Stock Market Simulation

An Interactive Qualifying Project

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by

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Abstract

An eight-week stock market simulation was conducted through an online trading simulator. The portfolio was formulated with mid- and large-cap U.S. companies in the financial services sector, and multiple strategies involving fundamental or technical analysis were employed. The result of the simulation was compared to key benchmarks and analyzed in the context of market conditions. The knowledge of and the experience in financial markets, trading strategies, and risk management gained from this simulation will benefit our future investment in the stock market.

Acknowledgement

We would like to express our gratitude to Professor Dalin Tang. We are heartily thankful for his encouragement and guidance throughout this Interactive Qualifying Project. His kind advice has not only helped us complete the project but will continue to benefit us in our career.

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Chapter One: Introduction

Investment in the stock market has become an inevitable part of almost every working individual's life. Such investment can be conducted directly or indirectly. Either way, the knowledge and experience of investing will help people become better positioned for the growth of their personal wealth.

In this Interactive Qualifying Project, we aimed to study and practice investing in the stock market as an important means of personal investment. We constructed our stock portfolio and performed an eight-week stock market simulation. The goals of our project, the criteria of stock selection for the portfolio, our trading strategies, and the key takeaways in our final analysis are presented in this chapter.

1.1   Goals of the Project

In order to manage our personal wealth better in the future, we hoped to start by practicing the investment in the stock market without the risk of losing money. Specifically, we set the following three goals for this project.

- To gain knowledge of the equity market, especially the one in the United States, and the industrial sector we followed in particular.

- To study, practice, and analyze trading and risk management techniques for personal investment in stocks.

- To obtain a basic understanding of our personal risk appetite as preparation for future investment using real money.

In line with the purpose of almost any investment, the investment we simulated sought to make a profit. However, given our goal we decided not to judge the outcome of the project according to our portfolio return.

1.2   Scope of the Project

The investment practice that this project entailed was restricted to personal investment, as opposed to institutional. Consequently, our activities were conducted on a very limited scale and thus would have ignorable impact on the prices of the securities involved in our transactions, which made it possible for us to simulate our investment without actually entering the real stock market.

We focused on investing in mid- to large-cap U.S. companies in the financial sector, using virtual money of a total amount of U.S. $100,000 at initiation. Then we managed our stock investment portfolio for approximately eight weeks, during which trading took place, no new capital was allowed to be added for our investment, and the use of leverage was avoided.

1.3   Core Strategies

For portfolio formulation, a top-down approach was used to select the sector in which we would invest. The financial sector became the top choice due to our belief in the global macro economy, U.S. domestic economy, and the industry outlook in the wake of the global meltdown.

For stock selection and timing transactions, we employed both fundamental analysis and technical analysis in our simulation. Fundamental analysis was performed throughout the simulation to select companies and realize diversified holding of relatively stable financial firms. It was also applied indirectly in the timing of our transactions, when we entered and exited (long)

positions according to the average analyst recommendations on Reuters. Technical analysis was added to our strategies in the second half of our simulation in order to time our transactions more accurately. A few technical indicators were considered simultaneously to help us confirm the recommendations on Reuters and drive us to our final trading decisions.

1.4   The Final Analysis

Following the simulation, we analyzed the methods used and summarized the key takeaways from our virtual investment, including lessons we learned on the financial market, investment analysis, trading strategies, and risk management. The learning and experience that we accumulated from this project will make us not only more skilled at the basics of stock trading but also more confident and capable of relatively aggressive investment with real money in the future.

Chapter Two: Background

2.1   Methods to Trade in Personal Investment

Commonly, there are two main methods for an individual to buy or sell stocks: with an online account or through a broker, each of them having their own advantages and disadvantages.

With the invention of online trading platforms, to invest individually, a person only needs to go to the websites of the stock brokerage firms through which they want to invest and purchase the amount of shares as they wish. This method is usually quick and easy, only with some low fees for the transactions, such as the commission fee will be automatically applied when a trade is made. The online trading platforms enable individuals to seemingly trade on their own without the need to communicate with a stock broker. While this method allows individuals to make investment decisions more independently, the downside of it that there is no access to the knowledge and experience of a stock broker either. Although services such as free research reports are available at and vary from one online brokerage to another, all decisions must be made and based on the research by individual investor, who may have very limited experienced with the stock market, and doing such research may be very time-consuming.

For people with too little time or knowledge and experience, they could go to the stock exchange physically and invest through a broker. After one finds a broker, the latter will first evaluate the investment goals and economic status of the client and then will offer some unbiased opinions, something the Internet option will not, and help determine the most suitable investment choice. Of course, the investment decisions still have to be made by the investor, but they might be largely influenced by the stock broker who cares about his or her earnings from brokering a deal. And in this case, the transaction cost is a no longer a flat rate but a commission

in a specified percentage, i.e., the more money you invest and trade, more money you have to pay to broker.

2.2   Investment Risk

Risk, briefly, is the chance of losing money because there are several dangers in investing. Smart investors always build a solid foundation of the knowledge about different types of risk for each stock, bond, etc., invested in. Apart from the market risk, there are three types of risk of a specific company that one needs to be conscious of: business risk, valuation risk and force of sale risk.

2.2.1 Business Risk

Perhaps this is the most familiar risk to an investor and easiest to understand. Business risk is the potential for loss of value due to company competition, mismanagement, and financial insolvency. There are a number of industries that are predisposed to higher levels of business risk such as steel, railroad, and airlines.

2.2.2 Valuation Risk

One might be able to find a company with excellent margins, stable growth rate, a little or even no debt on the balance sheet. However, if the company's stock was trading at a price extremely far in excess of the current earnings, should the stock be purchased or not? The answer would probably be no, because the danger of investing in companies that appear overvalued is that there is normally little room for error. The business may indeed be good, but if it suffers a significant decline in profit, the stock price will decline significantly.

2.2.3 Force of Sale Risk

The force of sale risk is a risk about the time you sell your shares. For example, you have bought an excellent stock that is trading far below what it is really worth but one has to sell it in certain days. So, that is, you have bet on when your stock is going to appreciate and this is a indeed a financially fatal mistake since in the stock market, you can be almost determine what will happen in a company, but not when. Facing this, you have turned your basic advantage, the luxury of holding permanently and ignoring market quotations, into a disadvantage.

2.2.4 Other considerations

There are two kinds of market, the bear market which is going down and the bull market which is going up. With a fund of knowledge about these two markets, one may decrease one's risk in investing. For example, if one buys stocks during a bear market, one may have a better chance of buying at the lower prices of a stock, and the reverse is true during a bull market.

An important method to decrease risk and increase chances of gain is diversification. As an old saying goes: don't put all your eggs in one basket. Thus, it is less risky to divide one's money to buy three of four different stocks instead of putting the whole amount into only one of them. In the stock market, while one stock may drop in price, others may rise at the same time. If all one's funds are in one stock, one stands to lose a great deal of money without any balancing gain in another stock. On the other hand, when the funds are diversified, many investments can go down with the gains in others nullifying the losses and even possibly resulting in a net gain in the overall portfolio.

2.3   Investment Return

The return is the money that investors earn in investing. In stock market, there are two ways in which investors receive returns, namely capital gain and dividend.

2.3.1 Capital Gain

Capital gain is a profit that results from holding an asset, such as stocks, bonds or real estate, whose prices exceeds the initial investment. It is the difference between a higher selling price and a lower purchasing price, which results in a financial gain for the investor.

2.3.2 Dividend

Dividends, usually used by investors to measure companies' expected earnings, are payments made by a corporation to its shareholders. When a corporation makes a profit, it can be received in two ways: being re-invested in the business or being paid to the shareholders as dividends. Dividends are usually set up on a cash basis, among their varying forms. Today, many public companies offer dividend reinvestment plans, which automatically use the cash dividend to purchase additional shares of the company for the shareholder.

2.4   Stock Analysis

Two divergent analytical methods exist in stock analysis – fundamental analysis and technical analysis. In this section we introduce and contrast both methods, then present how the two methods have been used together by practitioners, and throughout the section discuss the implication of different methods to our investment simulation.

