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Short Term Investment In Stocks

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An Interactive Qualifying Project

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By



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Abstract

This Intellectual Qualifying Project is dedicated to invest in stocks on the Internet on a short period of time, in order to determine if the Internet Market tools could fulfill all the expectations of the potential investors on the world. It's another objective of this Intellectual Qualifying Project to analyze the stocks bought with Financial oscillators and econometric analysis in order to determine certain behaviors and show the people that with these tools, its easy to make the right decision.

Acknowledgements

I will Like to thank all the people Involved with this IQP specially Professor Dalin Tang for his Understanding; Worcester Polytechnic Institute for the wonderful experience and knowledge that this IQP has taught me; my family for their persistence and knowledge; my friends for backing me up when I needed it; and a very special thanks to those on the ECIC (Economic Investigation Center) at ESPOL Guayaquil – Ecuador for their important help on more econometric and annalistic matters.

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Chapter 1 Introduction

The Stock market is a very interesting and not so complicated as many people think, is a tool used by millions of companies in order to gain capital from investors. This people so called investors “play” the stock market for a simple reason, to buy shares from these companies and share a piece of their success. But the market is a weapon with a double edge, for a time investors could gain millions of dollars in one day and loose it the next day, because no one is certain how will the market behave the next day. Many wealthy people have made fortunes “playing” the stocks and many people have lost theirs. So how can this relatively new tool named “the Internet Based trading” help ordinary individuals share a profit of the world’s most competitive companies?

My primary goal for this Intellectual Qualifying project is to research, test, and determine if it’s a reliable tool and to show how simple it is for anyone with the least stock market experience to try this web based tool and make a profit from it buying and selling shares from different companies. Why did I choose this IQP? Because I’ve always been interested in stocks and I want in the future to keep track of this incredible tool and be as financial

independent as I can, buying and selling stocks from different companies trying to be as honest as possible and always follow the ethic code of a good business man.

My second objective is to research on the market strategies available and online trading sites through a three week portfolio simulation. The best Internet trading sites that I chose to rely on for this project were:

- E*trade.....www.etrade.com
- Ameritrade.....www.ameritrade.com
- Eschwab.....www.eschwab.com
- Yahoo.....www.yahoo.com
- Quicken.....www.quicken.com

Some of these sites require a small fee to open an account as well as a social security number and Bank Routing Number, but they also share some information on quotes, years of technical experience, and important professional broker information and suggestions for free, these are critical for the small day trader like myself. These are very powerful tools that will help anyone become a professional investor and very wealthy easily.

Yesterday people used brokers to acquire and sell stock at the investor's wishes; these brokers also offered accurate information and investment advises of the market. In the past this system worked for brokers because they collected a fee for each trade, and it has also worked for the investors because they didn't have to worry about leveraging the trade themselves.

Today the online trading want to change this, brokers are still used today for their expertise in the trading business and because people just don't want to deal with this new tool and want to leave the job to these important people who know what their job is. But the online revolution offers everybody information on the market just as the brokers did in the past, so there is no need to call for a broker today in order to get information, graphs and new on the market because this information is available in millions of web pages. Using these tools for online trading, investors can keep track of their portfolios and make informed decisions about what to buy and sell, today is so easy to be and investor in any mayor company in the world.

But before anyone can trade online they have to recognize what types of stock there are out their on the market.

The stock market is composed of five different types of stocks, The first type are the Blue Chip stocks, this group consist of companies that are well

established, very strong, and have a large enough to have a global market. This companies stock are very much stable, their prices don't fluctuate a lot but are very expensive and in order to earn a profit from this companies, an individual must invest very heavily into their stocks.

The second issue stock is the next group of stock composed by companies that are smaller than the market monsters above, their price is cheaper and are nonetheless very well established as the blue chip companies. Companies that belong on the third group of stocks are companies that have a history for returning dividends to their investors. Their stock prices and size varies and are not as safe or stable as the other two groups above discussed.

Today many of the Technology and Information systems companies are gather beneath one group called growth stock or fourth type of stocks. These companies are smaller less established and relatively new that's why investors seek to buy stocks from these companies because of their hopes of future growth but not all of them grow positively.

The last group is the one called penny stocks; companies that fall within this category are small, very unstable, and very risky, but their price for a share is very cheap, but they are as well in demand by investors in hopes for a good future.

There are many more variables in the stock market; today even many professional brokers, investors, investment analysts, and even daily traders are still trying to figure out what variable and how could they predict the stock market; but until then The stock market is unpredictable and could easily destroy fortunes in a single day.

For this Intellectual Qualifying Project, I invested \$100,000 divided in \$10,000 per company within these five groups in a period of three weeks beginning on Monday June 11th and ending on Friday 29th. But before I can begin describing how this investment plan worked I must explain what tools did I use to monitor and “play” the stocks.

Chapter 2 Internet Trading Tools

2.1 Ameritrade

2.1.1 Monitoring the Stocks

Ameritrade offers a great deal of information to the user on the web, it has links to different articles of any kind of information about the company the user is doing research. Ameritrade sources of news information are: PR Newswire, Businesswire, and Dow Jones News.

Ameritrade also provides the user with vital information like quarterly or annual income statements, charts, and the possibility to compare to other companies within the industry. Ameritrade gives the user information on key ratios and vital statistics which are vital for the companies performance.

The only draw back to Ameritrade is that it only offers its information to its customers. In order to be a customer of ameritrade one must pay a fee when one wants to access this information.

Like most internet trading tools, Ameritrade provides means for obtaining, tracking and trading stocks and portfolios.

2.1.2 Online Trading

Ameritrade requires a fee of \$8.00 for each trade, and a minimum equity of \$2,000.00 in order to open an account. An additional \$5.00 allows the customer to place a stop or limit order on a scheduled transaction.

2.1.3 Ameritrade's Experience

Ameritrade is an excellent choice for those who are new to the Internet trading business. While Ameritrade may not offer the most expansive research tools, it does offer a great deal of information and much lower costs, in fact Ameritrade is the lowest of all the internet competitors in the business. When taken as part of a group of tools for research Ameritrade is a powerful option.

2.2 Charles Schwab

2.2.1 Monitoring the Stocks

Charles Schwab like Ameritrade offers various opportunities for researching stocks over the web, it also provides links to news articles, companies profiles and quotes of the day along with graphs and charts to inform the customer on how this title doing.

Charles Schwab offers ratios and statistics as well as insider trading, and the help and opinions of professional analysts. Much like Ameritrade these options are only for paying customers. But Schwab includes a glossary of terms and information on market cycles and assets location, which are available to anyone not just Schwab's customers. Swab offers quotes to anyone but only paying customers obtain real time quotes

2.2.2 Online Trading

Ameritrade and Swab are most popular when trading stocks refer, most of their features are similar, among these are account history, account overview, and the ability to view money transfers. Schwab offers a powerful feature, to chat with one of Schwab's brokers to seek information, unfortunately Schwab's services come with a higher price than Ameritrade's. A minimum equity of \$5,000.00 is required for their standard account and \$29.95 commissions applies for each trade and 1,000 shares and \$0.03 for additional share.

2.2.3 Charles Schwab's experience

Schwab is a great research tool for people who want to take an approach to investing. Many of the vital information can be found in this web site as well as the ability to trade online. Schwab has a more

professional fell than Ameritrade. Schwab is an extension of the well known investment firm with the same name, this provides the public with a certain assurance that Schwab knows what is saying, but it is not cheap, in fact Schwab is the most expensive solution to those seeking investment chances on the internet.

2.3 E*Trade

2.3.1 Monitoring the Stocks

E*Trade offers its visitors many of the information that Ameritrade and Schwab offers to their customers only. Anyone may go to E*Trade and browse through the vast array of news articles concerning companies, industries and the whole market. E*Trade offers quotes, companies profiles, graphs, charts, and financial statements over various intervals. It also supplies with ratio and statistic analysis tools. Among the additional services that E*Trade provides are the opportunity to obtain information on insider trading and IPO Center for researching upcoming IPOs. E*Trade also includes opinions of various experts in numerous articles.

2.3.2 Online Trading

E*Trade offers the information free of charge but takes commissions only when trade occurs, from 1-29 trades E*Trade charges \$14.95, from 30-74 \$9.95 and \$4.95 from the 75th and up. Customers of E*Trade have the possibility to invest in mutual funds, IPOs, bonds, and stocks. E*trade uses a single calendar quarter for example July through September.

2.3.3 E*Trade's Experience

E*Trade is an appropriate tool for all types of investors. E*trade has free access to information and is the best option to invest on the web. It offers the best services for free as well as a professional look, E*trades rates are above those of Ameritrade but an investor can take advantage of the lower rates for many rates within a calendar quarter.

2.4 Quicken

2.4.1 Monitoring the Stocks

Quicken like the other Internet based tools offers the same range of services to its customers, but with the difference that quicken is free and it only is used to get financial information about any title, company, or the industry. Quicken is not a tool where the investor

goes to buy and sell stocks, its not a trading site. But is a very impressive tool for the inexperienced investor seeking information on the different titles. Quicken offers ratios, statistic analysis, news articles, graphs, charts and one of the most complete economic glossaries on the Internet.

2.4.2 Online Trading

Quicken is not an Internet trading site but offers many of the services that the leading sites offer and its power by Datek an online trading site. In Quicken like in other sites chat with experts and exchange of emails is possible. The purpose of this well respected and free site is to offer as much information as possible to the potential investor seeking free information.

2.4.3 Quicken's Experience

Quicken offers many free services to the web surfer who seeks information on the internet, its one of the most important information sites on the web, its complete with news articles and the possibility to track mutual funds, stocks, IPOs, and the capability to develop a virtual portfolio which can be monitor at all time and offers the option to set alerts on it to advise you when the price of a title has gone down or if it has gone up.

2.5 Yahoo

2.5.1 Monitoring the Stocks

Yahoo other than be a search engine, yahoo offers to the public information on titles and the ability to research on past databases for research reports, it offers a wide range of databases of past prices in a easy to use web page. Yahoo also offers lots of information vital to the investor along with graphs, charts, quotes, news articles, financial reports and key ratios, and a state of the art glossary. Yahoo offers membership and the ability to develop a private portfolio to keep track of the stock quotes.

2.5.2 Online Trading

Yahoo is not a site to trade online only to get free information on the various titles and industries.

2.5.3 Yahoo's experience

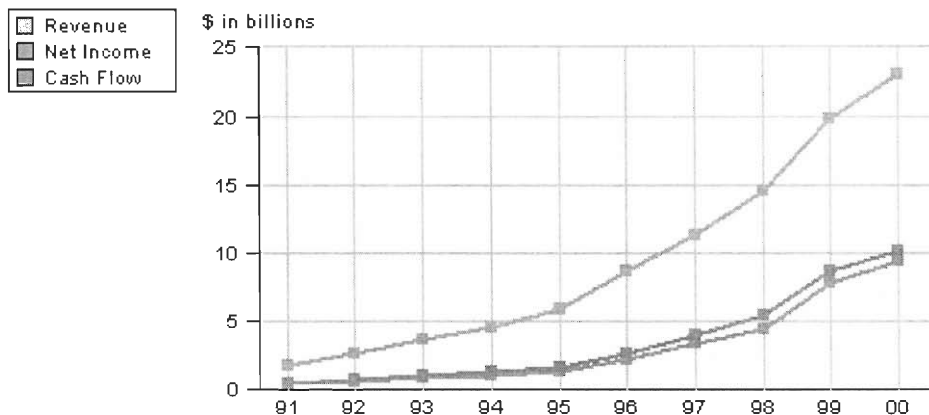
As mentioned, Yahoo does not offer the ability to trade online, but is great information tool to the potential investor. All this information can be delivered to your desktop via Yahoo Messenger. Information regarding any title is available 24 hours a day.

Chapter 3**Portfolio Simulation****3.1 *Microsoft* MSFT****3.1.1 Company Overview**

Probably the leading software and Internet Utilities development Company in the world, Microsoft has set record-breaking sales across the globe. It all started with the vision of a personal computer in every home, since then Microsoft has developed software that today has changed the way we think, work, and play.

The Company started in 1975 founded by Bill Gates and his close friend since childhood Paul Allen this vision has transformed society today and has help millions of families across great distances to get together with the power of the Internet, as well to help develop new and incredible ways of education.

