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By

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Approved by:

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Professor Dalin Tang, Project Advisor

Acknowledgements

I would like to thank the following people for their contributions to the project: Dalin Tang, Professor, Mathematical Science Department, Worcester Polytechnic Institute, as well as all of my family and friends.

Abstract

Through the use of tools and information on the internet, along with information gained through text references, a ten-week stock market simulation was conducted to research the different investment strategies in stock market trading. The experience and knowledge gained in this experiment was helpful for one tobecome a better investor in the future.

Table of Contents

Table of Figures

1. Introduction

1.1 Goals of the Project

The main objective of this project was to gain an understanding of how the stock market works as well as utilizing some basic investment techniques used in the markets today. Several different investment strategies have been researched and short-term simulations will be run in order to see how well these strategies work in today's market. These different strategies will be discussed in detail in further chapters. I will start with $100,000 USD, and with that will run my ten week simulation. At the end of the simulation, I will compare and contrast the different investment strategies that I have researched and utilized during the simulation.

The second objective of this project is to familiarize myself with the different investment options that today's investor has. In today's economy the individual investor has many options including mutual funds, bonds, certificates of deposit, as well as the stock market. These different investment options will be discussed in detail in further chapters. The informed and intelligent investor has to weigh the different strengths and weaknesses of different investment options if they want to be successful. These differences between investments can be attributed to risk, rates of return, time to reach maturity, protection from inflation, as well as many others.

My third and final objective for this project was to gain a basic knowledge of trends and other factors that affect the overall performance of the stock market. Factors such as inflation, interest rates, and oil prices have a major hold on the way the stock market performs, and as a result can be the difference between a good investment and a

bad one. Knowledge of how these factors affect the market, and when these trends occur can be a big advantage to the individual investor.

1.2 History of the Stock Market

After the Revolutionary War, there was a considerable debt that the newly founded United States government had to pay back to the nations that helped them defeat the British. With the help of founding father Alexander Hamilton the New York Stock Exchange (NYSE) was opened in 1792 in the Wall Street area of lower Manhattan. The original concept of the market was to sell over $80 million in bonds to help cover the debt acquired during the Revolutionary War. The second objective of the NYSE was to be a place where the stocks of newly founded companies could be traded. (Chuk et al. 2003)

When the market was opened in 1792 it was open to everyone, but today the only ones who are allowed to trade directly are called stockbrokers. The average individual investor usually has to go through a stockbroker in order to perform any trading of stocks. This is the main focus of today's markets. The second focus of today's market is to make the prices of traded stocks available to the public so there can be a way to determine the performance of the stock. This need for information has been greatly accelerated in the recent years with the development of the World Wide Web and other news outlets that are always televising stock prices with almost instantaneous updates.

Today in addition to the NYSE there is also the NASDAQ market. The NASDAQ market is run a little differently than the NYSE. Where as trading done by the NYSE is

done on the floor by people, trading done in the NASDAQ market is done over a telecommunications network. People called market makers are the distributors of securities of the NASDAQ market. Market makers set the prices of the stocks in the market as they buy stocks with their own money and sell them to individual investors. Stock prices in the NYSE are set by the supply and demand of each company's stock. Along with the NYSE and NASDAQ, the S&P is another frequently watched market in the United States. (Ames et al. 2004)

1.3 Resources for Investors

In today's market there are many different information resources that an investor can gather and accumulate information needed to make decisions. One major resource is Reuters. Reuters is an information based company aimed towards professionals in the financial markets. Reuters is so large and widely used that professionals working in any sector of finances use Reuters everyday as their main source of information. A large portion of their revenue is acquired through their financial services business. They also provide financial institutions with custom computer software that enables them to decrease risk and the ability to keep up with the high volume of trading that is done everyday.

Bloomberg is another main resource used by investors. Spanning over 125 countries and used by hundreds of thousands of business professionals, Bloomberg often rivals Reuters as the main source of information to business professionals. The key selling point of Bloomberg is their ability to complete any transactions in any foreign

currency. With a slew of charts, graphs, and investment tools have helped make Bloomberg one of the most visited websites in today's market.

One resource that I found very helpful during this project was Barchart.com. With streaming quotes and charts, this site offers sector analysis along with custom searches and tools that allow the investor to select analyze and compare stock growth to other companies within the same sector. The site is also geared for the novice investor as it has instructions on how to read and analyze the many charts and graphs the site provides.

In a world today run by up-to-the-minute information a largely overlooked resource still used today are newspapers. Two main players in this resource category include the Wall Street Journal and the Investor's Business Daily. Both are a great source for news articles and columns on the market as well as breaking news regarding the market. Whenever oil prices, interest rates, or other factors of the market are changed, expect to be given the anticipated behavior of the market as well as other trends that may occur.

1.4 Risks and Payoffs of Investing

Today any person can invest in the stock market although there are different ways one can do so. Before the invention of the internet, most people went through a stockbroker who made their trades for them albeit with a commission fee towards the broker. Since the dot-com boom many brokerage firms have set up websites allowing people to purchase and sell stock via the internet with fairly low commission fees.

Websites such as E-Trade, Ameriquest, and TD Waterhouse among others have allowed the general public to invest more frequently and with less hassle as ever before. (Chuk et al. 2003)

There are some risks associated with the growing number of transactions being done over the internet. The first and foremost is that without the use of a stockbroker the investor has to do all the research by themselves. This can prove to be very time consuming as well as risky. The average investor does not have the full scale knowledge of the markets as a stockbroker does and as a result a few ill-timed transactions may be made resulting in a drastic loss. Another downside to internet brokerage firms is that there is no communication between investor and broker. All decisions are made based on the investor's research, without the help and opinion of a trained professional. Another big factor for investors is brokerage fees. Whereas internet firms have a flat rate fee, brokers usually charge a fee based on the percentage of the total value of the transaction. This means the more you invest the more you would have to pay your broker.

Many investors use diversification as a way to decrease risk associated with the stock market. The main point in diversification is to not have all of your eggs in one basket. It takes advantage of a simple principle. As one stock price drops, others may make gains at the same time. Will all of your investments in one stock, this proves to be very risky as you stand to lose all of your money without a safety net of other stocks in different sectors. While this a common practice in the markets the potential of immerse gains are not as realistic as the risk associated with the market is decreased.

In today's volatile market there seems to be many more risks than payoffs. The stock market is a tricky thing. Often compared to gambling the key to the market is timing. Buying and selling at opportune times can reap tremendous rewards. With research one can uncover trends in the market which could either save or destroy the investor. In a bear market the overall trend for the market will be downward, and during this time buying at a low cost is the most sensible thing. During a Bull Market, the market is seeing an upward trend and selling at this point would be an intelligent choice. Although this seems simple there is still a lot of luck still involved with the market. With speculation derived from charts and graphs, there are many tools to help decrease risk, but there is a lot of unpredictability and chance still associated with the market.

2. Investment Comparisons

2.1 Bonds

Bonds are a form of investment that works by the investor lending money to a corporation which will then pay the investor a specific interest rate over a specified length of time. Maturities usually last between five and forty years. The interest is usually paid off every six months until the maturity of the bond is reached. There are various types of bonds that a person can invest in. They include treasury bonds, corporate bonds, and municipal bonds among a slew of others. The safest are treasury bonds. They are issued by the United States federal government and are issued in denominations of $1,000. They carry a lower interest rate than corporate bonds because the federal government backs them and are usually used as a way for the government to raise funds.

Corporate bonds are different than treasury bonds in which they are not backed by the federal government but by the company whom the investor is buying the bond in. Because of this they have a higher risk of default which has happened in the past when issuing company could not pay back either the interest associated with the bond or the monetary value of the bond itself. To make sure that future payments are made as promised, bonds have an indenture (bond contract) that states the right and privileges of the lender and the borrower's responsibilities. The indenture usually specifies that in case of default, bondholders have prior claim to any monetary funds associated with the company rather than stock holders. The key to a successful bond portfolio would be diversification, but at a minimum investment at $10,000 per corporate bond, could be risky due to the high cost of initial investment. With higher rates of interest than treasury

bonds and the associated risk with them, corporate bonds have begun to fall off the radar as a main investment strategy.

2.2 Certificates of Deposit

Certificates of deposit (commonly referred to as CD's) are a time deposit usually offered to consumers by banks and credit unions. CD's are similar to savings accounts in that they are insured and are risk-free. Most CD's have a low rate of return and as a result the investor has to "wait" for the maturation time to pass. They are insured by the FDIC for banks and the NCUA for credit unions. They are different from savings accounts in that the CD has a specific maturation time (usually in between 3 months to five years) and a specific interest rate. They are however not protected from inflation and as a result keeping money in a CD during a high inflation period would be a financially poor decision as the CD would become devalued and money would be lost.

2.3 Mutual Funds

Mutual funds are a form on investment which collectively pools the money from a group of people and is invested in corporate stocks, bonds and other money market vehicles. Within the mutual fund there is fund manager who trades the fund's securities, calculates capital gains or losses, and collects dividends. The investment gains are then split among the individual investors. The net asset value per share (NAV) is the value of a share of the mutual fund. The NAV is calculated daily based on the total value of the fund divided by the number of shares currently being held.

Mutual funds have become more popular amongst novice investors in recent years due to their relatively low risk and their simplicity. The selling point for mutual funds is that they take advantage of the diversification principle. An investor only has to research the mutual fund and if deemed a secure investment, automatically has a diversified portfolio. This can backfire when fund managers over diversify the mutual funds portfolio so returns tend to perform under the market's indexes. They are fees associated with mutual funds as fund managers are paid for their valuable research towards the fund.

Compared to other investment options, mutual funds offer advantages over investing in individual stocks. Transaction costs are split among all shareholders who benefit by having a fund manager apply their expertise and give their time to research investment options. Despite to professional management they are not immune to risks. If the fund primarily invests in stocks, the mutual fund is subject to the same volatility as the stock market.

2.4 Money Market

The money market is a short-term market for borrowing and lending. They typically have maturities of thirteen months, low risk, and its liquidity is attractive amongst investors. The main players of the money market are banks in the world's financial centers (New York, Tokyo, London and Greenwich.) With rates of return in the 1-2% per annum range, they are a good place to keep money during a slumping market or if there aren't any other higher return investments available. Although money markets are

not FDIC insured there is a chance that money could be lost, but that is unlikely as they are low risk as compared to other investment vehicles.