2.4.1 Fundamental Analysis

Fundamental analysis aims to forecast securities' prices using historical and present economic data. In the case of a stock, such data include figures from the company's financial statements, such as assets, liabilities, and book values of equities, along with various ratios derived from those figures such as Price/Earnings multiples (P/E ratio) [1].   Less quantitative analysis on the company's management, competitive advantages, and its markets are also involved. Since the major objective of performing fundamental analysis is to value a company's stock and predict its price evolution, the analysis tells people to buy the stock when it is undervalued by the market and to sell when it is overvalued.

Commonly, the fundamental indicators are the key tool used in long term equity investments. A good way to determine whether a stock is undervalued or overvalued is to analyze a company's P/E ratio, book value, debt and cash flow.

1.   *Price/Earnings (P/E) Ratio*

The P/E ratio is calculated by dividing the price of the stock by the earnings per share. A company with a higher P/E ratio compared to the industry could imply that investors are paying more for every dollar of earnings, which suggests that the stock is overvalued. A lower number compared to the industry might mean that the stock is undervalued.

2. *Book Value*

Book value is also used to determine whether a stock is overvalued or undervalued. The Book value could represent the worth of a company if it is liquidated immediately. Normally, if a stock is selling far below its book value per share, it is undervalued; a stock priced above its book value could be overvalued.

3. Debt & Cash Flow

Debt is the total amount of money owed by a company. While debt can finance growth during times of prosperity, it can also become a burden if a company is having financial difficulties. Cash flow is the amount of money that is moving in and out of a business. It is a good indicator of a company's financial health, because it is more difficult for a company to manipulate than earnings. However, a better analysis would require the analysis of both debt and cash flow, i.e. the company's debt obligations in relation to its cash flow.

2.4.2 Technical Analysis

The trend is your friend.

– George Lane

Technical analysis aims to identify favorable trading opportunities by studying security price patterns. The rationale behind it has two components. First, the stock price reflects all relevant public information at any given time as well as all market participants' opinions regarding that information. Second, the stock's fundamental information and market opinions, already reflected by the price, will lead to recurring price patterns that imply potential future price movements [1]. In a more theoretical way, Kaplan's CFA Level I guide summarizes the assumptions underlying all technical analysis as follows.

- Values, and thus prices, are determined by supply and demand.

- Supply and demand are driven by both rational and irrational behavior.

- Security prices move in trends that persist for long periods.

- While the causes of changes in supply and demand are difficult to determine, the actual shifts in supply and demand can be observed in market price behavior [2].

Various tools and methods are employed by users of technical analysis, or (market) technicians, but the study of price charts is primary given the nature of technical analysis. Hence the older term chartists referring to technicians.

2.4.3 Comparison between Fundamental and Technical Analyses

Fundamental analysts believe that the market reaction to new information, reflected by price changes, is fast, while technical analysts believe that such market reaction is slow.

In fundamental analysis, the price of a stock is determined by the supply and demand for the stock based on its economic fundamentals. For this reason, fundamentalists (people relying on fundamental analysis) look for changes in such basis of a stock's value as the corresponding company's economic data, which will eventually lead to changes in supply and demand for the stock and thus changes in the stock price. Technicians, on the other hand, seek confirmation of changes in supply and demand through market signals and indicators defined in numerous methods [2].

Fundamentalists look for reasons that prices will changes, while technicians look for evidences that prices have changed [2].   This is in accordance with their respective beliefs in the speed at which new information is in pounded into prices.

However, when it comes to investing, technicians generally trade more frequently than fundamentalists because the former act on signals and indicators, which confirm that the price changes that have already taken place. Fundamentalists, particularly value investors who invest in stocks underpriced by the market, pay less attention to temporary price fluctuations but instead focus on the longer term prospect that the market will shift the price to the stock's intrinsic value.

2.5   Sector Background

In economics and finance, sectors, also called industries, are divisions or areas of the economy where businesses provide the same or related products or services. In the financial market, a sector also refers to a group of securities, especially equities, in the same economic sector defined above. Sectors are usually further divided into subsectors.

2.5.1 Financial Sector (Financials)

The financial sector, or simply financials to reflect the collection of financial stocks, contains companies that provide financial services to individual and corporate clients. According to specific categories of services which these firms provide, the financial sector is usually subdivided in a number of ways. Generally, subsectors include banks, asset management firms, insurance companies, and real estate, each of which can be subdivided again (and again) to suit particular analysis purposes. For example, on Reuters, financials is subdivided into banks, consumer financial services, investment services, financials – specialty, financial services – diversified, insurance – multiline, insurance – property/casualty, insurance – life/health, reinsurance, real estate investment trust (REIT) – residential/commercial, and real estate operations [3].

Financial services firms typically have a beta above 1, meaning that they are sensitive, with a positive correlation, to the overall market conditions. Thus, financials stocks tend to outperform the market in an expansionary business cycle, benefiting from the increase in investment and financing, and underperform in a contracting cycle. Studies have also shown that financials perform better in low interest rate environments, and that the relationship between inflation and the financial sector performance is also negative [4].

2.6   Investopedia.com

Investopedia.com is one of the Internet's largest sites devoted entirely to investing education. The site was started by Cory Janssen and Cory Wagner in June 1999 at the height of the Internet stock boom as an unbiased source to learn about investing [9].   Based in the city of Edmonton in Alberta, Canada, the site has grown to become a well-respected source for financial information. In 2007, the site was purchased by U.S. publishing company Forbes and, after that, entirely focused on financial and investing education.   The site now averages over 2 million page views a month and is home to over 1,500 articles, 8,000 dictionary entries, and 750 pages of tutorials on nearly every aspect of finance and investing [9].   However the most popular of its many website features and resources is the Stock Market Simulator.

2.6.1 The Investopedia Online Simulator

The stock market simulator, operated by Investopedia, simulates the real stock market and provides up to date stock quotes on companies listed on any of the exchanges. This is a simple, easy-to-use program that imitates the real life workings of the stock market, but as a standard features in this type of simulators, there is a 20-minute delay of feedback from the real stock exchange. That is, with delayed data, a quote one gets during the time when the market is open actually reflects the price of the stock 20 minutes ago. In the training program, the simulator can provide users real trading experience by providing a virtual amount of $100,000.00 to start a portfolio. Just like real online brokers, the Investopedia Online Simulator also charges commissions. These charges can significantly affect an investor's bottom line, and including these in simulated trading helps users learn to factor these costs in when making purchasing decisions. Specifically, the commission is $19.99 for any (regular) market order which we will

denote as either "Buy" or "Sell", and $29.99 for any special order including limit order and stop

order, which will be denoted "Buy Limit", "Sell Limit", "Buy Stop", or "Sell Stop".

Chapter Three: Methodology

3.1   Portfolio Formulation

We chose to invest only in financials due to our belief that financials would outperform the market in general following the recession, that the slump in the equity market starting mid-January was merely a correction after nine consecutive months of gain, and that the market would start rallying again between mid-February and mid-April – within our simulation time horizon.

We focused on mid- to large-cap U.S. financial firms so that the stock selection and analysis would be less tedious given our workload and time-constraint. We also decided to start by investing in diversified large-cap financial services companies to control the risk level. As we gained more knowledge and skills in the simulation, we would gradually broaden our scope to more specialized financial firms and thereby increase the sophistication of our investment simulation.

3.2   Stock Selection

In our simulation, we used a combination of fundamental analysis and technical analysis. Fundamental analysis was employed to determine the market direction and select individual stocks; technical analysis to confirm the stock selections and time the trading of selected stocks.

Due to the time constraint of our simulation (about eight weeks), we focused on the short-term price movements of stock prices without excessive conviction about the stocks' long-term performance. Thus, in the fundamental analysis applied in the initial stage of our stock screening,

we did not set very stringent requirements on the companies' economic data and financial ratios in order to laboriously find even slightly undervalued stocks. Rather, we examined the fundamentals to select reasonably priced healthy companies and then, in a later stage of the simulation, used the technical indicators to narrow down our stock picks.

3.3   Trading Strategies

Throughout our simulation, we employed the "buy and bold" strategy for most of our holdings and purchased stocks when they were, on average, highly recommended according to the analyst survey on Reuters and sold them when they were downgraded. In the second half of the simulation, we added the use of technical indicators to confirm our timing of transactions.