3.1.2 Company Growth in the last 10 years

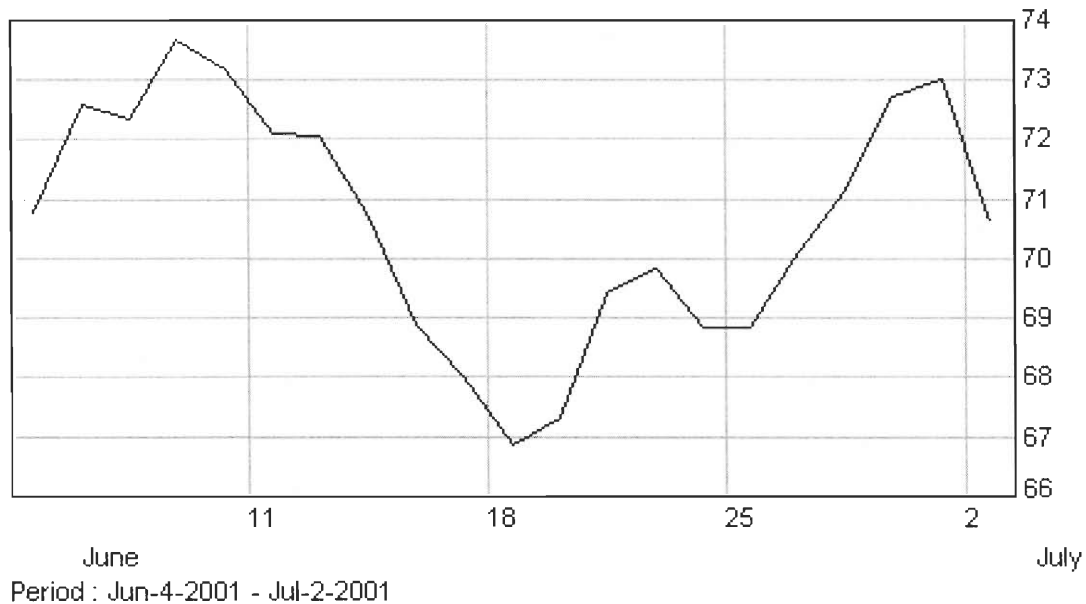


\$ In millions	91	92	93	94	95	96	97	98	99	00
Revenue	1843.4	2758.7	3753	4649	5937	8671	11358	14484	19747	22956
Net Income	462.7	708.1	953	1146	1453	2195	3454	4490	7785	9421
Cash Flow	538.5	820.4	1104	1383	1722	2675	3996	5486	8767	10155

Growth rate comparison

	MSFT	Industry	Sector	S&P 500	Ranking*
Revenue	30.85%	28.05%	14.94%	6.61%	████
Net Income	38.22%	33.62%	16.38%	13.71%	████
Cash Flow	37.4%	33.35%	18.68%	10.38%	████

3.1.3 Stock Performance In the Last Moth



At the beginning of my 3-week short-term investment in the stock beginning on June 11th I purchased 138 stocks from Microsoft at a price of \$72.56 per share for a total of \$10000

Since then the price of this stock went downward for one full week and it reached a closing price of \$66.88 per share on June 18th. I didn't trade my stock at that time hoping that this company's stock price will go up. My expectations were right The stock price kept going up but not as fast as expected, so on the 29th my last trading day of my 3 week short term investment in stock I sold my 138 shares at a price of \$73 per share for a value of \$10074 for a total profit of \$74 dollars

3.1.4 Lessons Learned form this investment

Microsoft despite a downfall on their stock prices it wasn't a gap to great for this company, a fluctuating price between \$66.88 and \$72.12 is nothing, this company is to solid to be affected by this small change, besides the stock price went up on June 29th to a price of \$73 per share (When I sold my shares) but It dropped again at the beginning of the week of June 2 and is still dropping.

So its safe to say that Microsoft is a strong company, but their stock prices fluctuate very often like any internet and software company out there, but to make a profit on this company one must invest really heavy in their stocks.

3.2



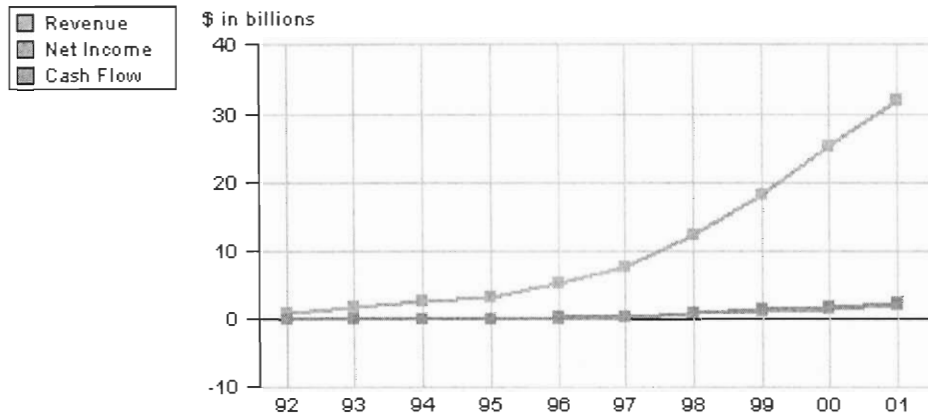
3.2.1 Company Overview

One of the Leading Computer hardware manufacturers in the World, the computer industry is addressed by the activities of Dell; the other companies follow Dell's leadership on this sector of the Industry.

Dell produces notebooks, Desktops, servers, and workstations. It also markets other company's software and hardware as well as a Award winning customer service.

It was the first Computer development Corporation that included the customers as their primary objective giving them a different kind of service, custom made Computer Systems.

3.2.2 Company Growth in the last 10 years

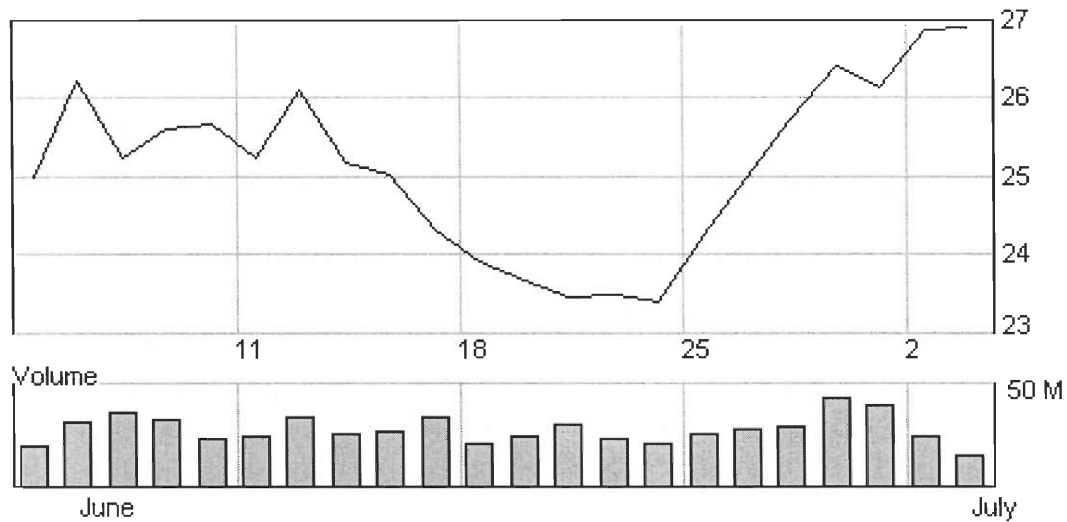


\$ in millions	92	93	94	95	96	97	98	99	00	01
Revenue	889.9	2013.9	2873.2	3475.3	5296	7759	12327	18243	25265	31888
Net Income	50.9	101.6	-35.9	149.2	272	531	944	1460	1666	2236
Cash Flow	64.7	121.2	-9	173.5	298	578	1011	1563	1822	2476

Growth rate Comparison

	DELL	Industry	Sector	S&P 500	Ranking*
Revenue	47.26%	26.64%	14.94%	6.61%	██████
Net Income	---	---	16.38%	13.71%	n/a
Cash Flow	---	15.08%	18.68%	10.38%	n/a

3.2.3 Stock Performance in the last moth



Period : Jun-4-2001 - Jul-3-2001

Dell's stock price at the beginning of my simulation period was at a price of \$24.5 per share that's when I invested in this company and acquired 408 shares for a total amount of \$10000. On the next day the price went up a closing price of \$26.1 per share, in that day June 12th I sold my 408 shares at a price of 26.20 per share for a total amount of \$10689.6 doing this I had an income of \$689.6 dollars. But the very next day June 13th the stock price was starting to drop \$1 and it didn't stop dropping, that's when I decided it was time to buy again cause I knew that the price in any of the following days was going to hit the bottom and start climbing up again.

On June 19th I bought shares from this company at a value of \$23.46 one dollar and four cents less for what I bought the first time for a total amount

of \$10689.6. On June 21st the price of the stock went up 14 cents but again on the 22 it dropped 9 cents I was having second thoughts about my second purchased because I feared that the price was going to keep dropping on the beginning of the next week. But on June 25th the closing price that day was \$24.25 a share, it had climbed 89 cents, so what I did was just to wait and see what was going to happen and on June 29th the last day of my simulation period I sold my stock for the price of \$25.85 a share. I knew that it had already touched the bottom and it was going to climb on the week of June 25th. I made an impressive income of \$799.15 and I said to myself “If only this was for real”

3.2.4 Lessons learned from this Investment

The first lesson that I learned from this trading in this company was that an opportunity for profit presented itself the very next day I acquired the stock so I took it, and after that the price fell. The second lesson I learned is that it always has to touch the bottom so that it can bounce back upward. In many different economies is the same principle although it can pass a lot of time before it happens, but not in a competitive market with a strong economy like the Computer industry.

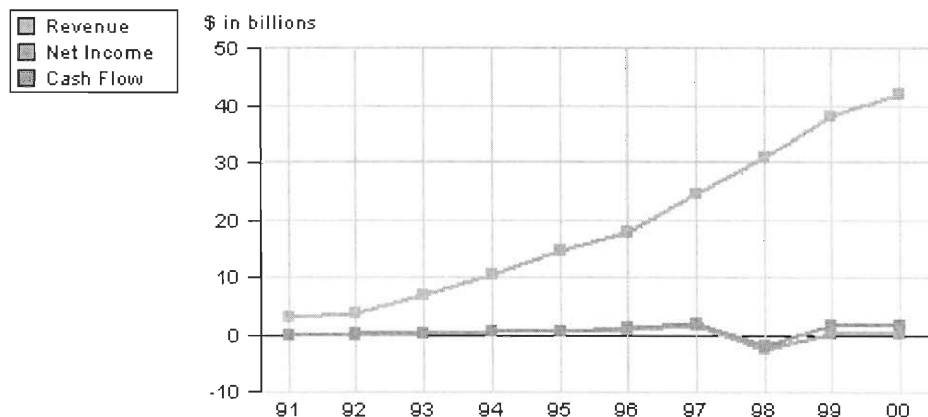
3.3 **COMPAQ**

3.3.1 Company Overview

Compaq founded in 1982 as a personal computer developed to run every single piece of software created for IBM, since then Compaq has emerged as a world leading company of computer hardware. The Compaq name is known to many people across the globe, it has record sales in Latin America where is placed as the number one computer sold in south America in the last years.

It was the first computer company to produce low-cost personal computers in the world and it was the first company to introduce the Pentium processor in their products.

