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Stock Market Simulation

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STOCK MARKET SIMULATION

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Abstract

The goal of this project was to achieve a basic understanding of the stock market through research and trading simulation. By using proper investment and technical analysis strategies in addition to online simulation tools, investment theories were put into practice. During the simulation, stock trades were made based on different strategies. Results from several trading strategies were compared and contrasted according on their profitability. Effectiveness of each strategy was also discussed.

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Chapter 1 Introduction

1.1 Objectives

During the 14 weeks of this IQP, we would like to accomplish the following goals. First of all, we will conduct research to gain a deeper understanding of the stock market, such as its history, evolution and how it functions. Secondly, we want to acquire skills in company research because this skill is essential to the success of stock investment. Thirdly, we would like to put all the theories we gather through research into practice by implementing different strategies in actual trading (real time, real price, hypothetic money). This will help us to acquire in depth understanding of each trading strategy and the conditions/assumptions in which each strategy is most helpful. Fourthly, we would like to acquire skill in making immediate investment decision based on the limited information we get during actual trading. Lastly, in the end of the virtual trading period, we would like to study the effectiveness of each strategy using the experimental results. From the analysis of the result, we would like to gain experience in investing. This would benefit us in the future and improve our chance of finding god jobs in the financial sector.

1.2 Stock Market in General

Stock market is obviously one of the most popular topics for people nowadays, but what is it anyway? It is not always clear what it is referring to. Is the stock market a place? Or is it something different? To many people it is just a totally abstract concept. Many people think of Wall Street and the stock market as the same thing. However, Wall Street is one place where people trade and where the world's largest financial market was born and prospered. The term “stock market” is actually a concept for the mechanism that enables the trading of company stocks, other securities, and derivatives. Commodities are traded in commodities markets, and derivatives are traded in a variety of markets.

The size of the stock market is estimated at about $51 trillion. The world derivatives market has been estimated at about $480 trillion nominal value. The stocks are listed and traded on stock exchanges which are entities specialized in the business. It brings buyers and sellers of stocks together. The stock market in the United States includes the trading on the NYSE, the NASDAQ, the Amex, as well as on the many regional exchanges such as the OTCBB and Pink Sheets. European stock exchanges include the Paris Bourse, the London Stock Exchange and the Deutsche Börse [6].

1.3 The History of the Stock Market

Historian Fernand Braudel suggests that in Cairo in the 11th century Muslim and Jewish merchants had already established all forms of trade association and were knowledgeable of every method of credit and payment, against the belief that these were invented later by Italians. In 12th century France the courratiers de change were concerned with managing and regulating the debts of agricultural communities on behalf of the banks. They might be called the first brokers. In the mid-13th century Venetian bankers began to trade in government securities. In 1351 the Venetian government outlawed spreading rumors intended to lower the price of government funds. During the 14th century Bankers in Pisa, Verona, Genoa and Florence also began trading in government securities. This was only possible since these were independent city states not ruled by a duke instead of a council of influential citizens. The Dutch later started joint stock companies, which let shareholders invest in business ventures and get a share of their profits - or losses. In 1602, the Dutch East India Company, first company to issuing stocks and bonds, did the first shares on the Amsterdam Stock Exchange.

The Amsterdam Stock Exchange is also said to have been the first stock exchange to introduce continuous trade in the early 17th century. The Dutch "pioneered short selling, option trading, debt-equity swaps, merchant banking, unit trusts and other speculative instruments, much as we know them" (Murray Sayle, "Japan Goes Dutch", London Review of Books XXIII.7, April 5, 2001).

Wall Street can trace its name back to 1653. Settlers of Dutch descent, who were always on the lookout from attacks by Native Americans and the British, built a 12 foot stockade fence. It was beyond their wildest guess that this fence would go on to become the center of financial activities in the world. The wall was torn down and a new street was built. The British called it Wall Street. What helped Wall Street rise was the appearance of two great Stock Exchanges, which gave order to the chaotic trading and gave birth to the financial markets as known today.

The founding of the first stock exchange in America was in Philadelphia in 1790. Two years later a group of New York merchants met to discuss how to take command of the securities business. Those 24 men founded what is now known as the New York Stock Exchange. But in early 1817, the merchant group from New York sent a representative to Philadelphia to observe how things were being done. Upon arriving with news about the robust exchange in Philadelphia, the New York Stock and Exchange Board was soon organized formally.

As for the New York Stock Exchange, it has since moved past its humble beginnings to the point where its system now facilitates billions of dollars worth of trades each day. But there was a gradual build up to this status. In the early 1900s massive amounts of money were made on Wall Street. But the boom period could not be sustained indefinitely. And in 1929 there comes the Great Depression.

But the crash of 1929 was just the beginning of sorrows for Wall Street. For while the economy eventually recovered from its catastrophic losses, the market excesses that had factored into the crash in the late 1920s seeped back into the picture. The result was the stock market crash of 1987, which saw the Dow Jones suffer what marketed largest single-day loss in the stock market’s history. Since then, the government and the industry have tried to have influence on place to curtail, if not entirely eliminate, the possibility of such a large-scale crash. The stock markets are now a whole part of the global economy.

The current "stock market" consists of 300,000 computers situated on pro trader's desks. These computers are networked together using sophisticated protocols. This level of information sharing makes pricing an almost exact science. These 300,000 computers are further linked to another 26 million computers worldwide. They are located in banks, small businesses, and large corporations. These computers comprise the banking networks which make computerized transactions possible. Finally, these computers are connected to another 300 million+ computers which connect and disconnect from the financial markets daily. In New York City alone, these transactions amount to over $2.2 trillion dollars daily [6].

1.4 Major Stock Indices in USA

There are many major stock indexes in USA. Each of them represents the performance of a certain number of stocks by indicating the characteristics of its component stocks. All stocks in a market index bear some common features. The trading takes place on the same stock market exchange. They belong to the same industry. They have close market capitalizations [17].

There are some major market indexes in USA today such as Dow Jones Industrial Average (DJIA), NYSE Composite Index, S&P 500 Composite Index, and Nasdaq-100 Index. Below we will give a brief description of each of them [17].

Dow Jones Industrial Average (DJIA)

Created in nineteenth century by Wall Street Journal Editor Dow Jones and Company Co-founder Charles Jones, DJIA is the oldest continuing US market index of 30 “blue chip” stocks of US “industrial” Companies: from financial services firms to computer companies, to retail companies. Different from many other indexes, DJIA is not a “weighted” index [17].

NYSE Composite Index

NYSE Composite Index tracks the performance of all common stocks listed in New York Stock Exchange. Among 2000 stocks covered in this index, 1600 are from US corporations. Each stock's weight in this index is proportional to the stock's market capitalization, making the Index "capitalization-weighted" [17].

S&P 500 Composite Index

Formally created in 1957, S& P Composite Index is a capitalization-weighted index of 500 large-cap corporations intended to be a representative sample of leading firms in leading industries [17].

Nasdaq-100 Index

As a way for the NASDAQ Stock Market to support enhanced media coverage for itself, The Nasdaq-100 Index began in 1985. Being a "modified capitalization-weighted", this index was designed to cover 100 largest and most actively traded non-financial domestic and international securities listed on The NASDAQ Stock Market [17].

1.5 Overall Plan of IQP

First of all, we plan to spend two weeks on researching the stock market in general. This would require us to use resources online as well as written materials in the library. After getting the general idea of the stock market, we would select sectors of the market which we found to be most likely to profit during the near future. After we identify the sectors, we would select 15 to 20 companies from various sectors which we will conduct an in depth background research on. These background researches would include studying the companies' income statements, stock price charts for past year and their recent news. In addition to our own research, we would find out if the companies receive any higher rate or recommendation from any brokerage firm or financial newspaper like Investor's Business Daily. Recent status changes of these companies' rating would be noted and invest farther before actual investing.

Once the selection of the 15 best companies is accomplished, our team will start the actual online trading. The actual trading would be considered of 3 portfolios for easier monitoring. Each person would be in charge of one portfolio with $100,000 to invest. Each portfolio would initially contain 5 companies to invest in. During each of the 5 weeks, we would have report on the changes in the stock quantity purchased or sold as well as the profitability for each stock in that week. Furthermore, we would make the buying and selling decision each week based on the actually market itself. Group discussion will also be held weekly to report our findings and help each other with their problem.

At the end of the trading period, we would calculate the amount we gain/loss for each of the portfolio and the simulation as whole. More importantly, we would analyze each strategy and decision in detail. By doing so, we hope to find out the effectiveness of each strategy with its pairing company.

Chapter 2 Other Types of Investment

From the view of financial concept, investment can also be interpreted as in the act of changing cash into another form in order to increase the principle amount over a period of time. According to the risk, return, and duration of investment, there are other different useful ways in investing besides stock. The following pyramid gives a concrete image of the level of risk and return for different types of investment [11]. If you want to be a knowledgeable investor, you need to be very familiar with those types of investment. After comparing those different types of investments, you will be able to select the one that provides more benefit to you. There are four main other types of investments: Cash, bonds, mutual funds, and Real estate [11].

Figure 2.0.1: Risk Chart [3]

2.1 Cash

Cash investment is at the bottom of the pyramid, which has the least risk and probably the lowest return. It can be represented by several forms, such as bank saving account, money market funds, certificates of deposit (CDs), and etc, and usually earns excess money through interest. Bank saving account usually guaranties the return of full principle and pays some low interest. Certificate of Deposit (CDs) has a specified period (called CD term) during which fund cannot be withdrawn without penalty. CD terms can vary from three months up to twenty years. CDs normally earn higher interest rate compared to bank savings or money market accounts. However, if you withdraw money before the maturity date of a CD, you will receive considerable penalty depending on the conditions of the CD amount. Money market fund pays a little more than a bank saving account, and invests in short-term securities as CDs, commercial paper, and Treasury bills. You may lose money since the money market fund is not FDIC insured. However, the chance is almost zero because the money market fund is relatively safe. Most investors invest in cash because of its liquidity, security and short –term period. Risky is not the main concern for cash investment. Cash positions reduce the risk of the total portfolio for the investors. Cash investment investors often know how much money they can get, and when they can get that money [11].

2.2 Bonds

Technically, a bond is issued by a corporation or the government in a specific period when a regular or fixed rate of interest was paid to the bondholder. It can be said that the corporation or government own you money and promise to pay you back in full with interest when you buy their issued bonds. The fixed interest rate is also called coupon rate. You are guaranteed to receive the interest during the bondholding period. At the end of the period, which is also called the maturity date, the corporation or the government, will repay you the par or face value of the bond, which is the original loan. For example, you buy a bond whose face value is $1000 from AGCO corp. with a 10 percent coupon rate now (11/01/2007), and matures on 11/01/2017. It can be explained this way: you lend AGCO corp. $1000 in a period of 10 years. AGCO corp. will pay you $100 annually per $1000 of face value until the maturity (11/01/2017) under 10 percent coupon rate ($1000*10%=$100). At maturity, $1000 will be repaid to you in cash by AGCO corp [3].

Bond investment is the second level of the pyramid, and has a higher risk and return than cash investment. Because of the promise of the bond issuers and guaranteed interest, bond investment can be considered stable and conservative. However, there still exists some major risks whey you buy the bonds, including credit risk, inflation risk, and rate risk. For example, the corporation may run out of business, and has a difficult to pay you back either interest or original loan. Rising of price could reduce the purchase power of an investment. The bond value could goes down if the market interest rate is higher than the coupon rate, vice versa [11 P20].

Base on the risk level and your investment goal, there are there main types of bonds: Treasuries, municipal bond or munis, and corporate. Treasuries are issued by the U.S. government. They are considered the safest bond investment. Munis are issued by state and local governments and are usually tax-free. Corporate bonds have the most risk but also provide the highest returns [3].

2.3 Mutual Funds

Mutual funds have become more popular in the recent years. It is special for those investor, who do not prefer to invest individual cash, stock or bond, or have little time or knowledge to research individual companies. Mutual funds are an ideal investment, which are the combination of cash, stock and bond investment. An investment company creates mutual fund by pooling investor's money and using it to invest in an assortment of stocks, bonds, or cash. A professional money manager, who manages the mutual fund in an investment objective and styles, can make buying and selling decision for you. Mutual funds can achieve the investors' portfolio diversification even though the investors have less investment amount. For example, you can buy a mutual fund that invests in stocks, technology, or bonds. There are well over 7000 mutual funds with its own style and strategy, so you need to take your time to choose a mutual fund that can match up your financial goals. Instead of investing all your money in only one stock, mutual funds allow you to buy a slice of hundreds of stocks, thus it reduce the risky and the commission of the specific stock can be divided among all the mutual fund shareholders [11 P22].

Mutual funds are the third level of the pyramid, which has higher risk and return than cash and bond investment. They are not as perfect as you thought. If the overall stock market goes down, the mutual funds also decrease since they contain various stocks. Many mutual funds went down a lot during the recent bear market; however do well in bull markets [11 P24].

2.4 Real Estate

Investing in real estate, such as buying your own single-family home, a residential property, or townhouse, has been considered to be the smartest investments. The real estate investors can get extra income from renting the house or the increased value of the house over time. Real estate is considered to be a long-term wealth investment. The main benefit from the real estate is that you can break your tax, and feel wonderful to become a property owner.

Real estate is the fourth level of the pyramid; and has much higher risks than those cash, bond and mutual fund investment. Real estate is inequity, unlike stock or mutual fund, so that you can not sell it immediately. Usually, real estate investors pay mortgage monthly. If they can not afford the payments, the bank will try to take over their property. Due to the decline of economy or some other reasons, the value of property could goes down. You need to spend your time to do some research or ask some experts when you invest in real estate, in order to predict the future value of the selected property [11].

Chapter 3 Investment Strategies

3.1 Introduction to Investment Strategy

Investment strategy is a set of rules, behaviors, or procedures used to invest in the market. It is designed not only to guide an investor's selection of an investment portfolio, but also help an investor make decision of what kind of stock to buy or sell. There are four kinds of risk. First, the outside events, such as war, recession or terrorism can make stock price go down. Second, even if entire stock market goes up, there are some reasons that your stocks can still go down. Third, even if you put the money in the bank instead of investing in the stock market, there is a risk that your money will be worthless because of inflation. Fourth, if you do not invest in the market, there is a risk that you will miss some profit from buying opportunities. Usually the strategy will be designed around the investor's risk-return tradeoff: some investors will invest in risky assets in order to maximize returns (profit), others will rather to minimize risk regard of less return. However, most investors will select a strategy somewhere in between [11].

