1/11/01		19.5				
1/12/01		20.19				

Figure 6.15 WWF's stock price and other values from 11/20/00-1/12/01.

6.3. Results

Date	Uninvested Cash	% Change	Today's Gain	Overall Gain	% Gain	Current Total Value
11/20/00	\$0.00					\$49,908.34
11/21/00	\$0.00	0.84%	\$421.68	\$421.68	0.84%	\$50,330.02
11/22/00	\$0.00	0.08%	\$38.24	\$459.92	0.92%	\$50,368.26
11/24/00	\$0.00	-2.44%	-\$1,231.38	-\$771.46	-1.55%	\$49,136.88
11/27/00	\$0.00	1.04%	\$511.19	-\$260.27	-0.52%	\$49,648.07
11/28/00	\$0.00	1.35%	\$670.85	\$410.58	0.82%	\$50,318.92
11/29/00	\$0.00	1.80%	\$904.98	\$1,315.56	2.64%	\$51,223.90
11/30/00	\$10,441.40	0.58%	\$294.82	\$1,610.38	3.23%	\$51,518.72
12/1/00	\$476.15	-0.77%	-\$395.44	\$1,214.94	2.43%	\$51,123.28
12/4/00	\$11,241.90	1.16%	\$590.68	\$1,805.62	3.62%	\$51,713.96
12/5/00	\$11,241.90	3.00%	\$1,548.94	\$3,354.56	6.72%	\$53,262.90
12/6/00	\$43,271.90	-0.39%	-\$206.00	\$3,148.56	6.31%	\$53,056.90
12/7/00	\$43,271.90	-0.22%	-\$115.36	\$3,033.20	6.08%	\$52,941.54
12/8/00	\$43,271.90	-0.51%	-\$270.89	\$2,762.31	5.53%	\$52,670.65
12/11/00	\$33,248.10	0.23%	\$122.57	\$2,884.88	5.78%	\$52,793.22
12/12/00	\$33,248.10	-0.82%	-\$433.49	\$2,451.39	4.91%	\$52,359.73
12/13/00	\$23,223.70	0.10%	\$53.30	\$2,504.69	5.02%	\$52,413.03
12/14/00	\$13,223.40	-1.41%	-\$736.46	\$1,768.23	3.54%	\$51,676.57
12/15/00	\$3,231.55	-3.44%	-\$1,776.94	-\$8.71	-0.02%	\$49,899.63
12/18/00	\$3,231.55	0.66%	\$329.77	\$321.06	0.64%	\$50,229.40
12/19/00	\$3,231.55	3.40%	\$1,709.04	\$2,030.10	4.07%	\$51,938.44
12/20/00	\$3,231.55	-0.51%	-\$266.75	\$1,763.35	3.53%	\$51,671.69
12/21/00	\$3,231.55	-0.45%	-\$232.17	\$1,531.18	3.07%	\$51,439.52
12/22/00	\$3,231.55	2.44%	\$1,255.35	\$2,786.53	5.58%	\$52,694.87
12/26/00	\$3,231.55	2.22%	\$1,171.53	\$3,958.06	7.93%	\$53,866.40
12/27/00	\$13,297.20	4.65%	\$2,503.93	\$6,461.99	12.95%	\$56,370.33
12/28/00	\$13,297.20	2.62%	\$1,477.12	\$7,939.11	15.91%	\$57,847.45
12/29/00	\$13,297.20	0.21%	\$122.55	\$8,061.66	16.15%	\$57,970.00
1/2/01	\$27,142.20	0.06%	\$33.18	\$8,094.84	16.22%	\$58,003.18
1/3/01	\$27,142.20	2.40%	\$1,392.95	\$9,487.79	19.01%	\$59,396.13
1/4/01	\$39,022.20	0.76%	\$450.44	\$9,938.23	19.91%	\$59,846.57
1/5/01	\$39,022.20	2.03%	\$1,213.93	\$11,152.16	22.35%	\$61,060.50
1/8/01	\$50,300.70	-0.08%	-\$48.30	\$11,103.86	22.25%	\$61,012.20
1/9/01	\$61,012.20	0.00%	\$0.00	\$11,103.86	22.25%	\$61,012.20
1/10/01	\$61,012.20	0.00%	\$0.00	\$11,103.86	22.25%	\$61,012.20
1/11/01	\$61,012.20	0.00%	\$0.00	\$11,103.86	22.25%	\$61,012.20
1/12/01	\$61,012.20	0.00%	\$0.00	\$11,103.86	22.25%	\$61,012.20

Figure 6.16 Overall result and other values from 11/20/00-1/12/01.

We could notice from chart 6.3.1 that the past eight weeks have been very successful weeks for me. After starting with 50000\$ I was able to end up with 61012.20\$ which is about 11000\$ in profit. This amount couldn't be considered as net profit as there were some undeducted expenses (broker fees, transaction fees, etc..). By making this amount of money during this short period of time would motivate me to invest real money in the market with no hesitation.

6.4. Conclusion

In conclusion, the past eight weeks were very good as we noticed from my results. During those eight weeks the steady stocks along with most of the stocks in the market were starting to face a bear market; this was the result of the recession in the United States along with the election problems that took about 8 weeks to get resolved. I followed the strategy "buy low and sell high". This strategy will be very successful when you can predict the stock value. Ultimately, everyone should research and set goals before investing real money in the market in order to make good profit in a short period of time.

Chapter 7

Momentum Stocks

7.1 Overview

Stocks that have been climbing in price and are expected to continue climbing are called momentum stocks. An investing strategy involving momentum stocks is one in which the investor purchases stocks whose prices have been climbing, in hopes that the price will continue to rise, thus adding value to his purchase. The greatest advantage of this style of investing is that there is a high probability that the investor will make a large profit in a relatively short amount of time.