3.3.2 Company Growth in the Last 10 years

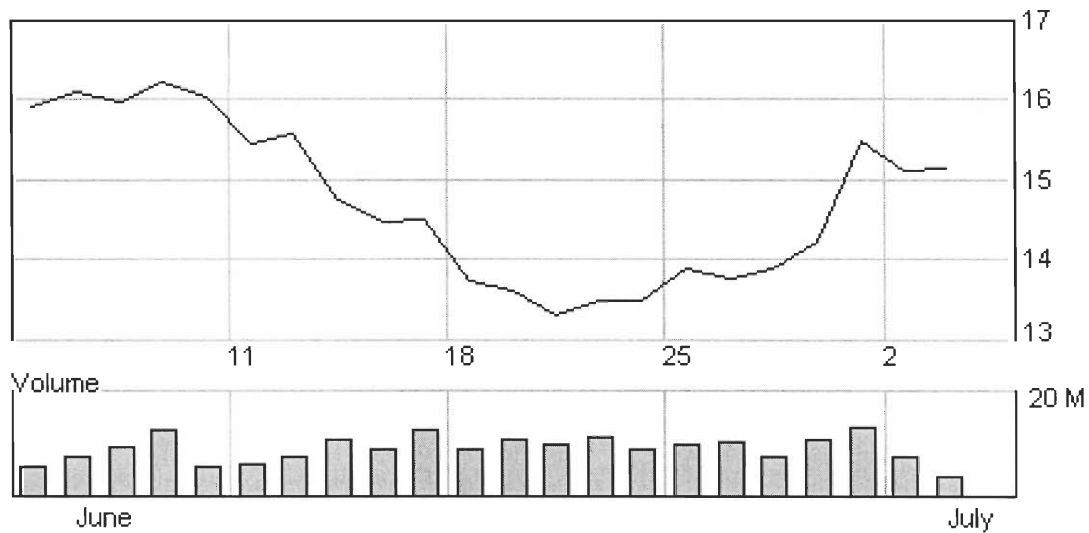


\$ in millions	91	92	93	94	95	96	97	98	99	00
Revenue	3271.4	4099.8	7191	10866	14755	18109	24584	31169	38525	42383
Net Income	130.9	213.2	462	867	789	1313	1855	-2743	569	595
Cash Flow	296.7	372.7	618	1036	1003	1598	2400	-1850	1971	2002

Growth rate comparison

	CPQ	Industry	Sector	S&P 500	Ranking*
Revenue	32.12%	26.64%	14.94%	6.61%	■■■■■
Net Income	---	---	16.41%	13.71%	n/a
Cash Flow	---	15.08%	18.68%	10.38%	n/a

3.3.3 Stock Performance in the last moth



Period : Jun-4-2001 - Jul-4-2001

At the start of the simulation Compaq's stock price was already on the downfall. I bought 653 shares for a price of \$15.32 on June 12th for a total amount of \$10000. I kept monitoring this stock for 2 weeks when it finally

hit the bottom price of \$13.3 on June 20th, the next day the price started to climb up but not as fast as expected, the price remained almost steady for 2 days at a price between 13.49-13.52 a variation of 3 cents. The price kept climbing up very slowly so on June 29th I sold my stocks for a price of \$14.12 per share loosing \$1.2 per share for a total loss of \$779.64.

3.3.4 Lessons learned from this Investment

Well for what I learned from this investment on Compaq is that this company is not doing so well its competition is tough an its stock price has declined from almost \$36 to a mere \$14 within the last year. This show us that even the great monsters of business fall sometimes. But Compaq is still a huge player on this business producing computer hardware to accommodate the masses.

3.4



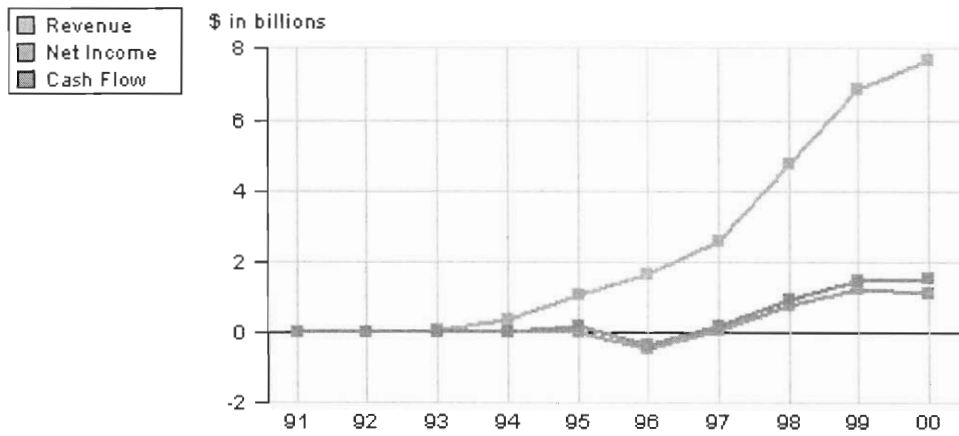
3.4.1 Company overview

AOL Time Warner is multinational company that owns many other well know companies; some of its braches include Warner Brothers, HBO, New Line Cinema, CNN, Sports Illustrated, and America Online.

Most of these companies are world most trusted leaders in Entertainment and are all under one roof. The world leader in entertainment today is like and octopus who's arms reach into any form of communication TV, magazines, Internet, and Music.

3.4.2 Company Growth in the last 10 years

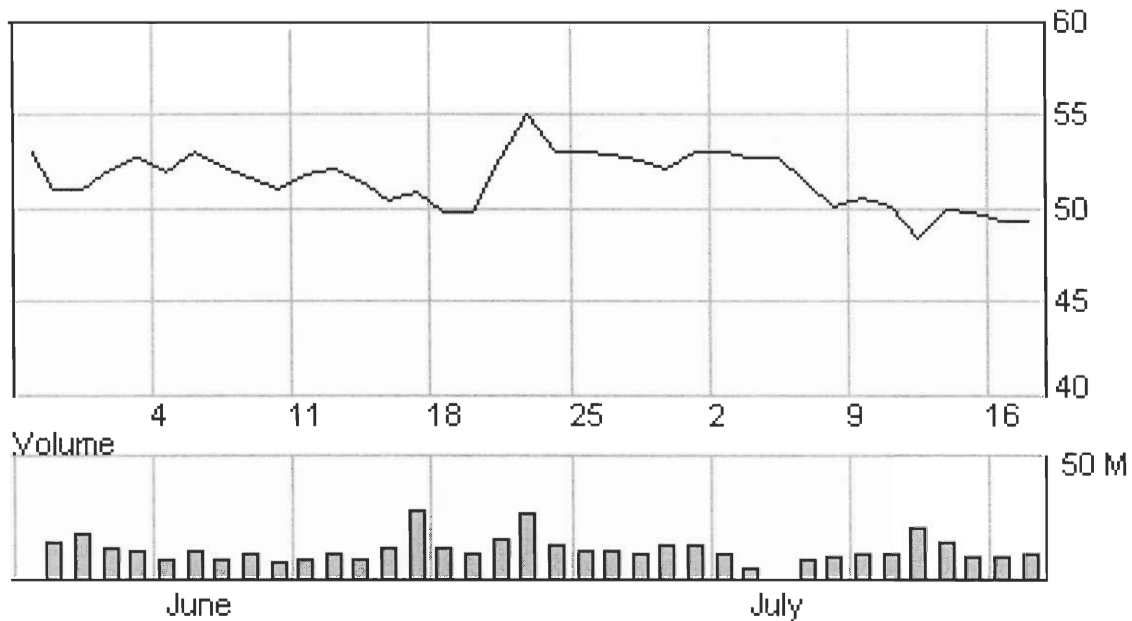
\$ in millions	91	92	93	94	95	96	97	98	99	00
Revenue	26.6	40	104.4	394.3	1093.9	1685.2	2600	4777	6886	7703
Net Income	2.2	3.1	6.2	-33.6	29.8	-499.3	92	762	1232	1152
Cash Flow	3.4	4.6	8.7	38.5	189.2	-375.5	192	984	1519	1533



Growth Rate comparison

	AOL	Industry	Sector	S&P 500	Ranking*
Revenue	96.56%	11.58%	12.25%	6.61%	□□□□■
Net Income	---	---	13.97%	13.71%	n/a
Cash Flow	---	17.24%	14.81%	10.4%	n/a

3.4.3 Stock Performance in the last moth



For AOL I bought 195 shares at \$51.43 per share for a total of \$10000 on June 11th. AOL in the first week of my simulation behaved very steady maintaining itself between \$52 and \$51 until June 18th, on June 19th the price dropped to \$49.97 per share. I didn't paid attention to this dropped so I held on to my stocks and hoped for the best. At the mean time good news were flowing around the Internet about AOL, so on June 20th the price went up passing my starting price of \$51.43 a share, this upraise lasted two days and on June 21st it reach \$54.57 a share so I decided to sell, making my profit for each share, \$3.15 for a total profit of \$641.15

3.4.4 Lessons learned from This Investment

AOL Time Warner is considered a Second issue stock, its price flows between 50 and 58 dollars. AOL is a company known around the world for its smaller children; is know to be very solid, highly stable, and with high dividends. It was good to invest in this type of company.

3.5 amazon.com.

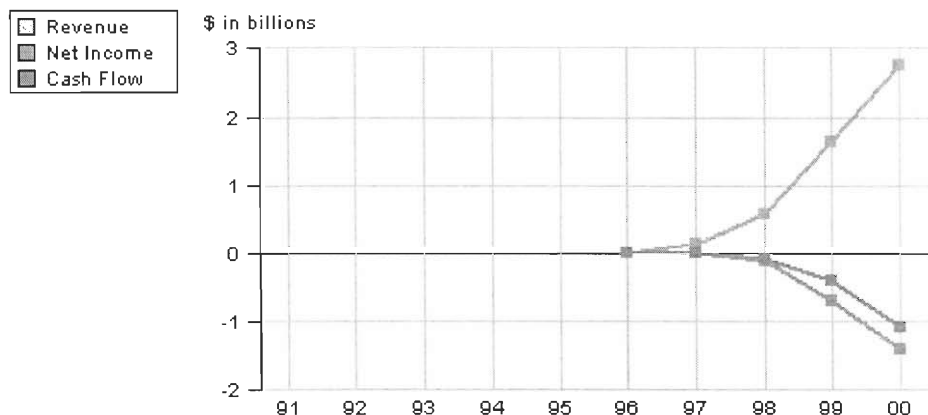
3.5.1 Company Overview

Amazon is a relative new company who offers sales over the Internet of any kind of product from video games, books, and lamps to cars and car accessories.

This Company opened its virtual doors on 1995 with a mission to change the book selling business and take it into the new millennium and to transform it into the fastest, easiest, and most enjoyable shopping experience possible. Today amazon.com sells thousands of different products but it still maintains the founding commitment of costumer satisfaction. I have bought many different products from Amazon (who haven't) and their customer support is

definitely an award winning service. Its one of the most famous Internet shopping sites of the world.

3.5.2 Company Growth in the last 5 years



\$ in millions	91	92	93	94	95	96	97	98	99	00
Revenue	---	---	---	---	---	15.7	147.8	610	1639.8	2762
Net Income	---	---	---	---	---	-5.8	-27.6	-124.5	-720.0	-1411
Cash Flow	---	---	---	---	---	-5.5	-22.9	-112.4	-437.9	-1089

Growth Rate Comparison

	AMZN	Industry	Sector	S&P 500	Ranking*
Revenue	50.43%	61.94%	21.9%	19.05%	■ ■ ■ ■
Net Income	---	---	-68.13%	-2.42%	n/a
Cash Flow	---	---	6.61%	8.77%	n/a

3.5.3 Stock Performance in the Last month



When I started this research Amazon was currently undergoing a drastically drop on the price of the title. On August 11th I invested \$10000 and bought on Amazon 656 title at a price of \$15.25 a share. Since the 11th, the price of the stock started to drop until on June 19th the closing price for Amazon was of \$11.36 per title, that's when it hit rock bottom, and started to climb up,. On June 21st it reached a closing price of \$13.08 dollars a share and on June 22nd the price drop 60 cents to \$12.40 a share, the next day climb up to 12.80

on the closing price and continued climbing until June 29th when I sold my titles for a price of \$14.32 a share having lost \$606.08 on this investment.

3.5.4 Lessons learned from this investment

What I learned from investing in Amazon is that it's overvalued that means that the price listed for a title is far beyond the real value that the company has on them. Today most Internet companies are overvalued in this sort of way. That is due to the hopes of the people that the Internet market will bring big results on the future.