Investment strategy involves evaluating a stock by examining the company, especially its operations and its financial condition. There are several evaluation methods, such as factoring in price/earnings ratio, PEG, dividend yields, book value, price/sales ratio, and return on equity. If you have little knowledge about stock market, it is important that you do research before you attend to buy r sell stock. If there is any particular strategy that suits you, you had better do more research before you actually use it. It usually takes a long time for you to make sense of investment strategies, and efficiently use it to increase the value of your portfolio. Since there are many different investment strategies, you are usually not limited to only one. Some investors and traders prefer to apply various strategies while others feel comfortable to use only one. No matter what kind strategies that you use, you still need to pay attention [11].

- An investment strategy is only as good as person using it. It means that you can still lose money no matter how brilliant and ingenious the strategy is.
- Not all the strategies during all market conditions. It means that you'd better match up the strategy and the market condition; do not choose any one without considering the market.
- Don't be devoted to a strategy if you find that it does not work as you expected. It means that when you lose money for a long time by applying the strategy, you need to give up immediately.

There are two main types of investment: long-term investment and short-term investment. People who are involved in long-term investment are called investors. Investors buy stocks in corporation that they believe in and plan to hold the stocks for the long term (usually a year or longer). Purchasing the stocks as long-term is like purchasing a stake in a company and its future performance. Investors do not care about the day-to-day fluctuations of the stock price, and do not require a deep understanding how the market affects the stock. They can use business perspective to get good returns through research, analysis and patience. People who are involved in short-term investment are called traders. They buy and then sell the stock within five minutes, a few hours, or a few days, or even a month. Traders focus on the price of a stock instead of caring about the future of a corporation. Their goal is to take advantage of the short-term movements in a stock or the market [11].

3.2 Descriptions of Common Strategies

Stock market investing is considered a difficult and risky way to make money, but using some common strategies, investors can reduce the risk and maximize potential profit. These strategies spread around a wide range. Some of which tell investors how to evaluate a company based its background information. Some of which tell investors the best time to invest and what to watch out for during trading. Some of which tell especially under what circumstances should investors sell the stock. The following paragraphs describe some of these strategies which might benefit investors.

Buy and Hold

The investors buy stock in a fundamentally sound company and hold it for the long term (a least a year). The reasons behind the buy and hold strategy are that the investors assume the economy will grow up over the time. The stock price will go up as the company becomes stronger. They usually ignore the day-to-day fluctuation of the stock price, since these will be smoothed out in the long term and the market as a whole will rise. There are some additional benefits. For example, the investors can pay less commission and tax. Also they just need to hold the stock as long as they assume the stock will rise instead of paying too much attention to the market [13].

Market Timing

The investors focus on the outlook of the entire market or economic conditions by using different methods, such as technical analysis, fundamental analysis, or even intuition. Market timers believe that they can predict when the market or some certain stocks can rise or fall. They usually buy the stock at the low price and sell it at the high price in order to maximize profit. Market timing seems dangerous since it is possible to over or under valued a stock. Unfortunately, sometimes the movement of stock price does not follow the logically predicted price. The market timer also spends a lot commission since they usually trade frequently, especially on small transition [13].

Growth

The investors prefer to pay attention on the background of the company when they buy the stock. They usually focus on the potential earning growth of the company, such as changes of earning per share every year, revenue growth. By comparing price/earning ratio with earning, the growth investor can get the sense of how much the market is willing to pay for a given rate of earning growth. Growth stocks are risky, since they usually grow from young company, which means growth investors have chance of gaining or losing a lot [13].

Value

The investors always focus on a stock that can be sold at an attractive price which is usually under the book value. It means that the value investors can identify stocks purchased less money than they are worth by measuring a company's value. They usually tend to look at the traditional valuation metrics such as low PE stocks, low price-to-cashflow ratio stocks, or low price-book-ratio stocks, which is not found in the growth investment. However, the value investment is not favored by many investors, since discount rates of some stocks are only assumption [13].

GARP

The investors focus on the growth potential company whose stock is undervalued. GARP investment strategy is considered to be the combination of both growth and value investment. It stands for "growth at a reasonable price". Most investors think that it is difficult to follow GARP strategy, since growth and value strategies have opposite characteristics. That is the reason that most GARP investors look at the price-to-earnings-growth (PEG) ratio [13].

Warren Buffett and Quality

On contrary to some complicated and fancy investing skills, a few investors would more likely to consider a "safe" way of investing: neither cheap and questionable companies nor exceptional and expensive companies: just good companies with good prices.

An outstanding character in stock market, Warren Buffet is referred to be a classic example. Different from people's normal assumption, he applies simple investment strategies to benefit investors at identifying good values. He just searches for great stocks, then purchases them and holds for years. Such a long term investor like him thinks of his investment not only as sharing the stock but also as buying part of a business. The way Buffet defines the value of a business is to calculate the total net cash flows of the company and discount them by the proper interest rate. His focuses are the return on equity, the operation margins, the debt levels, and the expenditures of capital, by which he identifies the best investments.

To one's most interest, Buffett Challenges a few classic notions about diversification. He regards it less essential for people who are very confident to find a number of stocks that will extraordinarily outperform the market. For him, it is far more important to identify the good values than investing money across a typical diverse portfolio.

Income

Income investors apply a straight forward strategy: purchasing them with the highest dividends. Their primary focus is to secure a stable income, rather than worrying about the earnings of capital. Obviously, the stocks of large companies normally fall in their preference. As one of the most conservative strategies, yet there are still risks involved in income investing in equities. For many reasons, this strategy is pretty much close to bond investing than stock investing [13].

Dollar Cost Averaging

Dollar cost averaging is fairly good for amateurs which contains regular and fixed amount to certain investment. At each period, people invest the chosen amount and remove any emotion-based motivation in order to react to short-term changes. As any strategy, the dollar cost averaging does not guarantee anything. However, it does make sure consecutive investing and protect from harming their long-term strategy. Since people buy it at a certain range of prices, changes in price are evened and the initial price has a much smaller influence on the future returns when the investment is sold.

Consequently, there come significant decreases of the gap between the value of money paid in and the current value. Nevertheless, the speed of the average price does not go fast enough to reduce the possibility of loss or profit. So dollar cost averaging can help prevent a huge negative gap, but it also constraints the potentiality of a positive gap.

As a matter of fact, dollar cost averaging is an ideal skill for conservative investors wishing to get rid of the risk involved timing the price and reacting to short-term results. When the market is underperforming, the dollar cost averaging is both safe and effective due to the acquisition of more shares for the same regular amount. But we should also realize better performance is not guaranteed and that part should not be the target motivation for applying this strategy [13].

DRIPs and DSPs

Direct Stock Purchase (DSP) and Dividend Reinvestment Plan (DRIP) are two methods which investors can increase profit by cutting down the cost toward the commission for the brokerage firms. DSP let buy stock directly from the company without use of a broker. The drawback to DSP is that a fee might be imposed to open a stock purchase account with the company. DRIP on the other hand, let you purchase the first shares through a broker but then the company use the dividend from the shares to reinvest back to the company without using brokers which also save the commission. The drawback for this method is that you don’t have control over when the dividends will be reinvested. Also for both methods, not all companies offer these program but many blue chip companies do [13].

Dogs of the DOW

This is a method in which you buy stocks from companies with highest dividend yield. The method is simple because those companies tend to have lower prices than other companies. This means they have potential in increase in price for next year. Also historically, this approach has been successful. For example, “Dogs” of DOW for 2006 such as GE, AT&T and Verizon all have great yield for the year [11].

CANSLIM

CANSLIM is a mixture of fundamental analysis and technical analysis. C stands for current earnings, which stated that we should buy stock with earning growth at least in 20%-25% range. A stands for average earnings which say stock we buy should have average annual earning around 25% for the past five years. N stands for new things which say the company should be in process of developing new service or products. S stands for shares outstanding which stated the company should have less than 30 million shares outstanding so that it has the potential for good growth. L stands for leading stocks which means the company should be the industry leader. I stand for institutional ownership which say the stock should have at least a couple of institutional shareholders. M stands for market conditions which said market should be going upward. CANSLIM method provides general guideline on what kind of company we should invest in [13].

Trailing Stops

Trailing stops is a stop-loss order that investor actively manage by moving up along with the stock price. The idea is that invest set the order to sell at a given percentage drop to minimize farther loss. For example if investor buy a stock at price of

$100, and he set a trailing stop at 25%, this means when the price drop to 75 dollars, he need to sell the stock to minimize the loss. But because it's trailing stop, if the price first increases to $150 then with 25%, the investor will sell the stock once it drop to $112.5(=150*0.75) rather than the previous 75 dollars. The percentage might change depend on the type and trend of the stock, for example if the stock tend to fluctuate significantly every time, then the percentage should be higher [13].

Chapter 4 Fundamental Analysis VS Technical Analysis

4.1 Introduction to Fundamental Analysis

Fundamental analysis is the study of the underlying data that affect a corporation. Technical analysis on the other hand, is the study of a stock's price. Fundamental analysis includes looking at a number of factors, including the company's assets and liabilities, its earnings, the managers who are running thru company, the competition, the kind of business the company is in and the amount of debt it has.

Learning everything you can about the company. An investor should first determine the type of industry to invest based on the current economic of the country. For example during a recession periods, the safe industry would be food, oil and retail because they are recession-proof. While during good times, you should look into industry like technology because they have higher potential.

Once the type of company is found, investors should identify the leading companies. It is because leading companies are stronger, and more profitable than the competitions. A good resource for identify the industry leaders would be the financial newspaper Investor's Business Daily rates. In the newspaper, a company with score of 90 or higher is considered excellent.

After identify the leading companies, investors should talk to the managers of the companies. Much investors talk to the managers of the company to find out the how the corporation is being run. This gives investor an insight on the company. But due to the unlikeness of general investor meeting the CEO or upper management, as well as the truthfulness of their words, interviewing companies' manager might not be the best way to find out how a company is working.

Besides talking to the company's officials, closely watching their activity is another way to get to know how the company is doing. This is because they are more knowledge and have inside information which we don't have access to. Insider activity can be found in business newspaper as well as government website. A drawback to watching insider's activity is that the activities were not report immediate, investors often found out about them weeks later.

In addition to above, the most important thing in fundamental analysis is the study of the balance sheet. Balance sheet includes company's annual report which listed company's asset as well as its debt. One thing investors need to be careful is that some information there might be misleading purposely [11].

4.2 Fundamental Analysis Tools and Tactics

The first tool is the income statement which record a company's sale, operating expense, and earnings. This gives a general idea about whether investor should put money into the company. For example, if the sale of the company increases by 15 percent or more each year then the growth investor should invest in this. Also investor should watch out for companies with negative net income because they are losing money that year.

Secondly, an important value to look at about a company is the EPS, which is the earning per share. EPS is calculated by dividing a company's after-tax profit by the company's outstanding shares. The quarterly or annually EPS of a company could be found on web site such as Yahoo Finance. Also the finance newspaper Investor's Business Daily also ranks the relative strength of EPS on a scale of 1 to 99, 99 being the best. Stock investor should invest in stock with increase in value of EPS from quarter to quarter and year to year. The drawback to EPS as an indication is that sometime the CEO or the company is not truthful about the actually earning. For example WorldCom restated its earnings by billions of dollars which mislead the investors.

Another indicator is P/E, which is the price to earnings ratio. It tells whether the stock prince given the company's earning is reasonable. This ratio basically tells the amount of money in dollars you need to invest to get a dollar in the earning. Bargain hunters looking for stocks of high quality companies that are selling at P/E fewer than 15. Example worth noticing is that Warren Buffet buys only company with trailing P/Es of 10 or less. On the other hand growth investors do buy stock with high P/Es because they believe that company's earnings would improve in the future. This means the P/E would eventually decrease.

P/E stand alone is not the best indicator to see whether a stock is good to buy. So in addition to P/E there is the PEG, price to earnings to growth ratio. PEG takes the P/E a step farther, it takes into account future earning potential of the company. The guideline for PEG is that a stock with a PEG of less than 0.05 is desirable; a stock with a peg between 0.50 and 1 is good. A stock with PEG higher than 1 is not recommended, especially when the PEG is over 2.

Like stated before, CEO of a company may fake earnings to make P/E and PEG not accurate. Because of this, another helpful indicator is P/S, price to sales ratio. It is effective for uncovering revenue. It is good indicator in way that although CEO can play with the earning of the company they cannot play with revenue. P/S compare price with sales revenue. Many value investors will look for stocks with a P/S of less than 1 [11].

4.3 Problem with Fundamental Analysis

The major problem with the fundamental analysis is that investor must rely on the information provided by the company. But this information might not be entirely truthful. One trick a company might do to the income statement is that they might spend or make loans to executives but classifying these as income rather than expense. Investors using fundamental analysis need to have some skill in uncover accounting irregularities in the company, so that they do not be fooled by the company.

The second problem with the fundamental analysis is that company's future prospects are hard to prove. And it doesn't take into account the psychological reasons that people drive stock price up. For example, even if the value and the price of a company are going down, investors would sometime blindly hold on to the stock in hope of it bouncing back.

Finally, the major problem with fundamental analysis is that it is extremely time consuming. Professional money managers hire teams of analysts to do fundamental research on individual companies. On the other hand, individual investors have to rely on the biased research that is passed down from Wall Street or the Internet [11].

4.4 Technical Analysis

Technical analysis might sound harder to understand or master but some people believed that it is exactly the opposite. That technical analysis is sometime not technical at all. Technical analysis relies on charts and graphs to helped investors determine what stocks to buy or sell. It relies on mechanical tool like indicators and oscillators. Technical analysis is used to forecast the future based on how the stock has reacted in the past. It is the study of the data that affect a company. Short term trader tends to use technical analysis to help them make buying or selling decision.

The major key to technical analysis is the stock chart. The one of the reason looking at the chart is good because it keeps our emotion out of the decision-making process. Also the stock chart for a company is very easy to find online. The basic stock charts include the line chart, bar chart and the candlestick charts.

Line chart is the simplest chart which is a line connecting the closing price of a stock in a period of time.

Figure 4.4.1: NGG Line Chart

Bar chart on the other hand gives more information. It uses a bar to represent the range of the stock price in a given day. While in that bar there is two stick extend out while the stick extends to the left represent the opening market price for the stock while the stick extends to the right represent the closing price of the stock in that day.