2.5 Stock Market

The term stock market refers to the mechanism that allows buyers and sellers to exchange shares of a particular companies stock. It serves the companies who issue the stock to raise funds. Today the size of the global stock market is approximately $51 trillion. Stocks are traded on a stock exchange which is an organization which specializes in bringing buyers and sellers of stocks and other securities together. Trades can occur in a variety of ways. Actual trades are based on a term called an auction market. This means that a buyer bids a specific price for a stock and a seller asks for a specific price for the stock. When the two asking prices match, a transaction takes place on a first come basis if there are multiple bidders. Selling or buying at market means that you will accept any bid or ask price for the stock. (Ames et al. 2004)

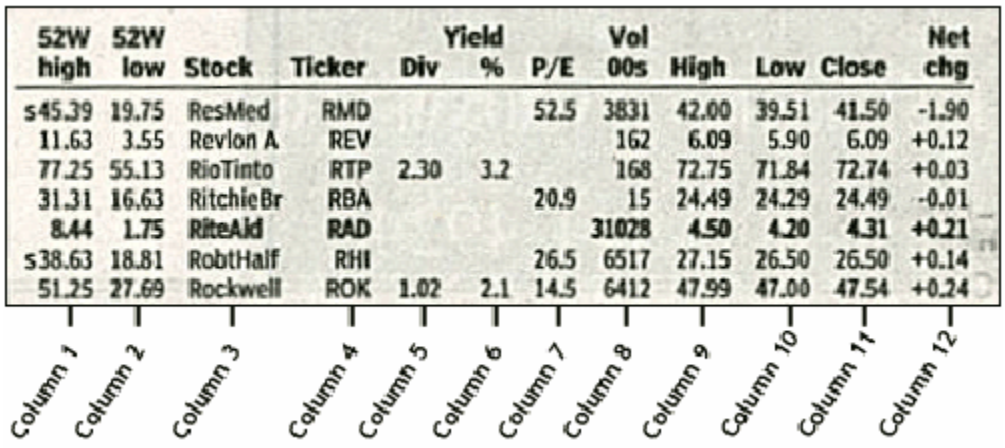
Some exchanges are physical meaning that transactions occur on a trading floor and bidding is done by something known an open outcry. This refers to the verbal shouts that buyers and sellers may have to use during bidding process. Another type of exchange is known as a virtual exchanges where trading occurs over a network of computers where brokers make their transactions. The NYSE is a physical exchange where the open outcry method is used. Orders enter onto the floor via the floor broker who then goes to the trading post where the stock is being sold. There sits someone known as the specialist, whose job is to match buy and sell orders. If there is no difference between the buy and

sell order, the transaction can occur. The details of the sale are sent to the "tape" and the information is relayed back to the investment firm who then notifies the investor. NASDAQ is based on the same theory except computers bring buyers and sellers together.

There are many different types of investment strategies that are used in the markets today. The two main ones are fundamental and technical analysis. In fundamental analysis, the companies' financial statements are the main source of information as well as the economic trends and conditions. Technical analysis attempts to predict future market conditions by use of charts and other quantitative techniques regardless of the companies' future financial situation.

With the creation of the internet there are many ways the average person can become a market investor. Along with the different means come many risks associated. Without the knowledge of a broker, the individual investor has to do much of the work by themselves and most of the time does not know what to look out for. With the stock market comes an amount of "noise" which means small fluctuations of stock price. With long term oriented goals the individual investor should generally ignore price noise unless he or she sees something in the future which would denote trading the stock as soon as possible. To the short term investor noise plays a large part of the profits he or she may see while investing in the market. Buying or selling during a short term investment period is a tricky process as noise affects the given stock's price. Dividend reinvestment plans (DRIP's) and directs investment plans (DIP's) are plans by which individual companies, for a minimal cost, allow shareholders to purchase stock directly

from the company. They are a very good way if investing small amounts of money at regular intervals.



52W high	52W low	Stock	Ticker	Yield Div	Yield %	P/E	Vol 00s	High	Low	Close	Net chg
s45.39	19.75	ResMed	RMD			52.5	3831	42.00	39.51	41.50	-1.90
11.63	3.55	Revlon A	REV				162	6.09	5.90	6.09	+0.12
77.25	55.13	RioTinto	RTP	2.30	3.2		168	72.75	71.84	72.74	+0.03
31.31	16.63	RitchieBr	RBA			20.9	15	24.49	24.29	24.49	-0.01
8.44	1.75	RiteAid	RAD				31028	4.50	4.20	4.31	+0.21
s38.63	18.81	RobtHalf	RHI			26.5	6517	27.15	26.50	26.50	+0.14
51.25	27.69	Rockwell	ROK	1.02	2.1	14.5	6412	47.99	47.00	47.54	+0.24

Figure 2.1: Reading a Stock Market Table

The table above is an example of a stock market table in a newspaper. Columns 1 and 2 are the 52 week high and low for the stock. Columns 3 and 4 are the company's name and ticker symbol respectively. Column 5 indicates the annual dividend payment per share. If the space is blank the company does not currently pay out dividends. Column 6 states the percentage return on the dividend, calculated as annual dividends per share divided by price per share. Column 7 is the price/earnings (P/E) ratio which is calculated by dividing the current stock price by earnings per share from the last four quarters. Column 8 is the trading volume which shows the total number shares traded for the day in hundreds. Columns 9 and 10 are the high and lows for the day. This indicates the price range at which the stock has traded at throughout the day. Column 11 is the last trading price recorded when the marked closed on the day. If the closing price is up or down more than 5% than the previous day's close, the entire listing for that stock is bold-faced.

2.6 Hedge Funds

In recent years hedge funds have made a lot of news in the financial community. The concept was created by Alfred Winslow Jones in 1949. His strategy was to sell short some stocks while buying others thus reducing or hedging some of the market risk. Before then there were many investment pools or partnerships, but Jones was the first to combine short selling, limited partnership structure to avoid regulation, and a 20% incentive fee as compensation for the managing partner. Unlike mutual funds which are under SEC regulation, there is no regulation for hedge funds and as a result can carry some serious risks. Investors are available to obtain funds of hedge funds with a much lower minimum than a hedge fund. Hedge funds attempt to make profits in almost any market at any time. Tactics they use include leveraging and speculation which can increase the risk of loss. It is recommended that the novice investor first gain an understanding of the market before attempting to buy in to hedge funds. (Ames et al. 2004)

3. Penny Stock Trading

3.1 Introduction

The term penny stock has many different meanings. Come people define penny stocks as priced under one dollar some under five dollars. For this project the term penny stock will be applied to all stocks priced at four dollars or less which is very acceptable in the business world. In addition, a true penny stock will have less than $4 million in net assets and not have a history of significant operation. Penny stocks are not traded on an exchange but are traded in the over-the-counter (OTC) market. Part of the OTC market is the NASDAQ National Market (NNM) of the NASDAQ which does not include any penny stocks. Another major component of the OTC market is the National Quotation Bureau (NQB), commonly referred to as the "pink sheets".

When investing with penny stocks there is much emphasis on the spread more than other methods of investment. For example, if a stock is purchased that traded at ½ cent bid, 1 cent ask, the bid would have to be more than double in price for the investor to break even. The spreads in penny stocks are most commonly 25-33%, are often 50-100% and are sometimes over 100%, so there is a heavy importance of the spread in trading penny stocks. The last pricing factor concerning penny stocks is called the mark-up. A broker, who has held the security in its account is subject to the risk of market price fluctuation, may mark the price of the stock it sells the investor up by a certain percentage on top of the spread. This is done to compensate brokers for maintaining sufficient supply during a demanding market. (Chuk et al. 2003)

As you can see there are many charges that are put upon penny stocks. With their low prices, many investors often believe that there is little risk associated with penny stocks. This is not the case as over the years many penny stock companies have become defunct and their investors took a loss. This however does not mean that an informed investor cannot make profits trading with penny stocks as research and diligence are keys to success.

3.2 Strategies and Goals

My goals for the penny stock simulation portion of this project included gaining knowledge of how to pick and choose penny stocks and making a profit in the process. With learning how to pick and choose penny stocks comes the opportunity to learn to the true value of a stock. With many penny stock prices so close to each other the casual investor may have a hard time trying to weed through the bad companies in order to find the profitable ones. A second goal was diversification. With a diversified portfolio the investor has an egg in many baskets and as one sector falls another one will rise. This helps curb the risk involved with stock market investing.

The companies I chose to invest in all had very strong outlooks for the summer of 2007 when the simulation would be taking place. I looked at their year to date price graphs and made appropriate decisions. Sectors that were chosen for the simulation included biotechnology, mining, silicon technology and pharmaceuticals. Biotechnology in recent years has been a booming business and medical breakthroughs are occurring at a rapid pace. Many small companies have started throughout the country staffed with

scientists looking to make the next discovery, and as a result that company's stock will skyrocket. The mining company was selected because of its large operation in Canada. Minerals and natural resources are always in constant demand and as a result the amount of business done by resource excavating companies is relatively larger than other sectors. Silicon technology has slowed down since the dotcom bust of 1998. Many people believed that there was no limit as to how high these companies stock prices can soar until investors lost big.

The ten stocks used for this simulation were bought all at once and held onto for ten weeks and then sold. The reason for this was explained in Donny Lowy's book, "A Guide for Penny Stock Investing", where he states that in order for most investors who do not want to day trade their penny stocks, the solution is to hold onto them as long as you can without suffering a big loss.

3.3 Company Profiles

CMGI, Inc. (CMGI)

CMGI, Inc. provides global supply chain management services and marketing distribution solutions that help businesses markets sell and distribute their products and services. They are based out of Waltham, MA. CMGI's venture capital affiliate, @Ventures, invests in a variety of technology ventures. The company markets its services and solutions through the internet, public relations, and advertising and tradeshow campaigns. CMGI sells products and services to its clients primarily on a purchase order basis. During July of 2006, the CMGI Inc., through its @Ventures entities, held investments in 15 portfolio companies. In April 2007, CMGI acquired full ownership of its Japan-based joint venture from Sasatoku Printing, which previously held a 60% interest in the company.[1]

Figure 3.1: CMGI Inc. Chart (Jan '07-May'07)

[1] All company profiles in this report are courtesy of http://www.etrade.com

CONEXANT SYSTEMS INC (CNXT)

Conexant Systems, Inc. designs, develops and sells semiconductor system solutions, which comprise semiconductor devices, software and designs, for use in broadband communications applications that enable transmission, processing and distribution of audio, video, voice and data throughout homes and business enterprises worldwide. They are based out of Newport Beach, CA. Their access solutions connect people through personal communications access products, such as personal computers (PCs) and television set-top boxes (STBs), to audio, video, voice and data services over wireless and wire line broadband connections, as well as over dial-up connections. Its central office solutions are used by service providers to deliver audio, video, and voice and data services over copper telephone lines and optical fiber networks to homes and businesses around the globe.

