An Interactive Qualifying Project Report: submitted to the Faculty of

WORCESTER POLYTECHNIC INSTITUTE

in partial fulfillment of the requirements for the

Degree of Bachelor of Science

By

Yuhan Yang   _____

Submitted:

August 20th, 2017

Approved by Professor Dalin Tang, Project Advisor

_____

Abstract

Using the tools and resources available from the internet and text references, a six-week stock-market simulation was conducted to investigate the effects of different trading strategies on stock market investments. The valuable trading experience gained throughout this project will allow me to become an investor that can make right decisions in the future.

Table of contents

Table of Figures

Tables

1. Introduction

In this chapter, we will state the objective of the project, briefly cover the background information needed for better understanding, and give an introduction to different kind of markets, investments and technical terms which will be used in the project. An overall set up of goals, methods, and plans of simulations will be listed.

1.1 Goals and Methods

The objective for this stock market simulation project is to develop the basic understanding and further improvement on stock market analysis skills and decision making strategies through a seven-week stock market simulation. Before all the simulation, I did some research about what stock market is, and I started studying the background history of stock market and get to know the different trading strategies. Some important factors like interest rates would be include in this report. During the several weeks of simulation I will use different methods and strategies and analyze each of them based on the result we get from the simulation. There will be selected stocks with different method for each one of them, and each stock would start with $100,000, after weeks I could start analyze the profits from each stock. After the short-term simulation a final conclusion that combined method and stock analysis would be developed and will be a section about application of this project in real life. The final goal for this project is enlarge the benefits of this project and utilize the techniques and skills in real life.

1.2 History of stock market

The earliest stock market was found by 1500s, however there were some early model for stock market. In the 1100s, France had a system where courretiers de change managed agricultural debts throughout the country on behalf of banks [11]. However, those early markets were missing

the stock, which were happened be the trading of government affairs and individual debts not the shares in modern stock markets. The earliest stock market system was found in Europe countries such Belgium and Netherland around 1400s to 1500s.

The most credible work shows Antwerp, the capital of Belgium, has the world first stock market system. In 1531 the world first bourse was built in Antwerp, the word bourse refers to a market with the non-simultaneously payment which end up developed to the modern stock market. Also the market formed with a large amount of merchants and meet frequently. Then in 1571, the Queen Elizabeth I started The Royal Exchange based on the model of Antwerp bourse, however the difference is The Royal Exchange included smaller groups of brokers offering marketable share interests in a larger variety of expeditions [21]. Around 1600s, Dutch East India Company became officially the first publically traded company. The main idea and the reason of why East India Company could be successful is about the risk. At that period of time when transportation was still not fully developed, it would take a lot of effort to reach East India (Indonesia), but the company saw the trade opportunities there. However, for any company sailing cross the ocean has a high risk and investor started a shares system which helps them split their budget into several companies to minimize the risk. This is the fundamental form of shares.

In United States, the most popular belief is the NYSE known as New York Stock Exchange is the earliest market. However, the history shows in 1790, the first stock exchange called Board of Brokers was established in Philadelphia which was two years earlier than NYSE. On May 17th 1792, 24 stockbrokers outside of 68 Wall Street signed an agreement under the buttonwood, which named Buttonwood agreement. There are two provisions of the agreement. First the brokers were to deal only with each other, thereby eliminating the auctioneers. Second the commissions were to be 0.25% [6]. It read as follows: we the Subscribers, Brokers for the Purchase and Sale of the

Public Stock, do hereby solemnly promise and pledge ourselves to each other, that we will not buy or sell from this day for any person whatsoever, any kind of Public Stock, at a less rate than one quarter percent Commission on the Specie value and that we will give preference to each other in our Negotiations. In Testimony whereof we have set our hands this 17th day of May at New York, 1792 [15].

The modern stock market developed sooner after two major market places established London Stock Exchange and New York Stock Exchange. Most of the markets are highly developed and has their own uniqueness. The TSX, for example, is Canada's largest stock market exchange and the third largest in North America, they hold the most oil and gas companies of the world. Even in war-torn countries like Iraq, they have their own stock exchange and is opened to foreign investors, also it was one of the rarely few stock exchanges that are not impact by the Economic Crisis [11].