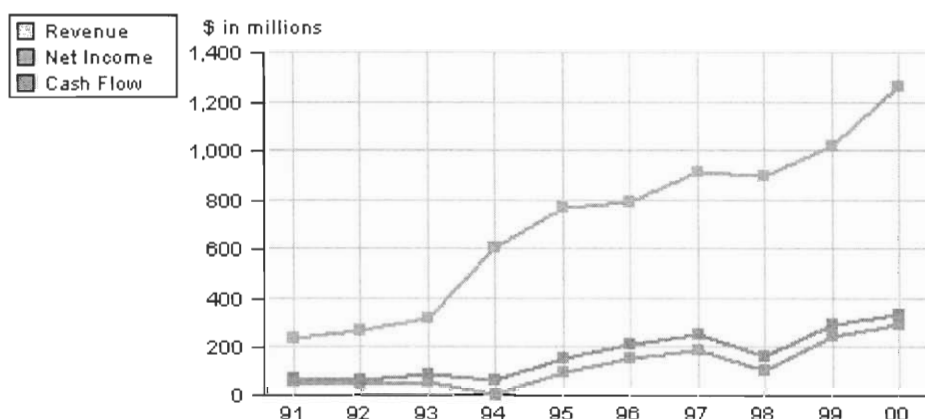
3.6 Adobe

3.6.1 Company overview

Adobe, the leader in Illustration designing software, founded in 1982, Adobe Systems Incorporated builds award-winning software solutions for Network Publishing, including Web, print, video, wireless, and broadband applications. Its graphic design, imaging, dynamic media, and authoring tools enable customers to create, publish, and deliver visually rich content for various types of media. Web and graphic designers, professional publishers, document-intensive organizations,

business users, and consumers use the company's products. Adobe is the second largest PC software company in the U.S., with annual revenues exceeding \$1.2 billion. It employs over 2,800 employees worldwide and has operations in North America, Europe, the Pacific Rim, Japan, and Latin America. Adobe's worldwide headquarters are in San Jose, California.

3.6.2 Company Growth rate in the Last 10 years

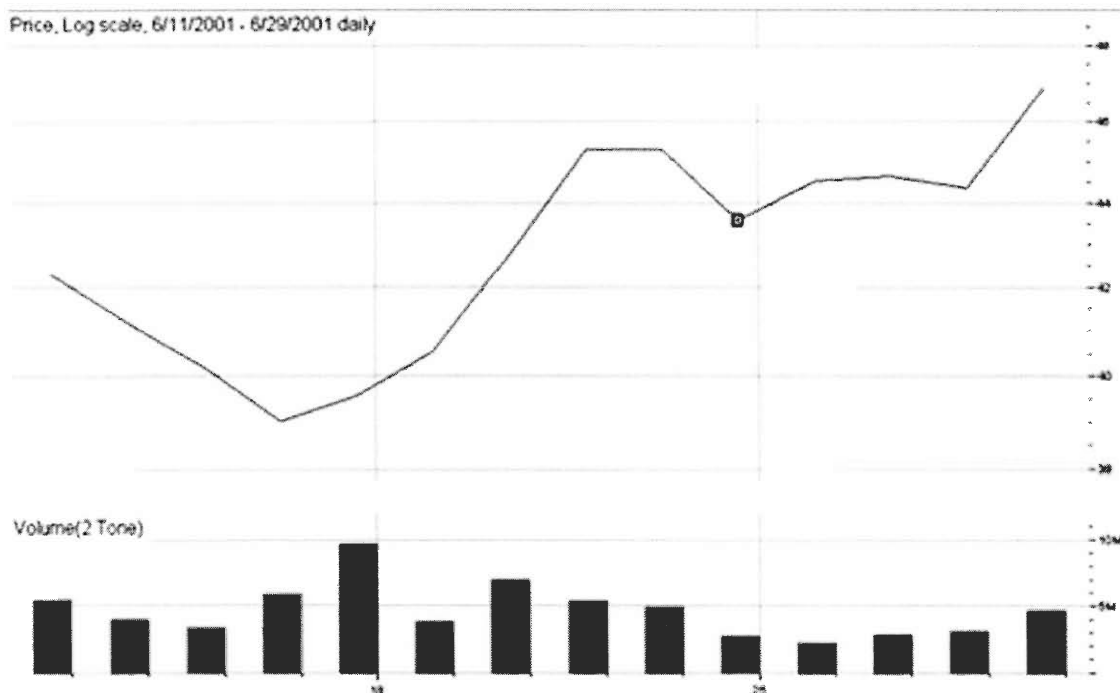


\$ in millions	91	92	93	94	95	96	97	98	99	00
Revenue	229.7	265.9	313.5	597.8	762.3	786.6	911.9	894.8	1015.4	1266.4
Net Income	51.6	43.6	57	6.3	93.5	153.3	186.8	105.1	237.8	287.8
Cash Flow	66.8	62.6	83	59.5	153.9	208.9	246.2	161.4	288.6	331.1

Growth Rate Comparison

	ADBE	Industry	Sector	S&P 500	Ranking*
Revenue	20.64%	17.74%	12.08%	16.25%	██████
Net Income	1.26%	-67.67%	-100.0%	-23.23%	██████
Cash Flow	4.37%	-25.77%	-20.51%	-4.41%	██████

3.6.3 Stock Performance in the Last month



I started Investing in Adobe when I purchased 236 titles at a price of \$42.33 a share on June 11th. Rapidly the next day the price dropped \$1 dollar and continued to drop until June 14th when It hit the bottom at a closing price of \$38.99 a title, on June 15th the price closed 1 dollar higher and continued to climb until June 21st when It reached a closing price of 45.37 dollars on that day I sold my shares fearing that the next day the price would drop. With that sell I made an Income of \$707.

Like I feared the next day on June 22nd the price for one stock dropped almost \$2 so I bought Again Having in mind the possibility for more income with only 7 days to go on my research I decided that it could to invest again. I bought again 236 titles at a price of \$43.12 a share for a total of \$10176.32 and hoped that this cycle could make me more money. Like I expected on June 29th I sold my stocks at a price of \$46.49 per share having earned \$795.32 in just 7 days.

3.6.4 Lessons learned from This Investment

There are prices that follow certain parameters like cycles in which many can be predicted by using many different financial tools. I learned that Adobe follows a rather small cycle of ups and downs.

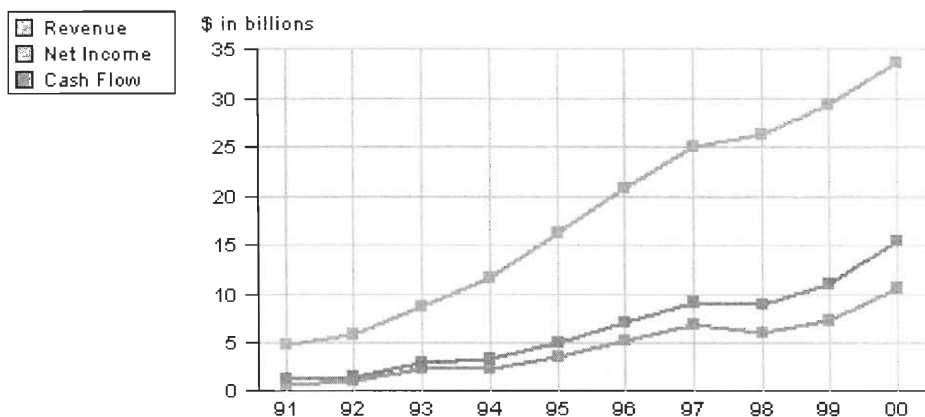
3.7 Intel

3.7.1 Company overview

The Leading microprocessor constructor in the world, Intel has really made a name for itself, every person who posses a computer in the world recognizes the name Pentium on the many microprocessor products that Intel offers to the public. In today's market Intel leads the battle for Microprocessor speed and agility with its new 2Ghz

Pentium 4, sold in the market for a Price of almost \$500, its today's fastest processor there is.

3.7.2 Company Growth in the Last 10 Years

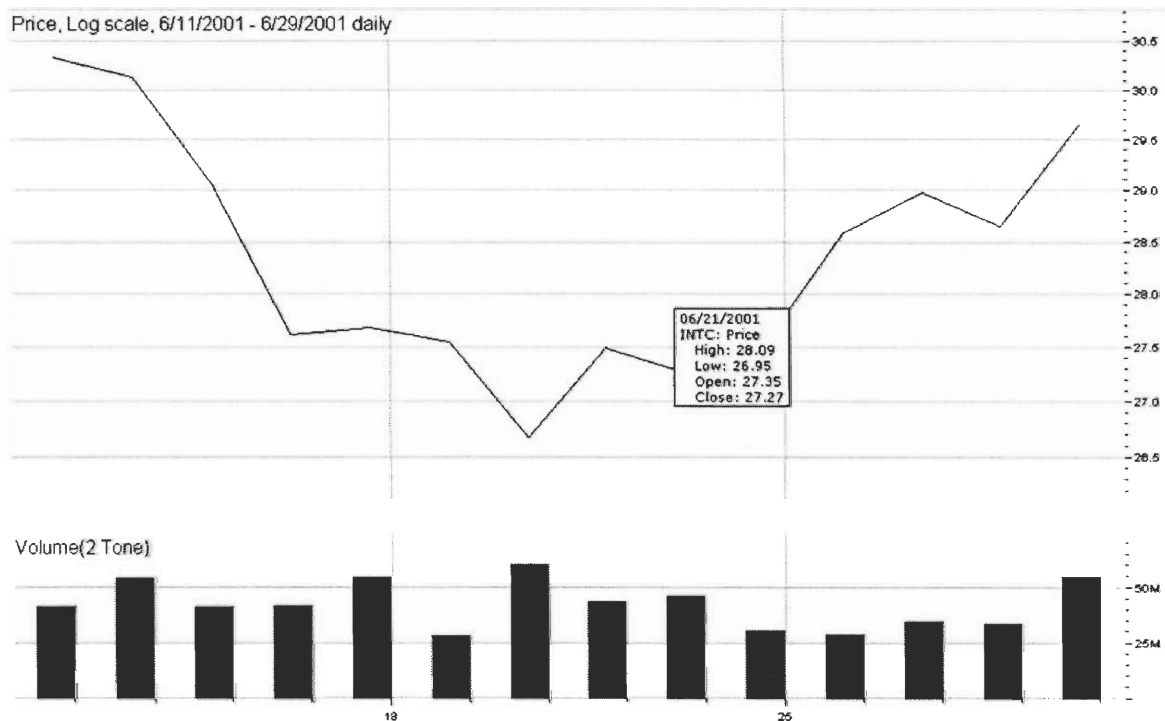


\$ in millions	91	92	93	94	95	96	97	98	99	00
Revenue	4778.6	5844	8782	11521	16202	20847	25070	26273	29389	33726
Net Income	818.6	1066.5	2295	2288	3566	5157	6945	6068	7314	10535
Cash Flow	1236.9	1584.1	3012	3335	4945	7045	9137	8875	10911	15370

Growth Rate Comparison

	INTC	Industry	Sector	S&P 500	Ranking*
Revenue	-4.36%	1.54%	12.08%	16.25%	■■■■
Net Income	-42.73%	-27.67%	-100.0%	-23.23%	■■■■
Cash Flow	-20.09%	-5.33%	-20.51%	-4.41%	■■■■

3.7.3 Stock Performance in the Last Month



When I invested on Intel the price for a share was of \$29.50, I bought 340 shares for a total price of \$10000. After my purchase the price of the stocks drop drastically every day until it reached the minimum on June 19th at a price of \$26.65 per share, the price dropped \$2.85 in 8 days. On June 20th the price climb up to \$27.47 per share, 1 dollar more on closing price. The price

of the titles kept climbing for the rest of the week until on June 29th the last day of my research I sold my shares at a price of \$30.00 dollars making a profit of \$200 total.

3.7.4 Lessons learned from this Investment

Intel is a big company very steady in valued stocks; in the 2 weeks of research Intel's price dropped almost \$3 and recovered very rapidly in the last 8 days enough to gain 50 cents per share, but that was not the end after my researched period Intel kept climbing up for a few more days and then changed slopes.

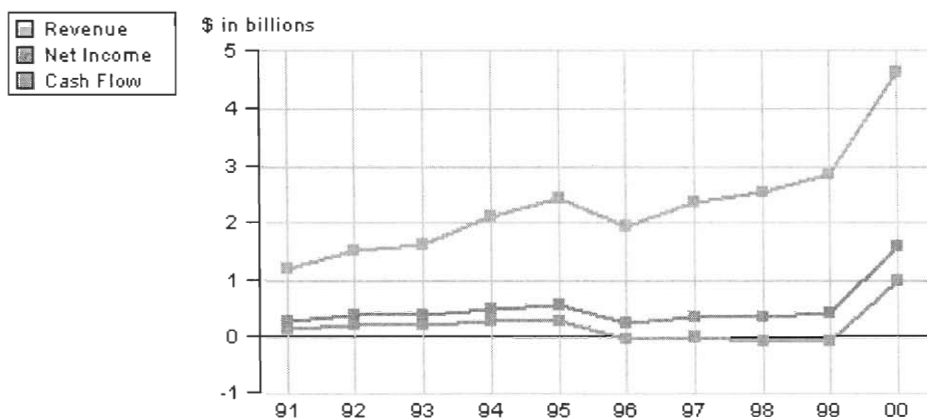
3.8 AMD

3.8.1 Company overview

AMD is a global supplier of integrated circuits for the personal and networked computer and communications markets. AMD produces microprocessors, Flash memory devices, and support circuitry for communications and networking applications. The company's products allow users to access, process, and communicate information at ever-greater speeds and low costs. AMD it's Intel's number one

competitor not only in speed but in price as well; AMD's quality and speed are just as good as the leader but AMD is cheaper.