Figure 3.2: Conexant Systems Inc. Chart (Jan '07-May'07)

STARFIELD RESOURCES INC. (SRFDF)

Starfield Resources Inc. is a junior resource company conducting advanced exploration and development on its fully owned, 1,323,000-acre Ferguson Lake Platinum-Palladium-Nickel-Cobalt-Copper property located in Nunavut Territory, Canada. As of February 28, 2007, the Starfield completed a 359 resource expansion diamond drill holes on the property, including 116 resource delineation holes during the year ended, and additional 20 geotechnical holes. In 2007, Starfield continued its drilling program in order to further delineate its existing resource base. Starfield is also pursuing regional exploration on much of its prospective surrounding mineral claims. The future looks good for Starfield as they have a number of targets for follow-up work.

Figure 3.3: Starfield Resources Inc. Chart (Jan '07-May'07)

MEDRA CORPORATION (MDRA)

Medra Corporation, formerly DCH (Diversified Commercial Hydrogen) Technology, Inc., is engaged in the acquisition, development and commercial exploitation of hydrogen-based technologies. They are based out of Valencia, CA. Specifically; Medra concentrates on fuel cells, hydrogen-specific sensors and hydrogen safety. Medra Corporation seeks out patented technologies, secures those patented technologies through licensing agreements with the patent holders and converts the technologies into viable products that it then produces and sells. Medra focuses on technologies related to the use of hydrogen, primarily hydrogen gas sensors and fuel cells. They also wholly own subsidiaries that include DCH Sensors Corp. and Enable Fuel Cell Corporation.

Figure 3.4: Medra Corporation Chart (Jan '07-May'07)

OPHTHALMIC IMAGING SYS INC (OISI)

Ophthalmic Imaging Systems is engaged in the business of designing, developing, manufacturing and marketing digital imaging systems, image enhancement and analysis software and informatics solutions for use by practitioners in the ocular health field. OIS products are used for a variety of standard diagnostic test procedures performed in eye care practices. The flagship products in the company's angiography line are its WinStation digital imaging systems. These products are targeted primarily at retinal specialists and general ophthalmologists in the diagnosis and treatment of retinal diseases and other ocular pathologies. The company provides its own Ophthalmic Picture Archiving and Communications System (PACS), and entered the electronic medical records and enterprise practice management markets through an alliance with NextGen Healthcare Information Systems, Inc., a subsidiary of Quality Systems Inc., a provider of EMR and EPM software platforms.

Figure 3.5: Ophthalmic Imaging Systems Chart (Jan '07-May'07)

PACIFIC BIOMETRICS INC (PBME)

Pacific Biometrics, Inc. (PBI) provides specialty central laboratory services to support pharmaceutical and laboratory diagnostic manufacturers in the conduct of human clinical research, for use in their drug and diagnostic product development efforts. Their specialty areas include cardiovascular disease (dyslipidemia, atherosclerosis and coronary heart disease), diabetes, obesity, and bone and joint diseases (osteoporosis, as well as osteo and rheumatoid arthritis). Coupled with its specialty testing, PBI also has central laboratory capability and provides full-service central laboratory support for multi-center clinical trials, including routine safety lab tests (general chemistry, hematology and urinalysis). The company's clients include a number of multi-national pharmaceutical, biotechnology and diagnostic companies.

Figure 3.6: Pacific Biometrics Inc. Chart (Jan '07-May'07)

BPO MANAGEMENT SERVICES INC (BPOM)

BPO Management Services, Inc. (BPOMS) provides business process outsourcing services to middle market enterprises in the United States and Canada. Its primary business offerings include document and data management solutions, also known as enterprise content management, including finance and accounting outsourcing services; information technology services outsourcing, and human resources outsourcing. It provides services to customers across a variety of industry segments, such as financial services, healthcare, manufacturing/logistics and government. In June 2007, the company acquired DocuCom Imaging Solutions Inc. In October 2006, it acquired Novus Imaging Solutions. On December 15, 2006, the company completed a reverse merger with netGuru. The company consolidated netGuru's two business units, Web4 and netGuru Systems. In January 2006, the BPO acquired Digica, Inc.

Figure 3.7: BPO Management Services Inc. Chart (Jan '07-May'07)

QUESTCOR PHARMACEUTICALS INC (QSC)

Questcor Pharmaceuticals, Inc. is a specialty pharmaceutical company that focuses on therapeutics for the treatment of diseases and disorders of the central nervous system (CNS). The company owns and markets two commercial CNS products: H.P. Acthar Gel (Acthar) and Doral. Acthar (repository corticotropin injection) is an injectable drug that is approved for the treatment of a range of conditions with an inflammatory component, including the treatment of flares associated with multiple sclerosis (MS), and is also used in treating patients with infantile spasm, an epileptic syndrome. Doral is indicated for the treatment of insomnia, characterized by difficulty in falling asleep, frequent nocturnal awakenings, and/or early morning awakenings, which occurs frequently in patients with CNS diseases and disorders. In May 2006, it completed the acquisition of Doral from MedPointe Healthcare Inc.

Figure 3.8: Questcor Pharmaceuticals Inc. Chart (Jan '07-May'07)

ISONICS CORPORPORATION (ISON)

Isonics Corporation, incorporated in 1993, is focused on the development and provision of homeland security products and services, and the manufacture of 300-millimeter (and smaller diameter) silicon wafer reclaim and test products, wafer thinning and custom wafer products. During the fiscal year 2007, the company acquired a 90% interest in SenseIt Corp. In June 2007, the company sold its life sciences business, which supplied isotopes for life sciences and health-care applications. The company conducts its operations through subsidiaries, including Isonics Homeland Security and Defense Corporation (HSDC), SenseIt Corp, Protection plus Security Corporation (PPSC), Isonics Vancouver, Inc. (IVI), Chemotrade GmbH (Chemotrade), Institut fur Umwelttechnologien GmbH (IUT), Interpro Zinc, LLC and ISCON Video Imaging, Inc. (ISCON).

Figure 3.9: Isonics Corporation Chart (Jan '07-May'07)

ERGO SCIENCE CORPORATION (ERGN)

Ergo Science Corporation is a business information provider serving key markets from defense and communications to travel and horticulture, using an increasing range of media, through its wholly owned subsidiary, Nexus Media Communications (Nexus Media). In addition to core magazine brands, Ergo also provides services, which include exhibitions, conferences, awards ceremony events and online services. The Company's business includes 13 trade names; 150 domain names; approximately 50 printed magazines and directories, and approximately 30 Events, including exhibitions, awards evenings and conferences.

Figure 3.10: Ergo Science Corporation Chart (Jan '07-May'07)

3.4 Simulations

CMGI Inc. (CMGI)

Figure 3.11: CMGI Inc. Simulation Chart (May '07- July '07)

Conexant Systems Inc. (CNXT)

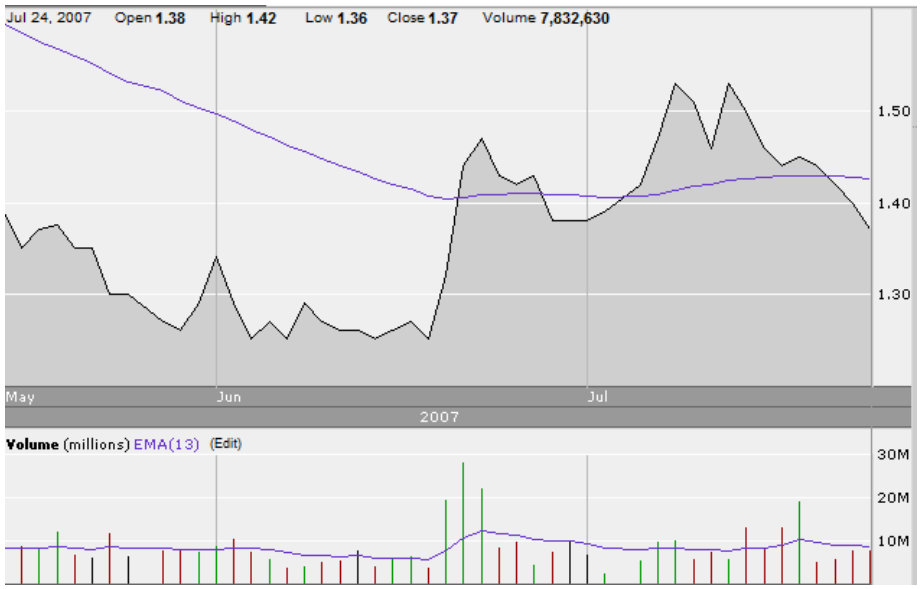


Figure 3.12: Conexant Systems Inc. Simulation Chart (May '07- July '07)

Starfield Resources Inc. (SRFDF)

Figure 3.13: Starfield Resources Inc. Simulation Chart (May '07- July '07)

Medra Corporation (MDRA)

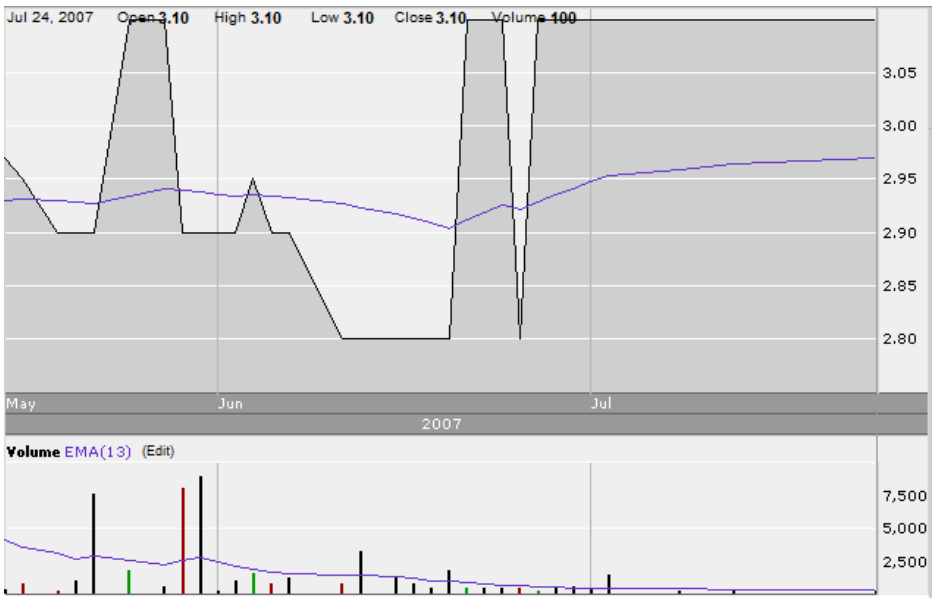


Figure 3.14: Medra Corporation Simulation Chart (May '07- July '07)