Two largest stock exchange markets nowadays are NYSE and NASDAQ which known as the National Association of Securities Dealers and Financial Industry Regulatory Authority. The NYSE was the largest before 1970s, as the technology developed and network dominating the world, NASDAQ a stock exchange market only exists online became the largest and the most convenient place for investors to do the trading. There's a requirement for the companies that want to be listed on NYSE which is to have an initial public offering known as IPO, however NASDAQ doesn't have the requirement which makes it an alternative for IPO. The above situation makes the companies listed on NASDAQ are smaller and not well developed, this leads to a better return cause the opportunities of small companies, which come along with more risk. In short the choice of the investor shouldn't depend on which Exchange the company is listed, they should focus more on the company itself and do research about the trending.

1.3 Bonds

Bonds are a type of debt, like loans and IOUs but serve as the bank. Generally, bonds has relatively lower risk and steady income, however there are several form of risk when people buying bonds. The first on is the issuer, the non-credible issuer would pay more interest or higher yield, but since they are not credible enough, it's buyer's choice to make a trade with high risk with high fast income. These kind of bonds called high-yield or junk bonds. The time of the bond u holding is another factor, the longer you lend money to the issuer would bring you higher yield. The interest rate is the last factor, as the interest rate goes higher the general price of the bond goes down, because the new issued bonds with higher rates makes existed bonds losing value [24].

There are many types of bonds, below will show the basic information about each bonds. The first one is called Treasury which is considered to be the safest bonds issued by U.S government. The second one is Treasury Bills, a short term less than 26 weeks' bond. Next one is Treasury Notes with two different time range of 5 years and 10 years. Treasury Bonds has a term of 30 years and get paid every 6 months. Saving bond is the bond you can redeem after holding for 1 year. EE Saving Bond make original saving bond's time limit from 1 year to 30 years, and currently has an interest of 3.4%. Saving bond, the Saving bonds that are indexed for inflation every 6 months. Agency bonds are issued by government sponsored enterprises. Municipal bonds are issued by states, cities and local government to fund local projects. Corporate bonds are bonds issued by companies. Coupon, is the technical word for the interest from the bonds. Par is also known as the face value of a bond which is the amount a bondholder receives when the bond matures. Duration is a measure of a bond price's sensitivity to a change in interest rates, measured in years.

1.4 Money market

Money market is referred to short term trading. It always has very short maturity with the range from overnight to under a year. Money market transactions are wholesales and always for large denominations and only between companies and financial institutions not individuals. The value limit for the Money market is ranged from 5 million to over a billion dollar each trade. The net asset value (NAV) would stay around $1, but after the financial crisis it dropped below $1 [18].

1.5 Stock market

A place where the shares of the public listed companies are traded. The primary market is where companies float shares to the general public in an initial public offering (IPO) to raise capital [3]. After he securities have been sold, they are traded to secondary market and the investors trade them after consultation the price. The secondary market also called stock exchanges. There are regulatory authority that managing the secondary market.

1.6 Trading styles

There are 4 major styles of trading, Position Trading, Swing Trading, Day Trading, and Scalping. Trading profits are achieved through buying low and selling high - and selling high and buying (to cover) low, in the case of short selling - and all trades are entered and exited within a relatively short period of time [5]. The time range could be varied from seconds to several years. Below is the overall comparison of four trading styles. In next chapter will include the detail introduction of each trading strategy. The table below collected the differences of 4 trading strategies. (Table 1.1)

Trading Style	Time Frame	Holding Period
Position Trading	Long Term	Months to years
Swing Trading	Short Term	Days to weeks
Day Trading	Short term	Short term trading within one day or several days depends on the trend.
Scalp Trading	Very short term	Seconds to minutes - no overnight positions

Table 1.1 Summary of trading strategies

1.7 Speculation & Investment

There are two strategies of making a trade, speculation and investment. Benjamin Graham, he great value investor said: The speculator's primary interest lies in anticipating and profiting from market fluctuations. The investor's primary interest lies in acquiring and holding suitable securities at suitable prices [22]. The speculators focus on short term benefits which relies on their technical analysis and research of historical trends. On the other hand, investor focus on long-term benefit to get a moderate return. A good investor could possibly hold on a stock for years or even decades like Warren Buffett. The following report will include basic strategies like technical analysis, fundamental analysis and more common techniques: day trading, trend following, swing trading, Value Investing, Bonds, Mutual Funds, short-term investing, long-term investing, Certification of Deposit investment, Money Market, Stock Market, Hedge Funds.