3.3.1 Long Term Transactions Using Buy and Hold Strategy

Buy and hold is a long term investment strategy in which stocks bought and then held for a long time, regardless of the market's fluctuations, will give a good rate of return. One of the strongest arguments for the buy and hold strategy is that in the very long term (say, 10 years), the stock prices will go up. The proof of this idea is that in a capitalist society the economy will keep growing and expending, and thus that corporate profits will keep growing as well. Two additional benefits, trading with the Buy and hold strategy, are the reduced commission fees and smaller taxes as the result of trading less frequently and holding longer.

Successful "long-term" trading means paying attention to the entire picture. In order to succeed in this strategy, involvement in violent market swings or other short-term influences should be avoided. Then, how to find a solid stock to buy and hold? The answer is through fundamental analysis. Thus, the fundamental indicators discussed in the previous chapter were applied in our stock selection.

Since our simulation time was merely eight weeks, we might not see the "full power" of Buy and Hold strategy, and the timing of transactions would play a more prominent role in our portfolio return than in longer holding periods. But if given enough time, we would be confident that the Buy and Hold method would pay off well, as justified by the historical data from the past 50 years.

3.3.2 Following Average Analyst Recommendations on Reuters

Reuters survey leading brokerage firms for their analysts' recommendation on stocks. We timed our transactions according to the change of those recommendations. Similar to the trading according to Zack's numbers, a stock was purchased when the average recommendation went above, or usually well above, "Outperform" (between "Outperform" and "Buy"), and it was sold when the average recommendation fell significantly below "Outperform" (between "Hold" and "Outperform", or even below "Hold").

Early in our simulation (during the first four weeks) we timed our transaction simply by spotting prices which we perceived "reasonable." This was due to our more risk-averse approach towards stock selection and lack of experience in investment, when we invested primarily in large-cap financial institutions which were still deemed "too big to fail" given the global market and macroeconomic conditions. Day trading was initially also avoided as we relied on longer-than-ultra-short-term price appreciations.

3.3.3 Timing Transactions Using Technical Indicators

During the second half of our simulation (from Week 5 to Week 8) we gradually added more elements of technical analysis to our timing of transactions, and the level of complexity increased over time in pursuit of a higher rate of return through more aggressive trading.

Basically, patterns of stock charts were analyzed, with an emphasis on support and resistant levels and trending. They were also compared to the established chart patterns which historically signaled trend continuation or reversal to a decent level of accuracy. Other technical indicators, including relative strength index (RSI) and moving average convergence/divergence (MACD) are considered to confirm the timing of our transactions.

Chapter Four: Company Information

4.1   JPMorgan Chase & Co. (NYSE: JPM)

The JPMorgan Chase & Co., also called JPMorgan Chase, incorporated in 1968, is a financial holding company. JPMorgan Chase's principal bank subsidiaries are JPMorgan Chase Bank, JPMorgan Chase Bank, N.A. and Chase Bank USA, Chase Bank USA, N.A., a national bank that is the Company's credit card issuing bank. JPMorgan Chase's principal non-banking subsidiary is J.P. Morgan Securities Inc., its United States investment banking firm. The bank and non-bank subsidiaries of JPMorgan Chase operate nationally, as well as through overseas branches and subsidiaries, representative offices and subsidiary foreign banks. The Company's activities are organized into six business segments: Investment Bank, Retail Financial Services (RFS), Card Services (CS), Commercial Banking (CB), Treasury & Securities Services (TSS) and Asset Management (AM). Its wholesale business comprises the Investment Bank, Commercial Banking, TSS, and Asset & Wealth Management. Its consumer business comprises RFS and CS. It also has a corporate segment, which includes Private Equity, Treasury and Corporate operations.

In September 2009, the Company announced the formation of the Prime-Custody Solutions Group and in February 2009, the Company completed its acquisitions of UBS Commodities Canada Ltd. and UBS AG's global agricultural business. In March 2009, The Bank of New York Mellon Corporation completed the acquisition of JPMorgan Trust Bank Limited in Japan from the Company [5].

Figure 1   JPM 8-Month Price Movement [6].

4.2   Bank of America Corporation (NYSE: BAC)

Bank of America Corporation (Bank of America) is a bank holding company and a financial holding company. Through its banking subsidiaries and various non-banking subsidiaries throughout the United States and in selected international markets, it provides a

diversified range of banking and non-banking financial services and products through three business segments: Global Consumer and Small Business Banking, Global Corporate and Investment Banking and Global Wealth and Investment Management. Bank of America operates in 50 states, the District of Columbia and more than 40 foreign countries. Bank of America has 6,100 banking centers, approximately 18,700 automated teller machines (ATMs), nationwide call centers, and online and mobile banking platforms.

On January 1, 2009, Bank of America announced the purchase of Merrill Lynch & Co., Inc. On July 1, 2008, Bank of America completed the acquisition of Countrywide Financial Corporation [5].

Figure 2   BAC 8-Month Price Movement [6].

4.3   American International Group, Inc. (NYSE: AIG)

American International Group, Inc. is a holding company engaged in range of insurance

and insurance-related activities in the United States and abroad. AIG's primary activities include

both General Insurance and Life Insurance & Retirement Services operations. Other significant

activities include Financial Services and Asset Management. The Company mainly operates in General Insurance, Life Insurance & Retirement Services, Financial Services and Asset Management. Through these operating segments, AIG provides insurance, financial and investment products and services to both businesses and individuals in more than 130 countries and jurisdictions. AIG's subsidiaries serve commercial, institutional and individual customers through a property-casualty, and life insurance and retirement services network. AIG's Financial Services businesses include commercial aircraft and equipment leasing, capital markets operations and consumer finance, both in the United States and abroad [5].

Figure 3   AIG 8-Month Price Movement [6].

4.4   State Street Corporation (NYSE: STT)

State Street Corporation (the Company) is a financial holding company. The Company

includes its banking subsidiary, State Street Bank and Trust Company, State Street Corporation,

provides a range of products and services for institutional investors worldwide. The Company

operates in two lines of business: Investment Management and Investment Servicing. The business provide services to support institutional investors, investment research and investment management, including passive and active United States and non-United States equity and fixed-income strategies.

State Street Bank is a member of the Federal Reserve System and the Federal Deposit Insurance Corporation (FDIC) and is subject to applicable federal and state banking laws and to supervision and examination by the Federal Reserve Bank of Boston, as well as by the Massachusetts Commissioner of Banks, FDIC, and the regulatory authorities of those countries in which a branch of State Street Bank is located. The Company provides a range of investment management strategies, investment management advisory services and other financial services for corporations, public funds, and other sophisticated investors. The services are offered through SSgA. It offers a range of foreign exchange services under an account model that focuses on the global requirements of the customers to execute trades and receive market insights in any time zone [5].

Figure 4   STT 8-Month Price Movement [6].

4.5   Goldman Sachs Group, Inc. (NYSE: GS)

The Goldman Sachs Group, Inc. (Goldman Sachs) is a bank holding company and global investment banking, securities and investment management firm that provides services worldwide to corporations, financial institutions, governments and high-net-worth individuals.

Its activities are divided into three segments: Investment Banking, Trading and Principal Investments, and Asset Management and Securities Services. Goldman Sachs provides a range of investment banking services to a diverse group of corporations, financial institutions, investment funds, governments and individuals. Its Investment Banking segment is divided into two components: Financial Advisory and Underwriting.

On February 25 2010, Coalcorp Mining Inc. announced that the previously announced sale by certain subsidiaries of Coalcorp of the La Francia I mine and related infrastructure assets, and all of the issued and outstanding shares of Adromi Capital Corp., the holder of the La Francia II concession, to a subsidiary of the Goldman Sachs Group, Inc. (the Proposed Transaction) is now expected to close on March 5, 2010 [5].

Figure 5   GS 8-Month Price Movement [6].