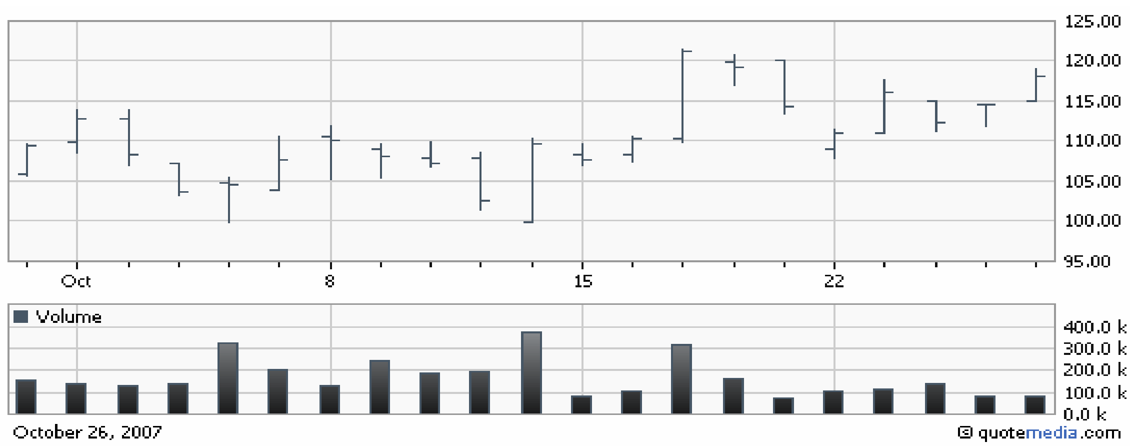

Figure 4.4.2: WBD Bar Chart

Finally the candlestick chart which was originally developed by a Japanese rice seller. It makes the two sticks in the bar charts into a rectangle. It then color the rectangular in white or black depend on the open and close price of the stock. If the closing price is higher than opening the box is white while if open price is lower than closing price, the box is colored black.

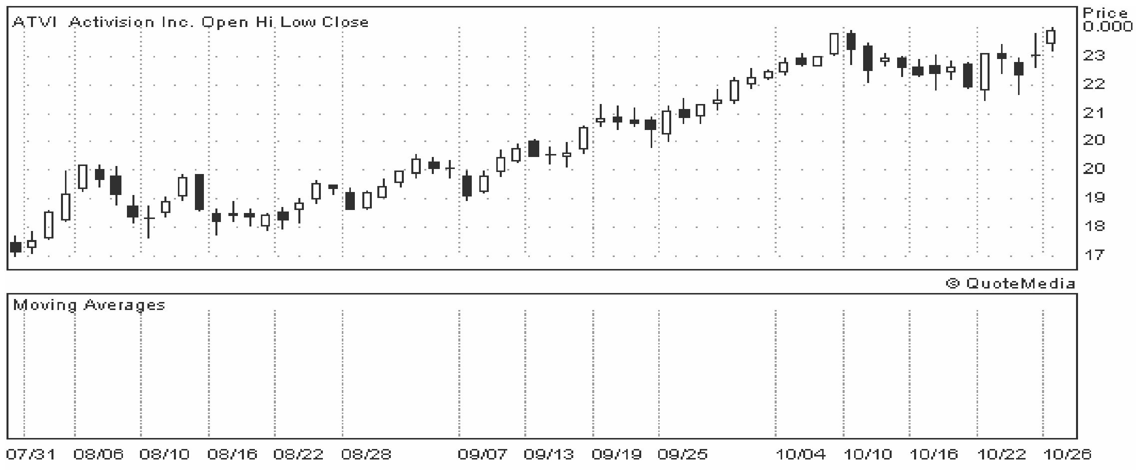

Figure 4.4.3: ATVI Candlestick Chart

There are many patterns and features on the charts. Two of them are the support and resistance. Support is often a barrel given by some outside force such as a large company. It is a price line to which the stock price cannot drop farther. Support is often at an exact value. The use of support can be an indicator for continuous drop in stock price. For example, if a company is in such bad condition, it will try to break the support couple times. But once the support line is broke, the stock is likely to continue dropping. Most investors at that point would sell their stock which contributes to farther drop in price. Resistance on the other hand, is a barrel to which the stock price cannot rise above. Force within the stock market creates this price ceiling to prevent stock price from increasing unreasonably. In conclusion, when company’s stock price increase or decrease significantly, support given by large company helps the buyer while the resistance given by large company helps the seller.

4.5 Problem with Technical Analysis

Even though technical analysis is helpful but there are problem to it as well. Some critics of technical analysis said that it is impossible to make predictions about the future based on what happened in the past. But just like the fundamental analysis, technical analysis is as much an art as a science. Investors must try and decide themselves if that technical analysis is helpful or not [11].

4.6 Technical Analysis's Tools and Tactics

The very first tool on technical analysis is the volume being exchange of the stock in the given day. Amount of volume indicate the liquidness of the stock, the more liquidity of the stock, the easier it is to get into and out of it.

Secondly, technical indicator and oscillators are also used by short term trader to make decision on buying or selling. One of the most valuable technical indicators for investors and traders is the moving average (MA). A moving average is the average price of a stock for a specified period. Many technical analysts use moving averages as support and resistance. If the stock price rises above the company moving average is it a bullish sign. While if the price drop below it is a bearish sign and is a signal to sell. Short term traders tend to use the 40- or 50-day MA to determine support and resistance levels.

In addition to the MA, there is the On-balance Volume (OBV). It is a measure of volume. It is one of the most underutilized but important indicators. It basically measures how much money is flowing into or out of a security. If the OBV line is dropping, it tells you that people are selling. While if it is rising it tells people are buying. OBA is often a method traders use to confirm what is happening with stock. An example would be if a stock is increase while OBV is dropping. This says that stock is temporarily going up but it's not going to last.

One other indicator is the relative strength indicator (TSI). It is a measure of whether stocks are overbought or oversold. TSI measures the strength or weakness of a stock when it is compared to itself over a specified period. It is an oscillator with an upper and lower band that ranges from 0 to 100 on a vertical scale. Relative strength means that a stock is strong compare to another stock or to an index. For example if NASDAQ is falling while the company is rising, then the company is strong relative to the NASDAQ. Relative weakness is the exact opposite, meaning the company is dropping while the NASDAQ is rising. RSI use in conjunction with other indicator such as OBV is a method to determine whether a stock is oversold or overbought. For example if the stock price is dropping, but RSI rises above 70 and then crosses back down. It is a sign that the stock might reverse direction.

In conclusion, technical analysis is extremely difficult to read the signal correctly. But it is only most helpful in short term decision. What investors need to watch out is the "analysis paralysis", meaning one spending too much time studying the charts which make the information confusing and could not make trade based on the mixed and complex information from the charts [11].

Chapter 5 Portfolio One by Haiying Liu

In this Portfolio, we are going to induce five selected companies, which can be matched up with the market-timing investment strategy. We not only describe the backgrounds of those companies, but also list the individual chosen reason. Weekly trading situations are also stated in this portfolio, including analyzing the weekly stock price, telling the reason why to buy or sell the stocks, and using formulas to calculate the profit during each transaction. At the end of five week simulation, we will give a brief conclusion about how well the market-timing investment strategy applies to those specifically chosen companies.

5.1 Types of Companies to Invest

Based on the growth and value investment strategies, there are five different kinds of sectors are selected: finance, healthcare, service, capital goods, and utilities. Through carefully looking at the companies in each sector by evaluating their balance sheet, cash flows, and income statement according to the fundamental analysis, we choose the following five companies which can typically represent for each sector. Since there is only five-week simulation, we will focus on the short-term investment strategies. Market-timing which is based on the technical analysis will be used most during our trading simulation. I will decide when to buy or sell the stock by reading the stock charts and evaluating the whole stock market situation. We can predict the future growth of the stock price by using the market-timing strategy.

5.2 Background of Selected Companies

The Hanover Insurance Group, Inc. (Public, NYSE: THG)

As the development of the economy, there are more and more people realize that how important the insurance is. The number of different kinds of insurance is increasing. The Hanover Insurance Group, Inc., through its subsidiaries, provides a range of insurance products and services primarily in the United States. The company primarily offers property and casualty insurance products and services that include personal lines, such as personal automobile, homeowners, and other personal coverage; and commercial lines, including multiple perils, commercial automobile, workers' compensation, and other commercial coverage, such as bonds and inland marine business. It also engages in the business of financing property and casualty insurance premiums to commercial customers; markets management services to institutions, pension funds, and other organizations; and provides traditional life insurance products, group retirement products, as well as owns and operates a guaranteed investment contract business. The following table and chart show the financial information of Hanover insurance group, Inc, such as dividend, P/E ratio, market cap, etc and the changes of the stock price from July to early October. THG has a large value of market cap which is 2.29B, which shows the stable growth of the company and produce good earning. The overall stock is increasing from mid august to now; even it is decreasing from July to mid August. I believe the price of the stock is undervalued, and it will continue to increase [2].

Mkt Cap: 2.29B	P/E: 11.36	Dividend: 0.3
52 Wk High: 51.00	F P/E: 10.95	Yield: 0.68
52 Wk Low: 36.52	Beta: 0.84	Shares: 51.89M
Ave Vol: 245,000	EPS: 3.89	Inst. Own: 74%

Table 5.2.1: THG Financial Information

Figure 5.2.1: THG Technical Chart

China Medical Technologies, Inc. (public NYSE: CMED)

Technology usually relates to science and engineering, and deals with usage and knowledge of tools and crafts. Developed technology help the society grow up by improving efficiency of human productivity. China Medical Technologies, Inc. has high-tech in R&D manufacturing medical equipment and bio-medical products, and established in 1999, and was awarded ISO 9001 certification in 2001. As of 2006, the company had two main products, the High-Intensity Focused Ultrasound (HIFU) which is used for the non-invasive treatment of solid tumors, and enhanced chemiluminescence which is used for diagnosing and analyzing a variety of diseases and conditions. Even though the clinical application of this technology has almost reached world leading level, it is still developing. The table and chart below indicate that China Medical Technologies has large potentials to grow up. During the 52 weeks, the highest stock price is as twice as the lowest stock price. This show how rapidly the company grows. The company also has high EPS (earning per ratio) compared to other companies in the same industry. 1.11B market cap show the stability of the company growth [2].

Mkt Cap: 1.11B	P/E: 27.92	Dividend: 0.4
52 Wk High:44.68	F P/E: N/A	Yield: 0.68
52 Wk Low: 21.65	Beta: 1.00	Shares: 27.36M
Ave Vol: 825,000	EPS: 1.46	Inst. Own: 42%

Table 5.2.2: CMED Financial Information

Figure 5.2.2: CMED Technial Chart[2]

Portland General Electric Company (public NYSE: POR)

Portland General Electric Company was built in 1930, and located in Portland, Oregon. The company not only provides diverse electric utility service, which engages in the generation, purchase, transmission, distribution, and retail sale of electricity in the state of Oregon, but also sells electricity and natural gas to utilities and power marketers located in the western United States. There is lot retail, commercial and industrial customers buy services from POR. Due to the diverse of service, and there are many contributions to the company. The number of retail customer approximately increased by 60 times during year 2006. This shows that the POR grows very quickly. From the chat below we will see there almost no big fluctuation from July to October. However, the stock price keep increasing since September according to the market timing strategy, we predict that the stock price will continue to rise. The total revenue of the POR increases by 14.5% to $838 million from $732 million for the first six months of last year. The company has a 1.4 price-to-book ratio, while the industry has 1.7 [2].

Mkt Cap: 1.78B	P/E: 11.76	Dividend: 0.23
52 Wk High:31.25	F P/E: 15.01	Yield: 3.31
52 Wk Low: 24.87	Beta: 1.00	Shares: 62.52M
Ave Vol: 396,000	EPS: 2.42	Inst. Own: 95%

Table 5.2.3: POR Financial Information

Figure 5.2.3: POR Technial Chart

AGCO Corporation (public, NYSE: AG)

AGCO Corporation was founded in April 1991. The attribution to its revenue is manufacturing and distributing agricultural equipment and related replacement parts. AG sells variable products, such as tractors, combines, self-propelled sprayers, hay tools, forage equipment and implements, in addition to a line of diesel engines. The company also provides retail financing to many countries, including United States, Canada, Brazil, Germany, France, the United Kingdom, Australia and Ireland. In September 2007, Industrial Agricola Fortaleza Limitada (SFIL) was bought by AG. The company is getting stronger and stronger, since there are more and more equipment produced every year. In later July, the company revenue increase by 18% from $1.45 billion to $1.71billion in one year period. The earning per share will increase later since it increases by 22 cents in late July compared to the same quarter last year. The highest stock price is twice as much as the lowest stock price. The chat also shows the continuity of increasing of stock price [2].

Mkt Cap: 4.69B	P/E: N/A	Dividend: N/A
52 Wk High:52.59	F P/E: 18.05	Yield: N/A
52 Wk Low: 22.47	Beta: 1.64	Shares: 91.55M
Ave Vol: 1.34M	EPS: -0.42	Inst. Own: 95%

Table 5.2.4: AG Financial Information

Figure 5.2.4: AG Technical Chart

Wal-Mart Stores, Inc. (Public, NYSE:WMT)

Wal-Mart Stores, Inc. was building in 1969, and has various formats of retail stores in the world. There are three segments: Wal-Mart Stores segment, Sam's Club segment and International segment. Supercenters, Discount Stores and Neighborhood Markets belong to Wal-Mart Stores segment. It provides general merchandise, such as book, shoes, domestics, hardware, and etc. You can buy most stuff in the Wal-Mart stores, and most merchandise price compared to those in other service stores is cheaper. Warehouse membership clubs belong to Sam's Club segment, offering hardgoods, softgoods, institution-size grocery items and etc. Different kind of retail stores and restaurants belong to the international segment, and operated in different countries. The Wal-Mart Stores has a long history, and stable growth. It almost located everywhere, and most customers prefer to go Wal-Mart. Market timing is an adapted short term strategy to help me make decision when is the profitable to buy or sell stocks. The WMT stock price is pretty low right now and worth to buy, since the chat indicates the stock price will continue to rise [2].