2. Stock Trading Strategies

Chapter Two elaborates on general information about different stock trading strategies. This chapter will include three analysis technics and four trading strategies. Three technics are: Fundamental & Technical analysis and trending following, four strategies are Day Trading, Swing Trading, and Positioning Trading and Scalping. Based on the following information I will make the decision of which strategy will be used for the simulation later on.

2.1 Fundamental analysis and Technical analysis

Fundamental analysis is a prediction of the trend of price movement based on the analysis of current market. The forecast would have started from three aspects, economic, industry and company. For economy analysis, current economic data are the source for studying the growth of the economy. For industry analysis, the demand and supply of the products would be the important factors. Financial data, management, business concept and competition are four factors for the fundamental analysis for a company [8]. Technical analysis focus more on the predicting the future price movement of the company based on the trend in the past.

Compare the two strategies, fundamental analysis uses the intrinsic value of the company which is not a factor considered by technical analysis. Fundamental analysis contains more analysis about different factors that would affect the company economy growth, which is more realistic compare to technical analysis. Technical analysis utilize more charts and forms of the economy trends to make the prediction, compare to fundamental analysis is more straight forward and more graphical, so makes it more straight forward. Technical analysis only look backwards base on the economy trend from the past, while fundamental analysis looks backward and forward which provides a more detailed prediction and analysis. Compare to fundamental analysis, technical analysis can bring a short term profit. The concepts used by fundamental analysis are

ROE which is Return on Equity and ROA stands for Return on Assets. Below is formula we use to calculate the ROE and ROA.

ROE = (net income) / (total assets) × (total assets) / (shareholders' equity)

Assets – Liabilities = Shareholders' equity.

Return on equity (ROE) helps investors gauge how their investments are generating income, while return on assets (ROA) helps investors measure how management is using its assets or resources to generate more income [7].

2.2 Trend following

Trend following is basically use specific techniques. The first one is moving average. Derive an average price flowing line to see the trend. The most popular choices are 50-day 100-day and 200-day simple moving average. (see Figure. 2.1) From the plot if the average moving horizontally, the price is not trending it's ranging. The plot can't use for prediction; it can only be used to see how the average price move by the time. Crossover is one of the technique for moving average, plot two averages with 200-day and 50-day ranges, and if the 50-day is above then it's a buy signal, otherwise it's a sell signal.

Figure 2.1 One-Year-Technical-chart of Apple Inc.

The next strategy is Moving Average Convergence Divergence known as MACD. From the graph below, if the MACD lines are above zero it shows the trend is going up, if the lines are below zero then the trend is going down. The MACD lines has two lines, the fast line and the slow line. (see Figure 2.2) Crossover is also helpful for MACD, if the fast line going above slow line, it's a buying signal, otherwise it's a selling signal.

Figure 2.2 One-Year-Technical-chart of IBM Inc.

The third one is Relative Strength Index also knows as RSI. Instead of going above and below zero, the movement vary between zero and 100. When the price is showed above 70 and below 30 means it's oversold. For an uptrend the price would reach 70 and higher, and downtrend would stay around 30 and goes even lower for a long period of time.(see Figure 2.3) The buying signal from RSI is when the price goes down below 50 and back up again. If it's the other way around then it's a selling signal.

Figure 2.3 One-Year-Technical-chart of Ford Motor Co.

The last indicator is called On Balance Volume, OBV. For normal condition, price is accompanied with OBV, as the OBV rising the price rising. The figure below is an example of OBV from Netflix Inc(see Figure 2.4)

Figure 2.4 One-Year-Technical-chart of Netflix Inc.

2.3 Day Trading

It's easy to tell from the name day trading is short term trades lasting less than one day. The most common day trading markets are stocks, forex and futures. Some of the trader are active that can make many trades in one day some just do one or two trades. Because of the rapidly change of the stock market, day trading become a strategy that requires investor change their strategy rapidly to adjust the current market trend. It's could take investor at least 6 months to get into day trading, so day trading is not a fast income career nor a long term profit investment. Because of the rapid change of the market, day trading depends on personal style of trading more than the market. The minimum investment for day trading would be $25,000 and higher. For day trade forex, $500 is enough to start with, and $1000 for day trading futures. Also because the rapidly changes of the market, practice with a demo is really important and helpful to get start with day trading.