There are disadvantages as well, however. One disadvantage is that the price may drop or begin a downward trend shortly after the investor made his purchase. If this occurs, he stands to lose a large portion of his investment. A second drawback is that, most often, shares of a momentum stock can be very expensive, as the stock is often over-valued. A third disadvantage is that this investing style requires a lot of guesswork as to the direction of a portion or sector of the market; more so than other investing strategies. This is because momentum stocks are often over-valued, and thus do not rely heavily on a company's financial status (as long as it is relatively steady), but more on speculation.

While this strategy is solid most of the time, it is rather difficult to implement in the technology sector, due to the volatile nature of the sector. This is especially true in recent months, with the presidential election and the slowing economy causing the market to decline.

7.2 Simulation

A trading simulation was performed for eight weeks in order to gain a better understanding of how the market works, and what it takes to become a successful investor. Because of the short time span of the simulation, the focus was on making money through capital appreciation in value of the stock, as opposed to dividend earnings. Only the companies listed below were traded, and a commission fee of \$20/transaction was also taken into account. A spreadsheet was used for record keeping; all daily closing prices, daily increase/decreases, and transactions were recorded. All graphs came from data recorded on this spreadsheet.

List of Companies

- Siebel Systems
- Checkpoint Software Technologies, Inc.
- Abgenix, Inc.
- Adobe Software
- Ciena Corporation

7.3 How Stocks Were Chosen

In order to choose stocks that were generally increasing in value, various web sites were searched, including www.nasdaq.com (the NASDAQ web site), www.nyse.com (the official web site of the New York Stock Exchange), and www.amex.com (the official web site of the American Stock Exchange), as well as www.cnnfn.com (CNN Financial Network homepage).

The criteria for selection are as follows:

- Must be in the technology sector
- Must have value higher than \$40.00/share
- Must have been in business for at least 3 years
- Must have a general trend of increase over the past year (see Year-To-Date charts)

Other less important criteria were also implemented, namely that a company regularly makes the headline news, or that it is a company that the author has heard of at one point or another.

7.4 Brief Company Descriptions

Siebel Systems is a world leader in the e-business software field, providing software systems to such companies as Ford Motor Company, Lucent Technologies, and the Charles Schwab Corporation. It currently employs over 7,000 people worldwide, and has received recognition for its accomplishments from such magazines as *Fortune*, *Business Week*, and *Customer Relationship Management*.

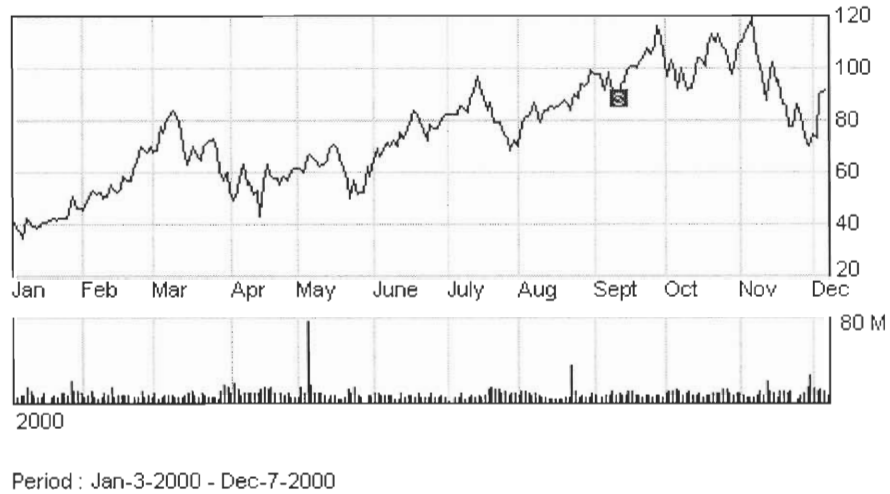


Figure 7.1 Siebel Systems stock price from 1/3/00-12/7/00

Checkpoint Software Technologies is a world leader in the area of secure internet software. It was founded in 1993 in Redwood City, California. It currently employs over 1,000 individuals, and prides itself on its ability to bring security to local networks and intranets, as well as internet operations. Products cover items such as access control, authentication, encryption, network address translation, content security, and auditing.

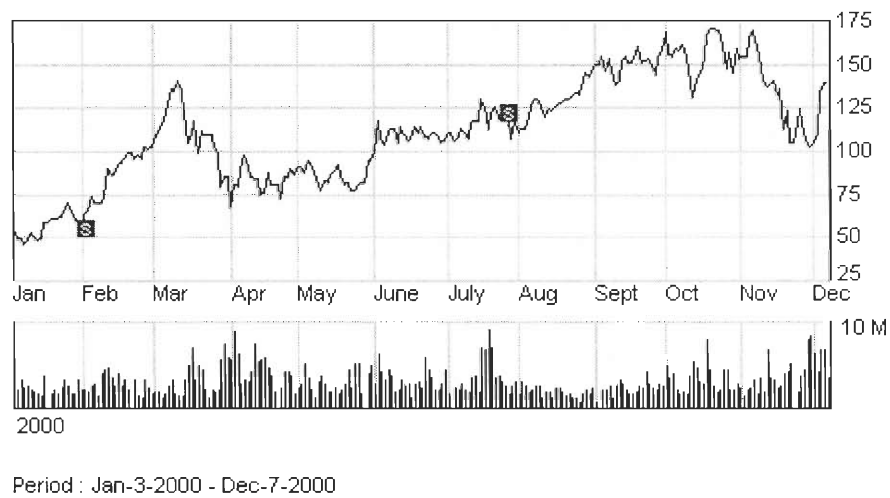


Figure 7.1 Checkpoint Software Technologies stock price 1/3/00-12/7/00.

Abgenix is a biopharmaceutical company that develops antibody therapeutic products to combat ailments occurring from transplants, cancers, cardio-vascular disorders, etc. Its “XenoMouse” technology allows it to develop very diverse products, and keep a large product portfolio. The technology essentially enables the rapid generation of high affinity, fully human antibody products to combat virtually any disease.