Mkt Cap: 184.58B	P/E: 15.20	Dividend: 0.22
52 Wk High:52.15	F P/E: 14.54	Yield: 1.94
52 Wk Low: 42.09	Beta: 0.50	Shares: 4.07B
Ave Vol: 19.77M	EPS: 2.99	Inst. Own: 39%

Table 5.2.5: WMT Financial Information

Figure 5.2.5: WMT Technical Chart [12]

5.3 Weekly Reports of Actual trading

Week 1 Report (10/08-10/12)

During each week's trading, I will calculate the profit every time when selling the stocks based on the formula (both selling and buying commission are $19.99 in this simulation):

Situation 1: do not sell all of the purchased stocks

Profit = (selling price – purchase price)* # of shares sold – commission

Situation 2: sell all of the purchased or the remaining stocks.

Profit = (selling price – purchase price)* # of shares sold – 2*commission

We buy all of the stocks at the end of this week, since the stock price seems high at the early week by looking at the line chart. The trend of stock charts of CMED and POR almost remains the same, WMT and AG increases, THG is unspecified. We wait until the end of the week, hoping the stock price can be relatively low. The table below shows the buying situation and the cash balance. We do not spend all of the cash, since we believe some stock price may go down, and then we have cash to invest if the stock price goes down and predict it will go up later.

Buy: Net Cost/Proceeds = purchase price * # of shares + commissions ($19.99)

Sell: Net Cost/Proceeds = selling price * # of shares – commissions ($19.99)

Date	Symbol	Buy/Sell	Price	Shares	Net Cost/ Proceeds	Profit/ Loss	Total Cash	Total Profit
							100,000	
10/12/07	THG	Buy	44.75	300	$13,444.99		86,555.01	
10/12/07	CMED	Buy	41.52	500	$20,779.99		65,775.02	
10/12/07	WMT	Buy	46.58	500	$23309.99		42,465.03	
10/12/07	AG	Buy	53.47	500	$26,754.99		15,710.04	
10/12/07	POR	Buy	27.87	500	$13,954.99		1,755.05	

Table 5.3.1: Portfolio Initial Record

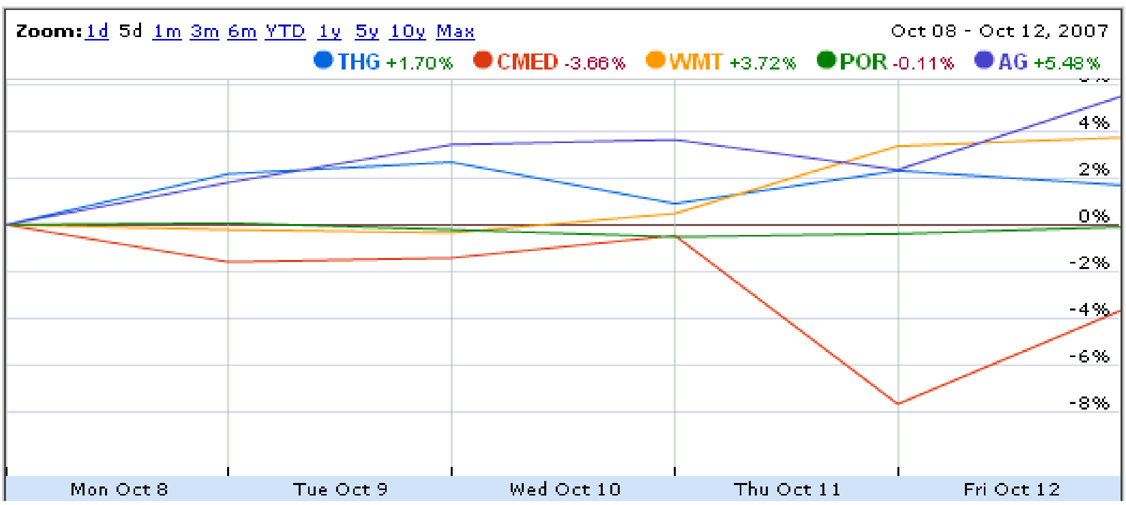

Figure 5.3.1: Weekly Stock Price for Five Companies from 10/08 – 10/12 [2]

Week 2 Report (10/15 – 10/19)

On Oct. 15th, we sell 200 CMED shares for \$41.75/share. We are afraid that this stock will goes down while it reaches the price of \$41.75/share. However, we do not sell all of stocks purchased last week because we are not very sure that the price of CMED will go down definitely. There are still 300 remained in cases the price goes up.

Profit= (41.75 – 41.52) * 200 - \$19.99=26.01

All of the stocks keep going down during this whole week especially WMT and POR, so we hold most of them. Since the most companies chosen are either potentially growth or undervalued, the stock value will grow.

Date	Symbol	Buy/Sell	Price	Shares	Net Cost/ Proceeds	Profit/ Loss	Total Cash	Total Profit
							1755.05	
10/15/07	CMED	Sell	$41.75	200	$8330.01	$26.01	10,085.06	26.01

Table 5.3.2: Portfolio Trading History from 10/15 – 10/19

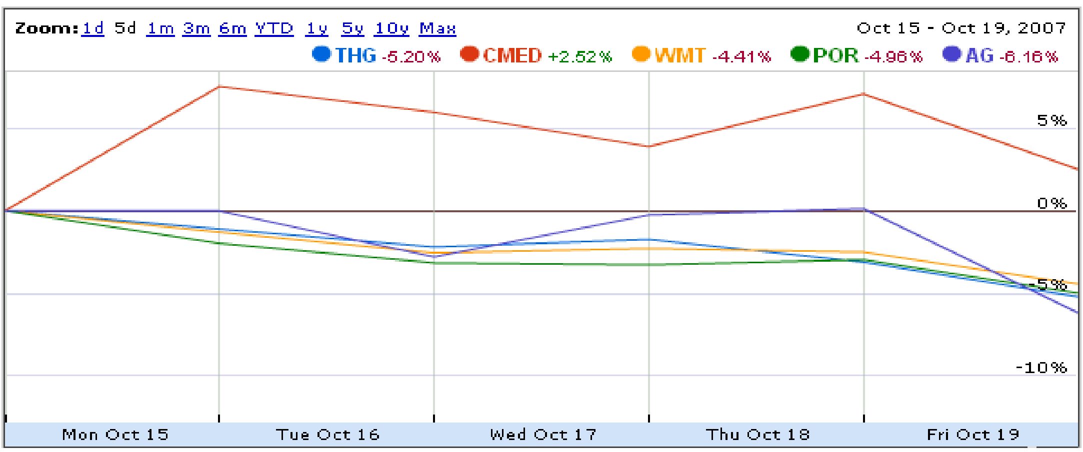

Figure 5.3.2: Weekly Stock Price for Five Companies from 10/15 – 10/19 [2]

Week 3 Report (10/22 – 10/26)

On Oct. 23rd, we buy 100 more AG stock at the price of $51.7, and 50 more WMT stocks at the price of 43.65. At the same day, we sell 100 CMED at the price of 40.50.

Profit: (40.50 – 41.52)* 100 – 19.99= ($121.99).

On Oct. 25th, we sell all of the CMED stocks at the price of $43.22.

Profit: (43.22 – 41.52)*200 – 2*19.99 = 300.02.

During this week, the trend of POR, AG and CMED increases. The stock prices of THG fluctuate while the WMT stock price keep decrease. I sell all of the CMED since we predict the price will decrease. There is more WMT stock bought because we strongly believe it is undervalued, so it will be worth to buy low value now even though the weekly stock chart may suggest you not to buy. We still hold THG and POR stocks since their price do not seem increase stable.

Date	**Symbol**	**Buy/ Sell**	**Price**	**Shares**	**Net Cost/ Proceeds**	**Profit/ Loss**	**Total Cash**	**Total Profit**
							10,085.06	26.01
10/23/07	AG	Buy	$51.7	100	$5,189.99		4,895.07	
10/23/07	CMED	Sell	$40.50	100	$4,030.01	($121.99)	8,925.08	(95.98)
10/23/07	WMT	Buy	$43.65	50	$2,202.49		6,722.59	
10/25/07	CMED	Sell	$43.22	200	$8,624.01	$300.02	15,346.6	204.04

Table 5.3.3: Portfolio Trading History from 10/22 – 10/26

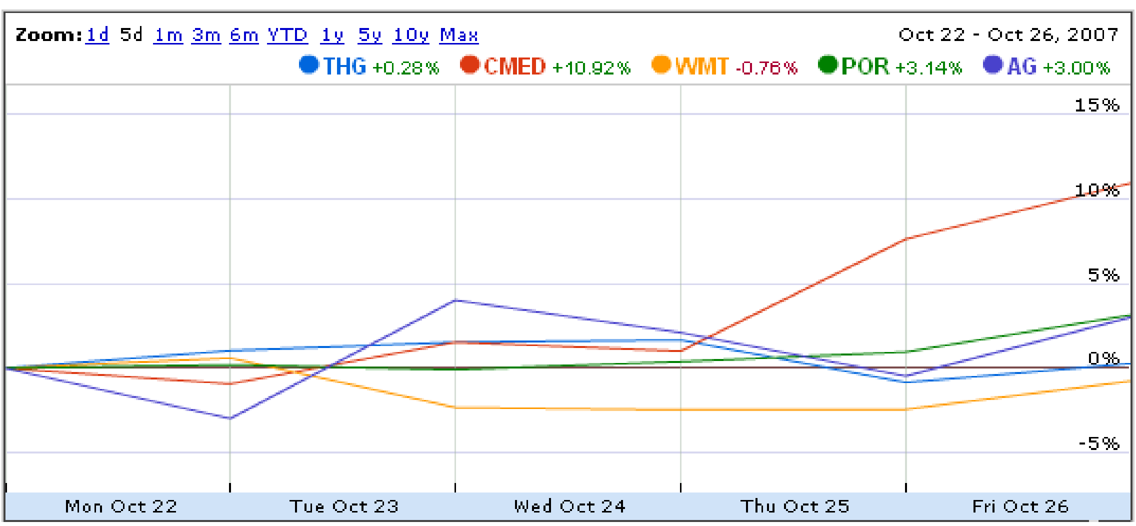

Figure 5.3.3: Weekly Stock Price for Five Companies from 10/22 – 10/26 [2]

Week 4 Report (10/29 – 11/02)

In the early of this week, all of the stocks prices dramatically increase. Especially AG stock increases averagely by 15% for the whole week, and reaches the highest price with $62.95/share on Thursday. However, this situation does not last for a long time. From the stock chat below we can easily figure out that most stocks begin to fall down during later week.

On Oct 30th, we buy 300 shares CMED with $47.48/share. CMED keeps increasing during those two weeks, so we predict the value of the stock will continue to grow at the remaining simulation weeks. Even though the price seems weighted high comparing to previous prices, we still buy 300 shares.

On Oct 31st, we buy 300 shares AG with $59.45/share. The profit calculated as following:

Profit = (59.45 – 53.47)*300 – 19.99 = $1774.01

So that we have more cash to buy other kinds stocks, whose price are lower that AG stock, and have more increasing value.

On Oct 31st, we also buy 200 shares POR with $28.16/share, and 200 shares THG with $46.11/share. POR stock is no only cheap, but also shows rise. THG stock begins to increase since I purchased it, so we strongly believe that the price will not fall down once it starts to rise.

Date	Symbol	Buy /Sell	Price	Shares	Net Cost/ Proceeds	Profit/ Loss	Total Cash	Total Profit
							15,346.6	204.04
10/30/07	CMED	Buy	$47.48	300	14,263.99		1,082.61	
10/31/07	AG	Sell	$59.45	300	17,815.01	1,774.01	18,897.62	1,978.05
10/31/07	POR	Buy	$28.16	200	5,651.99		13,245.63	
10/31/07	THG	Buy	$46.11	200	9,241.99		4,003.64	2182.09

Table 5.3.4: Portfolio Trading History from 10/29– 11/02

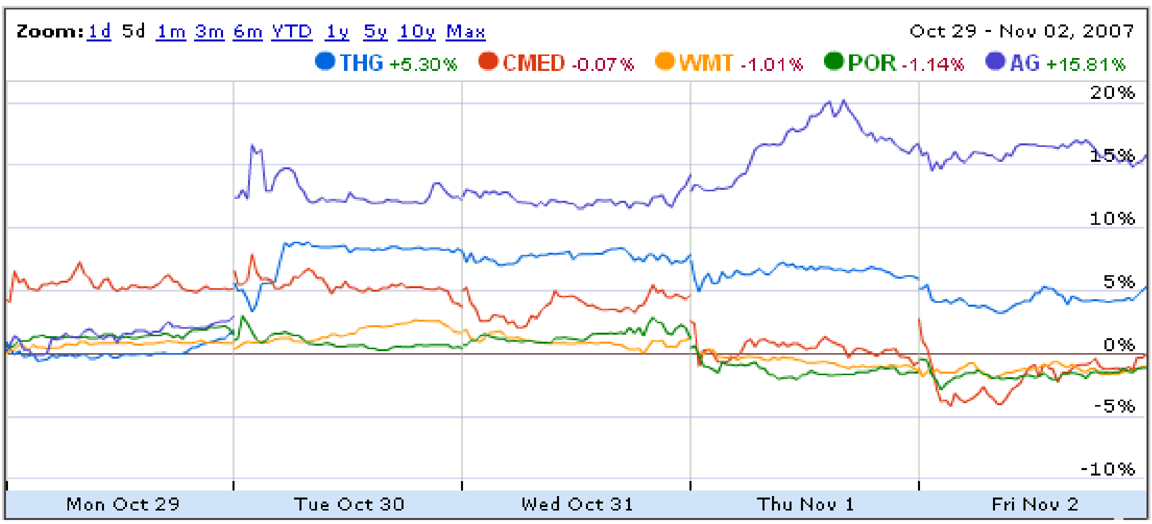

Figure 5.3.4: Weekly Stock Price for Five Companies from 10/29– 11/02 [2]

Week 5 Report (11/05 – 11/09)

From the stock line, we can see except AG stocks, all of the other four stocks lines lie below the “0%”, which means that those stocks price keep decrease, and do not show any increasing phenomena. Especially CMED stock turns to very bad. Its Price falls down by 10.17% at the end of the week compare to the beginning week

On Nov 6th, we sell 500 shares THG stocks.

Profit = (44.85 – 46.11)*200+ (44.85-44.75)*300- 19.99*4= ($182.0)

On Nov 7th, we sell 300 shares CMED stocks, and 500 WMT stocks. .

CMED: Profit = (43.94-47.48)*300-2*19.99= ($1101.98)

WMT: Profit = (44- 46.58)*500 – 19.99*2= ($1329.98)

On Nov 9th, we sell 300 shares AG stocks, 700 shares POR stocks and 50 shares WMT.