2.4 Swing trading

Normally we compare Swing trading with day trading. The holding position time is the major difference, swing trading hold a at least over-night trading typically several days to weeks. Compare to day trading, Swing trading always has a smaller positon size. Swing trading can utilize the overnight margin of 50% if the account meets the pattern day trading (PDT) rule of maintaining at least $25,000 in account equity [20]. Similar to day trading the traders would use patterns for analysis. The patterns are moving average crossovers, cup-and-handle patterns, head and shoulders patterns, flags and triangles.

2.5 Position Trading

Position Trading has a relatively longer time range, people who use position trading strategy don't concern the short term fluctuation because they focus more on long-term trends and believe the long-term horizon will smooth the small fluctuation out. Position trader use fundamental analysis to select stock and use technical analysis to pinpoint the perfect buy points.

Compare Swing trading and Position trading. Positon trading would fits better when a strong trend is happening in stock market and swing trading is better fits the situation that there are no large trend and the price is swinging back and forth. Position trading depends on fundamental analysis more, since for position trading the large trend of the stocks are more important. On the other hand, swing trading is more technical, the swing trader would buy in and out frequently in short time range. However, there's no better trading strategy only depends on personal preference and how the stock people choose performs [4].

2.6 Scalping

Compare to all above trading styles, Scalping focus on very short term trades, which requires very strict exit strategy. Since the time range is so short and the stock market is changing rapidly, one mistake in scalping can cause a large amount of loss which would possibly eliminate many small profit from previous trades. For scalping some professional consultation, enough patience and decision making skills are important. People who interested in scalping would always take all small profit, they wouldn't wait for a large trend going on. One of the strategies for scalping is to maximize the number of winners but sacrifice the size. Overall thinking, scalping is a high risk trading style that requires high skills and fast decision making, however a good scalper can secure the high ratio of winning from small wins of each trades.

3. Simulation 1 Swing Trading

Chapter three is the first simulation in which swing trading will be used. Swing trading is a technic that buys the stock and holds each stock for several days, which demonstrates perfect time for purchase when the stock value reaches the bottom and rise up again, selling time is when it reaches the top. In this simulation I will make the stock selection without any analysis first to get a good amount of stocks for trading, and then will use trend following strategy to do the analysis in order to select the stocks with rising trends or have more chance to win. For the selection part, I will do research about the technical analysis charts for the companies for the past year. A 50 days short-term and a 100 days long-term MACD (Moving Average Convergence Divergence) trend following analysis will be used for each stock.

For Swing trading there are generally 4 stages. 1 the time right after down trend, 2 the beginning of the uptrend, 3 the peak, and 4 is beginning of the down trend. Stage 2 is the perfect time for buying, and stage 4 is the time to sell. The strength is another factor, Swing trading is looking for a strong up trend but not like the rapidly up and down trend. Relative trend is also important, compare to the entire market trend.

3.1 Stock Selection

First, the basic research about different companies is done without any analysis. I started with household companies which is overall safe to do the trading since there will always be demand to the daily households. I will split my assets to four, and buy four stocks for the first week, so that there could be one stock to be alternative when one stock is falling. All the companies I picked are from the top trends with the best investment potentials. I searched the top 50 household companies from stock-wise and other aspects. Following are the five companies I picked, the main

reason of picking these stocks is that most of these stocks showing an uprising trend and a likely stage 2 of swing trading the day I started the trading simulation.

3.2 Companies' Profiles and Analysis of Stocks

JNJ: Johnson & Johnson, a company established on November 10, 1887. The Company engaged in manufacture and sale of products in healthcare field. There are three segments, Consumer, Pharmaceutical and Medical Devices. The Company has over 230 companies operating in Europe, Asia, and America nowadays.