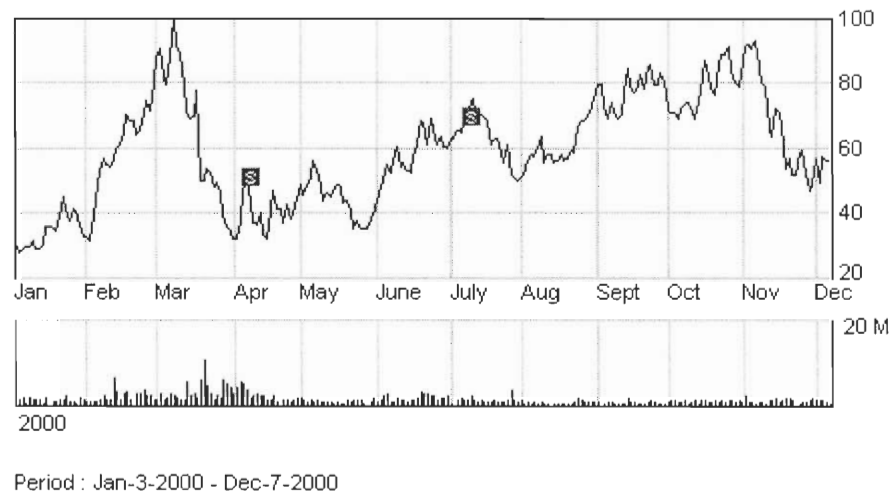


Figure 7.2 Abgenix stock price 1/3/00 – 12/7/00.

Adobe is a graphics software company that provides a range of products including photo editors, movie software, and other image-manipulating products. Perhaps its most well-known software is Photoshop and Acrobat Reader.

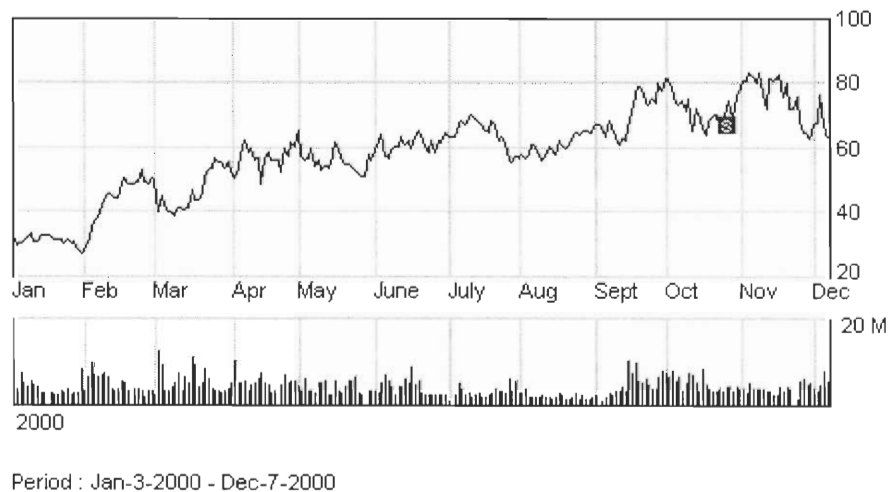


Figure 7.3 Adobe's stock price 1/3/00 – 12/7/00.

Ciena Corporation develops and produces fiber optic products, including systems for local and long distance phone services. Its latest networking technology, Lightworks™, has been designed to replace existing networks that are out of date. The software that has been developed for the network allows system operators to have complete control over a large portion of a network at any given time.

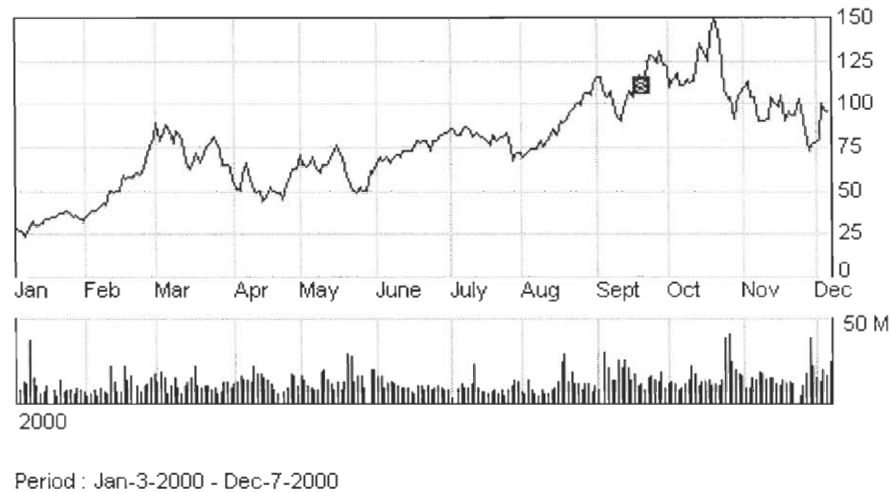


Figure 7.4 Ciena's stock price 1/3/00 – 12/7/00.

7.5 Analysis

The general philosophy used for the simulation was “buy low, sell high”. One mistake, however, was that no profit goals were set (i.e. a certain percent return) for investments, so a lot of profit was lost due to the fact that the stocks were held for too long. If a reasonable profit goal had been set, say, 15%, then the stocks would have been sold as soon as that percentage marker had been met. Although this would mean that occasionally an opportunity would be lost, it is more realistic in the long run, and can guarantee a solid return on an investment.

A lot of trading was done early in the simulation, in an attempt to make a quick profit, however it was soon noted that this is unrealistic, as it is virtually impossible to “outguess” the market. Observations were made as to what makes prices move. Items such as profit warnings, comments made by the Federal Reserve Bank, and even political issues such as the 2000 election were noted.

During the period from December 18, 2000 through January 12, 2001, the entire market was very low in comparison to the previous month, and did not move very much, making it difficult to judge when to invest, and whether it was worth investing at all. Therefore, very little trading was done during this time.