AG: Profit = (65.43-51.70)*100+ (65.43-53.47)*200-19.99*4

=3685.04

POR: Profit = (26.81- 28.16)*200+ (26.81-27.87)*500-19.99*4

= ($879.96)

WMT: Profit = (43.11-43.65)*50-2*19.99= ($66.98)

Date	Symbol	Buy /Sell	Price	Shares	Net Cost/ Proceeds	Profit/ Loss	Total Cash	Total Profit
							4,003.64	2182.09
11/06/07	THG	Sell	$44.85	500	22405.01	($222)	26408.65	1960.09
11/07/07	CMED	Sell	$43.94	300	13162.01	($1101.98)	39570.66	858.11
11/07/07	WMT	Sell	$44.00	500	21980.01	($1329.98)	61550.67	(471.87)
11/09//07	AG	Sell	$65.43	300	19609.01	$3685.04	81159.68	3213.17
11/09/07	POR	Sell	$26.81	700	18747.01	($879.96)	99906.69	2333.31
11/09/07	WMT	Sell	$43.11	50	2135.51	($66.98)	102042.2	2042.2

Table 5.3.5: Portfolio Trading History from 10/05– 11/09

Figure 5.3.5: Weekly Stock Price for Five Companies from 11/05– 11/09 [2]

5.4 Summary

Overall the five-week stock simulation, we gain $2042.2 as our profit for those five companies: THG, CMED, AG, POR and WMT. However, individually, we find that only AG is profitable, while all other four stocks lose money. During this simulation stock trading, we found that most of the stock price will go up when the company begin to report their quarterly financial report based on those selected five companies.

Figure 5.4.1: Overview of THG over five weeks [2]

We did not have many trading transactions for THG stock. From the chart, you can obviously see that the stock price turn to fall down for a long time. The price fairly increased from Oct. 25th to Oct. 30th. In which period the Hanover reported its third quarter financial results, which shows the increase in profit as revenue. The earning per share is $1.03 comparing to the $0.65 per share of the third quarter in 2006. We immediately bought extra 200 shares at the price of $46.11, since we predict it is the time for the THG stock price to rise. However, the phenomenon seems artificial, the price turned bad after that period but still considering increasing comparing to the previous period. As the result, THG brought $222 lost [2].

Figure 5.4.2: Overview of CMED over five weeks [2]

We made a very bad decision in selling all of the CMED in week 3 with $43.22/share compared to purchased price $41.52, since CMED stock kept falling down, then finally started to rise at the mid of third week. We were afraid that this will not last for a long time, so we decided to sell all of them. However, CMED stock price in the fourth week still went up, which reflects that we make a wrong decision. Then, we decided to buy 300 CMED shares at the high price of $47.48/share. The reason for the stock increasing at that time: China Medical Technologies got Korean FDA approval for its HIFU system; the company also announced investor events on November, including UBS China Life Sciences Conference; Goldman Sachs China Investment; Frontier Conference; Credit Suisse Phoenix Health Care Conference; Credit Suisse china Healthcare Sector Global Roadshow. Later, we found that the phenomena is fake, the stock price immediately turns bad after we bought. Holding the CMED stock until the end replaced of market-timing investment strategy. This stock brought $1100 lost [2].

Figure 5.4.3: Overview of AG over five weeks [2]

AG stock is the most profitable to buy. Its price increase by $10/share in average compared to my originally purchased price. From the chart, you can figure out that the price gap begins larger and larger since the end of the third week, and reaches the highest on Nov 4th. The main reason we chose the company is the strong recommendation by Zacks. The AG's stock began to rise since it represented in the Goldman Sachs- 2007 Global capital foods. On Oct. 30th, AG reported its third quarter income, which has a significant increase, so it's earning per share rose to 77¢. Sales went up to $1.6 billion, which is 37 percent higher than the sales in the third quarter in 2006. AG stock brought $5459 profit.

Figure 5.4.4: Overview of POR over five weeks [2]

The situation of POR stock price is very similar to THG stocks. We hold the POR stock most of time。 The value of the stock increases higher than our purchased price only in the first week. After that, it began to fairly decrease. Then, after the company declared quarterly common stock dividend of 23.5 cents per share, the stock price began to rise, and reported an increased profit in the third quarter. POR brought $880 lost [2].

Figure 5.4.5: Overview of WMT over five weeks [2]

WMT seems a bad choice even though it is the large retailer. It contributed the almost $1400 lost, which is the half of the total lost of the five company. Unexpectedly, the overall WMT stock in October decreased due to the breach –of-contract lawsuit against the world's largest retailer brought financial draining. The stock price began to back up through the announcement of beefed-up investment in its Japanese subsidiary on Oct. 23rd. The sales of Wal-Mart also are forecasted to increase in November due to the holiday shopping [2].

Chapter 6 Portfolio Two by Xiangyu Wang

In this portfolio, we will do the marketing research and pick up five companies to invest, followed with the weekly reports including trade history, various prices, investing method (buy/sell/hold), and portfolio reports. At the end of five week simulation, we will have a concise conclusion about how well the investment strategies apply to specific companies based on our analysis of the gain or losses of our portfolio.

6.1 Types of Companies to Invest

We are going to invest our money to CIGNA (a life and health care insurance company), Amazon (a ".com" company), Low's (a home improvement retailer), Comcast Cooperation (a cable operator company), and Sony (a game development and electronics company).

The reason we will put the money in five different companies of different fields is the application of mathematical statistics philosophy. When we have a large population, we prefer drawing a random sample which could possibly represent the nature of this whole population. Due to the limit of time and money, we could only invest a few companies, and we do hope the companies we picked up can be as representative as possible. These five types of companies are all closely relevant to the people's daily life, from household and health care (the basic), to game company (kids' favors), to ".com" company (an investment trend with lots of controversies).

Hopefully, after a certain period of business in the stock market, we would not only practice our financial market knowledge, but also further our knowledge of how stock markets and people's daily life correlate together.

6.2 Backgrounds of Selected Companies

CIGNA

The company provides health care and related benefits offered through the workplace. Key product lines include health care products and services (medical, pharmacy, behavioral health, clinical information management, dental and vision benefits, and case and disease management), and group disability, life and accident insurance. In addition, CIGNA also provides life, accident, health and expatriate employee benefits insurance coverage in selected international markets, primarily in Asia and Europe.

We have carefully reviewed the financial of this company. The income statement of this company keeps fairly stable for passing 3 years. The overall pattern of the curve in this chart indicates a positive sign for us to put our dollars in this company and hope for good earnings.

Figure 6.2.1 CIGNA Corporation's Performance in Stock Market [2]

Lowe's

Lowe's Company, Inc. is a home improvement retailer. The Company offers a line of products and services for home decorating, maintenance, repair, and remodeling and property maintenance. Lowe's Companies, Inc. operated 1,385 stores in 49 states, with 157 million square feet of retail selling space. The Company serves homeowners, renters and commercial business customers. Lowe's Companies, Inc. offers an array of home improvement products in the categories of appliances, lumber, flooring, millwork, paint, building materials, fashion plumbing, lighting, tools, lawn and landscape products, hardware, seasonal living, cabinets and countertops, outdoor power equipment, rough plumbing, rough electrical, nursery, home environment, walls/windows and home organization.

It seems that Lowe's has a really bad curve both for the passing month and this year. However, when we take a further observation of its market performance for year 2007, it shows some patterns that it fluctuated a lot. It reached its highest point at 35.74 and its lowest point at 25.98. Now it is at the point 28.02, pretty much close to the lowest point. We will buy and hold so that we will expect a possible growth in next few weeks [2].

Figure 6.2.2 Lowe's Companies' Performance in Stock Market [2]

Amazon

Amazon is another company that we would like to invest some money in. Amazon.com, Inc., (NASDAQ: AMZN), a Fortune 500 company based in Seattle, opened on the World Wide Web in July 1995 and today offers Earth's Biggest Selection. Amazon.com and other sellers offer millions of unique new, refurbished and used items in categories and have retail Websites and provide programs that enable third parties to sell products on its Websites. The Company's retail Websites includes www.amazon.com, www.amazon.ca, www.amazon.de, www.amazon.fr, www.amazon.co.jp, www.amazon.co.uk, www.joyo.com, www.shopbop.com and www.endless.com. Amazon.com also provides services for third-party retailers, marketing and promotional services, and Web services for developers. In addition, the Company operates other Websites. Amazon.com has organized its operations into two principal segments: North America and International. Compared to many of its competitors, Amazon has a much larger market cap, which will secure a relatively safe and promising investing growth. We will wait and see.

Figure 6.2.3 Amazon.com, Inc's Performance in Stock Market [2]

Comcast

Founded in 1963, Comcast Corporation is a cable operator in the United States and offers a variety of consumer entertainment and communication products and services. It operates in two segments: Cable and other business interests include Comcast Spectator, which owns the Philadelphia Flyers, the Philadelphia 76ers and two large multipurpose arenas in Philadelphia. As of December 31, 2006, the Company's cable systems served approximately 23.4 million video subscribers, 11 million Internet subscribers and 2.4 million phone subscribers and passed approximately 45.7 million homes in 39 states and the District of Columbia.

Although the overall pattern of the market performance seems going down, it has showed some positive signs recently. Besides, it shares a big market cap, so it would be convincing that the stock will go up in a very soon time. Thus we would like to buy now and expect it goes up in short term.

Figure 6.2.4 Comcast Corporation's Performance in Stock Market [2]

Sony

Sony Corporation (Sony) operates through five segments: Electronics, Games, Pictures, Financial Services, and All Other. Sony's principal manufacturing facilities are located in Japan, Malaysia, China, the United States, Singapore, Spain and Mexico, and its products are marketed by sales subsidiaries and unaffiliated local distributors and sold through direct sales via the Internet throughout the world.

This company has a large market cap of 49.48 billion, and we expect that the company has a relatively small range of fluctuation. Furthermore, it show strong path of growth in the beginning of October. For this stock, we don't expect to earn too much from it, however, we won't lose a huge amount either [2].

Figure 6.2.5 Sony Corporation's Performance in Stock Market [2]

6.3 Weekly Reports of Actual Trading

Week 1 Report

Date	Symbol	Buy/ Sell/ Hold	Price	Shares	Net Cost/ Proceeds	Profit/ Loss	Total Cash	Total Profit
							100,000	
10/12/07	CI	Buy	52.68	350	19.99	0.00	18,418.01	0.00
10/12/07	SNE	Buy	50.37	420	19.99	0.00	21,135.41	0.00
10/12/07	AMZN	Buy	94.22	210	19.99	0.00	19,766.21	0.00
10/12/07	LOW	Buy	29.14	709	19.99	0.00	20,640.27	0.00
10/12/07	CMCSA	Buy	24.19	826	19.99	0.00	19,960.95	0.00

Table 6.3.1 Portfolio Trading History of Week One

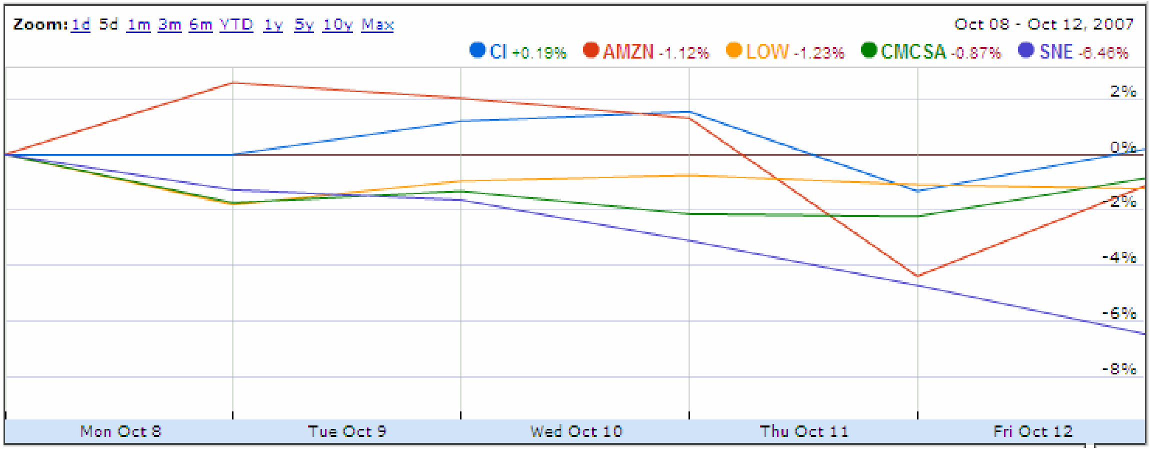

Figure 6.3.1 Report of Week One [2]

Cigna didn't give us too much surprise this week. The stock was going well and went up a little bit. However, it was very unstable. It reached the highest point at 53.58 at Friday, though the open price is mere 52.00, even lower than the open price of Monday. Based on our observation so far, we don't expect to gain many earnings from this stock. We are now looking for a replacement of Cigna, if the stock of it shows no sign of much increase next week.

The open price of Amazon this Monday was good, and gave us much expectation. The highest point of this week was 96.73 in Tuesday. However, it then went straight down and was even below 90 for the open price this Friday. Though it increased to 92.37 for its close price of this week, we still lost more than one point. Since Amazon seems not very stable, we are not going to sell the stocks right away. Instead, we will hold and watch, hoping to see a sudden boost some day.

Low's, Comcast and Sony didn't have a good week either. Being slightly different from Amazon, their tendencies seem to be going down without many changes. Since the "buy and hold" skill demands a bit longer time, we will hold these three and wait for a couple of more weeks.