4.6   Citigroup Inc. (NYSE: C)

Citigroup Inc. (Citigroup), incorporated in 1988, is a global diversified financial services holding company. The Company is engaged in providing a range of financial services to consumers and corporate customers. As of May 4, 2009, Citigroup had more than 200 million

customer accounts and did business in more than 140 countries. Through its two operating units, Citicorp and Citi Holdings, Citigroup provides consumers, corporations, governments and institutions with a range of financial products and services, including consumer banking and credit, corporate and investment banking, securities brokerage, and wealth management. In

On February 23 2010, the Wall Street Journal reported that Citigroup Inc. is in talks to sell a hedge-fund business with about $4 billion in assets. SkyBridge Capital, a New York alternative-asset manager, is in advanced talks to buy Citigroup's fund-of-funds business. No pact has yet been signed, and the proposed sale price couldn't be determined. The assets Citigroup is selling include about $1 billion in investments farmed out to hedge funds, some $2.5 billion in hedge-fund assets on which Citigroup advises, and $500 million in seeding capital tied to stakes in small hedge funds, says a person familiar with the matter. Citigroup management team overseeing the assets is expected to remain in their roles as part of the deal [5].

Figure 6   C 8-Month Price Movement [6].

4.7   Visa Inc. (NYSE: V)

Visa Inc. (Visa), incorporated in May 2007, operates the retail electronic payments network and manages a global payments brand. It facilitates global commerce through the transfer of value and information among financial institutions, merchants, consumers, businesses

and government entities. Visa provides financial institutions with product platforms encompassing consumer credit, debit, prepaid and commercial payments. VisaNet, the centralized, global processing platform, enables to provide financial institutions and merchants with a range of product platforms, transaction processing and related services.

On February 15 2010, Visa Inc and DeviceFidelity Inc. announced plans to market an solution that can enable a mobile phone with a memory card slot to be used as a Visa mobile payment device. The solution combines Visa`s contactless payment technology, Visa payWave, and DeviceFidelity`s In2PayTM technology to transform a mobile phone with a microSD memory slot into a mobile contactless payment device [5].

Figure 7   V 8-Month Price Movement [6].

4.8   CIT Group Inc. (NYSE: CIT)

CIT Group Inc. is a bank holding company, which provides commercial financing and leasing products, and management advisory services to clients in a variety of industries. CIT operates primarily in North America, with locations in Europe, Latin America, Australia and the

Asia-Pacific region. CIT Bank is its primary bank subsidiary. The Company provides financing and leasing capital to its clients and their customers in over 30 industries and 50 countries. It serves clients in a variety of industries, including transportation, aerospace and rail, manufacturing, wholesaling, retailing, healthcare, communications, media and entertainment, and various service-related industries.

The Company operates through five segments: Corporate Finance, Transportation Finance, Trade Finance, Vendor Finance and Consumer Finance.

In December 2009, CIT Group Inc. confirmed that it has emerged from bankruptcy having satisfied all of the conditions required to consummate the prepackaged Plan of Reorganization. The distribution of CIT`s new debt and equity securities has taken place in accordance with the Company's confirmed Plan and the new common stock has commenced trading on the New York Stock Exchange (NYSE) under the symbol CIT [5].

Figure 8   CIT 8-Month Price Movement [6].

4.9   MetLife, Inc. (NYSE: MET)

MetLife, Inc, incorporated in 1999, is a provider of insurance, employee benefits and

financial services, with operations throughout the United States and the regions of Latin America,

Asia Pacific and Europe, Middle East and India. The Company provides a variety of insurance

and financial services products, including life, dental, disability and long-term care insurance, various annuity products, and auto and home insurance. Within the United States, it also provides a range of savings and mortgage banking products. The Company's segments include Insurance Products (group life, individual life and non-medical health insurance products), Retirement Products (individual and institutional annuity products), Corporate Benefit Funding (pension closeouts, structured settlements and other benefit funding solutions), Auto and Home segment, International, as well as Banking, Corporate and Other.

On March 7, 2009, Reuters reported that American International Group, Inc., was closing in on a deal on March 7, 2010, to sell its foreign life insurance unit to MetLife Inc, for about $15.5 billion in cash and stock, leaving it with a substantial minority stake in MetLife, sources familiar with the matter said. MetLife is expected to pay American International Group about $6.8 billion in cash and about $8.7 billion in equity, which includes convertible preferred, common shares and common equivalent securities, for the unit, American Life Insurance Co (Alico), one of the sources said [5].

Figure 9   MET 8-Month Price Movement [6].

4.10 Toronto-Dominion Bank (USA) (NYSE: TD)

Toronto-Dominion Bank is a Canadian bank. The Bank and its subsidiaries are collectively known as TD Bank Financial Group. The Bank serves approximately 17 million customers in four segments: Canadian Personal and Commercial Banking, including TD Canada

Trust and TD Insurance; Wealth Management, including TD Waterhouse and an investment in TD AMERITRADE Holding Corporation (TD Ameritrade); U.S. Personal and Commercial Banking, including TD Bank, America's Most Convenient Bank, and Wholesale Banking, including TD Securities. The Bank also acts as online financial services firm, with more than 5.5 million online customers. On June 11, 2009, TD Waterhouse Canada Inc., a subsidiary of the Bank, acquired think or swim Canada, Inc., an online options trading brokerage firm.

In December 3, Toronto-Dominion Bank announced that a dividend in an amount of $0.61 per fully paid common share in the capital stock of Toronto-Dominion Bank has been declared for the quarter ending January 31, 2010, payable on and after January 31, 2010, to shareholders of record at the close of business on January 6, 2010. In lieu of receiving their dividends in cash, holders of the Toronto-Dominion Bank's common shares may choose to have their dividends reinvested in additional common shares of the Bank in accordance with the Dividend Reinvestment Plan [5].

Figure 10   TD 8-Month Price Movement [6].

Chapter Five: Simulation and Analysis

5.1 Week 1 Transactions (2/8/2010-2/12/2010)

Table 1 records the transactions that took place in the past week. We started our simulation dominate by investing in two "Venti Financials" – JPMorgan Chase and Bank of America as the market showed signs of recovery from the decline. We intended to carry out our Buy and Hold strategy with both investments, until further diversification or opportunities would necessitate the reduction of our stakes. Nevertheless, those two companies, as universal banking firms, they are relatively stable thanks to the steady deposits and diversified businesses. Thus, based on reason above, we decided to hold these two companies at the very beginning of our simulation, with sell limit orders at prices near their respective 52-week high, since we were not yet convinced that their prices above that level would sustain in the near future.

Date and Time	Trade	Sym.	Shares	Price	Cost/ Proceeds	Profit/ Loss	Total Profit	Cash Position
Feb 8, 2010 (Start)								**$100,000**
Feb 9, 2010 1:37 PM	**Buy**	JPM	1000	$38.55	$38,569.99	NA	NA	$61,430.10
Feb 10, 2010 1:20 PM	**Buy**	BAC	2000	$14.63	$29,279.99	NA	NA	$32,150.20
Feb 10, 2010 1:29 PM	**Buy**	AIG	1000	$24.35	$29,279.99	NA	NA	$7,780.30
Feb 11, 2010 1:09 PM	**Sell Stop**	AIG	500	$26.40	$13,169.96	$985.02	$985.02	$20,950.40
Feb 11, 2010 4:18 PM	**Sell**	AIG	500	$26.25	$13,105.01	$920.02	$1,905.04	$34,055.50

Table 1   Week 1 Transactions

(Commissions are included in Cost/Proceeds – refer to Section 2.6.1 for specific rates)

We profited from AIG's sharp rally partly out of luck. On the early afternoon of Wednesday, February 10, we notice that AIG had already gone up by approximately 5%. We

tried to follow that trend and purchased 1,000 shares. Market commentaries came out soon after, noting that the climb was due to a short squeeze, when investors rushed to purchase shares of AIG to cover their short positions, and that no significant development took place at the company. We were reassured of our trade, ending the day by gaining about 10%. Since no fundamental change occurred at AIG, we felt uncomfortable staying long and subsequently sold all AIG shares one day after purchasing them.

5.2 Week 2 Transactions (2/16/2010-2/19/2010)

In the second week we diversified our portfolio in the financial sector by adding, at a perceived reasonable price, 500 shares of State Street Corporation, whose main business involves institutional asset management and services. Taking into account the asset management business of JPMorgan Chase and Bank of America, along the latter's near 50% stake in the leading investment management firm BlackRock, our three-stock portfolio gained a rough balance among retail banking, investment banking, and asset management thanks to the two banks' universal banking model.