The volatility of the technology sector was made clear over the course of the simulation, with price jumps/drops of \$40 or more over the course of just a few days. This appears to occur for two reasons. The first is that many investors view the technology sector as such, or as a way to make to make a fast profit and the quickly sell. The second is that sales from one or two companies have a huge impact on many other companies. For example, if Gateway reports lower-than-expected personal computer sales, not only does its stock price drop, so do those of companies that provide Gateway with parts, software, or other devices. This kind of close-knit relationship between companies causes the whole sector to move very rapidly, which, in turn, can cause major gains or losses. One example of this is if all five stocks in the simulation had been sold on or about December 12, 2000, a 30% total profit would have been realized. However, they were not sold until three days later, and only a 5% profit was made instead. Had they been sold a week later, a loss would have occurred. Because of this volatility, it seems that the best way to handle momentum investing in the technology sector is to

watch very closely and buy or sell precisely when the time is right. If this does not happen then serious losses could occur.

As you can see from Figure 7.6, Siebel did very well at the beginning of the simulation and not so well at the end. This company gained the most appreciation for the first few weeks of the simulation. However, it was not sold soon enough, so a negligible profit was made. One thing that would have helped is if a profit margin had been set. If this margin had been set at, say, 15%, then a significant profit would have been realized (approximately \$7,500). This company's stock price continued to decline for the remainder of the simulation.

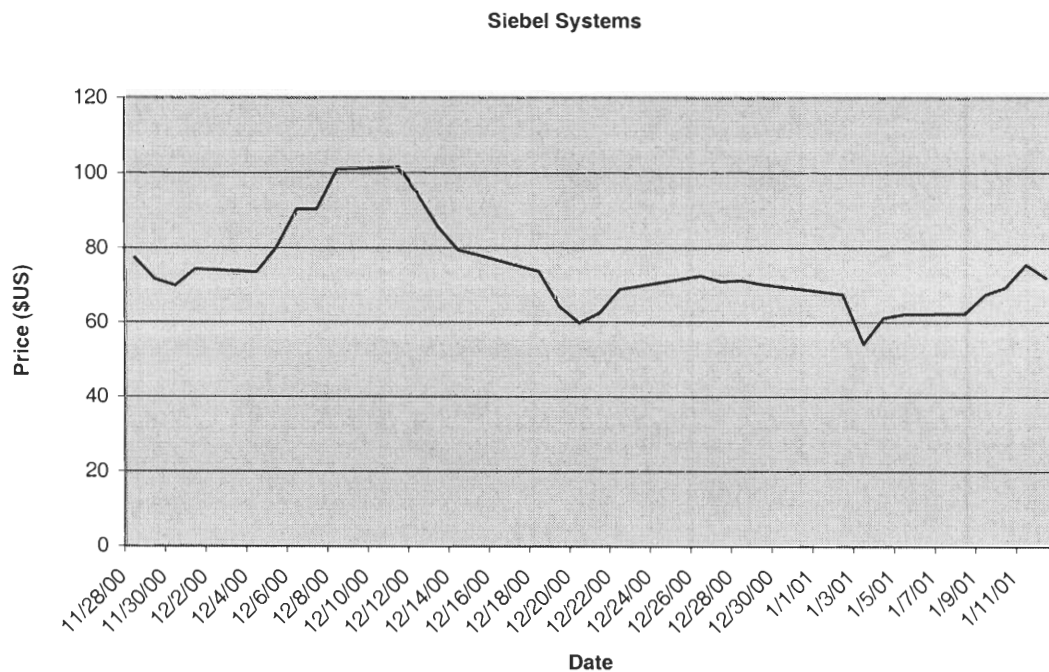


Figure 7.5. Siebel, Stock price vs. Date.

Siebel Systems

Date	Closing Price	Today's Change	% Change	Overall Gain	% Gain	Shares	Current Value
11/28/00	77.5					129	9997.5
11/29/00	71.7	-5.75	-7.42%	-741.75	-7.42%	129	9255.75
11/30/00	69.88	-1.88	-2.61%	-983.63	-9.84%	129	9013.88
12/1/00	74.38	4.50	6.44%				
12/4/00	73.44	-0.94	-1.26%				
12/5/00	80.15	6.71	8.37%	-477.99	-5.61%	113	9056.95
12/6/00	90.38	10.23	11.32%	684.78	7.18%	113	10219.72
12/7/00	90.44	0.06	0.07%	684.50	7.18%	113	10219.44
12/8/00	101.00	10.56	10.46%	1878.06	19.70%	113	11413.00
12/11/00	101.50	0.50	0.50%	1934.56	20.29%	113	11469.50
12/12/00	94.32	-7.18	-7.61%	1061.73	11.14%	113	10596.67
12/13/00	85.63	-8.69	-9.21%	140.69	1.48%	113	9675.63
12/14/00	79.56	-6.07	-7.63%				
12/15/00	78.20	-1.36	-1.74%				
12/18/00	73.68	-4.52	-6.13%				
12/19/00	64.30	-9.38	-14.59%				
12/20/00	59.90	-4.40	-7.35%				
12/21/00	62.54	2.64	4.22%				
12/22/00	68.84	6.30	9.15%				
12/26/00	72.46	3.62	5.00%				
12/27/00	70.90	-1.56	-2.20%				
12/28/00	71.32	0.42	0.59%				
12/29/00	70.25	-1.07	-1.52%				
1/2/01	67.50	-2.75	-4.07%				
1/3/01	54.14	-13.36	-24.67%				
1/4/01	61.26	7.12	11.62%				
1/5/01	62.30	1.04	1.67%				
1/8/01	62.45	0.15	0.24%				
1/9/01	67.60	5.15	7.62%				
1/10/01	69.37	1.77	2.55%				
1/11/01	75.50	6.13	8.83%	44.03	0.49%	119	8984.50
1/12/01	72.00	-3.50	-4.64%	-372.47	-4.17%	119	8568.00

Figure 6.7 Siebel Systems, Simulation Data. (Blank spaces indicate days during which stock in this company was not held).