Ophthalmic Imaging Systems (OISI)

Figure 3.15: Ophthalmic Imaging Systems Simulation Chart (May '07- July '07)

Pacific Biometrics Inc. (PBME)

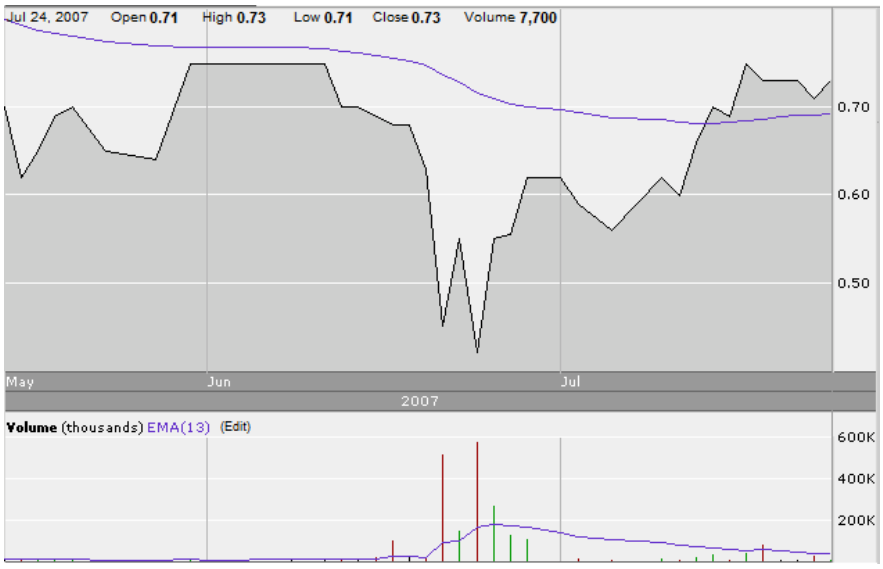


Figure 3.16: Pacific Biometrics Inc. Simulation Chart (May '07- July '07)

BPO Management Services Inc. (BPOM)

Figure 3.17: BPO Management Services Inc. Simulation Chart (May '07- July '07)

Questcor Pharmaceuticals Inc. (QSC)

Figure 3.18: Questcor Pharmaceuticals Inc. Simulation Chart (May '07- July '07)

Isonics Corporation (ISON)

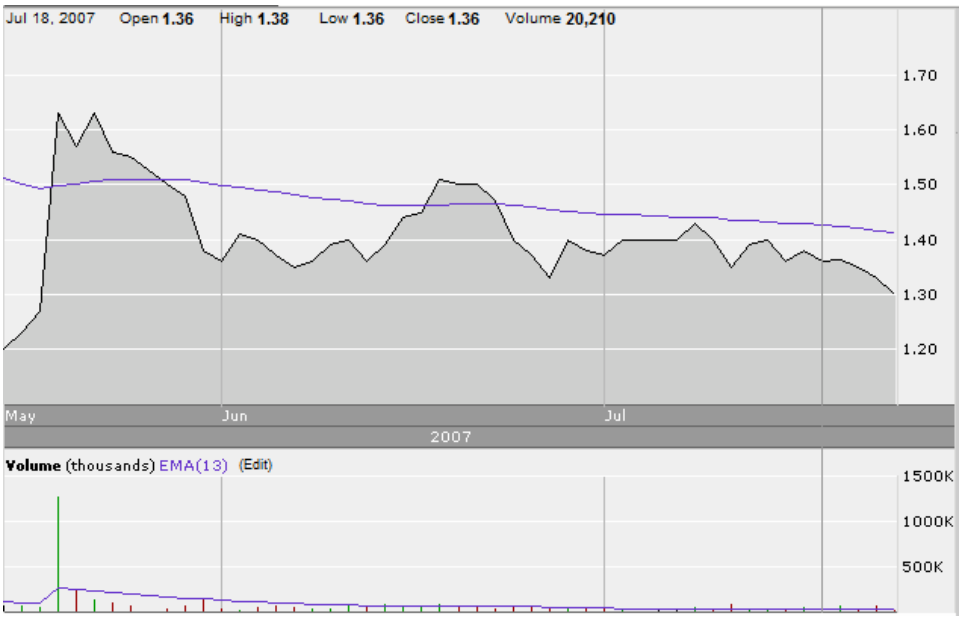


Figure 3.19: Isonics Corporation Simulation Chart (May '07- July '07)

Ergo Science Corporation (ERGN)

Figure 3.20: Ergo Science Corporation Simulation Chart (May '07- July '07)

Date	Symbol	Buy/ Sell	Price	Shares	Net Cost/ Proceeds	Profit/ Loss	Total Cash	Total Profit
05/15/07							10000	
05/15/07	CMGI	Buy	$2.38	300	$724		9276	
05/15/07	CNXT	Buy	$1.41	500	$715		8561	
05/15/07	SRFDF	Buy	$1.01	500	$515		8046	
05/15/07	MDRA	Buy	$2.97	300	$901		7145	
05/15/07	OISI	Buy	$2.25	300	$685		6460	
05/15/07	PBME	Buy	$0.70	500	$360		6100	
05/15/07	BPOM	Buy	$1.30	500	$660		5440	
05/15/07	QSC	Buy	$0.70	500	$360		5080	
05/15/07	ISON	Buy	$1.21	500	$615		4465	
05/15/07	ERGN	Buy	$0.75	500	$385		4080	
07/24/07	CMGI	Sell	$1.70	300	$500	(224)	4580	(224)
07/24/07	CNXT	Sell	$1.37	500	$675	(40)	5255	(264)
07/24/07	SRFDF	Sell	$1.34	500	$660	145	5915	(119)
07/24/07	MDRA	Sell	$3.10	300	$920	19	6835	(100)
07/24/07	OISI	Sell	$1.75	300	$515	(170)	7350	(270)
07/24/07	PBME	Sell	$0.73	500	$355	(5)	7705	(275)
07/24/07	BPOM	Sell	$0.90	500	$440	(220)	8145	(495)
07/24/07	QSC	Sell	$0.39	500	$185	(175)	8330	(670)
07/24/07	ISON	Sell	$1.30	500	$640	25	8970	(645)
07/24/07	ERGN	Sell	$0.85	500	$415	30	9385	(615)

Figure 3.21: Penny Stock Simulation Table

3.5 Results for Penny Stock Trading

My results from the penny stock simulation portion of the project were neither stellar nor horrible. With my definition of a penny stock having a price at the time of purchase of less than $3.00 allowed me to research a broad range of companies in different sectors. With this being my first experience with the stock market I was a little reluctant to frequently buy and sell these stocks as I was trying to get a feel of what the market was all about. All of the stocks were purchased on the 15th of May 2007 and the number of shares that were purchased from each company was dependent on the price of the stock at that time. For example at the time of purchase the price for CMGI was $2.38.

This price I thought was rather high for my definition and did not feel comfortable enough to invest a large amount so three hundred shares was purchased. On the other hand CNXT had a price of $1.41 which I thought was more reasonable and as a result five hundred shares were purchased.

As all of the stocks were purchased at the same date they were all sold at the same date accordingly. The date of their sale was the 24th of July 2007. Six out of the ten penny stocks that were chosen ended up in a loss. With a starting amount of $20,000 USD to invest I was a little speculative of penny stocks and invested only$5920. My reasoning behind buying all the stocks at once and holding on to them was that since they were all relatively low priced compared to the other stocks chosen during the project, if they all flopped it would only end up in a total loss of $5920 at worst which was a risk I was willing to take. Thankfully this did not happen although the stock with the largest gain was SRFDF with a price jump of $0.33 which allowed for a profit of $145 which was rather small. The biggest hit to my portfolio came from CMGI where the stock price dropped $0.68 during the simulation and a corresponding loss of $224. Penny stock trading allowed for a total loss of $615. All in all the penny stock trading portion of the project was a good springboard for experience and knowledge in the market which allowed for more fruitful investments later in the project.

4. Fundamental Analysis

4.1 Introduction

The goals of analyzing a company's fundamentals are to find a stock's intrinsic value. The intrinsic value is basically the value at which you believe the stock is worth. If the intrinsic value is more than the current share price, your analysis is showing that the stock is worth more than its price and that is makes sense to buy the stock. There are a few different ways to acquire a stock's intrinsic value but all the strategies are the same: a company is worth the sum of its discounted cash flows. This means that a company is worth all of its future profits added together and these future profits must be discounted to account for the time value of money. This can be attained by the equation below.

$$DCF = \frac{CF_1}{(1+r)^1} + \frac{CF_2}{(1+r)^2} + \cdots + \frac{CF_n}{(1+r)^n}$$

CF = Cash Flow and r = discount rate (Weighted Average Cost of Capital)

Figure 4.1: Discounted Cash Flow Equation

The idea of discounting cash flows seems like a great idea in theory but there is problem when it comes to practicing it. One of the challenges is determining how far into

the future the investor should forecast cash flows. There is also a problem with projecting far into the future as that there will be different phases when the company will grow and that needs to be accounted for. (Wyss, 2001)

Prior- year cash flow	The theoretical amount that the shareholders could take from the company the previous year
Growth Rate	The rate at which the owner's earnings are expected to grow for the next five years
Cash Flow	The theoretical amount that shareholders would get if all the company's profits were distributed to them
Discount Factor	The number that brings the future cash flows back to year zero.
Discount per year	The cash flow multiplied by the discount factor.
Cash flow in year five	The amount the company could distribute to shareholders in year five.
Capitalization rate	The denominator in Figure 3.1
Value at the end of year five	The value of the company in five years.
Discount factor at the end of year five	The discount factor that converts the value of the firm in year five to the present value.
PV of residual value	The present value of the firm in year five.

Figure 4.2: Fundamental Analysis Variables

The figure above shows us the different variables that are used in calculating cash flow. Unfortunately there is no easy way to measure it. The only natural cash flow from a public company to its shareholders is a dividend and the dividend discount model (DDM) values a company based on its future dividends. However, a company does not pay out all of its profits in dividends and many profitable companies don't pay dividends at all.