As the Federal Reserve surprisingly adjusted the discount rate from 0.5% to 0.75% on the night of Thursday, February 18, State Street opened sharply higher on Friday morning since, as a trust bank, it can begin lending at a higher rate when banks will begin borrowing from private markets. This move in State State's share price enabled State Street to break through its recent resistance [7]. We thus expect the price remain on the new level and hopefully begin an uptrend in the short term.
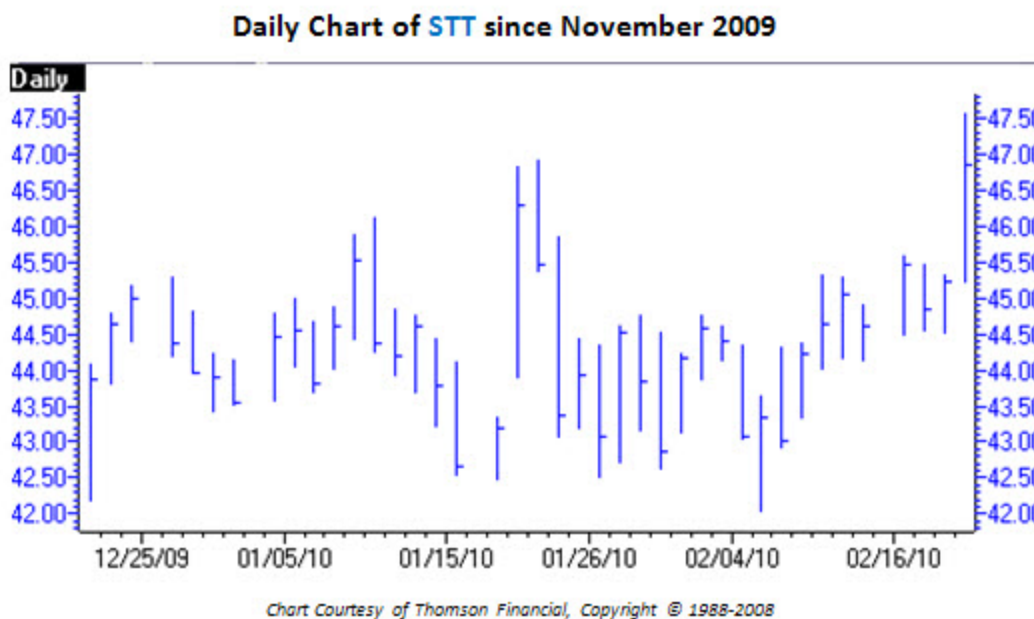
Figure 11   State Street Corporation (STT) Daily Chart **[7].**

With a beta of 1.10 (see corresponding figure in Chapter Four), JPMorgan Chase finished our second week of simulation slightly higher (up 1.7%), not a bad result compared to the 1.41% gain in the broader financial sector but no less disappointing considering the Dow's 1.93% rise and S&P 500's 1.98% rise over the same period. Meanwhile, Bank of America, with three consecutive gaining days and one flat day on Friday, finished the week 6.58% higher, impressive even given its beta of 2.39 [8].   Going forward if the market comes back on an up-trending path, we may need to under-weigh JPMorgan Chase and slightly over-weigh Bank of America with caution.

A quarter of the way through our approximately eight-week simulation, our portfolio produced a 6.98% return between February 9 and February 19, 2010, after subtracting commissions, which are higher than those of the average online brokerage services, although commissions have a very limited impact on our return because of our relatively infrequent

trading. Over these two weeks, financials returned a hefty 10.28% primarily due to their significant rally during the first week, while the Dow and the S&P 500 gained 4.99% and 4.96%, respectively [8]. Our portfolio underperformed the financial services industry, which can be attributed to their small than average beta values, but over performed the broader market benchmarks.

Starting next week when our three-week returns become available, we will include more specific analysis in tabular form showing our returns over time periods of different lengths.

Date and Time	Trade	Sym.	Shares	Price	Cost/ Proceeds	Profit/ Loss	Total Profit	Cash Position
Feb 16, 2010 1:05 PM	Buy	STT	500	$44.84	$22,439.99	NA	$1,905.04	$11,615.60
Feb 17, 2010 10:05 AM	Buy	BAC	500	$15.33	$7,684.99	NA	$1,905.04	$3,930.70

Table 2   Week 2 Transactions

5.3   Week 3 Transactions (2/22/2010-2/26/2010)

Following the average "Buy" recommendation on Reuters, we added Goldman Sachs, Citigroup, and Visa Inc. to our portfolio. Consequently, we further diversified our holdings to virtually all areas of business in financial services, only with a significant absence of insurance, for which we and many analysts do not have a rosy outlook in the near term.

To purchase the abovementioned companies' stocks, we reduced the weights of JPMorgan Chase and Bank of America by selling half of their shares, thus realized a profit, and kept each of them weighting approximately 20% of our portfolio. When purchasing the shares of Goldman Sachs on February 23, we made a calculation mistake which resulted in automatic

borrowing to purchase all the 30 shares we requested. We did not intend to use leverage and will keep avoiding it going forward.

We constructed a table comparing the return on portfolio to the return on Dow Jones Industrial Average, S&P 500 index, and the S&P 500 Financials index. Comparisons were made over three time periods: since the beginning of our simulation, one week, and three weeks.

Our portfolio has outperformed the Dow and S&P 500 by significant margins and outperformed the S&P Financials by overall measures. However, its slight underperformance compared to S&P Financials in Week 3 is alarming, with State Street's 3.71% loss over the week being the main culprit.

Date and Time	Trade	Sym.	Shares	Price	Cost/ Proceeds	Profit/ Loss	Total Profit	Cash Position
Feb 23, 2010 11:05 AM	Buy	GS	30	$158.70	$4,780.99	NA	NA	-$850.20
Feb 25, 2010 1:37 PM	Sell	BAC	1250	$16.09	$20,086.26	$1,825	$3,730.04	$19,242.40
Feb 25, 2010 1:39 PM	Sell	JPM	500	$39.93	$19,941.26	$685	$4,415.04	$39,187.50
Feb 26, 2010 12:13 PM	Buy	C	3000	$3.40	$10,219.99	NA	NA	$28,967.60
Feb 26, 2010 2:26 PM	Buy	GS	100	$156.53	$15,672.49	NA	NA	$13,294.70
Feb 26, 2010 2:34 PM	Buy	V	150	$85.18	$12,796.99	NA	NA	$493.40

Table 3   Week 3 Transactions

5.4   Week 4 Transactions (3/1/2010-3/5/2010)

This week our portfolio produced a decent return of 2.73%. Although 97 basis points (bps) weaker than the broader S&P 500 Financials Sector and 37 bps weaker than S&P 500 Index, the one-week return is still satisfying given the level of risk we have thus far assumed by holding the

financial services companies with the largest market capitalizations, and it is 40 bps higher than the DJIA, which is also in line with riskiness of our portfolio compared to the Dow.

Individual stock-wise, Bank of America, JPMorgan Chase, together with our newly acquired shares of Goldman Sachs and Visa Inc. performed well and we remain highly confident with their near term performance outlook. This is confirmed by the average analyst recommendation on Reuters.com.

On the other hand, the performance of Citigroup and State Street has been week. The recommendation on Reuters for Citigroup has been slightly downgraded, and State Street gave back most of its gain since the breakout on February 19 (refer to Week 2 Transactions). We thus sold our entire holding of Citigroup's shares and half of our State Street shares.

Meanwhile, the recommendation on Reuters for MasterCard has become a strong "Buy", and the rosy outlook of Visa boosted our confidence in consumer credit card issuers. We believed that MasterCard's share price became low enough following its 2009 Q4 earning's release that missed the Street view. Thus we invested the cash freed up by the sale of Citigroup's share in MasterCard, giving it a roughly 10% weight in our portfolio.