3.8.2 Company Growth In the Last 10 Years

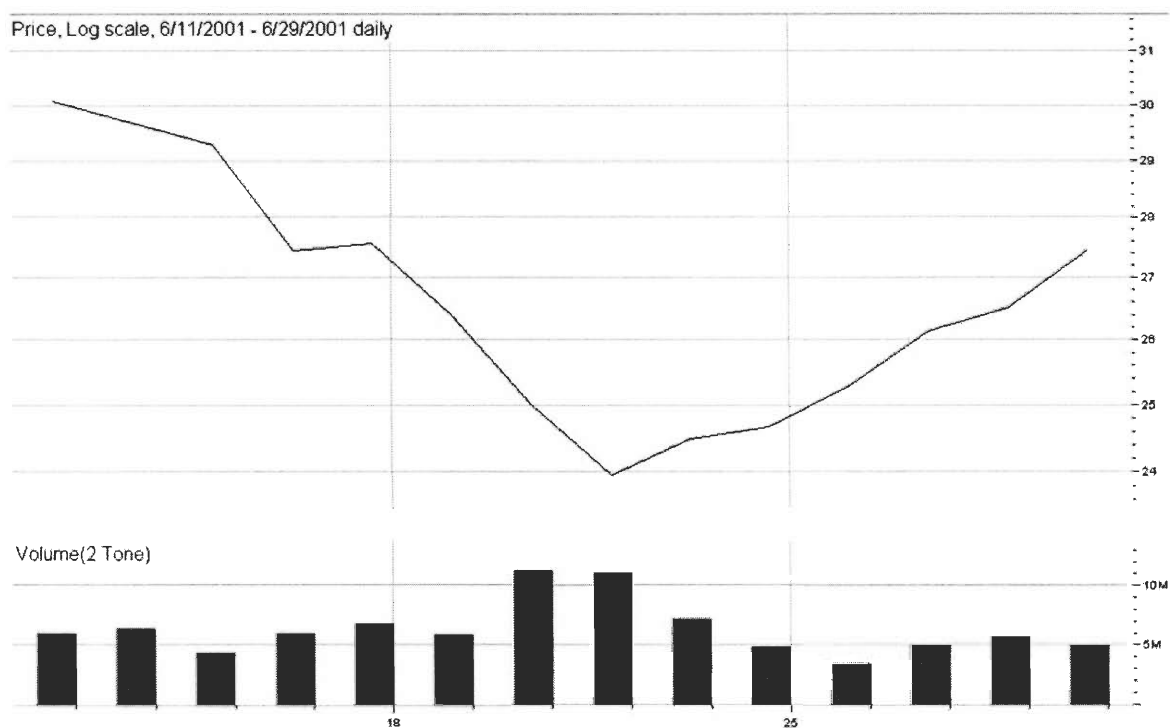


\$ in millions	91	92	93	94	95	96	97	98	99	00
Revenue	1226.6	1514.5	1648.3	2134.7	2429.7	1953	2356.4	2542.1	2857.6	4644.2
Net Income	145.3	245	228.8	305.3	300.5	-69	-21.1	-104.0	-88.9	1006.1
Cash Flow	290.8	386.9	393.5	510.9	562	263.6	373.4	363.5	426.6	1585.2

Growth Rate Comparison

	AMD	Industry	Sector	S&P 500	Ranking*
Revenue	17.01%	1.54%	12.08%	16.25%	██████
Net Income	111.12%	-27.67%	-100.0%	-23.23%	██████
Cash Flow	53.33%	-5.33%	-20.51%	-4.41%	██████

3.8.3 Stock Performance in the Last Month



AMD began my research period already on a downfall of the price for a share. I bought on AMD 344 shares at a price of \$29.10 per share, The down slope seemed to slow down on June 20th and 21st when the price of a share had almost stayed steady, but short after this period started to climb up but not as fast as I expected leaving me no choice but to sell the shares at a price of \$28.7 per share on June 29th, I lost on this investment \$127.2 dollars.

3.8.4 Lessons Learned from this Investment

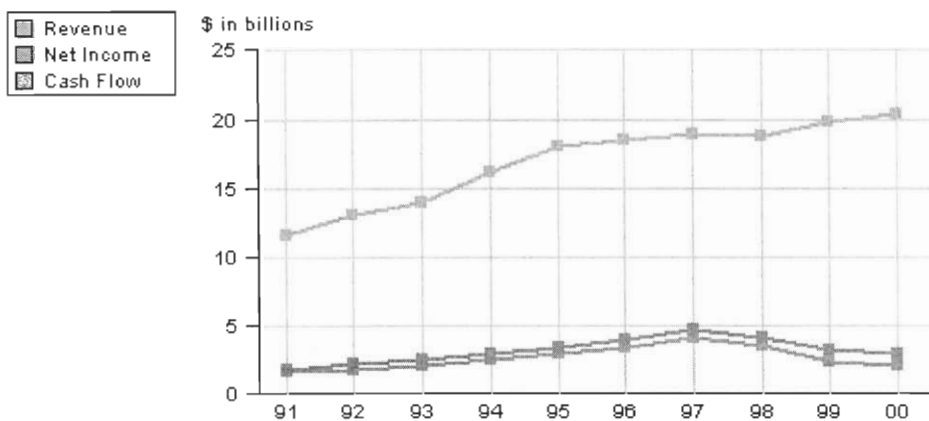
A lesson learned here is that not always the good competitors are as good as they appear to be. I thought that AMD was going to help me earn a profit but it happen otherwise I lost money.

3.9 Coca Cola

3.9.1 Company Overview

Perhaps the most recognizable trademark in the world, Coca Cola has become a symbol to anyone seeking to quench their thirst. More than 85% of the world population knows the name Coca Cola or has heard of it in some sort of way. Coca Cola is the worldwide leader in the Soft drink Industry followed only by Pepsi another well known trade mark that together symbolizes and Eternal battle for the number one place.

3.9.2 Company Growth in the Last 10 Years

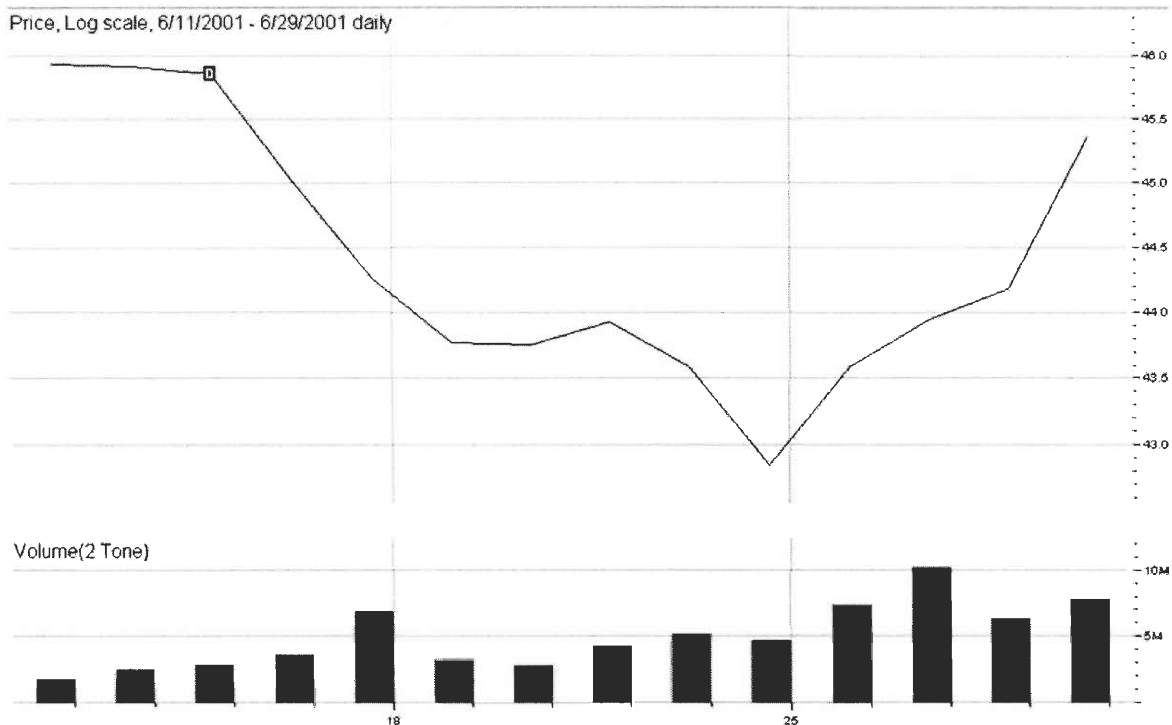


\$ in millions	91	92	93	94	95	96	97	98	99	00
Revenue	11572	13074	13957	16172	18018	18546	18868	18813	19805	20458
Net Income	1618	1883.8	2188	2554	2986	3492	4129	3533	2431	2177
Cash Flow	1878.9	2205.7	2548	2965	3440	3971	4755	4178	3223	2950

Growth Rate Comparison

	KO	Industry	Sector	S&P 500	Ranking*
Revenue	1.04%	3.91%	11.22%	16.25%	■■■■
Net Income	104.97%	41.02%	-22.1%	-23.23%	■■■■
Cash Flow	64.21%	16.39%	-3%	-4.41%	■■■■

3.9.3 Stock Performance in the last month



Coca Cola began my research period with a slight down slope of about 4 days where the price almost is the same. I bought on Coca Cola \$220 Titles at a price of \$45.34 on June 11th. On June 22nd the fall of the price was over when it hit rock bottom at a price of \$22 a share then it came a really fast climb than rocketed the price in the next few days up to \$46 On June 29th, the day I sold my shares and made an Income of \$120 Total

3.9.4 Lessons Learned from this Investment

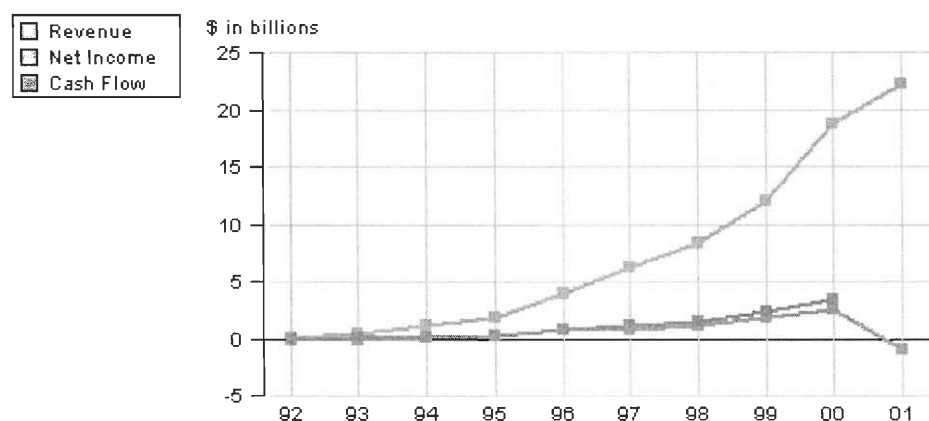
Coca Cola is a very steady company a drop on the price of their stock does not affect their sales or the ability to liquefy money and invest it elsewhere. It doesn't matter if the price goes down or up, people will still drink Coke.

3.10 Cisco Systems

3.10.1 Company Overview

By focusing on customer satisfaction and technology innovation, Cisco Systems, Inc. has become the worldwide leader in networking for the Internet.