When this occurs some valuation options include analyzing net income, free cash flow and other financial measures of growth and value. There are advantages and disadvantages to using any of these values to get a look at a company's intrinsic value. Regardless of the model used, the basic theory of fundamental analysis is cash flow analysis.

4.2 Strategies and Goals

My goals for this portion of the project were to perform an extensive amount of research on the companies that would be chosen as this was the cornerstone of the stock selection process. Based on my research of public earnings reports I came to the conclusion that communications was the best sector for this method of investment. I paid close attention to the year to date graphs of these companies as well as the graphs from previous years. I looked at those to see if there was a quarterly pattern to their price fluctuations or any other warning signs that I should be aware of. Earnings reports and earnings statements were my main focus during this part as this is the basis of fundamental analysis. Each of the company's first and second quarter reports were researched and decisions on whether to buy the company's stock were based on these reports. Also reached was prior year cash flow and growth rate as these factors were also taken into consideration. (Gardner, 1996)

My strategy during this time was very different than the one used in the penny stock simulation. The old saying of buying low and selling high was my main rule for this portion of the project. Another goal of mine was to minimize loss as much as possible

especially after the poor showing of the companies I chose in the penny stocks. After having a little more experience in the market and due to the high prices of these stocks, I was not reluctant to buy and sell as I chose fit. The amount of shares that were purchased was not based on the stock's price but rather on how I thought the company would perform over the simulation. The simulation began on the 11th of June 2007 and lasted until the 16th of August 2007.

4.3 Company Profiles

CISCO SYSTEMS INC (CSCO)

Cisco Systems, Inc. designs, manufactures and sells Internet protocol (IP)-based networking and other products related to the communications and information technology industry, and provides services associated with these products and their use. It provides a line of products for transporting data, voice and video within buildings, across campuses and around the world. Its products, which include primarily routers, switches and products that the company refers to as its advanced technologies, are installed at enterprises, public institutions, telecommunications companies, commercial businesses and personal residences. The company conducts its business globally and is managed geographically in five segments: the United States and Canada; European Markets; Emerging Markets; Asia Pacific, and Japan.

Figure 4.3: Cisco Systems Inc. Chart (Jan '07-June'07)

CABLEVISION SYSTEMS CORPORATION (CVC)

Cablevision Corporation (Cablevision) is a cable operator in the United States that operates cable programming networks, entertainment businesses and telecommunications companies. As of December 31, 2006, the company served approximately 3.1 million basic video subscribers in and around the New York City metropolitan area. Through its wholly owned subsidiary, Rainbow Media Holdings LLC, Cablevision owns interests in and manages numerous national and regional programming networks, the Madison Square Garden sports and entertainment businesses, and cable television advertising sales companies. Through Cablevision Lightpath, Inc., its wholly owned subsidiary, the company provides telephone services and Internet access to the business market. The company operates in three segments: Telecommunications Services, Rainbow and Madison Square Garden.

Figure 4.4: Cablevision Corporation Chart (Jan '07-June'07)

DOW JONES & COMPANY INC (DJ)

Dow Jones & Company, Inc. is a provider of global business and financial news, information and insight through multiple channels of media. In addition to The Wall Street Journal and its international and online editions, the company publishes the print and online editions of Barron's, Dow Jones Newswires, Dow Jones Indexes and MarketWatch.com. It also provides news and information of general interest to local communities throughout the United States through its Ottaway group of local media, formerly known as community media. The company is a co-owner with Hearst of SmartMoney, and it also provides news content to CNBC television operations and radio stations in the United States. The Company's segments include consumer media and enterprise media, and local media. In December 2006, Dow Jones & Company, Inc.

acquired the remaining 50% interest in Factiva LLC (Factiva). In May 2007, the Company acquired eFinancialNews Holdings Ltd.

Figure 4.5: Dow Jones & Company Chart (Jan '07-June'07)

VERIZON COMMUNICATIONS (VZ)

Verizon Communications Inc. provides communications services. Verizon has two segments: Wireline and Domestic Wireless. The company's Wireline business provides telephone services, including voice, network access and nationwide long-distance services, broadband video and data services, and other communications products and services globally in 150 countries. Its Wireline business also owns and operates one of the global internet protocol (IP) networks. The company's domestic wireless business, operating as Verizon Wireless, provides wireless voice and data products and services across the United States using domestic wireless networks. During the year ended

December 31, 2006, Verizon acquired MCI, Inc. In March 2007, Verizon completed the sale of its 52% interest in Telecomunicaciones de Puerto Rico, Inc.

Figure 4.6: Verizon Communications Chart (Jan '07-June'07)

AT&T INC COM (T)

AT&T Inc. is a holding company whose subsidiaries and affiliates operate in the communications services industry both domestically and internationally providing wire line and wireless telecommunications services and equipment, as well as directory advertising and publishing services. The services and products offered by the company include local exchange services, wireless communications, long-distance services, data/broadband and Internet services, telecommunications equipment, managed networking, wholesale services, directory advertising and publishing. AT&T operates in four segments: Wireline, wireless, directory and other. On December 29, 2006, AT&T acquired BellSouth. With the BellSouth acquisition, the company acquired BellSouth's

40% interest in AT&T Mobility LLC (AT&T Mobility), resulting in 100% ownership of AT&T Mobility.

Figure 4.7: AT&T Inc. Chart (Jan '07-June'07)

4.4 Simulations

Dow Jones Simulation (DJ)

Figure 4.8: Dow Jones Simulation Chart (June '07-August '07)

Cablevision Simulation (CVC)

Figure 4.9: Cablevision Simulation Chart (June '07-August '07)

Cisco Systems (CSCO)

Figure 4.10: Cisco Systems Simulation Chart (June '07-August '07)

AT&T (T)

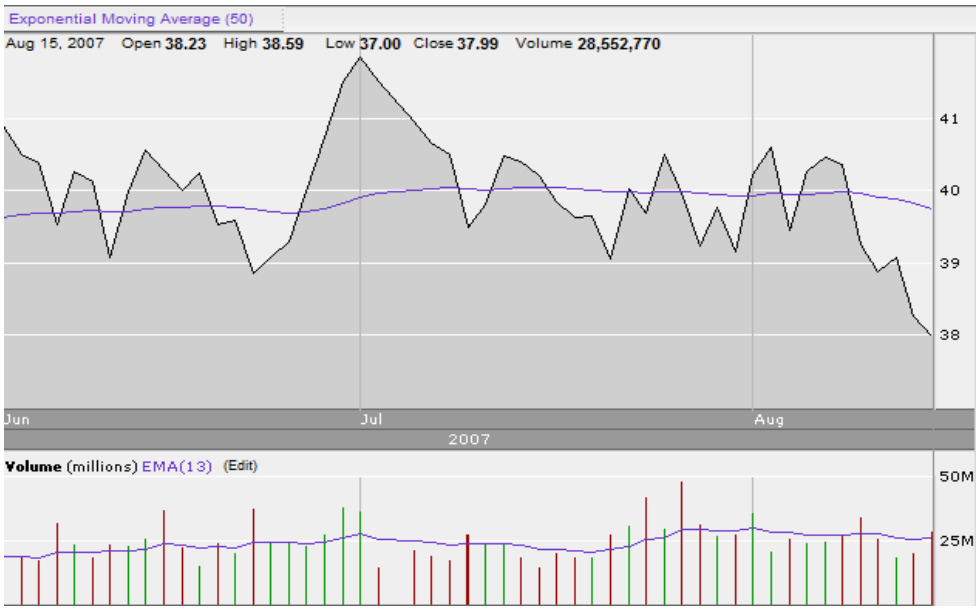


Figure 4.11: AT&T Simulation Chart (June '07-August '07)

Verizon (VZ)

Figure 4.12: Verizon Simulation Chart (June '07-August '07)

Date	Symbol	Buy/ Sell	Price	Shares	Net Cost/ Proceeds	Profit/ Loss	Total Cash	Total Profit
06/11/07							50000	
06/11/07	CSCO	Buy	26.32	500	13170		36830	
06/25/07	CSCO	Sell	27.03	500	13505	335	50335	335
06/26/07	T	Buy	39.29	600	23584		26771	
07/03/07	T	Sell	41.50	600	24800	1216	51551	1551
06/26/07	DJ	Buy	28.77	300	8641		42910	
07/12/07	DJ	Sell	57.60	300	17270	8629	60180	10180
06/26/07	CVC	Buy	35.12	500	17570		42610	
07/19/07	CVC	Sell	38.22	500	19100	1530	61710	11710
07/19/07	VZ	Buy	42.26	500	21140		40570	
08/16/07	VZ	Sell	40.23	500	20105	(1035)	60675	10675
07/19/07	DJ	Buy	55.40	500	27800		32875	
08/16/07	DJ	Sell	58.50	500	29240	1440	62115	12115
07/19/07	CSCO	Buy	29.94	800	23962		38153	
08/16/07	CSCO	Sell	29.30	800	23430	(532)	61583	11583

Figure 4.13: Fundamental Analysis Simulation Table

4.5 Results for Fundamental Analysis Trading

The results for fundamental analysis trading were quite surprising. The sectors that I believed were to perform well did to some extent. I relied heavily on the communications sector of the market with the thought that since cell phones, PDA's, Blackberries were the craze that these companies were sure to rise. On the other hand the one company that I did invest in another sector outperformed them all.

The first time that Cisco Systems was bought the stock's price jumped from a purchase price of $26.32 and was sold at $27.03. This was an increase of $0.71 and returned a profit of $335. Cisco was sold when it was because I believed that the company would lose value soon as other companies in the communications sector began to fall as well. AT&T was bought the next day at a price of $39.29 at a total of 600 shares. I invested more into this stock because I believed that with its price as low as it was that this opportunity would not last very long and I wanted to get a large profit. The stocks were then sold at price of $41.50 which led to a profit of $1216 on the trade. Cablevision was purchased next and although the company's stock price had risen dramatically since the year began, there was a feeling that they were in for another price jump. The stock was held for approximately three weeks when I believed that there was not going to be a drastic gain in the stock's price and was sold for a profit of $1530. The two times that my portfolio took a loss came first with Verizon. Five hundred shares were purchased at $42.46 and as the stock progressed downward I decided to cut my losses and sell at $40.23 and took a loss of $1035. The second time Cisco was purchased another loss was recorded on my portfolio. Not as big as Verizon although there was a loss of $532.

The biggest surprise came from Dow Jones which drastically improved my portfolio. The stock was bought then sold twice over the simulation. The first time the company was bought at $28.77 and sold at $57.60. This led to a profit of $8629. The second time it was purchased at $55.40 and sold at $58.50 which allotted a profit of $1440.