Consumer, products include baby care, oral care, over-the-counter pharmaceutical, women's health and wound care markets. The products of Consumer marketed to the public and retail outlets and distributors. Pharmaceutical is focused on five therapeutic areas, Immunology (rheumatoid arthritis, inflammatory bowel disease, psoriasis and pulmonary diseases), Infectious diseases and vaccines (human immunodeficiency virus (HIV), hepatitis, respiratory infections, tuberculosis and vaccines), neuroscience (Alzheimer's disease, mood disorders and schizophrenia), oncology (prostate cancer, hematologic malignancies and lung cancer), and cardiovascular and metabolic diseases (thrombosis and diabetes). The products marketed to retailers, wholesalers, hospitals and healthcare professionals for prescription use. The Medical Devices, products used in the orthopedic, surgery, cardiovascular, diabetes care and vision care fields. The segment's products are distributed to wholesalers, hospitals and retailers, and used principally in the professional fields by physicians, nurses, hospitals, eye care professionals and clinics [JNJ].

Below is the technical chart of JNJ for the past month. (see Figure 3.1) From this chart we can tell JNJ stock is generally showing a rising trend but pay attention to the last two days, there's a small dropping trend occurred and followed by a rising trend which is exactly how swing trade

stage 2 performs. This is the best buying opportunity, which just the time I started my simulation, so for the first day I chose to buy in this stock.
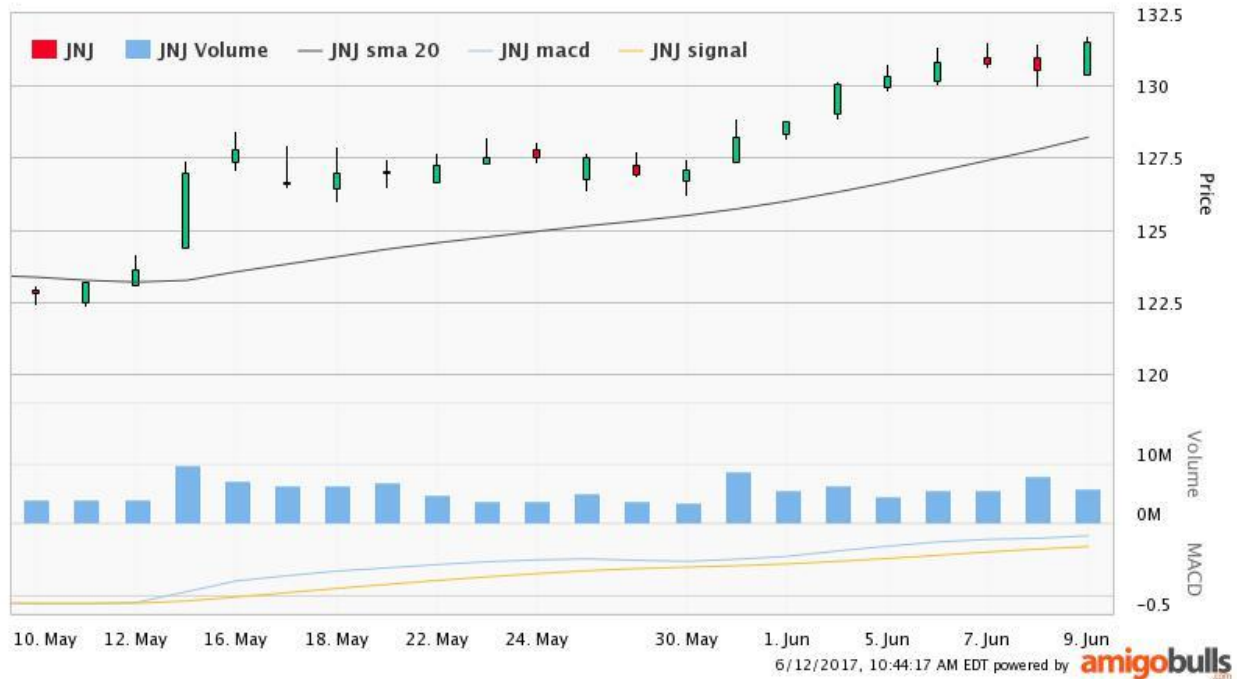
Figure 3.1 One-Month-Technical-chart of JNJ

CLX: The Clorox Company, established on September 5th, 1986, manufacturer and marketer of Consumer and Professional Products. The products marketed mostly through retail outlets, e-commerce channels, wholesale distributors and medical supply distributors. The Clorox Company has four operation segments, Cleaning, Household, Lifestyle and International.