3.10.2 Company Growth in the Last 10 Years

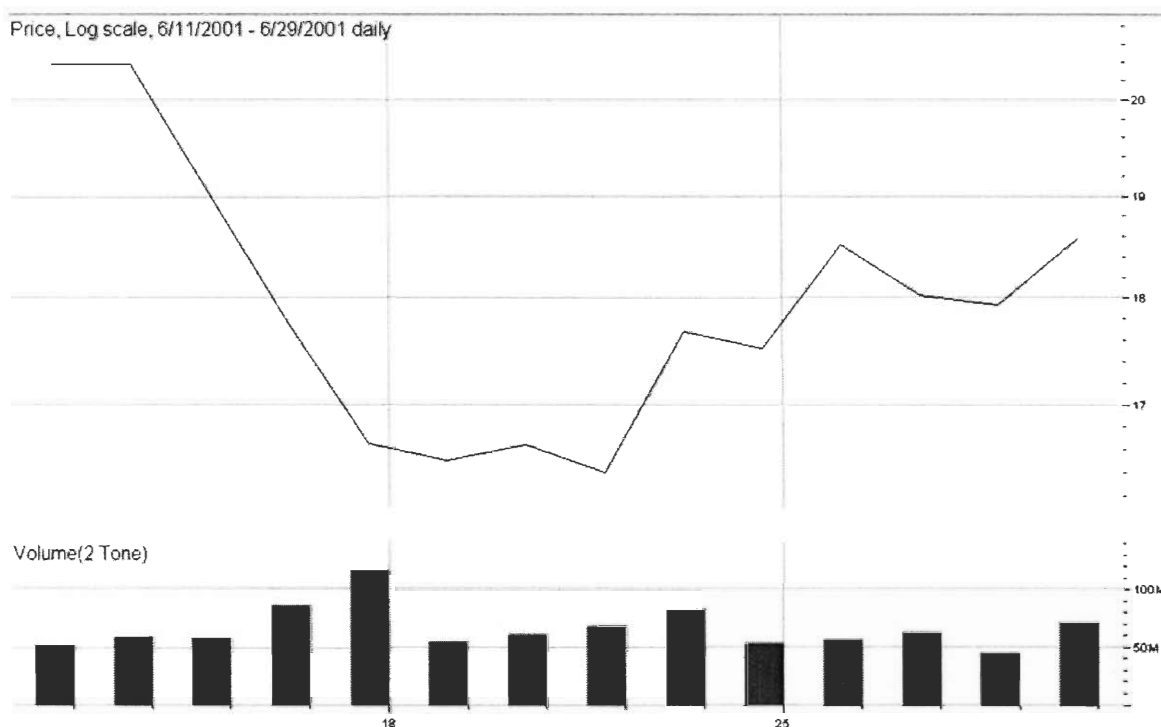


\$ in millions	92	93	94	95	96	97	98	99	00	01
Revenue	339.6	649	1243	1978.9	4096	6440.2	8458.8	12154	18928	22293
Net Income	84.4	172	314.9	421	913.3	1048.7	1350.1	2096	2668	-1014
Cash Flow	91.1	185.6	345.7	479.5	1045.9	1260.9	1677.4	2582	3531	---

Growth Rate Comparison

	CSCO	Industry	Sector	S&P 500	Ranking*
Revenue	17.78%	53.2%	12.08%	16.25%	■■■■■
Net Income	-100.0%	-100.0%	-100.0%	-23.23%	■■■■■
Cash Flow	-37.69%	-100.0%	-20.51%	-4.41%	■■■■■

3.10.3 Stock Performance in the Last Month



Cisco began the period with a 2 day almost identical closing price, only 1 cent separate them from each other; but then the next day a nasty drop of the price was visible; this downfall made the price go down to \$16.14 a share on June 20th. I did not invest on Cisco the first week due to this downfall, I'm glad I wait, the next week the price seemed to be getting higher so I bought 588 shares at a price of \$17 knowing that it already had reached the minimum. It was a perfect ride so on June 29th I sold my shares at a price of \$19.2 for a total profit of \$1289.6 "Awesome".

3.10.4 Lessons Learned from This Investment

Investing in Cisco was a great opportunity; I made the biggest profit in this company, but only because I didn't invest since the beginning of my period; if I had I would have lost money instead of earning it. I used the Williams oscillator to measure when the price of the stock was going to approach the minimum so that I could buy after it changed slopes. Thanks to these financial tools I was able to earn a lot of "virtual" money in this project I strongly recommend to use these tools when you are not sure when to invest.

Chapter 4 Technical Analysis

4.1 Definition of Oscillators

They are indexes that fluctuate around a valued determined bandwidth; the principal property of oscillator is that they determine changes in tendencies before means and resistance lines.

The principal oscillators are

- Relative Strength Indicator
- Williams's Oscillator (%R)
- %K Oscillator

4.1.1 Relative Strength Indicator

Momentum Index that measures the price of a stock relative to itself. It has really high predicting power, telling us when a stock is overbought or oversold.

- The Absolute values of the RSI go from 0 to 100
- Buying signs are triggered between levels of 20 - 30
- Selling signs are triggered between levels of 70 - 80

4.1.2 Williams's Oscillator (%R)

Points when a title is overvalued or sub valued. To use this oscillator a database of 15 to 20 days is needed, considering the highest price (A), the lowest (B), and the last closing price (U).

It's calculated by the following equation:

$$\%R = 100 \times ((A-U)/(A-B))$$

It's interpreted as:

- If %R > 80 buying sign
- If %R < 20 selling sign

4.1.3 %K Oscillator

This oscillator it's based on the fact that when the prices grow, the closing price is near the highest of the day and vice versa.

The oscillator tries to determine when the prices start to concentrate near the lowest prices of the day in a growing tendency and when the prices concentrate near the highest of the day in a downward tendency. According to the theory, these would be the conditions to identify when changes in tendencies start to occur.

Decision Criteria:

- $\%K > 80$ Indicates a selling sign

Indicators greater than 80 represent a strong signs and indicate that the price is near the maximum.

- $\%K < 20$ Indicates a buying sign

Indicators less than 20 represent a strong sign and indicate that the price is near the minimum.

The %K Oscillator is calculated by the following equation:

$$\%K = ((U-B)/(A-B)) \times 100$$

4.2 Momentum

The Momentum shows the velocity on which a title's price climbs or falls. At the start of a climb, the price carries a strong rise that each time gets smaller. At the time that goes slower and slower a tendency change is near.

4.5.1 Momentum for a 7-day period

$M_7 = U - P_{n-7}$ where:

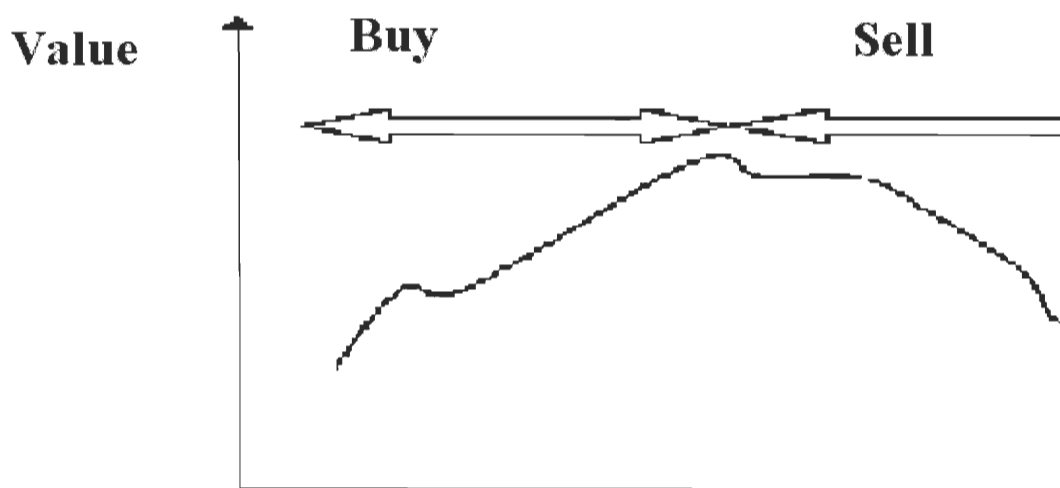
U: last closing price

P_{n-7} : closing price 7 days before:

Interpretations:

- If the Momentum grows it's a sign of buy
- If the Momentum shrinks it's a sign of sell

Momentum



4.3 Technical Analysis Application for all the Stocks

4.3.1 Microsoft

- **Williams's Oscillator**

To do the Williams's Oscillator I used 15 days of data from June 11th to 19th the time period of this IQP

A = 76.15 Highest
 B = 67.96 Minimum
 U = 73.00 Last closing price

$$\begin{aligned} \%R &= 100 \times ((A-U)/(A-B)) \\ \%R &= 100 \times ((76.15-73)/(76.15-67.96)) \\ \%R &= 38.46 \end{aligned}$$

$\%R$ is < 80 therefore I must sell

- **%K Oscilador**

$$\begin{aligned} \%K &= ((U-B)/(A-B)) \times 100 \\ \%K &= ((73-67.96)/(76.15-67.96)) \times 100 \\ \%K &= 61.54 \end{aligned}$$

$20 < \%K > 80$ Therefore the stock price is not near the minimum, it is recommended to keep the stock now.

- **Momentum**

To do the momentum I divided the time period in two of 7 days.

June 29th

$$M7 = U - P_{n-7}$$

June 20th

$$M7 = U - P_{n-7}$$

$$U = 73$$

$$P_{n-7} = 68.83$$

$$M7 = 73 - 69.84$$

$$72.08$$

$$M7 = 3.16$$

$$U = 69.41$$

$$P_{n-7} = 72.08$$

$$M7 = 69.41 -$$

$$72.08$$

$$M7 = -2.67$$

Answer: For Microsoft the Momentum grew, comparing the two periods that means that is a strong sign to buy this stock.

4.3.2 Dell

- Williams's Oscillator

$$A = 26.68$$

$$B = 22.65$$

$$U = 26.15$$

$$\%R = 100 \times ((26.68 - 26.15) / (26.68 - 22.65))$$

$$\%R = 13.15$$

$\%R < 80$ it is recommended to sell

- %K Oscillator

$$\%K = ((26.15 - 22.65) / (26.68 - 22.65)) \times 100$$

$$\%K = 86.84$$

$\%K > 80$ It is recommended to sell because its near the maximum price

- Momentum

$$\text{June } 29^{\text{th}}$$

$$U = 26.15$$

$$P_{n-7} = 23.5$$

$$M7 = 2.65$$

$$\text{June } 20^{\text{th}}$$

$$U = 23.45$$

$$P_{n-7} = 26.1$$

$$M7 = -2.65$$

Answer: In this case is recommended to buy due to the increment in the momentum.

4.3.3 Compaq

- Williams's Oscillator

$$A = 15.8212$$

$$B = 13.176$$

$$U = 15.32$$

$$\%R = 18.94$$

$\%R < 80$ It is recommended to sell

- %K Oscillator

$$\%K = 81.05$$

$\%K > 80$ It is recommended to sell because its near the maximum price

- Momentum

June 29th

$$U = 15.32$$

$$Pn-7 = 13.4655$$

$$M7 = 1.8545$$

June 20th

$$U = 13.2758$$

$$Pn-7 = 15.5417$$

$$M7 = -2.2659$$

Answer: The Momentum has increased so it's recommended to buy.

4.3.4 AOL

- Williams's Oscillator

$$A = 55$$

$$B = 48.18$$

$$U = 53$$

$$\%R = 29.32$$

$\%R < 80$ Its recommended to sell

- %K Oscillator

$$\%K = 70.67$$

$20 < \%K > 80$ The price is not near the minimum

- Momentum

June 29th

$$U = 53$$

$$Pn-7 = 55$$

$$M7 = -2$$

June 20th

$$U = 52.8$$

$$Pn-7 = 52.1$$

$$M7 = 0.7$$

Answer: The Momentum has decreased, its recommended to sell.

4.3.5 Amazon

- Williams's Oscillator

$$A = 15.55$$

$$B = 11.2$$

$$U = 14.5$$

$$\%R = 24.13$$

$\%R < 80$ It is recommended to sell

- %K Oscillator

$$\%K = 75.86$$

$20 < \%K > 80$ The price is not near the minimum.