5. Qualitative Analysis

5.1 Introduction

We have seen in the previous section that fundamental analysis has a very wide scope. Valuing a company involves not only calculations and predicting cash flows but also looking at the general, more subjective qualities of a company. In this section I will discuss the qualitative factors used in stock picking.

The backbone of any successful company is strong management. The people at the top ultimately make the decisions that hold the future of the company. Smart investors know the CEO (chief executive officer), CFO (chief financial officer), COO (chief operating officer) and the CIO (chief information officer) of their companies. Once the investor knows who the management team is, the next question should be their backgrounds. A management team consisting of people who come from completely unrelated industries should raise questions. If the CEO of a newly-formed mining company previously worked in the industry, ask yourself whether he or she has the necessary qualities to lead the company to success. (Gardner, 1996)

Knowing how a company's activities will be profitable is fundamental to determining the worth of an investment. If an investor is not sure how their company will make money there are going to be in a position for portfolio loss. One of the biggest lessons taught by the dotcom bust of the late '90s is that not understanding a business model can have dire consequences. Many people had no idea how the dotcom companies were making money, or why they were trading so high. In fact, these companies weren't making any money, it was thought that their growth potential to be enormous. This led to

overzealous buying based on a herd mentality, which in turn led to a market crash. But not everyone lost money when the bubble burst. Warren Buffett didn't invest in high-tech primarily because he didn't understand it. Although he was criticized for this during the boom, it saved him billions of dollars in the ensuing dotcom fallout. The intelligent investor should a solid understanding of how a company actually generates revenue in order to evaluate whether management is making the right decisions.

Aside from having a general understanding of what a company does, you should analyze the characteristics of its industry, such as its growth potential. A mediocre company in a great industry can provide a solid return, while a mediocre company in a poor industry will likely give your portfolio a loss. (Graham, 1940) A valuable brand reflects years of product development and marketing. Take for example one of the most popular brands in the world, Coca-Cola. Many estimate that the intangible value of Coke's brand name is in the billions of dollars. Massive corporations such as Procter & Gamble rely on hundreds of popular brand names like Tide, Pampers, Head & Shoulders and Colgate. Having a portfolio of brands diversifies risk because the good performance of one brand can compensate for the ones who do not perform as expected. (Fontallis, 2001)

Assessing a company from a qualitative standpoint and determining whether you should invest or not, are as important as looking at sales and earnings. This strategy may be one of the simplest, but it is also one of the most effective ways to evaluate a potential investment.

5.2 Strategies and Goals

My main strategies in this form of investment were to have diversification and at the same time to select companies that I believed were at the top of their sector. These sectors included clothing, entertainment, electronics, news media, beverages, and computers. With this broad range of companies chosen, I believed that this would minimize risk as the theory of diversification's main selling point is that if one sector is doing badly another one must be doing well. (Graham, 1973)

The companies chosen were researched with the main selection factors of qualitative analysis. Strong leadership was a key priority to me. Companies with CEO's that have taken their products to new heights and have dominated their market caught my immediate attention. Microsoft was one of them. With years of domination over other software companies, I believed that after their release of their new operating system Windows Vista would be in for a big gain. Also companies that were reaching toward new markets around the world also were paid attention to as that was a positive quality. Sony was a company I believed would fair very well. With their main focus being electronics, over the years Sony has moved into the entertainment sector when they opened their own production company. Also with the release of their newest game console the PLAYSTATION 3, earnings jumped. Although in qualitative analysis the investor should not pay much attention to earnings reports and cash flow statements, it was hard to delete those factors from my mind when making selections. Even though a company may have strong leadership, this does not always guarantee a positive investment.

The Coca Cola Corporation was an easy selection as their main product is found almost anywhere in the world. The clothing sector was a new one to me as the companies selected Gap Inc and Jones Apparel traditionally do very well over their sector counterparts. Gap which also owns Old Navy and banana republic showed strong leadership as the number of their stores continues to grow all over the country.

5.3 Company Profiles

CITIGROUP INC (C)

Citigroup Inc. (Citigroup) is a diversified global financial services holding company whose businesses provide a range of financial services to consumer and corporate customers. The Company is a bank holding company. Its segments include Global Consumer Group, Corporate and Investment Banking (CIB), Global Wealth Management and Alternative Investments (AI). Citigroup has more than 200 million customer accounts and does business in more than 100 countries. In May 2007, Citigroup acquired Egg Banking plc, from Prudential PLC. As of May 9, 2007, it held a 56% stake in Nikko Cordial Corporation. In May 2007, CIT Group Inc. acquired the U.S. Business Technology Finance unit of Citigroup. In July 2007, Citigroup acquired Old Lane Partners, L.P. and Old Lane Partners, GP, LLC. In August 2007, it acquired The BISYS Group, Inc.

Figure 5.1: Citigroup Inc. Chart (Jan '07-May'07)

WALT DISNEY CO (DIS)

The Walt Disney Company, together with its subsidiaries, is a diversified worldwide entertainment company with operations in four segments: Media Networks, Parks and Resorts, Studio Entertainment and Consumer Products. On May 5, 2006, the Company acquired Pixar, a digital animation studio. On August 1, 2007, the Company acquired Club Penguin Entertainment, Inc. On February 1, 2007, the Company acquired NASN Limited. In December 2007, the Company announced that The Walt Disney Internet Group has acquired iParenting Media. iParenting's content and services will be integrated into Disney's network of family targeted sites.

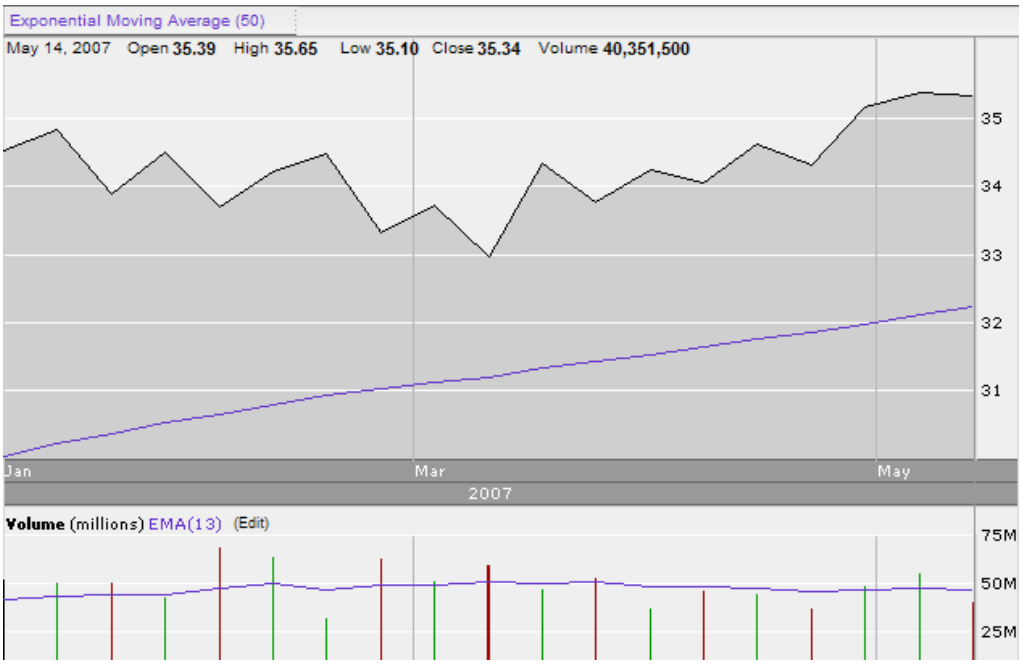


Figure 5.2: Walt Disney Company Chart (Jan '07-May'07)

GENERAL ELECTRIC CO (GE)

General Electric Company (GE) is a diversified industrial corporation. It is engaged in developing, manufacturing and marketing a variety of products for the generation, transmission, distribution, control and utilization of electricity. During the year ended December 31, 2006, GE completed the sales of its Advanced Materials business by Industrial and GE Life, its United Kingdom-based life insurance business. During 2006, GE acquired IDX Systems Corporation, ZENON Environmental Inc. and Biacore International AB. On March 15, 2007, GeoEye Inc. acquired M.J. Harden Associates, Inc., from GE. In May 2007, Smiths Group PLC sold its aerospace businesses to GE. In May 2007, STV Partners Corporation, the Japanese unit of GE, acquired a 97% interest in Sanyo Electric Credit Co., LTD. In October 2007, GE Healthcare, a unit of GE, acquired Dynamic Imaging, LLC.

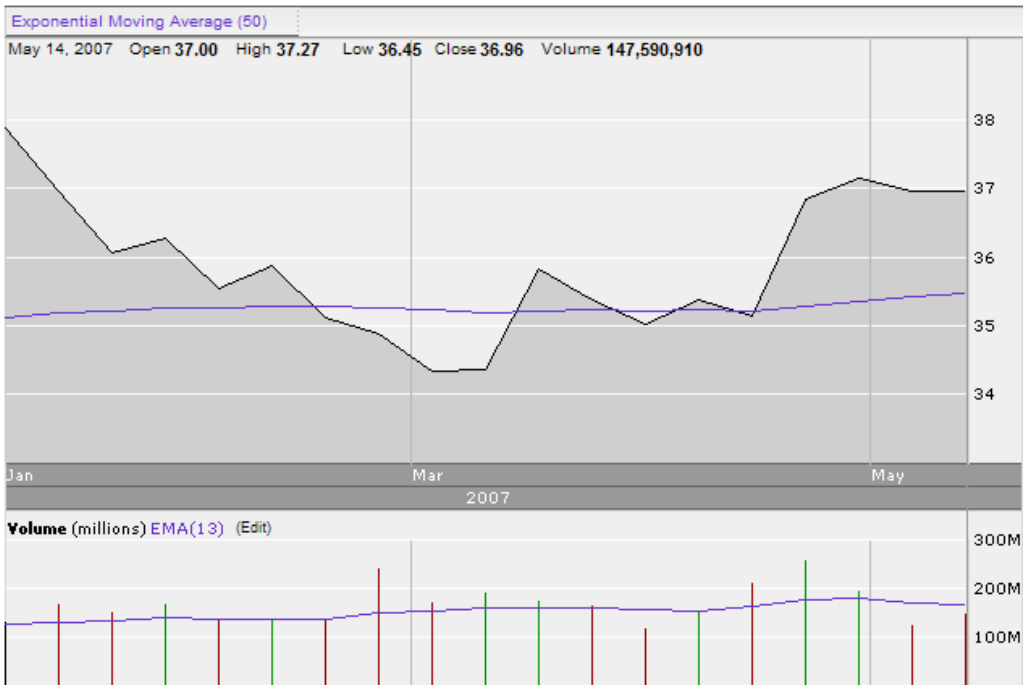


Figure 5.3: General Electric Chart (Jan '07-May'07)

NEW YORK TIMES CO (NYT)

The New York Times Company is a diversified media company, including newspapers, Internet businesses, television and radio stations, and investments in paper mills and other investments. During the year ended December 31, 2006, the Company operated in two segments: the News Media Group and About.com. On March 18, 2005, it acquired About.com, an online source for original consumer information and advice. On August 28, 2006, the Company completed the acquisition of Baseline StudioSystems, an online database and research service for information on the film and television industries, from Hollywood Media Corp. In May 2007, the Company closed the sale of its Broadcast Media Group to Oak Hill Capital Partners.