Cleaning, this segment consists of laundry, home care and professional products, the main market region is in the United States. Household, this segment consists of charcoal, cat litter and plastic bags, wraps and container products also marketed in the United States region. Lifestyle, this segment consists of food products, water-filtration systems and filters, and natural personal care products marketed in United States. International, this segment consists of products sold outside the United States. Products within this segment include laundry, home care, water-

filtration, charcoal and cat litter products, dressings and sauces, plastic bags, wraps and containers, and natural personal care products, primarily under the Clorox [2].

Below is the technical chart of Clorox, (see Figure 3.2) and the overall trend is rising and narrow it down to most recent few days, there's a dropping trend from June 7th to June 9th. It's a slightly drop and based on the overall trend I predicted that it will be safe to make the trade of buying in CLX stock, the only thing I need is the rising trend after this small dropping trend and it could form a stage 2 trend and would be the best buying chance. However, because the lack of knowledge and patience I started the trade before a rising trend occurs which end up my buying price is not the lowest I could get and that leads to small amount of loss on profit.

Figure 3.2 One-Month-Technical-chart of CLX.

JBSS: John B. Sanfilippo & Son, Inc. incorporated on August 30, 1979. This company is the processor and distributor of nuts related products. The Company offers nuts under the Fisher, Orchard Valley Harvest, Fisher Nut Exactly and Sunshine Country brand names. The Company mainly focused on processed and raw nuts. The Company also produce nuts related snack products with varieties of package styles including stand-up bags, poly-cellophane packages,

environmentally friendly packages, composite and clear-plastic cans, plastic tubs and plastic jars for retail sales. The variety of nuts related snacks includes snack mixes, salad toppings, snacks, snack bites, trail mixes, dried fruit and chocolate and yogurt coated products, and those are distributed to retailers and wholesalers; baking ingredients sold to retailers, wholesalers and commercial ingredient customers; bulk food products sold to retail and commercial ingredient users.

There are four segments of the company's Consumer, Commercial Ingredient, Contract packaging and Export distribution channels. Consumer, this segment supplies nut-based products, including consumer-packaged and bulk products. The products are distributed to retailers, wholesalers, supermarkets, supercenters, and retail food outlets in United States region. The commercial ingredient, this segment supplies nut-based products as ingredients for other manufacturers, for example, bakery, confection, cereal, and ice cream. In this segment the Company also supplies the ingredients for national wide food services, for example chain restaurants, fast food, institutions and hotel food. Contract packaging segment produce packaged nut related snacks for national-wide supply. Export distribution is the segment that distributes Fisher branded snack nuts, private brand snack nuts and commercial ingredients to world-wide customers. The company markets the products through a 70 independent brokers group and other independent distributors and suppliers [12].

Below is the technical analysis chart of JBSS for the past month, (see Figure 3.3) the overall trend is changing rapidly without a certain direction, however, there's no need for an overall rising trend to apply swing trade strategy. There are small rising and dropping trend which fit the whole rotation of swing trading stages. From the most recent several-day price trend we can see a

dropping trend happened about 5 days ago and followed by a rising trend which is the sign of stage 2 of Swing trading, a good buying chance.

Figure 3.3 One-Month-Technical-chart of JBSS.

MDLZ: Mondelez International, Inc. established on January 10, 2005. The Company focuses on snack food and beverage products for consumers. There are four operation segments, Latin America, Asia, Middle East and Africa (AMEA), Europe and North America. There are five categories of products of the Company, Biscuits; Chocolate: Gum and candy; Beverages, and Cheese and grocery.

The company distributes their products mainly to supermarket chains, wholesalers, supercenters, club stores, mass merchandisers, distributors, convenience stores, gasoline stations, drug stores, value stores and other retail food outlets. As of December 31, 2016, the Company had a record of selling products to consumers in around 165 countries, the company also had operations

in more than 80 countries and made products at 150 manufacturing and processing facilities in 52 countries and 130 distribution centers and depots all over the world.

The Company's portfolio includes various snack brands, including Nabisco, Oreo, LU and belVita biscuits; Cadbury, Milka, Cadbury Dairy Milk and Toblerone chocolate; Trident gum; Halls candy, and Tang powdered beverages [17].

Below is the technical analysis chart of MDLZ for the past month. (see Figure 3.4) We can tell an overall rapid changing trend showing but with clear price swings, which is good for short-term Swing Trading strategy to apply. From the most recent three day's price, there's a dropping trend occurred and the price is has dropped to about average price of the past month which is very likely to rise back up. Because of the competitive background of the company, the stock would not drop too low. This last 5 days price trend fits the first stage of Swing trading and about to get into second stage. Which is a good chance to start the whole simulation with buy in the stock.