Week 2 Report

Date	Symbol	Buy/ Sell/ Hold	Price	Shares	Net Cost/ Proceeds	Profit/ Loss	Total Cash	Total Profit
							99,920.85	
10/19/07	CI	Hold	52.87	370	0.00	0.00	18,418.01	0.00
10/19/07	AMZN	Hold	91.80	210	0.00	0.00	19,766.21	0.00
10/19/07	LOW	Hold	28.73	709	0.00	0.00	20,640.27	0.00
10/19/07	CMCSA	Hold	24.03	826	0.00	0.00	19,960.95	0.00
10/19/07	SNE	Hold	47.61	426	0.00	0.00	21,135.41	0.00

Table 6.3.2 Portfolio Trading History of Week Two

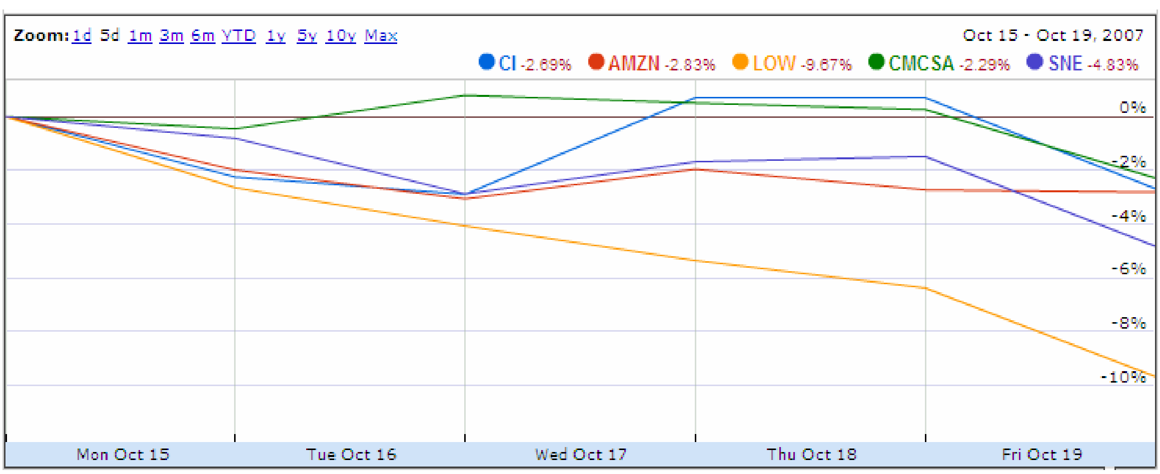

Figure 6.3.2 Report of Week Two [2]

We suffered a huge loss this week: all our five stocks went down. We are trying to find the reason behind this by searching the major economics websites in US. It is reported that the unemployment has hit the lowest since last June, as well as other bad news such as the falling of home sales. On October 20th, The Treasury Secretary Henry Paulson admitted in an IMF meeting that the global was suffering from credit losses, and it would also impose some penalty on the US economy.

Now that it is mainly due to the underperformance of the stock market, we will not blame on my stocks too much. Thus, we would hold them for a bit longer and see what will happen during next week.

Week 3 Report

Date	**Symbol**	**Buy/ Sell/ hold**	**Price**	**Shares**	**Net Cost/ Proceeds**	**Profit/ Loss**	**Total Cash**	**Total Profit**
							95,322.84	
10/26/07	CI	Hold	50.68	370	0.00	0.00	18,418.01	0.00
10/26/07	SNE	Hold	45.41	426	0.00	0.00	21,135.41	0.00
10/26/07	AMZN	Sell	90.41	210	19.99	(840.08)	18,966.11	(840.08)
10/26/07	LOW	Sell	27.29	709	19.99	(1351.63)	19,328.62	(1351.63)
10/26/07	CMCSA	Sell	21.18	826	19.99	(2526.24)	17,474.69	(2526.24)

Table 6.3.3 Portfolio Trading History of Week Three

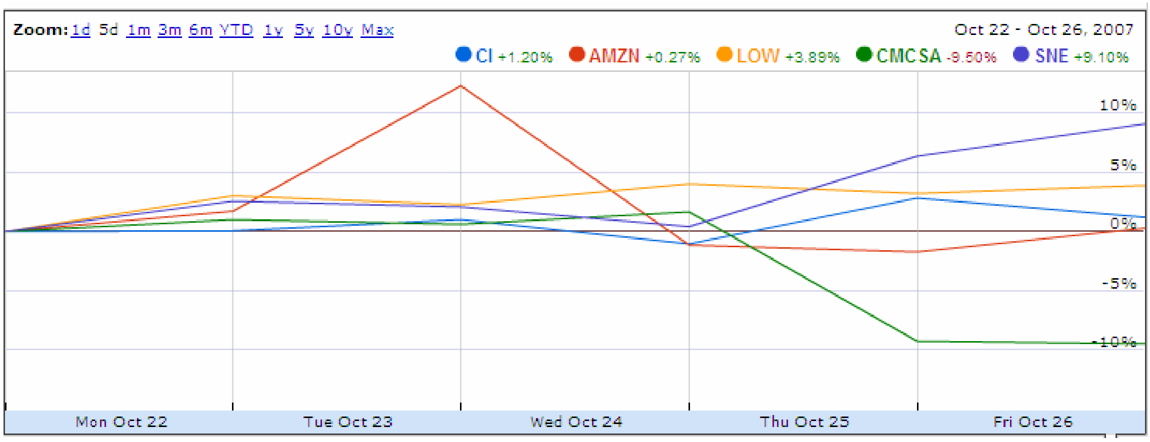

Figure 6.3.3 Report of Week Three [2]

In the end of this week, we decided to sell Amazon, Low's and Comcast, which brought us huge losses without any sign of ceasing to go down. We will invest these amounts of money to other companies. We are considering replacing Low's of Home depot. We don't any intention to buy any other ".com" company stocks, and neither any competitor of Comcast. Instead, we may do some research and try some companies in other more promising and stable field.

Although the stocks of Cigna and Sony didn't show us too much excitement this week, we noticed that they have revealed signs of growing up. Thus, we won't sell them this week. Hopefully, they will keep positive trends for a relatively long term.

Week 4 Report

Date	Symbol	Buy/ Sell/ Hold	Price	Shares	Net Cost/ Proceeds	Profit/ Loss	Total Cash	Total Profit
							95,347.92	
11/02/07	CI	hold	49.93	370	0.00	0.00	18,474.10	0.00
11/02/07	SNE	hold	49.54	426	0.00	0.00	21104.04	0.00

Table 6.3.4 Portfolio Trading History of Week Four

Figure 6.3.4 Report of Week Four [2]

After our last week's huge losses, we are not as optimistic as before. For this week, we lost an amount of money of CI and earned a bit of SNE. Having sold those three stocks, the current balance is 100,000 - 100,018.6 + 18966.1 + 19328.62 + 17474.69 = 55750.81. But we didn't just quickly put my money in three other stocks. After sold those three stocks, the current balance is 100,000 - 100,018.6 + 18966.1 + 19328.62 + 17474.69 = 55750.81. After very careful and prudent observation, we decided to put my money in KMG American Corporation (KMA), Sprint Nextel Corporation (S), and EBay (EBAY) next week. All of them are now having strong trends in stock market. They are also big companies with more financial stability.

It is now near the end of my five-week stock market simulation. Hopefully, we can have a strong close by earning some short-term profits. So we will put our money left in these three companies at the beginning of next week. We expect them to have a consistent growth next week without too much variation.

Week 5 Report

Date	Symbol	Buy/Sell/hold	Price	Shares	Net Cost/ Proceeds	Total Cash	Total Profit
						91,158.75	
11/05/07	KMA	Buy	6.07	2950	19.99		
11/05/07	S	Buy	16.98	1050	19.99		
11/05/07	EBAY	Buy	34.48	510	19.99		
11/09/07	CI	Sell	49.35	370	19.99	18,239.51	(238.47)
11/09/07	SNE	Sell	47.00	426	19.99	21135.41	(1,475.60)
11/09/07	KMA	Sell	6.14	2950	19.99	18,093.01	(166.52)
11/09/07	S	Sell	16.30	1050	19.99	17,095.01	(753.98)
11/09/07	EBAY	Sell	32.58	510	19.99	16,595.81	(1,008.98)

Table 6.3.5 Portfolio Trading History of Week Five

Figure 6.3.5 Report of Week Five [2]

For the passing five weeks, we have made an overall loss of 3,310.51 out of 100,000.00 initial investments (which means the loss ratio is 3.31%). It is a pity that almost all our stocks went down during this five-week period.

Generally, their curves were growing and showed positive signs for the first week and half. However, it was getting worse and worse from the second week and lasted till the end. Since we were mainly using "buy and hold" strategy, we were a little bit hesitated if we should sell some of them at that time or held it for a bit longer. Eventually it proves that we had a wrong prediction about their market tendency and we lost a fair amount of money.

We will discuss about this further more in our final part.

6.4 Summary

During our five-week period of investing, we used “buy and hold” mostly. This method requires a very detailed company researches before we put our dollars in the stock market. It also demands a good prediction of the stock market: the curves may go down temporarily, but we should build enough confidence based on our research and wait it to rise again.

Unfortunately, the initial five companies that we invested out 100,000 in all had a general bad performance during the five-week period. They had showed signs of growing for the first two weeks, but then just all went down to a large extent for the rest of the weeks. Ultimately, it leads to an overall loss of around 3,500 out of 100,000 (roughly equals to 3.5%) in this 5 weeks.

Admittedly, this is a failing case due to the inappropriate use of “buy and hold” strategy. What we learnt from this case is the necessity of doing enough research about the companies. What type of the company is it? What is it strength? How is its stock market performance recently? What is the reason for that? Will this company have any new products on the market soon? Did it have some significant change in its leading group? These various details of the company may be potential factors to influence its stock market tendency in the future.

Another lesson that we learnt from this case is the proper time to sell, even we use “buy and hold” strategy. People can’t avoid make mistakes. When we see some obvious and magnificent negative signs about a company in stock market, we should not hesitate but sell its stocks and find new replacement for that.

Chapter 7 Portfolio Three by Chaoran Xie

Portfolio three will start out with five selected companies, each of which chosen based on its fundamental and technical analysis. One of the portfolio's major focuses is on selecting possible profitable companies. To do this, the backgrounds of the companies and its reasons to be included will be discussed in the very beginning. After investing in these companies, their stock values as well as its related news will be closely followed. The selling and buying decision of the stock will be based on the analysis of the prices and the news within that week. Also each week, there will be a report to record the transaction and noticeable event during that week. In the end of the simulation period, an overall summary of the portfolio will be given.

7.1 Types of Company to Invest

Due to the nature of our IQP being a short 5 weeks trading, portfolio three focuses these sectors: food, utilities, oil, technology and healthcare. The food, utilities and oil sectors are recession-proof, meaning even though the economic was not doing so well when this portfolio started, the stocks in these sectors will be less affected by the overall downtrend of the economic. This is because when people have less money, they still need to buy food and use utilities to live a normal life. Also as winter is approaching, the demand in oil and electricity for heating purpose is surely going to increase seasonally during the near future. Beside these recession-proof stocks, portfolio three also includes the sector technology whose stocks tend to fluctuate more frequently. Stocks in this sector are mostly like to gain a profit in a short term, which hopefully will be our case and make a profit in the coming up 5 weeks. Finally, looking at the society right now, as the babies born during baby boom period turning into elders, the need for healthcare has been increasing significantly. Investing in the leader companies of the healthcare sector will surely be a wise long term investment.

7.2 Backgrounds of Selected Companies

National Grid

National Grid was incorporated on July 11, 2000. Its main operations are regulated electricity and gas in the United Kingdom and in the United States. Based on its recent record and activities, it has proved itself to be a stock with potential of increasing in its return. First of all, for a large cap stock like National Grid, its P/E ratio is 19.02, which is ideal because it is under 20. Also its return on equity is 27.87% which is well above the 10% line. On August 24, 2006, National Grid successfully acquire Southern Union Company's Rhode Island gas distribution network. Shortly after that, on October 27, 2006, it completed the sale of its 38.5% interest in Copperbelt Energy Corporation in Zambia. This year, in August 2007, National Grid acquires another gas company KeySpan Corporation which helps farther expanding its service areas. Also it has a beta of 0.09 which means it has a very low volatility relative to the overall market [7].

Figure 7.2.1 Stock Chart for National Grid [2]

Wimm-Bill-Dann Foods OJSC

Wimm-Bill-Dann Foods OJSC (WBD) is a Russian manufacturer of dairy and juice products. By the end of 2006, the Company's dairy, beverage and baby food products accounted for 75%, 18.4% and 6.6% of its net sales respectively. Similar to NGG, WBD is also a defensive stock. WBD is in the industry of food processing, and in the sector of Consumer/Non-Cyclical. As the standard living of the Russian increase, their needs for more and better dairy products also increase. In January 2006, WBD acquired an additional 20% stake in the Moscow Baby Food Plant. In September 2006, the Company acquired Surgut City Dairy Plant (Russia). As of June 2007, the Company held a 96.45% interest in Obninsk Dairy Factory OJSC. All these events show that WBD has great potentials to grow. Also the beta for WBD is as low as 0.33 which means it is less likely to be effected by the changes in industry [15].

Figure 7.2.2 Stock Chart for Wimm-Bill-Dann Foods [2]

EchoStar Communications

EchoStar Communications Corporation (EchoStar) is primarily a holding company. It is mainly consisted of the DISH Network and EchoStar Technologies Corporation (ETC). The DISH Network provides a direct broadcast satellite (DBS) subscription television service in the United States. As of December 31, 2006, the DISH Network had approximately 13.105 million subscribers. In September 2007, Hercules Technology Growth Capital Inc announced that its portfolio company, Sling Media, Inc. has been acquired by the Company. EchoStar Communication is likely to profit for at least short term in the near future because Sling Media recently come up with a new and improved sling box, Sling box Solo. And its popularity has attractive consumers who want to watch TV on the go [2].

Figure 7.2.3 Stock Chart for EchoStar Communications [2]

Johnson & Johnson

Johnson & Johnson, incorporated in 1887, is engaged in the research and development, manufacture and sale of a range of products in the healthcare field. JNJ is in the major drugs industry and the healthcare sector. With this given sector, JNJ is very likely to growth in the near future as healthcare and medicine development are increase concern of people. Also JNJ has three major divisions, consume, pharmaceutical and medical device. Also given its market cap of 191.76B, it is surely a large cap company but its price to earnings is 18.45 which is lower than 20. Finally recent event within the company has painted an image of continue growth. September 28th, 2007, Jan's obesity device got FDA approved. And Oct 3rd, 2007 J&J reports positive results for psoriasis drug. Even today, news that China's Dabao Cosmetics reportedly to sell 100% stake to Johnson & Johnson [1, 2].

Figure 7.2.4 Stock Chart for Johnson & Johnson [2]

Exxon Mobil Corporation

Exxon Mobil Corporation (ExxonMobil), incorporated in 1882, is an international oil and gas company. ExxonMobil operates facilities or market products in many countries, and explores for oil and natural gas on six continents. Exxon Mobil Corporation resides in the Oil and Gas industry, and Energy sector. It has market cap of 506.71 billion but a P/E of 13.08 which is significant less than 20. As the demand for oil continue increase in developed and developing company, Exxon Mobil has a huge potential to continue grow thing for year [2].