Date and Time	Trade	Sym.	Shares	Price	Cost/ Proceeds	Profit/ Loss	Total Profit	Cash Position
Mar 2, 2010 11:02 AM	Sell	C	3000	$3.42	$10,237.91	$60.00	$4,475.04	$9,384.12
Mar 2, 2010 11:05 AM	Buy	MA	45	$232.96	$10,503.19	NA	NA	$228.06
Mar 5, 2010 2:54 PM	Sell	STT	250	$45.35	$11,317.51	$127.50	$4,602.54	$11,545.57

Table 4   Week 4 Transactions

5.5   Week 5 Transactions (3/8/2010-3/13/2010)

On the portfolio level, another strong gain of 2.42% was achieved in Week 5. More importantly, it has been the strongest one-week return compared to our benchmarks, topping the S&P 500 Financials Sector (2.06%) and surpassing both S&P 500 (0.99%) and DJIA (0.55%) by wide margins. Our portfolio has continued its outperformance over S&P and the Dow since the beginning of the simulation, and reduced its lag behind S&P 500 Financials that emerged last week.

Once again on the individual stock level, Goldman Sachs and Visa produced hefty returns while two other of our strong holds, Bank of America and JPMorgan Chase, closed the week only slightly higher. We will stick with GS, BAC, and JPM.

Three and a half months after emerging from bankruptcy, CIT also emerged as a strong buy, for which we freed up cash by selling the rest of our shares of State Street at a good price thanks to a limit sale order. We thus completely dumped STT and switched our confidence in the long term outlook to CIT, which was recommended according to Reuters and had established a clear up-trend since early February by rising above the January 12 high on February 25. Most of the rest of our cash was invested in MasterCard in the hope of its strong performance.

On Monday, MetLife, Inc. announced a definitive agreement to acquire one of AIG's international subsidiaries, American Life Insurance Company (ALICO), for approximately $15.5 billion. On Tuesday, AIG announced the pricing of a $1.3 billion offering of term loans by AIG's big aircraft-leasing unit, International Lease Finance Corp. The surges in AIG's share price on Tuesday and Wednesday reflected investors' bolstered confidence in the insurer's efforts to sell assets and repay billions of dollars in taxpayer support as well as its ability to operate with less

government support. Amidst this optimism we decided to purchase some shares of AIG and keep watching it closely.

On Monday, Visa's share price broke out of the trading range between $80 and $90 established since last December but on Tuesday started giving back its excess above $90. We thus placed a stop loss order on one third of our holdings in Visa and sold 50 shares at $89.99, 1 cent below our stop loss price of $90. However, the rest of the week proved that the stop loss price was set too high, because Visa's share price bounced back on Thursday and Friday, closing the week at $93.25. We should have stayed calm in such situation and set the stop loss price closer to the middle of the trading range, i.e. closer to $85, to avoid a hasty sell-off of a promising stock.

Date and Time	Trade	Sym.	Shares	Price	Cost/ Proceeds	Profit/ Loss	Total Profit	Cash Position
Mar 8, 2010 10:08 AM	Sell Limit	STT	250	$46.06	$11,485.01	$305.00	$4,907.54	$21,683.45
Mar 8, 2010 12:26 AM	Buy	CIT	300	$36.00	$10,819.99	NA	NA	$12,210.59
Mar 9, 2010 10:58 AM	Buy	MA	40	$249.50	$9,999.99	NA	NA	$2,210.60
Mar 10, 2010 10:02 AM	Sell Stop	V	50	$89.99	$4,469.59	$240.50	$5,148.04	$5,333.06
Mar 10, 2010 10:04 AM	Buy	AIG	50	$33.90	$1,714.99	NA	NA	$4,965.20

Table 5   Week 5 Transactions

5.6 Week 6 Transactions (3/15/2010-3/19/2010)

Following two consecutive strong weeks, our portfolio handed out the worst one-week return so far (0.16%), far worse than the S&P 500 Index (0.86%), the Dow Jones Industrial Average (1.10%), or the S&P 500 Financials Sector index (1.08%). Consequently, the portfolio's six-week and three week returns lagged farther behind S&P 500 Financials (13.90% vs. 15.03%,

and 5.39% vs. 6.97%, respectively), which justifiably were in line with the level of risk we assumed while the past one-week return was indeed very weak.

Back to our stocks, our strong holds Bank of America and JPMorgan Chase close another flat week with little gain, and Goldman Sachs rose modestly (1.68%), a decent gain compared to the overall market. CIT produced a hefty 3.22% gain over this week.

MasterCard started giving up gains in the previous weeks, and we cashed them in, in pursuit of better opportunities once again in AIG and Visa. Subsequently, AIG went slightly upward, while Visa's share price kept sliding nevertheless. In contrast of our hope of a sustained up-trend in Visa's stocks, their price seemed to be once again reverting back to the $80 - $90 trading range.

There are only two more weeks left in our simulation. Next week we will likely place a stop-loss order on Visa if there appears to be no sign of further gain. Additionally, we may invest in some insurance companies, including MetLife and Prudential, which we have been following for weeks if there are signals of short-term gain.

Date and Time	Trade	Sym.	Shares	Price	Cost/ Proceeds	Profit/ Loss	Total Profit	Cash Position
Mar 17, 2010 1:46 PM	Sell	MA	85	$247.84	$21,046.52	$603.20	$5,157.24	$24,664.59
Mar 17, 2010 3:31 PM	Buy	AIG	450	$34.17	$15,396.49	NA	NA	$9,268.10
Mar 17, 2010 3:33 PM	Buy	V	110	$91.57	$10,092.69	NA	NA	$524.59

Table 6   Week 6 Transactions

5.7 Week 7 Transactions (3/22/2010-3/26/2010)

This week we traded relatively intensely, although the result was not as good as expected. AIG was sold off in rush to free up cash and reduce our risk resulted from its heavy price

fluctuations. The stock closed the week at $34.21, so with the benefit of hindsight the first trade of this week was not a bad move despite the fact that AIG's price once surged above $35. With the proceeds we over-weighted CIT in our portfolio by acquiring 445 shares in addition to the 300 shares we had had. However, its price only rose slowly to $39 as of Friday's close.

In an effort to realize our gain on our holdings of Bank of America, Goldman Sachs, and Visa, we sold 40% of shares of BAC, all of GS, and about half of V.

Hastily seeking new opportunities in Toronto-Dominion Bank (USA) and MetLife, however, proved to be a big mistake. Without proper analysis, we saw both stocks perform poorly in the rest of the week when we were holding them. As for the return analysis, numbers are already speaking for themselves – a series of mismanagement resulted in a poor 1.02% weekly return.

With only one week left, we will be liquidating all our positions at appropriate times in next few days and close our portfolio.

Date and Time	Trade	Sym.	Shares	Price	Cost/ Proceeds	Profit/ Loss	Total Profit	Cash Position
Mar 23, 2010 10:00 AM	Sell Stop	AIG	500	$33.51	$16,724.61	$316.50	$4,840.74	$17,247.15
Mar 23, 2010 1:59 PM	Buy Limit	CIT	445	$38.65	$17,229.24	NA	NA	$17.91
Mar 24, 2010 9:58 AM	Sell Limit	BAC	500	$17.24	$8,590.01	$1,405.00	$6,245.74	$8,607.89
Mar 24, 2010 3:10 PM	Buy	TD	116	$73.99	$8,602.83	NA	NA	$5.09
Mar 25, 2010 10:53 AM	Sell Limit	GS	70	$177.01	$12,360.71	$1,500.00	$7,745.74	$33,840.98
Mar 25, 2010 11:25 AM	Sell Limit	V	100	$91.06	$9,076.02	$591.00	$8,336.74	$21,480.27
Mar 25, 2010 12:22 PM	Buy	MET	502	$42.73	$21,467.94	NA	NA	$12.33
Mar 26, 2010 1:14 PM	Sell Stop	GS	60	$172.95	$10,347.01	$957.00	$9,293.74	$10,333.24

Table 7   Week 7 Transactions

5.8   Week 8 Transactions (3/29/2010-4/1/2010)

Due to the Good Friday on April 2 this year, the market was only open during the first four days of our final week for simulation. Our primary goal was to offload all of our holdings at favorable times so that we could realize more profit. Consequently, no purchase was made due to, our inactiveness in identifying new ultra-short term opportunities and, second, the fact that we decided against selling any our holdings early in the week. The overall market moved slightly sideways and closed flat on Monday and Tuesday, when the mixed performance of the six stocks put our activities on hold until more desirable price levels were reached. During this time, we placed several sell-limit and stop-loss orders to lock in our previous gains while hoping to capitalize on the sudden upswings of the stock prices.