Figure 3.4 One-Month-Technical-chart of MDLZ.

Kellogg (K)

Kellogg Company, established on December 11, 1922, manufacturer and marketer of ready-to-eat cereal and convenience foods. The main products are convenience foods like cookies, crackers, savory snacks, toaster pastries, cereal bars, fruit-flavored snacks, frozen waffles and veggie foods. There are several operation segments including U.S. Morning Foods; U.S. Specialty; North America Other; Europe; Latin America, and Asia Pacific.

The Company's cereal products are marketed under the Kellogg's name and sold to grocery trade through direct sales forces for resale to consumers. The Company uses broker and distributor arrangements for certain products. The Company's products are marketed under trademarks it owns. The brand names of certain ready-to-eat cereals include All-Bran, Apple Jacks, Bran Buds, Choco Zucaritas, Cocoa Krispies, Kellogg's Corn Flakes, Corn Pops, Cracklin' Oat Bran, Crispix, Eggo, Froot Loops, Kellogg's Frosted Flakes, Krave, Frosted Krispies, Frosted Mini-Wheats, Kellogg's Low Fat Granola, Mueslix, Pops, Kellogg's Raisin Bran, Raisin Bran Crunch, Rice Krispies, Rice Krispies Treats, Smacks/Honey Smacks, Smart Start, Special K, Special K Nourish, Special K Red Berries and Zucaritas in the United States and elsewhere; Sucrilhos, Krunchy Granola, Kellogg's Extra, Kellness, Musli, and Choco Krispis for cereals in Latin America; Vector in Canada; Coco Pops, Choco Krispies, Frosties, Fruit 'N Fibre, Kellogg's Crunchy Nut, Krave, Honey Loops, Kellogg's Extra, Country Store, Ricicles, Smacks, Start, Pops, Honey Bsss, Croco Copters and Tresor for cereals in Europe; and Froot Ring, Guardian, Sultana Bran, Frosties, Rice Bubbles, Nutri-Grain, and Sustain for cereals in Asia and Australia.

The Company's other brand names include Kellogg's Corn Flake Crumbs; All-Bran, Choco Krispis, Special K, Squares, Zucaritas and Sucrilhos for cereal bars, Pop-Tarts for toaster pastries; Eggo and Nutri-Grain for frozen waffles and pancakes; Eggo, Special K and MorningStar Farms

29

for breakfast sandwiches; Rice Krispies Treats for convenience foods; Special K protein shakes; Nutri-Grain cereal bars for convenience foods in the United States and elsewhere; K-Time, Rice Bubbles, Be Natural, Sunibrite and LCMs for convenience foods in Asia and Australia; Choco Krispies, Tresor and Rice Krispies Squares for convenience foods in Europe; Kashi for certain cereals, convenience foods, frozen foods, powders and pilaf; GoLean for cereals and nutrition bars; Special K and Vector for meal bars; Bear Naked for granola cereal, bars and trail mix, Pringles for potato crisps, corn crisps and potato sticks, and Morningstar Farms and Gardenburger for certain meat alternatives. It also markets convenience foods under brands, which include Keebler, Austin, Cheez-It, Chips Deluxe, Club, E. L. Fudge, Famous Amos, Fudge Shoppe, Gripz, Krispy, Minueto, Mother's, Murray, Murray Sugar Free, Parati, Ready Crust, Sandies, Soft Batch, Simply Made, Stretch Island, Sunshine, Toasteds, Town House, Trink, Vienna Creams, Vienna Fingers, Zesta and Zoo Cartoon [14].

Below is the one-month technical analysis chart of last month stock by K. (see Figure 3.5) There was a clear drastically rose of the price from May 18th to May 25th. But followed with a dropping trend. This shows that the chart has been changing rapidly without a certain pattern. From the most recent 5 days of technical analysis, there's a losing trend keep happing. Because of the huge rose, there would be a chance for this stock to drop even lower, which leads to me putting this stock into watching list and wait until it rise up again, which fits the second stage of swing trading, and then it would be the best chance of buying.

Figure 3.5 One-Month-Technical-chart of K.