Figure 5.4: New York Times Chart (Jan '07-May'07)

SONY CORP (SNE)

Sony Corporation (Sony) is the ultimate parent company of the Sony Group. The Company is primarily focused on Electronics, such as audiovisual/ information technology products & components; Game, such as PlayStation; Entertainment, such as motion pictures and music, and Financial Services, such as insurance and banking sectors. It has five segments: Electronics, Games, Pictures, Financial Services and All Other. In the Electronics segment, it develops designs, manufactures and sells various kinds of electronic equipment, instruments and devices for consumer and professional markets. In the Games segment, Sony Computer Entertainment Inc. develops, produces, markets and distributes PlayStation Portable (PSP), PlayStation 2 and the PLAYSTATION 3 computer entertainment systems. In the Entertainment segment, operations encompass motion picture, television and home entertainment production, acquisition and distribution; television broadcasting, and digital content creation.

Figure 5.5: Sony Corp. Chart (Jan '07-May'07

GAP INC (GPS)

The Gap, Inc. is a global specialty retailer operating retail and outlet stores selling casual apparel, accessories and personal care products for men, women and children under the Gap, Old Navy, banana republic, Piperlime and Forth & Towne brands. The Company operates stores in the United States, Canada, the United Kingdom, France, Ireland and Japan. The Gap, Inc. also has franchise agreements with unaffiliated franchisees to operate Gap or Gap and banana republic stores in Singapore, Malaysia, United Arab Emirates, Kuwait, Qatar, Bahrain, Oman, Indonesia and Korea. In addition, the Company's United States customers may shop online at www.gap.com, www.bananarepublic.com, www.oldnavy.com and www.piperlime.com. As of February 3, 2007, The Gap, Inc. operated a total of 3,131 store locations.

Figure 5.6: Gap Inc. Chart (Jan '07-May'07)

JONES APPAREL GROUP INC (JNY)

Jones Apparel Group, Inc. is a designer, marketer and wholesaler of branded apparel, footwear and accessories. The Company also markets directly to consumers through its chain of specialty retail and value-based stores. The Company's brands include Jones New York, Nine West, Anne Klein, Gloria Vanderbilt, Kasper, Bandolino, Easy Spirit, Evan-Picone, l.e.i., Energie, Enzo Angiolini, Joan & David, Mootsies Tootsies, Sam & Libby, Napier, Judith Jack, Albert Nipon and Le Suit. The Company also markets costume jewelry under the Givenchy brand licensed from Givenchy Corporation and footwear under the Dockers Women brand licensed from Levi Strauss & Co. In September 2007, the Company completed the sale of its indirect wholly owned subsidiary, Barneys New York, Inc.

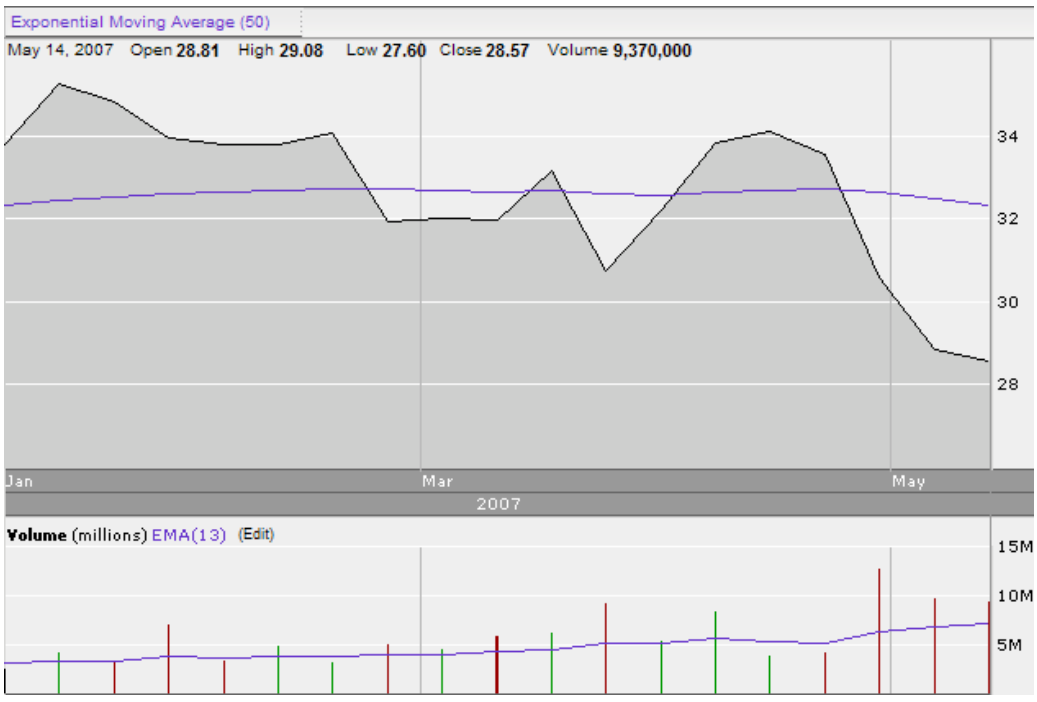


Figure 5.7: Jones Apparel Inc. Chart (Jan '07-May'07)

COCA COLA CO (KO)

The Coca-Cola Company manufactures, distributes and markets non-alcoholic beverage concentrates and syrups. It manufactures beverage concentrates and syrups, which it sells to bottling and canning operations, fountain wholesalers and some fountain retailers, as well as some finished beverages, which it sells primarily to distributors. The Company owns or licenses more than 400 brands, including diet and light beverages, waters, juice and juice drinks, teas, coffees, and energy and sports drinks. It also has ownership interests in numerous bottling and canning operations. Finished beverage products bearing the Company's trademarks are sold in more than 200 countries. As of December 31, 2006, the Company operated through eight segments: Africa; East, South Asia and Pacific Rim; European Union; Latin America; North America; North Asia, Eurasia and Middle East; Bottling Investments, and Corporate. In June 2007, the Company completed the acquisition of Energy Brands, Inc., known as Glaceau.

Figure 5.8: Coca Cola Corp. Chart (Jan '07-May'07)

MICROSOFT CORP (MSFT)

Microsoft Corporation develops, manufactures, licenses and supports a range of software products for computing devices. The Company software products include operating systems for servers, personal computers (PCs) and intelligent devices, server applications for distributed computing environments, information worker productivity applications, business solution applications, high-performance computing applications and software development tools. It provides consulting and product support services, and trains and certifies computer system integrators and developers. The Company sells the Xbox 360 video game console, the Zune digital music and entertainment device, PC games and peripherals. Online offerings are delivered through its Windows Live, Office Live, and MSN portals and channels. It has five segments: Client, Server and Tools, the Online Services Business, the Microsoft Business Division, and the Entertainment and Devices Division. In December 2007, the Company acquired Multimap.

Figure 5.9: Microsoft Corp. Chart (Jan '07-May'07)

5.4 Simulations

Citigroup Inc. (C)

Figure 5.10: Citigroup Inc. Simulation Chart (June '07-August'07)

The Walt Disney Company (DIS)

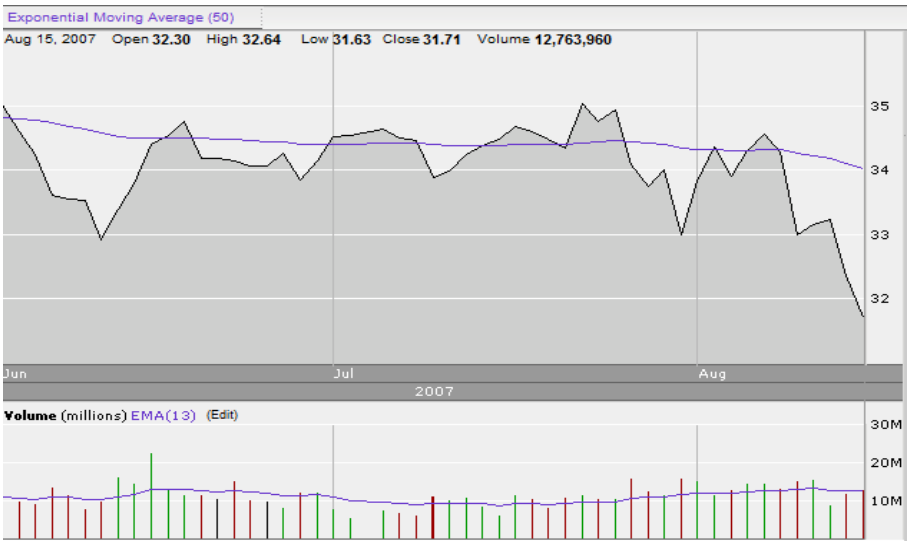


Figure 5.11: Walt Disney Company Simulation Chart (June '07-August'07)

General Electric (GE)

Figure 5.12: General Electric Simulation Chart (June '07-August'07)

New York Times (NYT)

Figure 5.13: New York Times Simulation Chart (June '07-August'07)

Sony Corporation (SNE)

Figure 5.14: Sony Corporation Simulation Chart (June '07-August'07)

Gap Inc. (GPS)

Figure 5.15: Gap Inc. Simulation Chart (June '07-August'07)

Jones Apparel Group (JNY)

Figure 5.16: Jones Apparel Group Simulation Chart (June '07-August'07)

Coca Cola Corporation (KO)