Checkpoint Software is another company that gained a lot of appreciation in the first few weeks, and then tapered off as the simulation went on. Again, had a profit margin been set, a significant profit would have been realized. However, it was sold too late, so again, a negligible profit was made. It was purchased again a few weeks later, but nothing significant came of it.

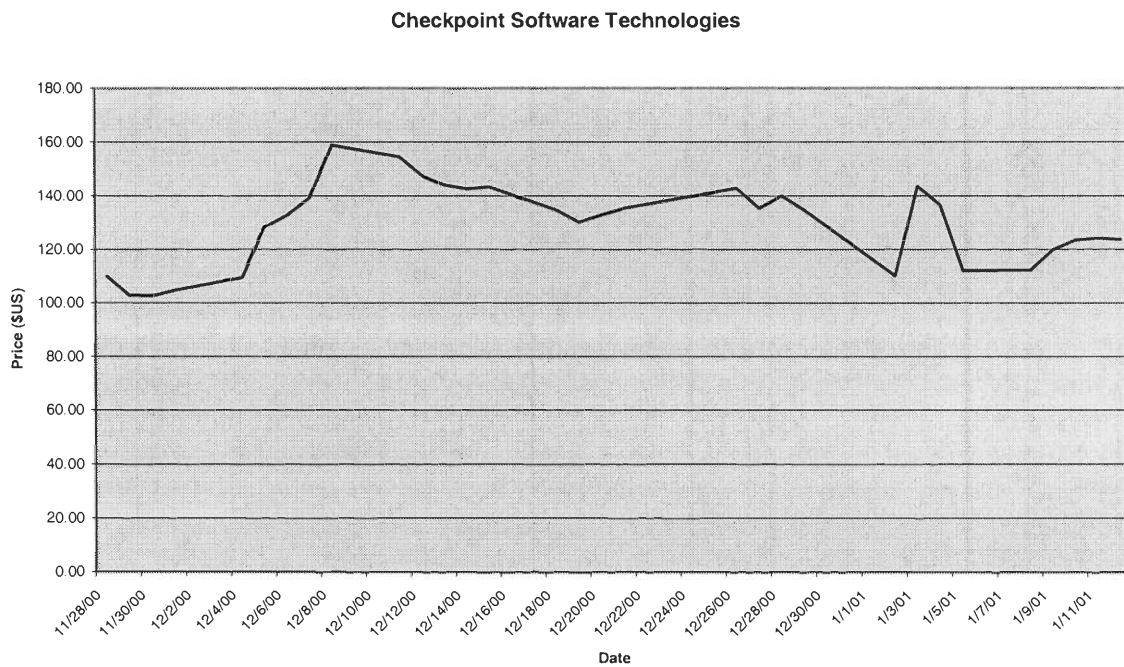


Figure 7.7 Checkpoint Software, Stock price vs. Date.

Checkpoint Software Technologies

Date	Closing Price	Today's Change	% Change	Overall Gain	% Gain	Shares	Current Value
11/28/00	110.00					90	9900
11/29/00	103.00	-7.00	-6.36%	-630.00	-6.36%	90	9255.75
11/30/00	102.63	-0.38	-0.36%	-663.75	-6.70%	90	9236.25
12/1/00	104.81	2.19	2.13%				
12/4/00	109.69	4.88	4.65%	675.86	7.01%	94	10310.86
12/5/00	128.36	18.67	14.55%	1500.23	14.55%	94	11811.09
12/6/00	132.91	4.55	3.42%	2778.64	26.50%	94	13089.50
12/7/00	139.25	6.34	4.77%	3403.31	33.01%	94	13713.87
12/8/00	158.88	19.63	12.36%	5299.25	55.00%	94	14934.25
12/11/00	154.44	-4.44	-2.79%	4882.13	47.35%	94	14517.13
12/12/00	147.64	-6.80	-4.61%	3567.30	34.60%	94	13878.89
12/13/00	144.00	-3.64	-2.53%	3225.14	31.28%	94	13536.00
12/14/00	142.70	-1.30	-0.91%				
12/15/00	143.35	0.65	0.45%				
12/18/00	134.75	-8.60	-6.38%				
12/19/00	130.26	-4.55	-3.49%				
12/20/00	133.21	2.95	2.21%				
12/21/00	135.47	2.26	1.67%				
12/22/00	137.00	1.53	1.12%				
12/26/00	142.85	5.85	4.10%				
12/27/00	135.42	-7.43	-5.49%				
12/28/00	140.00	4.58	3.27%				
12/29/00	134.77	-5.23	-3.88%				
1/2/01	110.24	-24.53	-22.25%				
1/3/01	143.70	33.46	23.28%				
1/4/01	136.84	-6.86	-5.01%				
1/5/01	112.35	-24.49	-21.80%				
1/8/01	112.50	0.15	0.13%				
1/9/01	120.00	7.50	6.25%				
1/10/01	123.73	3.73	3.01%				
1/11/01	124.38	0.65	1.38%	-59.50	-0.48%	100	12437.50
1/12/01	124.00	-0.38	-0.30%	-97.00	-0.78%	100	12400.00

Figure 7.8 Checkpoint Software, Simulation Data.

Abgenix is yet another company that started well, and then slid downhill. At one point during the simulation, this stock had the highest capital appreciation of the lot. This was sold a little earlier than the others, however, and thus a slightly more significant profit was made.