Figure 7.2.5 Stock Chart for Exxon Mobil Corporation [2]

ACTIVISION INC

Activision, Inc. (ATVI) is the 6th company whose stock was purchased in portfolio three. It is an international publisher of interactive entertainment software products. The company have developed widely known games such as Call of Duty 3, Guitar Hero II, Tony Hawk's Project 8, Tony Hawk's Downhill Jam, Marvel: Ultimate Alliance, Over the Hedge, and X-Men: The Official Game. The company covers a wide category of games such as action/adventure, sports, RPG, first person action and strategy. On June 6, 2006, the Company acquired video game publisher RedOctane Inc., the publisher of the Guitar Hero franchise. And shortly after in September 2007, the Company acquired United Kingdom-based video game developer, Bizarre Creations Ltd.

Even though Activision, Inc belongs to the sector of technology meaning it being a high risk and high profit company, it was also added to this portfolio because during the terms of the simulation, there are two new games will be released by Activision, one being Guitar Hero III: Legends of Rock, a music video game widely play by high school and college students. It is schedule to be released in the United States on Oct 28th 2007. The second one being Call of Duty 4: Modern Warfare, a first-person shooting game schedule to be released on Nov 6th 2007.

The stock for this company tend to follow the trend of released games, meaning for terms which no game were released, the stock price went down because the money invested went to research and development while no profitable product is released to increase the price. But on the other hand, the released date of a popular game is approaching, the anticipate sales of the game would brought up the price, and once the sale of the game begin the stock price would tend to go up or down based on the successfulness of the game. (Activision Inc, stock chart given below) [10].

Figure 7.2.6 Stock Chart for Activision, Inc [2]

7.3 Weekly Reports of Actual Trading

Week 1 Report

Date	Symbol	Buy/Sell	Price	Shares	Net Cost/ Proceeds	Profit/ Loss	Total Cash	Total Profit
							100,000.00	
10/08/2007	NGG	Buy	81.57	100	$ 8,176.99		91,823.01	
10/10/2007	WBD	Buy	112.00	300	$ 33,619.99		58203.02	
10/10/2007	JNJ	Buy	64.14	300	$ 19,261.99		38941.03	
10/11/2007	XOM	Buy	92.13	200	$ 18,445.99		20495.04	
10/12/2007	DISH	Buy	48.23	400	$ 19311.99		1183.05	

Table 7.3.1: Portfolio Initial Record

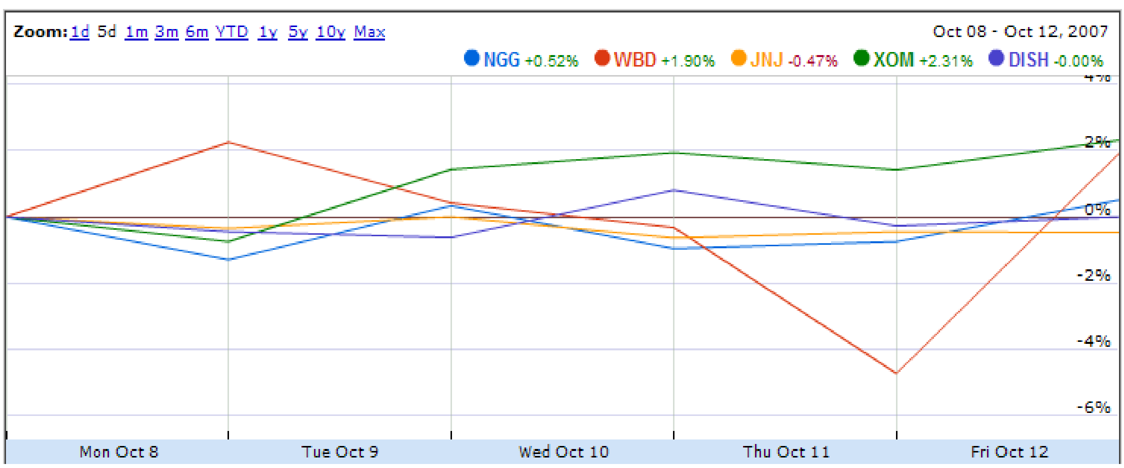

Figure 7.3.1 Percent Change for Each Stock in Week 1 (10/08 – 10/12) [2]

During week 1, stocks from the five selected companies were purchased. The stocks were purchased on different days of the week at time in which we believe that the stock is the cheapest within that week. The stocks were purchased in exact hundreds of share for easy calculation in the end. The transactions were recorded in the above table (Figure 7.3.1).

Also as we are using Zacks.com as our primary tool for the simulation, the automatic commission fee of 19.99 dollars were imposed upon each transaction. The overall performance of the stocks were good, most of the stock price has increase during the week with the exception of Johnson & Johnson.

Worth Noticing in Week 1

The price of Johnson & Johnson did drop within the week. This is most likely due to its recalls of infant cough/cold medicines. As we know, when a company recalls its product due to various reasons, its stock price is surely to decrease. But as describe in the previous sessions, Johnson & Johnson were in the industry of healthcare which is a wise investment in the long term trading. This week's 0.47% drop in price was insignificant and does not trigger action of selling the stock [1].

Wimm-Bill-Dann Foods on the other hand seems to fluctuate a big more than any other stocks during the week, but seems the price were indeed increasing in the end of the week, no action of selling was taken. Also according to Agriculture Marketing Project, the chairman of WBD has shows sign of interest in purchasing of productive assets in Eastern Europe, USA and China. This is surely a sign of expansion which indirectly means an increase in the future earning of the company [15].

Week 2 Report

Date	Symbol	Buy/ Sell	Price	Shares	Net Cost/ Proceeds	Profit Loss	Total Cash	Total Profit
							$100,000.00	
10/8/2007	NGG	Buy	81.57	100	$ 8,176.99		$91,823.01	
10/10/2007	WBD	Buy	112.00	300	$ 33,619.99		$58,203.02	
10/10/2007	JNJ	Buy	64.14	300	$ 19,261.99		$38,941.03	
10/11/2007	XOM	Buy	92.13	200	$ 18,445.99		$20,495.04	
10/12/2007	DISH	Buy	48.23	400	$ 19,311.99		$1,183.05	
10/18/2007	DISH	Sell	48.80	400	$19,500.01	$188.02	$20,683.06	

Table 7.3.2: Portfolio Trading History from 10/15 – 10/19

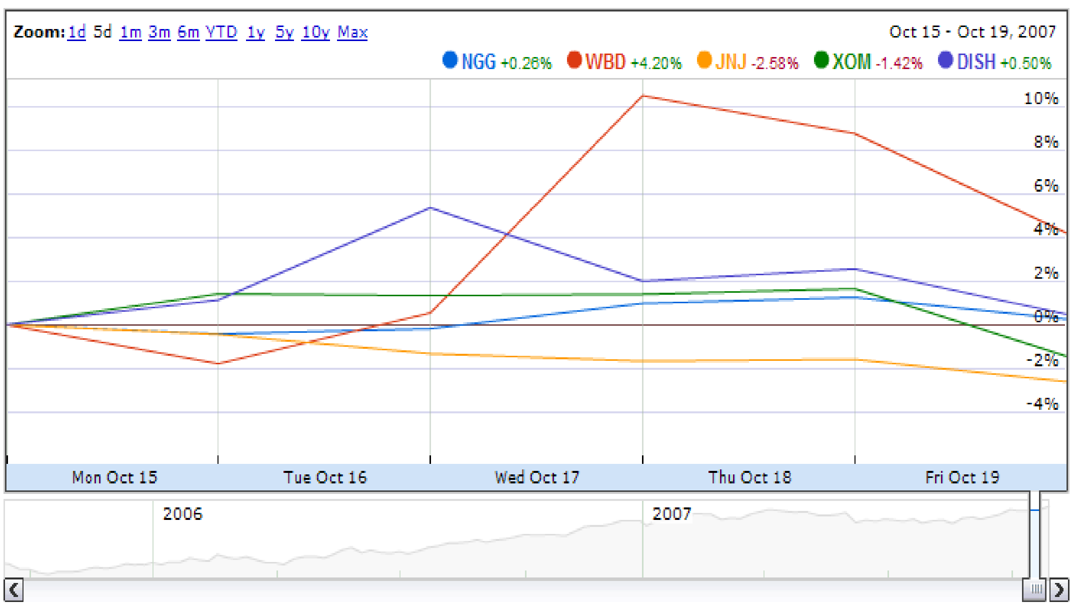

Figure 7.3.2 Percent Change for Each Stock in Week 2 (10/15 – 10/19) [2]

During week 2, the major transaction of the week was selling of all the stock from EchoStar Communications (DISH). The stock price of DISH went up a bit which did created a small profit for the portfolio. But this profit was insignificant due to the reason that there was a total of 40.00 dollars transaction fee impose of the small profit. The reason for selling all the stock was the increasing in the advertisement of DISH's greatest competitors Comcast and DIRECTV. DISH wad removed to eliminate possible future loss before it occurs.

Worth Noticing in Week 2

Johnson & Johnson's stock price continues to drop due to the recall of infant medicine last week. Again Johnson & Johnson was not removed from the portfolio because it is a long term investment [1].

Exactly opposite to JNJ, Wimm-Bill-Dann Foods' (WBD) stock prices increase insignificantly for most of the week. This is because following last week's news on the chairman of the WBD interested in Eastern Europe, USA and China, on Oct 16th 2007, WBD bought Georgian Foods to fuel sales outside its domestic market. WBD will use this Tbilisi-based Georgian Foods to supply Armenia and Azerbaijan local demand.

National Grid's price went up slightly probably because there is a new project for National Grid is underway according to Contract Journal.

Week 3 Report

Date	Symbol	Buy/ Sell	Price	Shares	Net Cost/ Proceeds	Profit Loss	Total Cash	Total Profit
							100,000.00	
10/8/2007	NGG	Buy	81.57	100	$ 8,176.99		$91,823.01	
10/10/2007	WBD	Buy	112.00	300	$ 33,619.99		$58,203.02	
10/10/2007	JNJ	Buy	64.14	300	$ 19,261.99		$38,941.03	
10/11/2007	XOM	Buy	92.13	200	$ 18,445.99		$20,495.04	
10/12/2007	DISH	Buy	48.23	400	$ 19,311.99		$1,183.05	
10/18/2007	DISH	Sell	48.80	400	$19,500.01	$188.02	$20,683.06	188.02
10/25/2007	ATVI	Buy	22.95	900	$ 20,674.99		$8.07	

Table 7.3.3: Portfolio Trading History from 10/22 – 10/26

Figure 7.3.3 Percent Change for Each Stock in Week 3 (10/22 – 10/26) [2]

During week 3, the major transaction of the week was buying of 900 shares stock from the company Activision Inc (ATVI). ATVI has performance fairly good for the past couple years. But the major reason for purchasing its stock was because within the next 2 week, there will be 2 popular games being released by ATVI. These releases will quite likely to boost up the stock price in the coming weeks.

Worth Noticing in Week 3

Johnson & Johnson's stock price went up a little bit in the beginning of the week but come by down in the end of the week to just a bit higher than the open price of the week. This is because on Oct 24th this week, it settles the suit over death of 14-year-old by paying $1.25 Million. The Johnson & Johnson is still in the portfolio but it is in closing attention meaning if there is more bad news on JNJ, its stock should be sold.

Activision Inc's price for the week has skyrocketed, ending with a 7.58% increase compare to the opening price in the beginning of the week. The most important sign is that as the release date of the new game, Guitar Heroes getting closer, the anticipation of the great sales for the game has brought up the stock price very significant. Even thought selling the stock at the end of the week would be great idea to make a profit, we did not do that. This is because the released of another game on Nov 6th 2007 might bring up the price even higher. The stocks were being hold in hope of even higher return [10].

NGG and WBD continue to increase in price but all these increasing were expected since the events last week. And XOM on the other hand increases just slightly which is insignificant to talk about because it only increase by 0.08% and could just be normal changing of stocks.

Week 4 Report

Date	Symbol	Buy/Sell	Price	Shares	Net Cost/ Proceeds	Profit/ Loss	Total Cash	Total Profit
							100,000.00	
10/8/2007	NGG	Buy	81.57	100	$ 8,176.99		$91,823.01	
10/10/2007	WBD	Buy	112.00	300	$ 33,619.99		$58,203.02	
10/10/2007	JNJ	Buy	64.14	300	$ 19,261.99		$38,941.03	
10/11/2007	XOM	Buy	92.13	200	$ 18,445.99		$20,495.04	
10/12/2007	DISH	Buy	48.23	400	$ 19,311.99		$1,183.05	
10/18/2007	DISH	Sell	48.80	400	$19,500.01	$188.02	$20,683.06	188.02
10/25/2007	ATVI	Buy	22.95	900	$ 20,674.99		$8.07	

Table 7.3.4: Portfolio Trading History from 10/29 – 11/02

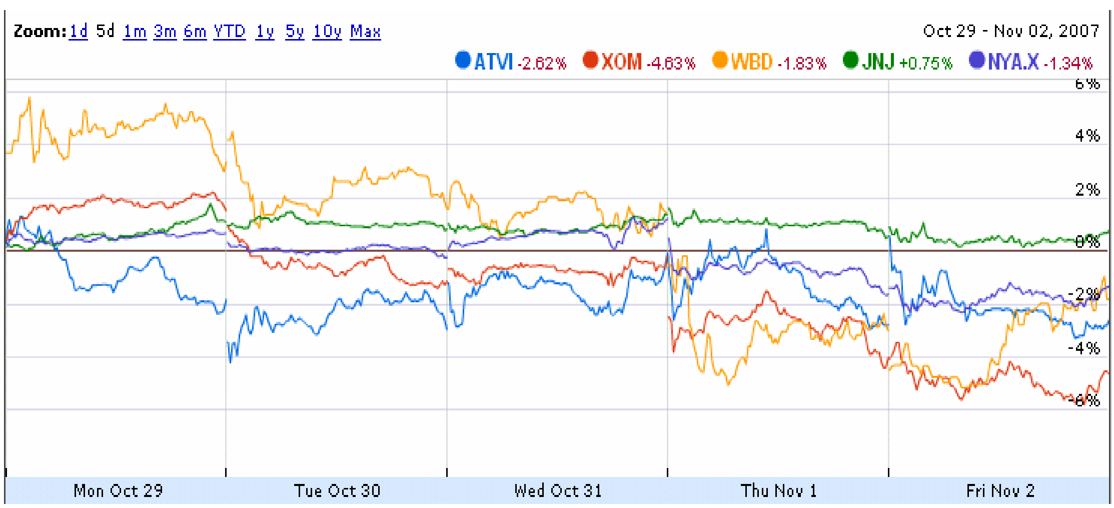

Figure 7.3.4 Percent Change for Each Stock in Week 4 (10/29 – 11/02) [2]

During this week, there was no transaction. This is because even though stock price drop for most company, but it is still higher than the purchasing price weeks ago.