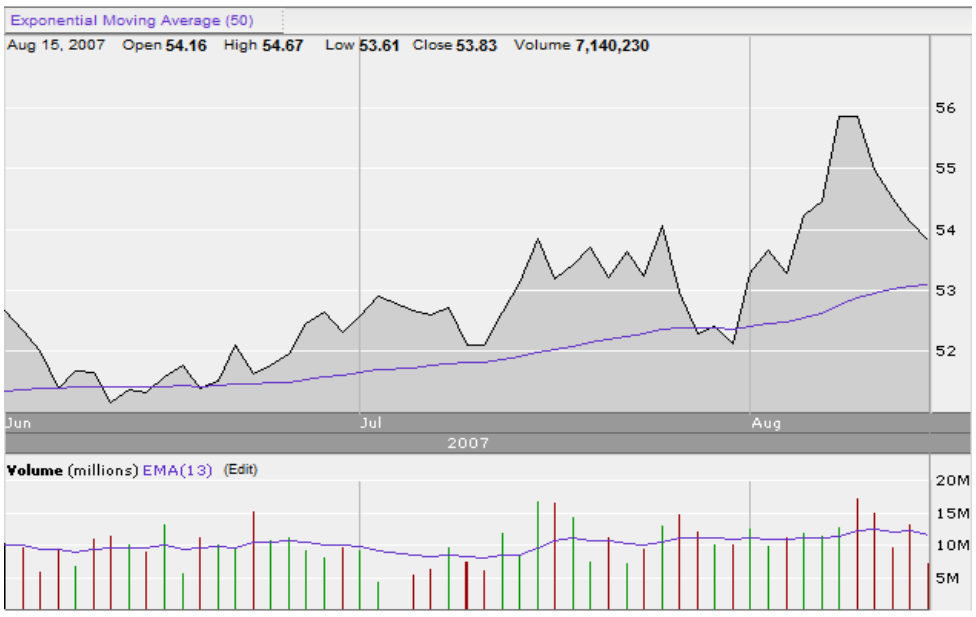


Figure 5.17: Coca Cola Corp. Simulation Chart (June '07-August'07)

Microsoft (MSFT)

Figure 5.18: Microsoft Simulation Chart (June '07-August'07)

Date	Symbol	Buy/ Sell	Price	Shares	Net Cost/ Proceeds	Profit/ Loss	Total Cash	Total Profit
							40000	
6/1/2007	GE	Buy	37.68	200	7546		32454	
6/1/2007	NYT	Buy	26.07	200	5224		27230	
6/1/2007	JNY	Buy	25.53	200	5136		22094	
6/1/2007	SNE	Buy	56.90	200	11390		10704	
6/1/2007	KO	Buy	52.43	200	10496		208	
6/13/2007	SNE	Sell	54.30	200	10850	(540)	11058	(540)
6/20/2007	NYT	Sell	25.78	200	5056	(168)	16114	718)
6/27/2007	GE	Sell	38.09	200	7608	62	23722	(646)
7/2/2007	JNY	Sell	28.33	200	5616	480	29338	(166)
7/2/2007	MSFT	Buy	29.49	200	5908		23430	
7/2/2007	C	Buy	51.01	200	10212		13218	
7/2/2007	GPS	Buy	19.13	200	3836		9382	
7/16/2007	C	Sell	52.97	200	10584	382	19966	216
8/10/2007	KO	Sell	56.13	200	11216	720	31182	936
8/10/2007	MSFT	Sell	29.05	200	5800	(108)	36982	828
8/10/2007	GPS	Sell	16.87	200	3364	(462)	40346	346

Figure 5.19: Qualitative Analysis Simulation Table

5.5 Results

As in the penny stock simulation part of this project, my performance in qualitative analysis stock market trading was neither stellar nor terrible. Although some of the companies stock prices were high, my objective was to manage the risk that is associated with stock market trading. Because of my caution only two hundred shares of each company's stock was purchased. Some of the companies which I believed were to perform well did while others did not perform up to par.

The first set of companies whose stock was purchased was General Electric, New York Times, Jones New York, Sony, and Coca Cola. Out of these, Coca Cola

outperformed the rest. With a purchase price of $52.43, I held on to the stock as long as I could without risking my portfolio and was sold at $52.97. This provided for a profit of $720. Jones New York Apparel also performed to my expectations, providing me with a profit of $480. The biggest hit to my portfolio in this method of trading occurred with Sony. Purchased at a price of $54.30, the stock began to fall within the next few days. Trying not to cut and run and losing money, I decided to hold on for a little longer to see where it would lead. Unfortunately this did not help as the stock continued to steadily fall and was eventually sold at a price of $54.30 resulting in a loss of $540. Another loss came with the New York Times. Not as bad as Sony, this provided for a loss of $168.

In the second round of stock purchasing, Gap, Microsoft and Citicorp were bought. Citicorp was purchased at a price of $51.01 and was sold rather quickly at a price of $52.97. This proved to be a smart move as the stock's price declined over the next weeks. Microsoft and Gap did not perform well and as a result Microsoft provided for a loss of $108, and Gap with a loss of $462.

6. Analysis and Conclusion

Now at the end of the entire simulation process it is time to take a step back and look at the big picture of the project. After examining the different methods of stock market investment, the ones were that were chosen were because I felt that these methods would help me as a future investor. The goals at the beginning of this project was to provide a person without knowledge of the forms of financial investment a solid background so that they may be able to make investments of their own as well as see the trends and factors that affect the market in today's world. The biggest factors in our market today are the price of a barrel of oil and interest rates. With this price continuously rising, it has an effect on almost everything from airline prices to the price of groceries and as a result some of the companies I invested in may have been affected.

Among the three different strategies examined; penny stock trading, qualitative analysis and fundamental analysis it turns out that fundamental analysis was the most profitable. This in part is due to the fact that one company in that simulation, Dow Jones performed well beyond my wildest expectations and it showed with a profit of $8629. The overall performance of the three investment strategies can be seen at the end of this chapter as well as the buy/sell charts for the other stocks.

My experience in the project was a positive one. The experience that I learned throughout the simulation process has informed me to become a better investor. Like the old saying goes, "It takes money to make money." However if one is not careful that same person can see themselves losing their money. Success in the stock market takes time, patience and lots of research. The biggest lesson I learned from this

project is that an investor does not buy stock in a company; they invest in that company's products, beliefs, and ultimately success. Without proper research there is little probability that an investor will see the fruits of their money. This project has sparked such interest in me that I myself have begun to invest in the market. Slowly but surely, I believe that with proper diligence and work that I can be a success in the stock market.

Method	Start Cash	Finish Cash	Profit	% Change
Penny Stocks	10000	9385	(615)	6.15
Fundamental	50000	61583	11583	23.16
Qualitative	40000	40346	346	0.87

Figure 6.1: Overall Performance Table

Date	Symbol	Buy/ Sell	Price	Shares	Net Cost/ Proceeds	Profit/ Loss	Total Cash	Total Profit
06/11/07							50000	
06/11/07	CSCO	Buy	26.32	500	13170		36830	
06/25/07	CSCO	Sell	27.03	500	13505	335	50335	335
06/26/07	T	Buy	39.29	600	23584		26771	
07/03/07	T	Sell	41.50	600	24800	1216	51551	1551
06/26/07	DJ	Buy	28.77	300	8641		42910	
7/12/07	DJ	Sell	57.60	300	17270	8629	60180	10180
06/26/07	CVC	Buy	35.12	500	17570		42610	
7/19/07	CVC	Sell	38.22	500	19100	1530	61710	11710
7/19/07	VZ	Buy	42.26	500	21140		40570	
08/16/07	VZ	Sell	40.23	500	20105	(1035)	60675	10675
7/19/07	DJ	Buy	55.40	500	27800		32875	
08/16/07	DJ	Sell	58.50	500	29240	1440	62115	12115
7/19/07	CSCO	Buy	29.94	800	23962		38153	
08/16/07	CSCO	Sell	29.30	800	23430	(532)	61583	11583

Figure 6.2: Fundamental Analysis Table

Date	Symbol	Buy/ Sell	Price	Shares	Net Cost/ Proceeds	Profit/ Loss	Total Cash	Total Profit
05/15/07							10000	
05/15/07	CMGI	Buy	$2.38	300	$724		9276	
05/15/07	CNXT	Buy	$1.41	500	$715		8561	
05/15/07	SRFDF	Buy	$1.01	500	$515		8046	
05/15/07	MDRA	Buy	$2.97	300	$901		7145	
05/15/07	OISI	Buy	$2.25	300	$685		6460	
05/15/07	PBME	Buy	$0.70	500	$360		6100	
05/15/07	BPOM	Buy	$1.30	500	$660		5440	
05/15/07	QSC	Buy	$0.70	500	$360		5080	
05/15/07	ISON	Buy	$1.21	500	$615		4465	
05/15/07	ERGN	Buy	$0.75	500	$385		4080	
07/24/07	CMGI	Sell	$1.70	300	$500	(224)	4580	(224)
07/24/07	CNXT	Sell	$1.37	500	$675	(40)	5255	(264)
07/24/07	SRFDF	Sell	$1.34	500	$660	145	5915	(119)
07/24/07	MDRA	Sell	$3.10	300	$920	19	6835	(100)
07/24/07	OISI	Sell	$1.75	300	$515	(170)	7350	(270)
07/24/07	PBME	Sell	$0.73	500	$355	(5)	7705	(275)
07/24/07	BPOM	Sell	$0.90	500	$440	(220)	8145	(495)
07/24/07	QSC	Sell	$0.39	500	$185	(175)	8330	(670)
07/24/07	ISON	Sell	$1.30	500	$640	25	8970	(645)
07/24/07	ERGN	Sell	$0.85	500	$415	30	9385	(615)

Figure 6.3: Penny Stock Trading Table

Date	Symbol	Buy/ Sell	Price	Shares	Net Cost/ Proceeds	Profit/ Loss	Total Cash	Total Profit
							40000	
6/1/2007	GE	Buy	37.68	200	7546		32454	
6/1/2007	NYT	Buy	26.07	200	5224		27230	
6/1/2007	JNY	Buy	25.53	200	5136		22094	
6/1/2007	SNE	Buy	56.90	200	11390		10704	
6/1/2007	KO	Buy	52.43	200	10496		208	
6/13/2007	SNE	Sell	54.30	200	10850	(540)	11058	(540)
6/20/2007	NYT	Sell	25.78	200	5056	(168)	16114	718)
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8/10/2007	MSFT	Sell	29.05	200	5800	(108)	36982	828
8/10/2007	GPS	Sell	16.87	200	3364	(462)	40346	346

Figure 6.4: Qualitative Analysis Simulation Table

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