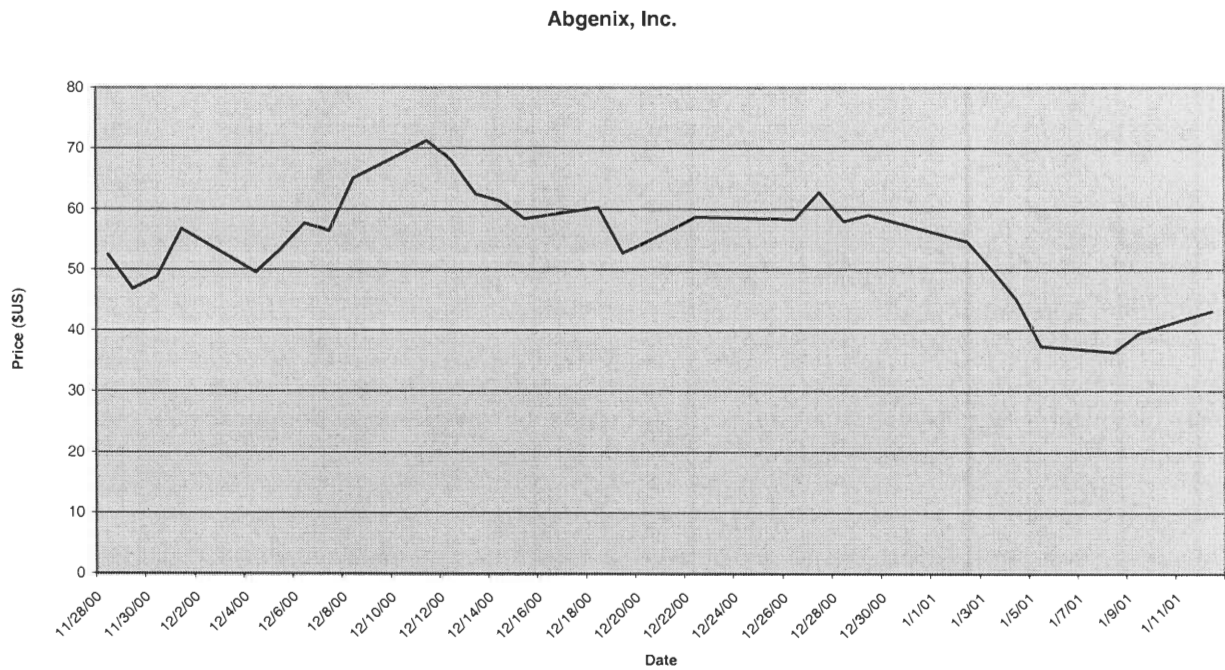


Figure 7.9 Abgenix, Inc. Stock price vs. Date.

Abgenix, Inc.

Date	Closing Price	Today's Change	% Change	Overall Gain	% Gain	Shares	Current Value
11/28/00	52.38					190	9952.2
11/29/00	46.81	-5.56	-10.62%	-1057.83	-10.63%	190	8894.38
11/30/00	48.81	2.00	4.27%	-677.83	-6.81%	190	9274.38
12/1/00	56.69	7.88	16.14%	0	0	0	0
12/4/00	49.56	-7.13	-12.58%	0	0	0	0
12/5/00	53.25	3.69	7.45%	-348.14	-3.08%	206	10969.50
12/6/00	57.63	4.38	8.23%	296.64	2.62%	206	11614.28
12/7/00	56.38	-1.25	-2.17%	303.13	2.61%	206	11917.41
12/8/00	65.13	8.75	15.52%	2098.11	18.54%	206	13415.75
12/11/00	71.31	6.19	9.50%	3372.74	29.80%	206	14690.38
12/12/00	68.00	-3.31	-4.64%	2691.11	23.78%	206	14008.75
12/13/00	62.50	-5.50	-8.09%	1557.36	13.76%	206	12875.00
12/14/00	61.27	-1.23	-1.97%				
12/15/00	58.35	-2.92	-4.77%				
12/18/00	60.30	1.95	3.34%				
12/19/00	52.75	-7.55	-12.52%				
12/20/00	54.60	1.85	3.51%				
12/21/00	56.63	2.03	3.72%				
12/22/00	58.72	2.09	3.69%				
12/26/00	58.25	-0.47	-0.80%				
12/27/00	62.73	4.48	7.69%				
12/28/00	57.94	-4.79	-7.64%				
12/29/00	59.00	1.06	1.83%				
1/2/01	54.60	-4.40	-7.46%				
1/3/01	50.00	-4.60	-8.42%				
1/4/01	45.05	-4.95	-9.90%				
1/5/01	37.36	-7.69	-17.06				
1/8/01	36.46	-0.90	-2.41%				
1/9/01	39.50	3.04	8.34%				
1/10/01	40.75	1.25	3.16%				
1/11/01	42.00	1.50	3.70%	149.50	1.20%	299	12558.00
1/12/01	43.19	1.19	2.83%	504.56	4.07%	299	12913.06

Figure 7.10 Abgenix, Simulation Data.

Adobe was one stock that was probably a mistake to invest in for the period of the simulation, because it only declined in price. There were several points at which some profit could have been made, but it was not very significant. Overall, it detracted from the value of the portfolio.