- Momentum

June 29th

$$U = 14.5$$

$$Pn-7 = 13.08$$

$$M7 = 0.7$$

June 20th

$$U = 12.53$$

$$Pn-7 = 14.64$$

$$M7 = -2.11$$

Answer: Its recommended to sell

4.3.6 Adobe

- Williams's Oscillator

$$A = 48.13$$

$$B = 37.7892$$

$$U = 47$$

$$\%R = 10.92 \quad \text{Its recommended to sell}$$

- %K Oscillator

$$\%K = 89.07 \quad \text{Its recommended to sell because its near the maximum price}$$

- Momentum

$$\text{June } 29^{\text{th}}$$

$$U = 47$$

$$Pn-7 = 45.297$$

$$M7 = 1.703$$

$$\text{June } 20^{\text{th}}$$

$$U = 45.287$$

$$Pn-7 = 41.1682$$

$$M7 = 4.1188$$

Answer: It's recommended to sell

4.3.7 Intel

- Williams's Oscillator

$$A = 30.7508$$

$$B = 26.1237$$

$$U = 29.2318$$

$$\%R = 32.82$$

$$\%R < 80 \quad \text{Its recommended to sell}$$

- %K Oscillator

$$\%K = 67.17$$

$20 < \%K > 80$ It's not near the minimum price.

- Momentum

June 29th

$$U = 29.2318$$

$$Pn-7 = 27.253$$

$$M7 = 1.9788$$

June 20th

$$U = 27.4729$$

$$Pn-7 = 30.1112$$

$$M7 = -2.6383$$

Answer: In this case it's recommended to buy.

4.3.8 AMD

- Williams's Oscillator

$$A = 31.1$$

$$B = 23.56$$

$$U = 28.9$$

$$\%R = 29.17$$

$\%R < 80$ Its recommended to sell

- %K Oscillator

$$\%K = 70.82$$

$20 < \%K > 80$ It's neither near neither the minimum nor the maximum price.

- Momentum

June 29th

$$U = 28.9$$

$$Pn-7 = 24.48$$

June 20th

$$U = 23.95$$

$$Pn-7 = 29.67$$

$$M7 = 4.42$$

$$M7 = -5.72$$

Answer: Its recommended to Buy

4.2.9 Coca Cola

- Williams's Oscilador

$$A = 45.9491$$

$$B = 42.59$$

$$U = 45$$

$$\%R = 28.25$$

$\%R < 80$ Its recommended to sell

- %K Oscillator

$$\%K = 71.74$$

$20 < \%K > 80$ It's neither near the minimum nor the maximum price.

- Momentum

June 29th

$$U = 45$$

$$Pn-7 = 43.59$$

$$M7 = 1.49$$

June 20th

$$U = 43.45$$

$$Pn-7 = 45.73$$

$$M7 = -2.28$$

Answer: Its recommended to Buy

4.3.9 Cisco

- Williams's Oscillator

$$A = 20.58$$

$$B = 16.14$$

$$U = 18.2$$

$$\%R = 53.60$$

$\%R < 80$ Its recommended to sell

- %K Oscillator

$$\%K = 46.39$$

$20 < \%K > 80$ It's neither near the minimum nor the maximum price.

- Momentum

$$\text{June } 29^{\text{th}}$$

$$U = 18.2$$

$$Pn-7 = 17.68$$

$$M7 = 0.52$$

$$\text{June } 20^{\text{th}}$$

$$U = 16.4$$

$$Pn-7 = 20.37$$

$$M7 = - 3.97$$

Answer: Its recommended to Buy

Chapter 5 Econometric Analysis

5.1 Why a Time Series Regression Analysis?

To do an accurate time series analysis at least 1-year database is needed. With this analysis one can determine the correlations that exists between the values taken and possibly predict what will happen in the near future by looking at the behavior of the function in the past since its proven that this values follow a distinctive cycle.

When doing this analysis I used an Econometric program called EViews (Econometric Views), This program generates function from the values entered and helps observe certain distinctive behaviors on them.

Next I will include the databases for all the stocks along with the table resulting from the Time series Analysis with auto regressive vectors from the program EViews

5.2 Tables of the Time series Regression analysis for all the stocks

5.2.1 Microsoft

Dependent Variable: DLMSFT

Method: Least Squares

Date: 08/21/01 Time: 18:22

Sample(adjusted): 3 266

Included observations: 264 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
DLMSFT(-1)	0.265808	0.059456	4.470646	0.0000
R-squared	0.070530	Mean dependent var		0.000290
Adjusted R-squared	0.070530	S.D. dependent var		0.028431
S.E. of regression	0.027410	Akaike info criterion		-4.352068
Sum squared resid	0.197588	Schwarz criterion		-4.338522
Log likelihood	575.4729	Durbin-Watson stat		1.909515

5.2.2 Dell

Dependent Variable: DLDELL

Method: Least Squares

Date: 08/21/01 Time: 18:21

Sample(adjusted): 3 266

Included observations: 264 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
DLDELL(-1)	0.176259	0.060723	2.902692	0.0040
R-squared	0.028740	Mean dependent var		-0.002020
Adjusted R-squared	0.028740	S.D. dependent var		0.041523
S.E. of regression	0.040922	Akaike info criterion		-3.550541
Sum squared resid	0.440412	Schwarz criterion		-3.536996
Log likelihood	469.6714	Durbin-Watson stat		1.951331

5.2.3 Compaq

Dependent Variable: DLCPQ

Method: Least Squares

Date: 08/21/01 Time: 18:20

Sample(adjusted): 3 266

Included observations: 264 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
DLCPQ(-1)	0.095831	0.061447	1.559566	0.1201
R-squared	0.006329	Mean dependent var		-0.002086

Adjusted R-squared	0.006329	S.D. dependent var	0.039075
S.E. of regression	0.038951	Akaike info criterion	-3.649242
Sum squared resid	0.399019	Schwarz criterion	-3.635697
Log likelihood	482.7000	Durbin-Watson stat	1.983273

5.2.4 AOL

Dependent Variable: DLAOL

Method: Least Squares

Date: 08/21/01 Time: 18:18

Sample(adjusted): 3 266

Included observations: 264 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
DLAOL(-1)	0.245904	0.059733	4.116711	0.0001
R-squared	0.060537	Mean dependent var		1.67E-05
Adjusted R-squared	0.060537	S.D. dependent var		0.033529
S.E. of regression	0.032498	Akaike info criterion		-4.011487
Sum squared resid	0.277762	Schwarz criterion		-3.997941
Log likelihood	530.5162	Durbin-Watson stat		1.953240

5.2.5 Amazon

Dependent Variable: DLAMZ

Method: Least Squares

Date: 08/21/01 Time: 18:18

Sample(adjusted): 3 266

Included observations: 264 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
DLAMZ(-1)	0.164970	0.060774	2.714475	0.0071
R-squared	0.021093	Mean dependent var		-0.004608
Adjusted R-squared	0.021093	S.D. dependent var		0.058010
S.E. of regression	0.057395	Akaike info criterion		-2.873949
Sum squared resid	0.866362	Schwarz criterion		-2.860404
Log likelihood	380.3613	Durbin-Watson stat		1.989958

5.2.6 Adobe

Dependent Variable: DLADB

Method: Least Squares

Date: 08/21/01 Time: 18:12

Sample(adjusted): 3 266

Included observations: 264 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
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DLADB(-1)	0.139425	0.061160	2.279673	0.0234
R-squared	0.018733	Mean dependent var		-0.001086
Adjusted R-squared	0.018733	S.D. dependent var		0.042463
S.E. of regression	0.042063	Akaike info criterion		-3.495500
Sum squared resid	0.465332	Schwarz criterion		-3.481955
Log likelihood	462.4060	Durbin-Watson stat		1.981166

5.2.7 Intel

Dependent Variable: DLINTEL

Method: Least Squares

Date: 08/21/01 Time: 18:21

Sample(adjusted): 3 266

Included observations: 264 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
DLINTEL(-1)	0.174299	0.060705	2.871244	0.0044
R-squared	0.024737	Mean dependent var		-0.002893
Adjusted R-squared	0.024737	S.D. dependent var		0.037947
S.E. of regression	0.037474	Akaike info criterion		-3.726541
Sum squared resid	0.369337	Schwarz criterion		-3.712996
Log likelihood	492.9034	Durbin-Watson stat		1.970221

5.2.8 AMD

Dependent Variable: DLAMD

Method: Least Squares

Date: 08/21/01 Time: 18:16

Sample(adjusted): 3 266

Included observations: 264 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
DLAMD(-1)	0.238237	0.059948	3.974066	0.0001
R-squared	0.055572	Mean dependent var		-0.001542
Adjusted R-squared	0.055572	S.D. dependent var		0.045737
S.E. of regression	0.044448	Akaike info criterion		-3.385195
Sum squared resid	0.519598	Schwarz criterion		-3.371650
Log likelihood	447.8458	Durbin-Watson stat		1.942246

5.2.9 Coca Cola

Dependent Variable: DLCOKE

Method: Least Squares

Date: 08/21/01 Time: 18:20

Sample(adjusted): 3 266

Included observations: 264 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
DLCOKE(-1)	0.216451	0.060240	3.593127	0.0004
R-squared	0.045670	Mean dependent var		-0.000613
Adjusted R-squared	0.045670	S.D. dependent var		0.017900
S.E. of regression	0.017487	Akaike info criterion		-5.250990
Sum squared resid	0.080420	Schwarz criterion		-5.237445
Log likelihood	694.1307	Durbin-Watson stat		1.898495

5.2.10 Cisco

Dependent Variable: DLCISCO

Method: Least Squares

Date: 08/21/01 Time: 18:19

Sample(adjusted): 3 266

Included observations: 264 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
DLCISCO(-1)	0.099349	0.061511	1.615142	0.1075
R-squared	-0.001924	Mean dependent var		-0.004592
Adjusted R-squared	-0.001924	S.D. dependent var		0.042238
S.E. of regression	0.042278	Akaike info criterion		-3.485308
Sum squared resid	0.470099	Schwarz criterion		-3.471763
Log likelihood	461.0606	Durbin-Watson stat		1.983876

5.3 Explanation

When doing a Time Series Regression Analysis, a database at least 1 year is needed in order to accurately get the results expected, if there are more values the probability will be higher and the Quartiles would be more and smaller.

A Time series analysis consists in looking back at past values and determines if there is a correlation between those values and today's this way we can predict and determine a behavior, and we can use this to take decision in the future.

With all the values together first we must generate a function; after it has been generated we proceed to determine its logarithm to see if the variables within this function are stationary or non-stationary. Non-Stationary variables cannot be used in a Time Series Regression Analysis; the variables I used were in fact Non-Stationary variables. In order to use these variables in the regression we must determine the derivable function. This derivative function transforms Non-Stationary variables into Stationary, now we can proceed with the statistics analysis and probabilities. Once all is done the coefficient α determines if there is correlation between the T_{-1} and T_0 values with the probability that may happen. If the Coefficient is positive it means that if changes that occurred in the past may occur today with the given probability. If the coefficient is negative there is no correlation between the values. Doing this Econometric Analysis in all of the tables of all companies the coefficient was positive; this means that if the price of a Title goes up today it's possible that it will go up tomorrow as well until it reaches the maximum and changes slopes. How do we determine that the price will reach the maximum by using the theories of oscillators. It works the other way around as well, if the price goes down today it may go down tomorrow as well until it reaches the minimum.

Chapter 6 Conclusions

1. The Internet Based tools for stock trading are indeed a great way to gain or loose money; it's the investment method of today and the future. It helps millions of people to invest their money in the quest for profit; there are many Internet trading sites out there that can help people and give expertise on the current market conditions.

The Internet Trading Market for Stocks has a great disadvantage; in the future when most of the population uses these tools to invest only those with the power to monitor all the time, hour by hour, only those people will get rich. In other words the investor that arrives first will get all the money.

2. The Internet related and information systems Companies of today are very much overvalued in the market; that means that their stock price is really above the one that it should be when within itself the company is evaluated but that information never goes out the reach of the insiders not even the minor investors know about it only the board of directors. This problem is due to Possible market conditions and the great expectations that current people hope to have from these companies, this creates a sort of rush to buy a piece of these

companies in order to have a return on their hopes for the company. This problem causes people to invest in companies that could be already in the margin of breaking up or have too much debt and no Net Income and whose key ratios may be very low. Only one method that could safely lift the company from breaking, to issue bonds with fixed Income at a price that doesn't fluctuate at all.