And we have high hope in the bouncing back of the stock in the next coming week. Also the overall price for all stock went down this week.

Worth Noticing in Week 4

Even thought price for ATVI drop a bit in the week, but we have hope in the increase in the price right when the second game, Call of Duty 4 is released on Nov 6th next week.

Johnson & Johnson also has recovery from last week law suits and showing sign of increase price in the near future.

As the final simulation is approaching, the portfolio is preparing to sell all its stock next week.

Week 5 Report

Date	Symbol	Buy/Sell	Price	Shares	Net Cost/ Proceeds	Profit/ Loss	Total Cash	Total Profit
							100,000.00	
10/08/2007	NGG	Buy	81.57	100	$ 8,176.99		$91,823.01	
10/10/2007	WBD	Buy	112.00	300	$ 33,619.99		$58,203.02	
10/10/2007	JNJ	Buy	64.14	300	$ 19,261.99		$38,941.03	
10/11/2007	XOM	Buy	92.13	200	$ 18,445.99		$20,495.04	
10/12/2007	DISH	Buy	48.23	400	$ 19,311.99		$1,183.05	
10/18/2007	DISH	Sell	48.80	400	$19,500.01	$188.02	$20,683.06	188.02
10/25/2007	ATVI	Buy	22.95	900	$ 20,674.99		$8.07	
11/05/2007	JNJ	Sell	64.41	300	$ 19,303.01	$41.02	$19,311.08	229.04
11/09/2007	NGG	Buy	83.25	100	$8,344.99		$10,966.09	
11/09/2007	WBD	Sell	125.45	300	$37,615.01	$3,995.02	48,581.10	4,224.06
11/09/2007	NGG	Sell	83.41	200	$16,662.01	$140.03	$65,243.11	4,364.09
11/09/2007	XOM	Sell	88.15	200	$17,610.01	-$835.98	$82,853.12	3,528.11
11/09/2007	ATVI	Sell	20.95	900	$18,835.01	-1,839.98	$101,688.13	1,688.13
End of Simulation							**Final Profit**	**1,688.13**

Table 7.3.5: Portfolio Trading History from 11/5 – 11/09

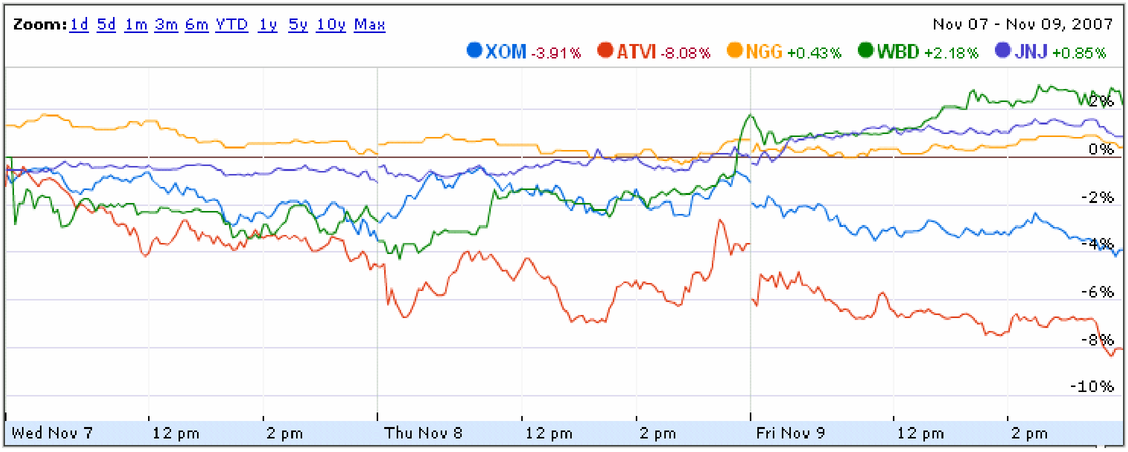

Figure 7.3.5 Percent Change for Each Stock in Week 5 (11/05 – 11/09) [2]

Due to the nature of the IQP, this week is the final week of the simulation. During this week, we tried to sell all our stocks we have at the highest possible price so that we can do the final calculation and earn a maximum profit.

JNJ was sold first in the first day of this week. The reason for early selling of this stock is because the price might be unstable again because the lawsuit last week. We sell it so that we will not be at risk of a possible dropping in price.

In the end of the week, we sell all the stock we have on hand, WBD turned out to be the "money maker" of the portfolio which earn almost 4000 dollars. On the other hand, the portfolio suffered from stocks XOM and ATVI.

Worth Noticing in Week 5

ATVI continued to drop in its price. This is odd due to the 2 reasons. First being the second game, Call of Duty 4 having a great sale. Second being the company published its fiscal report stating that earning this year was far more than last year. Exact reason is unknown and still need more investigation. But a possible explanation to this occurrence might be that even though ATVI is making money and report earnings but the expectation of stock holder in the company's earning is even higher. Also many people who might have purchase the stock might be a bit speculating than investing. They want to wait for the price reach to its highest, and quickly make a profit. This might just be the reason. Because we see, price continues to go down after it reaches the highest.

7.4 Summary

The overall performance of this portfolio is that it makes 1688.13 dollars. This is profit is insignificant compared to the investment amount of 100,000 dollars because the profit rate was just a bit more than 1.5%. But if look at carefully into the portfolio we might see many interest event.

ATVI was brought in the 4th week of the simulation and ended up losing the most money for the portfolio. Its price during the 2 weeks period of time has gone through dramatically changes. It went from going up to the highest of the year, to continuing dropping and lost more than 20% of its value. What should be not in this company is that, even if the new products are likely to increase company's sales and earnings. The company's stock might not be a good buy. This is because the stock price might have gone down due to the unsatisfied sales of the new products. Also even if the sales went well, the price might have gone down because all the speculators are selling for quick profit. This is exactly what happened to ATVI.

WBD on the other hand made the most money for the portfolio, making almost 4000 dollars for the portfolio. This is a great example of value stocks. It is a great company for future investment. WBD was successful for many reasons. First of all it being located in Russia, it does not get effect by the downfall of the US economic. Secondly, the company's in the food sector which is a defense sector. Third the company has new products as well as acquisition of other company to expand its leadership role in its filed.

JNJ was also a leader in its field, and it shows its powerful tolerance toward bad news. As we can see that during the time of simulation, JNJ has gone through the recall of its products and a lawsuit. But the evidence shows that it was huge enough to withstand the negative news and its stock price went right back up after shortly after the settlement of the lawsuit and in the end make a small profit for the portfolio.

The overall lesson of the portfolio was that not a single aspect of the fundamental analysis or technical analysis can be a good predictor of the company's future. It is more of a combination of all the factors. For example, with new products, ATVI's price drops, while with the negative influence of a lawsuit, JNJ's price increases.

Chapter 8 Effectiveness of Each Strategy

During the term of the IQP, there are some strategies that turn out to be more effective than others. In this chapter, they will be discussed in detail according to their profitability which is its return per dollar invested. Actual examples in the simulation will be used to further the understanding of them. These strategies will be divided into two groups: group one being strategies producing a profit, group two being strategies producing a loss.

Group One:

The most effective strategy during the simulation turns out to be buying defense and growth stocks. First of all, buying defense stock is a safer way to gain at least a small profit during a long term investment. WBD is one of these stocks. WBD, being in the sector of food processing and distributing, is a great defense stock. In addition to that, it is also a growth stock. WBD is the industry leader of Russia's food sector, but it still has much space for improvement if it wants to become industry leader internationally. This means that the price of WBD is not at its potential peak and has a room for increasing in stock price. What this means is that, the percentage of return is higher in WBD than other international industry leader. Finally, WBD is residing in the country Russia, meaning it is more like to be affected by the Russian economic than the US economic. As we know, there are a lot of ups and downs in the United States' stock market compared to Russia's which being rather stable. Buying a defense and growth stock in Russia will surely be greatly effective. The fact that WBD made almost 4000 dollars in total and having a return of over 0.11 dollars per dollar invested is a great proof.

In addition to buying defense and growth stock, value investment strategy brought lot profit during our simulation as well. Value investors are good in fundamental analysis. Through managing the companies' growing situation, we can decide if the stock is valued to buy, which means if the stock's current price is undervalued. For example, we are successful in matching AGCO Corporation to value investment strategy. We earned around $5000 comparing to $ 30,000 invest. After reviewing its fundamentals values, we identified that the current AG stock market price was not in the true potential price, even thought we were not sure what the real price was. AGCO Corporation provides diversity products especially agriculture equipment, and serves many different customers. The stock price does not very well reflect its annual net income, or we can say it is undervalued. Only five week's simulation, the stock price per share increases by $10, which shows the effectiveness of value investment strategy.

Group Two

On the contrary, some of the strategies that did not turn out to be as effective as we hoped. One of them is buying stocks from company which has new products soon to be released. During the IQP, stocks from ATVI were purchased for the major reason that there are two soon to be released games published by the company. According to our strategy, this is a good sign that the company's stock price will increase. This is true to an extent as we can see from the price of ATVI in week 4 when the first game was released. The price reached 24 dollars per share which was the highest this year. But even with the great sale of the second game, the price then dropped continuously from the peak. This strategy turned out to be a mistake for the portfolio. The reason being the news about the new games was public and available for everyone. This means there are many other investors and speculators just like us, trying to make a quick profit from the company. We lost in the battle because we did not sell the stock as early as they do. And end up taking the drop of the price, while more experienced stock brokers sold at the peak price. The proof is fairly obvious that we lost 1839.98 dollars which means an almost 0.09 dollar lost per dollar invested.

We also lost money by applying the marketing timing strategy to the companies. Market timing strategy is the belief of the prediction of the stock price in the near future. Unlike the “buy and hold” strategy, this strategy for buying stocks does not let the stock just sit on it for years after years. Instead, market timing investors can sell or buy stocks whenever they feel it is worth to do. There are also some problems with the market timing strategy. You cannot always truly predict the rise or fall of the stock price, since it is easy for you to make wrong correlation between the current market conditions and those which affected historical stock prices by applying technical analysis. For example, we make wrong decision during the middle trading period for China Medical Technologies, Inc (CMED), which brought around $1200 lost comparing to $14,000 invest. Based on the long period increased trend, we forecasted that the CMED stock price reached its peak, so we sold all of them. However, the price still went up after that. This phenomenon leaded us to buy some CMED shares again at the high price. Unexpectedly, the price per share went down later. We lose more money in CMED stocks. Another negative with the marketing timing strategy is that it involves lot transactions, which means commission can kill your investment unless you buy large number of stocks. You will feel that commission is nothing when you sell the stocks even their price per share just increases a little bit. We conclude that marketing timing strategy tends to be more risky, which can be interpreted that it is easy for you to make mistakes in purchasing or selling stocks.

Finally the strategy that suffers most loss is buy and hold. This strategy is mainly based on the personal assumption, and most likely it is even very wisdom-challenged for a genius in Wall Street to make a sound prediction of what will happen tomorrow. Admittedly, looking back to the stock market of past 10 years will be helpful to some extent. Nevertheless, the future performance of a stock in a certain period may not closely depend on the past tendency. This can be well explained if we think about the probability theory in mathematical field. It turns out to be a scientific tendency only when we repeat the same experiment for many times. But for only a few times of trials, the results may be rather irregular with a large variance. In stock market, if a stock is observed to have the potential to grow, it will go up, in long-term run. Before we picked up these five companies (CIGNA, SONY, Amazon.com, Comcast, and Lowe's) to invest, we did comprehensive research about the backgrounds, historical trends, and so much more. During our investing period of five weeks, there was a time that CIGNA, SONY, and Amazon.com have been struggling badly in the stock market, but, based on our analysis, we were pretty confident that the number of losses for CIGNA and SONY would not reach an astronomical figure and, they would eventually show positive signs of ceasing to fall. That was why we were so hesitated if we should sell them immediately or wait for a possible rise before long. Unfortunately, it proves that our so-called prediction was far from the truth: five-week investment period is not sufficiently long enough for a change. At the end of this five-week period, we lost about US $1,700 combined from CIGNA and

SONY. Considering all the factors that could be relevant to the strategy, we may safely conclude that for a not so long period, the disillusionment of a safe and stable strategy such as buy and hold is eventually inevitable and irreversible.

Chapter 9 Conclusion

We based our IQP on a five-week period simulation from the beginning of October to early November. The simulation was based on three different types of portfolios, each of which has its own group of companies with the corresponding stock market strategies. Eventually, only portfolio III had a good gain from all its companies. Portfolio I had gained from only one of five companies, which would not be regarded as a good sign. Portfolio II, unfortunately, has suffered different amounts of losses from every single company.

A philosophy of stock market is doing great by doing right. After analyzing and comparing our portfolios each week, we eventually figured out the key point in stock market is how to convert risk into opportunity by applying specific investing strategies. Thus, each strategy has its own way to insure against potential risk in a certain way. However, the risk of tomorrow is highly likely to be affected by different factors, which cannot be wisely controlled by any single investing strategy. Thus by far there is not an all-round strategy to apply in the real stock market, for every strategy has its own advantage and disadvantage, depending on the specific situations. As a matter of fact, the best way to let a strategy work out is to have a thorough understanding of the feature of the strategy, and thus both avoid its disadvantage and fully take advantage of it.

In addition to various complicated investing strategies, we should also have sufficient research about the target companies and the overall investment atmosphere. We may be also especially interested in the news, both the good and the bad, of the target companies, which may cause further influence on the company later on. Such risks are named sensible risks. One of the main tasks for wise investors is to limit the sensible risks as most as they could.

Stock market is full of risk, and risk is not always on the opposite side of earning profits. Risk is the potential opportunity for investors with full preparation. Nevertheless, risk can be the disaster for investors who do merely enough prior work and tend to do any emotional-based decision. This IQP provides us a precious opportunity to have an early and quick glimpse of the how the stock market runs. It indicated that we, as future investors, should do much more work than we could expect before we put our money in the stock market and let it run.

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