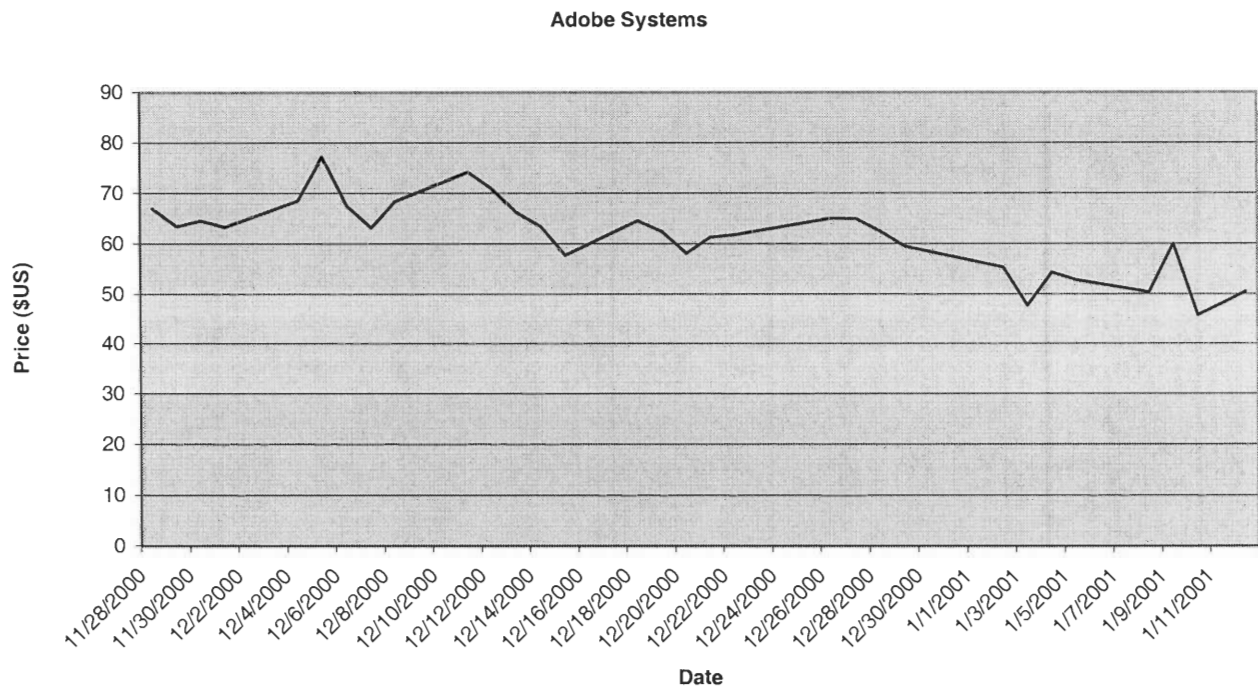


Figure 7.11 Adobe, Stock price vs. Date.

Adobe Systems

Date	Closing Price	Today's Change	% Change	Overall Gain	% Gain	Shares	Current Value
11/28/00	66.94						
11/29/00	63.35	-3.59	-5.36%				
11/30/00	64.55	1.20	1.89%				
12/1/00	63.30	-1.25	-1.94%				
12/4/00	68.44	5.14	8.12%				
12/5/00	77.23	8.79	12.84%				
12/6/00	67.46	-9.77	-12.65%				
12/7/00	63.10	-4.36	-6.46%				
12/8/00	68.38	5.28	8.37%				
12/11/00	74.13	5.75	8.41%	153.00	1.54%	136	10081.00
12/12/00	70.69	-3.44	-4.64%	-467.84	-4.71%	136	9613.84
12/13/00	66.19	-4.50	-6.37%	612.34	-6.17%	136	9001.50
12/14/00	63.42	-2.77	-4.18%				
12/15/00	57.65	-5.77	-9.10%				
12/18/00	64.50	6.85	11.88%				
12/19/00	62.35	-2.15	-3.33%				
12/20/00	58.00	-4.35	-6.98%				
12/21/00	61.21	3.21	5.53%				
12/22/00	61.75	0.54	0.88%				
12/26/00	65.05	3.30	5.34%				
12/27/00	64.86	-0.19	-0.29%				
12/28/00	62.36	-2.50	-3.85%				
12/29/00	59.50	-2.86	-4.59%				
1/2/01	55.30	-4.20	-7.06%				
1/3/01	47.64	-7.66	-13.85%				
1/4/01	54.23	6.59	13.83%				
1/5/01	52.75	-1.48	-2.73%				
1/8/01	50.32	-2.43	-4.61%				
1/9/01	59.95	9.63	19.14%				
1/10/01	45.75	-14.20	-23.69%				
1/11/01	48.06	2.31	5.05%				
1/12/01	50.44	2.38	4.94%	-105.26	-1.35%	152	7666.50

Figure 7.12 Adobe, Simulation Data.

Ciena Corporation did pretty well at the beginning of the simulation, but it was not purchased until a week or so after the simulation began. This was due to some uncertainty on the part of the author, because the price had been fluctuating a great deal during the two weeks prior. Had it been purchased, a large profit could have been made. Unfortunately, it dropped during the week of December 22nd, and did not gain much appreciation after that.

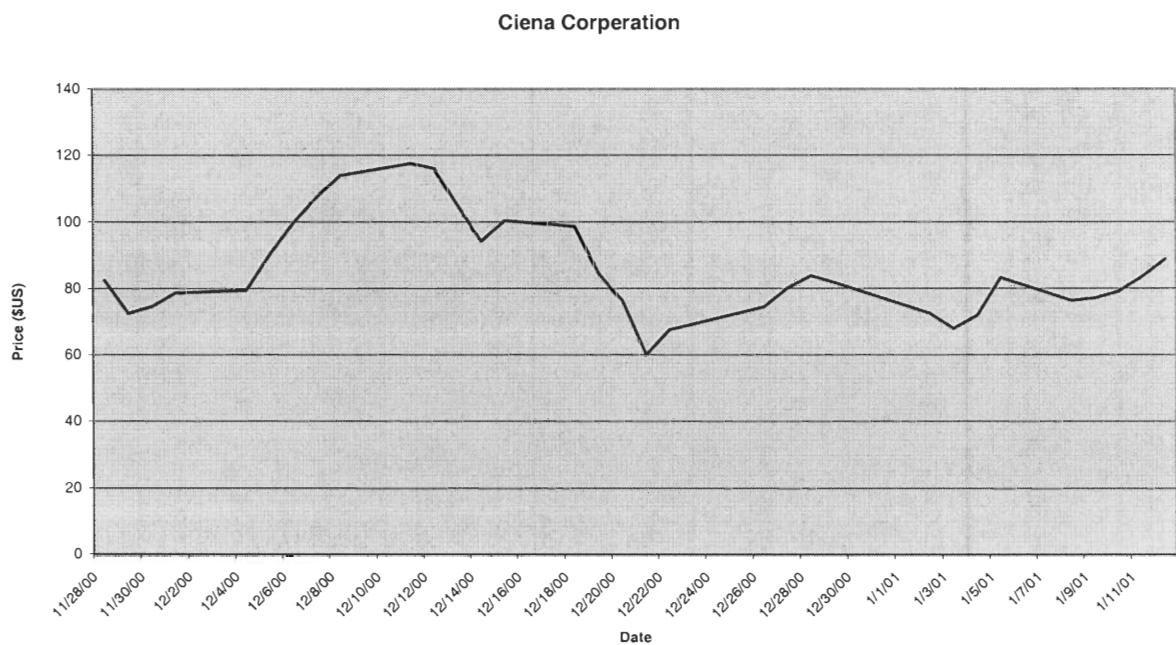


Figure 7.13 Ciena Corp., Stock price vs. Date.