Taking advantage of limit orders, we sold our shares of Visa and MetLife at the almost one off opportunities on Wednesday and Thursday, respectively. We exit all other positions on Thursday when the market picked up without being charged the higher commission on limit orders. Although we would have gained more once the market opened on Monday had we placed sell-limit orders last week, our patience on Monday, Tuesday, and even Wednesday paid off on the last day of our simulation.

With one eleventh of it in cash, our portfolio returned 0.98% this final week, trailing the 0.99% of S&P 500 Index while leading the Dow Jones Industrial Average's 0.71% and S&P 500 Financial Sector's 0.55%. However, the lowest of the past six three-week rates of return produced by both our portfolio and the financial sector signals the slowing of the recovery from the correction earlier this year.

Date and Time	Trade	Sym.	Shares	Price	Cost/ Proceeds	Profit/ Loss	Total Profit	Cash Position
Mar 31, 2010 12:14 PM	**Sell Limit**	V	110	$92.20	$10,112.01	$39.40	$9,333.14	$20,445.25
Apr 1, 2010 12:21 PM	**Sell Limit**	MET	502	$44.03	$22,073.07	$622.70	$9,955.84	$42,531.39
Apr 1, 2010 2:47 PM	**Sell**	JPM	500	$45.17	$22,565.01	$2,705..01	$12,660.85	$65,096.40
Apr 1, 2010 2:48 PM	**Sell**	BAC	750	$17.98	$13,465.01	$2,342.60	$15,003.45	$78,581.41
Apr 1, 2010 2:48 PM	**Sell**	TD	116	$74.30	$8,598.81	$16.06	$15,019.51	$87,180.22
Apr 1, 2010 2:51 PM	**Sell**	CIT	745	$38.98	$29,020.11	$1,020.86	$16,200.33	**$116,200.33**

Table 8   Week 8 Transactions

Chapter Six: Post-Simulation Analysis

6.1   Return Analysis

Table 9 displays all the total, one-week, and three-week rates of return produced by our portfolio, the Dow Jones Industrial Average, S&P 500 Index, and the financial sector of the S&P 500 stocks, respectively.

Our $100,000 portfolio returned 16.18% over the eight weeks starting on February 8 and ending on April 1, 2010. It outperformed both the Dow and the S&P 500 by wide margins while trailing the S&P Financials by approximately 2%. Our strategy was to identify opportunities in the stocks of mid- and large-cap U.S. financial services companies, and in fact, except AIG, all the companies we ended up investing in had market capitalizations of over $20 billion. Thus, the level of risk we assumed in our portfolio was much less than that of the entire S&P 500 financial sector, and the underperformance our portfolio compared to S&P 500 financials is justified by this lower level of risk. Moreover, the portfolio return is calculated after commissions and the significantly higher-than-average commissions ($19.99 for market orders and $29.99 for limit and stop orders) affected our portfolio return.

Despite the fluctuations, neither our portfolio nor the S&P 500 financial sector had a single losing week over the past eight weeks. Conditions of the overall global and U.S. financial market largely contributed to this strong performance. The follow section will discuss the impact of the macro economy on the financial services industrial sector as well as on our portfolio.

	Types of Return	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8
Total	**Portfolio**	1.90%	6.98%	8.08%	11.02%	13.72%	13.90%	15.06%	**16.18%**
	DJIA	1.93%	4.99%	4.21%	6.64%	7.23%	8.41%	9.51%	**10.28%**
	S&P500	1.78%	4.96%	4.52%	7.75%	8.82%	9.76%	10.40%	**11.48%**
	S&P Financials	1.86%	5.99%	7.53%	11.51%	13.80%	15.03%	17.40%	**18.05%**
1-Week	**Portfolio**	1.90%	4.98%	1.03%	2.73%	2.42%	0.16%	1.02%	0.98%
	DJIA	1.93%	3.00%	-0.74%	2.33%	0.55%	1.10%	1.01%	0.71%
	S&P500	1.78%	3.13%	-0.42%	3.10%	0.99%	0.86%	0.58%	0.99%
	S&P Financials	1.86%	4.05%	1.45%	3.70%	2.06%	1.08%	2.06%	0.55%
3-Week	**Portfolio**	N/A	N/A	8.08%	8.95%	6.30%	5.39%	3.63%	2.17%
	DJIA	N/A	N/A	4.21%	4.62%	2.14%	4.04%	2.69%	2.85%
	S&P500	N/A	N/A	4.52%	5.87%	3.68%	5.02%	2.45%	2.44%
	S&P Financials	N/A	N/A	7.53%	9.47%	7.37%	6.97%	5.29%	3.73%

Table 9   Comparison of the Rates of Return

6.2   Global and U.S. Macro Economy

The recovery of the global economy from the financial crisis continued at the beginning of 2010. In the Unites States, the unemployment rate slightly decreased from the 10% released in November and December, 2009, to 9.7% and stayed at this new level in the first three leases in 2010.

Soon after major global stock indices reached post-crisis new highs in mid-January, problems lurking in the global economy suddenly sent the global markets down until almost mid-February. Among the various risk factors that caused the decline in the market, the government balance sheet problems were most prominent. Development countries in southern Europe, including Spain, Portugal, Italy, and especially Greece, ran into severe financial distress after years of fiscal deficit. The default risk and consequently the cost of debt of the Greek government skyrocketed among the heavy speculation of investors around the globe. Net creditor countries led by Germany and net debtor countries in the Euro zone stood divided for weeks

around the issue of a bailout of the Greek government, while investors entered a record short position against the Euro.

With multi-lateral efforts of the international society, countries in the European Monetary Union gradually came to an agreement in concept regarding the financial measures to mitigate the credit risk of Greece in early February, backing the plan of its government to reduce the country's budget deficit below 3% of GDP by 2012 and cut the Greece's overall wages. Although the lack of details from the European Union Commission's sent fluctuations to the global markets subsequently, the U.S. market resumed its rally since February 9, 2010, precisely the day we began our simulation.

Once again, the U.S. financial market proved resilient to the shocks in the global macro economy and continued its rapid recovery, which remained all through our eight-week investment simulation. The favorable market condition gave a strong boost to the U.S. financial services industry to which our investments were highly positively correlated.

6.3 Industrial Sector Performance

Typically, the performance of stocks in the financial services sector leads the economic recovery. During the period of our simulation, from February 8 to April 1, 2010, the S&P 500 Financial Sector index gained 18.05%, compared to the 13.29% produced by the S&P 500 Technology Sector and the 8.08% by the Energy Sector during the same period, even though the technology and energy sectors were promising in the expansionary phase of the economy.

Still in the wake of the global meltdown, the world economy remained weak. During the inflation-less recovery in the Unites States, benchmark interest rates were slow and capital markets activity gradually tended towards better health. Given the prolonged fragility of the

market in the U.S. and the rest of the world alike, the "too big to fail" status of large financial institutions remained highly relevant, as did the "too interconnected to fail" concept. Moreover, we believe that, after extensive and largely successful intervention in the economy during the credit crunch, governments around the world would protect the financial markets from another downturn though all possible means, and that the effectiveness of government's role during the crisis would give regulators stronger arguments for new rounds of crisis intervention should the market condition once again go beyond the control of the financial market itself.

The large U.S. financial institutions benefitted from this market and regulatory environment. The shares of most of these financial services providers performed very well in our eight-week simulation period. Our selection of the largest institutions provided our investment with an additional safety net from the government, with which some stocks we held returned close to or even higher than 20%.

6.4 Trading/Investing Techniques

All the transaction records during our eight-week investment simulation are compiled in Table 10 and Table 11.

Clearly, Buy and Hold strategy proved highly successful, as three stocks contributed most to the profit made in our portfolio. They are JPMorgan Chase (JPM), Bank of America (BAC), and Goldman Sachs (GS), which we relied on to carry out this strategy. Relative to the prices of these three stocks, rates of return also stood out. We also assigned significant weight to them each of these "Venti-financials", which paid off with above portfolio average return rate as well as maintaining the portfolio's overall stability.