This overvalued condition happens in the first few years of a company life. Once the Industry realizes that this company is overvalued the market adjusts itself obligating the company to adjust their prices.

3. The Technical analysis tools described on chapter four can help an investor to fully understand and help decide where to invest and when, These tools can help any potential investor and can be found in any financial book. The Fundamental analysis it's a very powerful tool to learn and manipulate when necessary, I'm surprised that no Internet related trading site has them.
4. The Internet Trading Sites most important and the ones that posses the most reliable information that could really help investors all over the world are:
 - Charles Schwab
 - Ameritrade

- E*Trade with its low rate plan

And for the Inexperience investor I recommend to use Yahoo Finance, which offers a research tool and Historical quotes that can help determine cycles and upward slopes using a time series regression analysis.

5. The Final conclusion for This IQP is referred to the Econometric analysis on chapter 5. In every company the prices of a title follows a cycle of ups and downs some more up or down than others but it's a simple cycle than can be determine with an analysis so that we can predict its behavior. With and Econometric analysis I determined the correlation that exists between prices in the past with those ones in the present. After the analysis my correlation between t_{-1} and t_0 was positive this means that what happens today might happen with a slightly high possibility of 0.42356 tomorrow until the price approaches its maximum determined by the Williams's and %K oscillators in chapter 4, that is when the function changes slopes.

Appendix Databases of 15-day prices for all companies

Microsoft

Date	Open	High	Low	Close	Volume
29-Jun-01	72.6	73.41	71.4	73	47141900
28-Jun-01	71.55	76.15	70.53	72.74	64487800
27-Jun-01	69.86	71.53	69.36	71.14	34599900
26-Jun-01	67.82	70.21	67.7	70.14	31538500
25-Jun-01	69.1	69.81	67.77	68.85	24607800
22-Jun-01	70	70.61	68.58	68.83	25546000
21-Jun-01	69.15	70.55	68.92	69.84	34801900
20-Jun-01	67.14	69.59	67.1	69.41	32054200
19-Jun-01	68.21	68.85	66.85	67.32	31728700
18-Jun-01	67.95	67.96	66.01	66.88	28423400
15-Jun-01	67.51	68.3	66.4	68.02	54177200
14-Jun-01	70.22	70.55	68.4	68.9	35986200
13-Jun-01	72.05	72.3	70.64	70.69	27651200
12-Jun-01	71.02	72.41	70.81	72.08	33357300
11-Jun-01	72.85	72.85	71.51	72.12	23672800

Dell

29-Jun-01	26.65	27.68	24.79	26.15	39257800
28-Jun-01	25.99	27.57	25.97	26.42	42896000
27-Jun-01	25.15	25.99	24.95	25.74	29049400
26-Jun-01	24.24	26.25	23.82	25	27628300
25-Jun-01	24.1	24.4	23.73	24.25	25707300
22-Jun-01	23.73	24.25	23.3	23.41	21048800
21-Jun-01	23.42	24.49	23.17	23.5	22711000
20-Jun-01	22.98	23.5	22.65	23.45	29706700
19-Jun-01	24.54	24.85	23.1	23.67	24685900
18-Jun-01	24.55	24.7	23.48	23.92	20917600
15-Jun-01	24.74	25.25	24.25	24.32	34137800
14-Jun-01	24.94	25.75	24.72	25.04	26448800

13-Jun-01	26.19	26.52	25.09	25.19	25551300
12-Jun-01	25.75	26.47	24.87	26.1	33892100
11-Jun-01	25.29	25.51	24.5	25.26	24328400

Compaq

29-Jun-01	14.3	15.5	14.11	15.32	13214400
28-Jun-01	14.05	14.7	13.96	14.22	10789900
27-Jun-01	13.73	13.94	13.6	13.88	7478000
26-Jun-01	13.5753	13.8248	13.4256	13.735	10009500
25-Jun-01	13.725	14.0245	13.5254	13.8747	9562500
22-Jun-01	13.6252	14.0145	13.3657	13.4755	8622800
21-Jun-01	13.3757	13.7051	13.3257	13.4655	11056800
20-Jun-01	13.3257	13.725	13.176	13.2758	9552200
19-Jun-01	14.0245	14.2341	13.4455	13.5753	10759800
18-Jun-01	14.2241	14.5236	13.725	13.725	9001200
15-Jun-01	14.2441	14.7432	14.1143	14.4737	12372000
14-Jun-01	14.274	14.7432	14.274	14.4537	8768100
13-Jun-01	15.402	15.5717	14.7232	14.7332	10712700
12-Jun-01	15.3021	15.6216	15.2223	15.5417	7540200
11-Jun-01	15.7713	15.8212	15.2722	15.4219	6178200

AOL

Date	Open	High	Low	Close	Volume
29-Jun-01	51.7	53.15	51.61	53	13496600
28-Jun-01	52.8	53.26	51.51	52.08	14363200
27-Jun-01	53	53.15	52.15	52.68	10456900
26-Jun-01	52.1	53	51.76	52.85	11302400
25-Jun-01	53.7	53.84	52.7	53	11224600
22-Jun-01	54.05	54.3	52.75	53.1	13431000
21-Jun-01	52.6	55	52.3	55	26473200
20-Jun-01	49.74	52.8	49.74	52.8	16370300
19-Jun-01	50.4	50.9	49.53	49.84	10924200
18-Jun-01	50.75	50.8	49.55	49.8	13073400
15-Jun-01	49.4	50.9	48.18	50.9	27328600
14-Jun-01	51.5	51.53	50.06	50.41	12707400
13-Jun-01	51.95	52.89	51.5	51.55	8400900
12-Jun-01	51.9	52.65	50.6	52.1	10597000
11-Jun-01	51.05	52.25	51	51.79	8272800

Amazon

Date	Open	High	Low	Close	Volume
29-Jun-01	14.31	14.65	13.72	14.15	4489000
28-Jun-01	14.23	14.59	13.77	14.36	5516700
27-Jun-01	13.81	14.25	13.65	14.04	7624400
26-Jun-01	12.54	13.74	12.04	13.25	6639500
25-Jun-01	12.71	13.14	12.57	12.81	6947000
22-Jun-01	13.13	13.27	12.38	12.4	6316700
21-Jun-01	12.68	13.2	12.59	13.08	9777400
20-Jun-01	11.27	12.7	11.2	12.53	10652300
19-Jun-01	12.45	12.65	11.2	11.36	6109500
18-Jun-01	12.45	12.7	11.67	11.83	5717100
15-Jun-01	13.01	13.46	12.3	12.49	7671600
14-Jun-01	14.12	14.12	13.16	13.29	5088300
13-Jun-01	14.96	15.15	14.11	14.12	3784400
12-Jun-01	14.6	14.79	14.32	14.64	4333700
11-Jun-01	15.5	15.55	14.45	14.86	4971000

Adobe

Date	Open	High	Low	Close	Volume
29-Jun-01	47.33	48	46.49	47	4607600
28-Jun-01	44.85	48.13	44.81	46.86	4658200
27-Jun-01	44.55	45.34	44	44.35	3075100
26-Jun-01	43.7	45.11	43.4	44.65	2822000
25-Jun-01	43.98	44.58	43.25	44.52	2223700
22-Jun-01	45.59	45.75	43	43.58	2799500
21-Jun-01	45.0071	46.2767	44.6972	45.297	4913600
20-Jun-01	41.9879	45.6669	41.938	45.287	5425500
19-Jun-01	41.9979	43.6875	41.9879	42.7377	6941200
18-Jun-01	39.2487	40.7183	38.7489	40.5284	3771500
15-Jun-01	38.5789	41.9879	37.9891	39.5486	9713500
14-Jun-01	39.6986	40.1885	37.7892	38.9988	5913000
13-Jun-01	41.3581	42.0879	39.9985	40.1685	3371400
12-Jun-01	41.3181	42.0979	39.6786	41.1682	4002000
11-Jun-01	42.7377	44.2373	41.3381	42.2779	5454500

Intel

Date	Open	High	Low	Close	Volume
29-Jun-01	29.7914	30.7508	28.7321	29.2318	49436600
28-Jun-01	29.2118	30.481	29.1818	29.6215	54522800
27-Jun-01	28.9819	29.1918	28.3223	28.6322	33729600
26-Jun-01	28.0725	29.0519	28.0125	28.952	34780200
25-Jun-01	27.9826	28.6721	27.4529	28.5622	28358600
22-Jun-01	27.4529	28.2824	27.253	27.4929	30366800
21-Jun-01	27.333	28.0725	26.9332	27.253	45895500
20-Jun-01	26.2936	27.6428	26.2436	27.4729	43070200
19-Jun-01	28.5122	28.7721	26.1237	26.6534	60427600
18-Jun-01	27.8526	28.5222	27.4129	27.5328	27854300
15-Jun-01	27.323	28.2824	27.0931	27.6628	54910400
14-Jun-01	28.5422	29.0819	27.5428	27.5928	41913100
13-Jun-01	29.8614	30.1112	28.9819	29.0419	41032400
12-Jun-01	29.6815	30.1912	28.9819	30.1112	54088900
11-Jun-01	30.1512	30.491	29.4017	30.3111	41072800

AMD

Date	Open	High	Low	Close	Volume
29-Jun-01	27.43	30.1	27.43	28.9	11227700
28-Jun-01	26.95	28.6	26.94	27.43	4919400
27-Jun-01	25.9	27.06	25.55	26.5	5611500
26-Jun-01	25.15	26.4	24.83	26.15	4906200
25-Jun-01	25.95	25.95	24.71	25.29	3415600
22-Jun-01	24.65	25.85	24.2	24.67	4866500
21-Jun-01	24.05	24.59	23.62	24.48	7173400
20-Jun-01	24	25.1	23.56	23.95	11126200
19-Jun-01	27.5	27.75	24.38	24.99	11304400
18-Jun-01	27.5	28.05	26.15	26.4	5887800
15-Jun-01	27.05	28.1	26.5	27.56	6735800
14-Jun-01	28.08	29.28	27.23	27.44	5932600
13-Jun-01	29.75	30.46	28.9	29.28	4284000
12-Jun-01	29.05	30.3	28.53	29.67	6348200
11-Jun-01	31.1	31.1	29.08	30.05	5982200

Coca Cola

Date	Open	High	Low	Close	Volume
29-Jun-01	45.5	45.66	44.86	45	6573400
28-Jun-01	44.3	45.41	44.22	45.35	7807500
27-Jun-01	44.1	44.35	43.75	44.18	6326900
26-Jun-01	43.59	44.3	43.03	43.95	10223300
25-Jun-01	44	44.2	43.26	43.59	7345300
22-Jun-01	43.65	43.71	42.59	42.85	4605600
21-Jun-01	44.25	44.48	43.55	43.59	5149400
20-Jun-01	43.46	44.24	43.45	43.93	4150900
19-Jun-01	43.77	44.09	43.54	43.75	2720500
18-Jun-01	44.26	44.45	43.47	43.77	3177200
15-Jun-01	44.11	45.19	44.11	44.26	6874900
14-Jun-01	45.36	45.69	44.84	45.02	3510800
13-Jun-01	45.89	45.9	45.4	45.85	2787800
12-Jun-01	45.72	45.9491	45.3316	45.73	2449700
11-Jun-01	45.3415	45.9392	45.3316	45.7499	1738100

Cisco Systems

Date	Open	High	Low	Close	Volume
29-Jun-01	18.77	20	18.1	18.2	87250800
28-Jun-01	18.54	19.19	18.45	18.58	70696400
27-Jun-01	18.01	18.25	17.61	17.93	44681200
26-Jun-01	17.97	18.1	17.65	18.02	62755700
25-Jun-01	18	18.55	17.77	18.51	56218100
22-Jun-01	18.09	18.53	17.48	17.52	52644300
21-Jun-01	16.58	18.31	16.28	17.68	82574700
20-Jun-01	16.6	16.85	16.14	16.4	67861900
19-Jun-01	17.47	17.52	16.33	16.64	60739500
18-Jun-01	16.8	17.23	16.4	16.5	54183100
15-Jun-01	17.25	17.67	16.4	16.65	1.17E+08
14-Jun-01	18.3	19.01	17.71	17.74	85642500
13-Jun-01	20.22	20.25	19	19.02	57764900
12-Jun-01	19.93	20.58	19.25	20.37	57859100
11-Jun-01	20.31	20.5	19.67	20.38	50494800