Ciena Corporation

Date	Closing Price	Today's Change	% Change	Overall Gain	% Gain	Shares	Current Value
11/28/00	82.45						
11/29/00	72.50	-9.95	-12.07%				
11/30/00	74.63	2.13	2.94%				
12/1/00	78.66	4.03	5.40%				
12/4/00	79.45	0.79	1.00%				
12/5/00	90.32	10.87	13.68%				
12/6/00	99.56	9.24	10.23%				
12/7/00	107.31	7.75	7.78%				
12/8/00	114.00	6.69	6.23%				
12/11/00	117.5	3.50	3.07%	-150.23	-1.52%	83	9752.50
12/12/00	116.07	-1.43	-1.20%	-268.92	-1.20%	83	9633.81
12/13/00	104.63	-11.44	-9.85%	-1218.86	-12.31%	83	8683.88
12/14/00	94.16	-10.47	-10.01%				
12/15/00	100.27	6.11	6.49%				
12/18/00	98.64	-1.63	-1.63%				
12/19/00	84.25	-14.39	-14.59%				
12/20/00	76.30	-7.95	-9.44%				
12/21/00	59.96	-16.34	-21.42%				
12/22/00	67.50	7.54	12.58%				
12/26/00	74.32	6.82	10.10%				
12/27/00	80.26	5.94	7.99%				
12/28/00	83.75	3.49	4.35%				
12/29/00	81.65	-2.10	-2.57%				
1/2/01	72.56	-9.09	-11.13%				
1/3/01	67.84	-4.72	-6.50%				
1/4/01	71.94	4.10	6.04%				
1/5/01	83.17	11.23	15.61%				
1/8/01	76.29	-6.88	-8.27%				
1/9/01	77.12	0.83	1.09%				
1/10/01	78.94	1.82	2.36%				
1/11/01	83.50	4.56	5.78%	-29.45	-0.37%	95	7932.50
1/12/01	88.88	5.38	6.44%	481.17	6.04%	95	8443.13

Figure 7.14 Ciena Corp., Simulation Data.

7.6 Conclusions

Several conclusions can be drawn from the results of the simulation. The first is that it is very difficult to make money as a momentum investor in a bear market, especially in the technology sector. The sector is the highest of any sector in a bull market, but it is also the lowest in a bear market. Momentum investing lends itself to a bull market anyway, making it that much more difficult to utilize in a bear market, such as the one that is occurring at the moment.

Secondly, because the entire stock market is based on nothing more than investor psychology, it can move for seemingly no reason at all. The psychology associated with the technology sector is what keeps it so volatile. In other words, if investors view it as volatile, it will be. Therefore, even companies that are solid in growth and revenue can have stock prices that drop severely. One particularly illustrative example of this involves Ciena Corporation. There was a day during the simulation on which Ciena announced that it would miss Wall Street analysts' dividend expectations by one penny, and instantly the stock price dropped by 20%! It recovered somewhat the next day, but it took several days for it to rebound to its original price. It is just this sort of thing that keeps investors on their toes.

Chapter 8

Conclusion

The purpose of this IQP was to learn about the stock market and develop some strategies that could be used by the beginning investor. To come up with these strategies we chose to do a short simulation in which the three of us each took a different approach to investing. We also include some background information and other investment information to give the reader a better grasp of the concepts used in this project.

The first approach taken during the simulation was the purchasing of undervalued stocks with the hope that their real value was realized causing the price to increase. This group of stocks did very well with a percentage gain of 21.5% over the simulation period. The second approach taken was the purchase of steady stocks with the hope that these stocks would rise in value a little, but not be affected as much by bad economic news. This group did the best overall with a percentage gain of 22.5%. The third approach was the purchasing of momentum stocks with the hope that they would continue to rise in price. This group of stocks did the worst with a percentage gain of 0.62%. This had a lot to do with the stock market at the time of the simulation because it was going through a series of corrections where the stocks that had been seeing large gains had inflated values. This caused a lot of decreases in the prices of these stocks.

From our simulation we can see that the approaches taken yielded results that were very interesting and not quite what we had predicted. These results can't be relied on heavily though since a different person managed each group of stocks. This could have affected the results since different people will choose to buy and sell at different

times. The state of the stock market at the time of the simulation could have also had a large affect on the results. Had the stock market continued on the same upward trend that it had when we began the simulation our results may have been closer to what we had predicted. The results obtained don't make any one of these buying strategies better than the other, because there is a different level of risk involved with each. The determining factor for what strategy an investor should use depends on how much of a risk he or she is prepared to take.

From this project we learned a lot about the stock market and investing in it. Probably the biggest thing that we learned is that there is money to be made from investing as long as you spread your investments out among several stocks. This way if you have one bad stock it doesn't cause your whole investment to cause you to lose all your money. This strategy will usually work except for when the stock market as a whole is on a downward trend. In this situation it is probably best to hold off on investing until the market stabilizes. Any investor can't be afraid to lose money when investing because it will happen, but hopefully in the long run money can be made on your investment. Before investing, though, you must decide how much you can afford to lose, so that if you do lose all the money you have invested you don't have financial problems. When deciding what stocks to invest in you want to have some kind of strategy that involves more than just selecting stocks at random. There are several ways to do this, but you want to make sure you are selecting stocks in a way that focuses on the potential for a stock to increase in value.

Overall this IQP was a very good learning experience for the three of us, giving us a chance to learn about investing as a whole. The simulation aspect of the project gave us

the closest possible experience to actually investing without using actual money. From this we were able to feel some of the same emotions that a real investor feels when the value of the stocks goes up and down. This project helped us learn valuable information that we can put to use later in life and hopefully make some money using it.

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