Following the average analyst recommendations on Reuters also turned out to be helpful. The recommendations served as a good confirmation of our selection of stocks, and the more highly recommended stocks tended to gain in their prices more consistently. However, it was less practical to first select stocks recommended as "Buy" and then screen out the undesired ones given the relatively large number of stocks with great average recommendations. Thus, it is useful as a decent reference rather than a substitute for independent analysis and judgment.

The basic technical analysis as a timing/confirmation tool for transactions, on the other hand, failed to work out well. It ended up leading to more indecision than decisive execution. This misfortune was due to two facts. First, it requires sound knowledge of technical analysis, which we lacked, to make good use of the analysis. Second, even with much knowledge, technical analysis was subject heavily to interpretation and thus also calls for experience in different chart patterns and indicators specific to market conditions, sectors, individual stocks, etc. Although technical analysis did not serve our simulation well, it was helpful practice and part of our experience accumulation process.

Week	Date and Time	Trade	Sym.	Shares	Price	Cost/ Proceeds	Profit/ Loss	Total Profit	Cash Position
	Feb 8, 2010 (Start)								**$100,000**
1	Feb 9, 2010 1:37 PM	Buy	JPM	1000	$38.55	$38,569.99	N/A	N/A	$61,430.10
	Feb 10, 2010 1:20 PM	Buy	BAC	2000	$14.63	$29,279.99	N/A	N/A	$32,150.20
	Feb 10, 2010 1:29 PM	Buy	AIG	1000	$24.35	$29,279.99	N/A	N/A	$7,780.30
	Feb 11, 2010 1:09 PM	Sell Stop	AIG	500	$26.40	$13,169.96	$985.02	$985.02	$20,950.40
	Feb 11, 2010 4:18 PM	Sell	AIG	500	$26.25	$13,105.01	$920.02	$1,905.04	$34,055.50
2	Feb 16, 2010 1:05 PM	Buy	STT	500	$44.84	$22,439.99	N/A	$1,905.04	$11,615.60
	Feb 17, 2010 10:05 AM	Buy	BAC	500	$15.33	$7,684.99	N/A	$1,905.04	$3,930.70
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	Feb 25, 2010 1:39 PM	Sell	JPM	500	$39.93	$19,941.26	$685	$4,415.04	$39,187.50
	Feb 26, 2010 12:13 PM	Buy	C	3000	$3.40	$10,219.99	N/A	N/A	$28,967.60
	Feb 26, 2010 2:26 PM	Buy	GS	100	$156.53	$15,672.49	N/A	N/A	$13,294.70
	Feb 26, 2010 2:34 PM	Buy	V	150	$85.18	$12,796.99	N/A	N/A	$493.40
4	Mar 2, 2010 11:02 AM	Sell	C	3000	$3.42	$10,237.91	$60.00	$4,475.04	$9,384.12
	Mar 2, 2010 11:05 AM	Buy	MA	45	$232.96	$10,503.19	N/A	N/A	$228.06
	Mar 5, 2010 2:54 PM	Sell	STT	250	$45.35	$11,317.51	$127.50	$4,602.54	$11,545.57
5	Mar 8, 2010 10:08 AM	Sell Limit	STT	250	$46.06	$11,485.01	$305.00	$4,907.54	$21,683.45
	Mar 8, 2010 12:26 AM	Buy	CIT	300	$36.00	$10,819.99	N/A	N/A	$12,210.59
	Mar 9, 2010 10:58 AM	Buy	MA	40	$249.50	$9,999.99	N/A	N/A	$2,210.60
	Mar 10, 2010 10:02 AM	Sell Stop	V	50	$89.99	$4,469.59	$240.50	$5,148.04	$5,333.06
	Mar 10, 2010 10:04 AM	Buy	AIG	50	$33.90	$1,714.99	N/A	N/A	$4,965.20

Table 10   Transactions in Weeks 1-5

Week	Date and Time	Trade	Sym.	Shares	Price	Cost/ Proceeds	Profit/ Loss	Total Profit	Cash Position
6	Mar 17, 2010 1:46 PM	Sell	MA	85	$247.84	$21,046.52	$603.20	$5,157.24	$24,664.59
	Mar 17, 2010 3:31 PM	Buy	AIG	450	$34.17	$15,396.49	N/A	N/A	$9,268.10
	Mar 17, 2010 3:33 PM	Buy	V	110	$91.57	$10,092.69	N/A	N/A	$524.59
7	Mar 23, 2010 10:00 AM	Sell Stop	AIG	500	$33.51	$16,724.61	$316.50	$4,840.74	$17,247.15
	Mar 23, 2010 1:59 PM	Buy Limit	CIT	445	$38.65	$17,229.24	NA	NA	$17.91
	Mar 24, 2010 9:58 AM	Sell Limit	BAC	500	$17.24	$8,590.01	$1,405.00	$6,245.74	$8,607.89
	Mar 24, 2010 3:10 PM	Buy	TD	116	$73.99	$8,602.83	NA	NA	$5.09
	Mar 25, 2010 10:53 AM	Sell Limit	GS	70	$177.01	$12,360.71	$1,500.00	$7,745.74	$33,840.98
	Mar 25, 2010 11:25 AM	Sell Limit	V	100	$91.06	$9,076.02	$591.00	$8,336.74	$21,480.27
	Mar 25, 2010 12:22 PM	Buy	MET	502	$42.73	$21,467.94	NA	NA	$12.33
	Mar 26, 2010 1:14 PM	Sell Stop	GS	60	$172.95	$10,347.01	$957.00	$9,293.74	$10,333.24
8	Mar 31, 2010 12:14 PM	Sell Limit	V	110	$92.20	$10,112.01	$39.40	$9,333.14	$20,445.25
	Apr 1, 2010 12:21 PM	Sell Limit	MET	502	$44.03	$22,073.07	$622.70	$9,955.84	$42,531.39
	Apr 1, 2010 2:47 PM	Sell	JPM	500	$45.17	$22,565.01	$2,705..01	$12,660.85	$65,096.40
	Apr 1, 2010 2:48 PM	Sell	BAC	750	$17.98	$13,465.01	$2,342.60	$15,003.45	$78,581.41
	Apr 1, 2010 2:48 PM	Sell	TD	116	$74.30	$8,598.81	$16.06	$15,019.51	$87,180.22
	Apr 1, 2010 2:51 PM	Sell	CIT	745	$38.98	$29,020.11	$1,020.86	$16,200.33	**$116,200.33**

Table 11   Transactions in Weeks 6-8

Chapter Seven: Conclusion

We were pleased that our investment portfolio produced a 16.18% return over the eight-week stock market simulation. More importantly, much has been learned by us regarding the financial market, investment analysis, trading strategies, and risk management.

The top-down analysis of the financial market was critical to our investment success, which was hardly escapable from the overall market condition. Despite the weakness in the macro economy in developed countries one year after the global financial crisis, the market was favorable in a number of bullish industrial sectors, led by financials among a few others. Our personal interest and an objective top-down analysis converged at the financial sector, which outperformed the overall equity market by a wide margin and directly contributed to the outperformance of our portfolio on a similar scale.

The effectiveness of the top-down analysis also validated our fundamentals approach, based on which the Buy and Hold strategy helped us "pocket" a hefty profit. With limited knowledge and experience in fundamental analysis, taking the advantage of analyst recommendations, such as the average recommendation on Reuters.com which is fundamentally focused, could be helpful for confirming the stock selection, but should not be relied on as the sole decision-making tool.

Technical analysis, on the other hand, added much less value to our investment because of our lack of knowledge and experience. Nevertheless, our practice was rewarding in that it provided us a better understanding of technical analysis in comparison with fundamental analysis

and jumpstarted our use of this method as well as our continual practice of it in future investments.

As for risk management, we practiced the basic principle of diversification with an adequate level of discipline. We discovered that both of us are unemotional and eager to take calculated risks, although our investment discipline still needs to be articulated more clearly and enforced more stringently going forward.

After this Interactive Qualifying Project, we are more knowledgeable and experienced with the financial market, more clearly aware of our strengths and areas of improvement in stock trading, more confident about putting money at stake, and better positioned for growing our personal wealth through equity investment in the future.

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