AVP: Avon Products, Inc. established on January 27th, 1916, a manufacturer and marketer of beauty and related products. There are five operation segments, including Europe, Middle East & Africa; South Latin America; North Latin America, and Asia Pacific. Its product categories are Beauty, and Fashion and Home. Beauty consists of skincare, fragrance and color. Fashion and Home consists of fashion jewelry, watches, apparel, footwear, accessories, gift and decorative products, housewares, entertainment and leisure products, children's products and nutritional products.

The Company's products include Anew Ultimate Supreme Advanced Performance Creme, Anew Vitale Visible Perfection Blurring Treatment, Big & Multiplied Volume Mascara, Avon True Perfectly Matte Lipstick, Avon Life for Him and for Her Fragrances, Far Away Infinity Fragrance and Avon Nutra Effects body collection with Active Seed Complex.

From the record December 31, 2016, the Company had sales operations in 57 countries and territories, and distributed its products to 18 other countries and territories. In some markets,

the Company uses decentralized branches, satellite stores and independent retail operations (beauty boutiques) to serve representatives and other customers. In the United Kingdom and certain other markets, it also utilizes e-commerce and markets its products through consumer Websites [1].

Below is the technical chart of the last month AVP stock. (see Figure 3.6) From the chart we can see that there was a dropping trend at the beginning of the month and some rapid no pattern changed during the month. By the end of the month there's a dropping trend, I didn't buy in this stock the first day I started the simulation, I waited for a rising trend coming and then buy in which can provide the most profit base on the rule of swing trading.
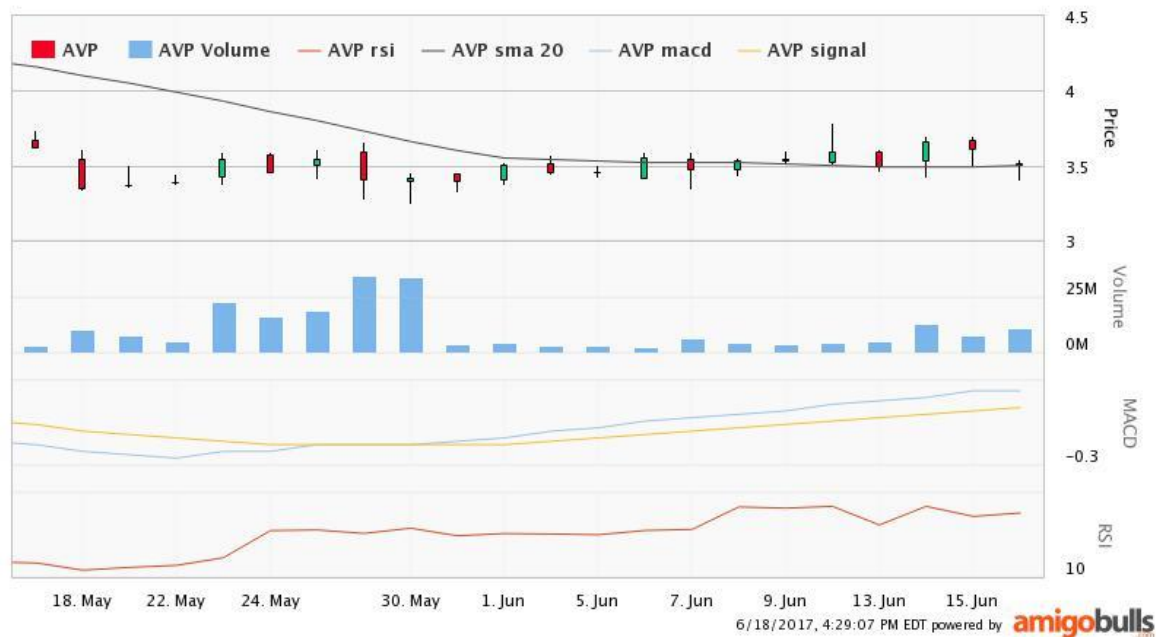

Figure 3.6 One-Month-Technical-chart of AVP.

3.3 Week 1 Simulation

June 12th, Monday. Since I split the funds to four I bought 190 shares of JNJ at the price of $131.19/share, which cost $24,934.20. 180 shares of Clorox at the price of $137.33/share, which

cost $24,769.80. 380 shares of JBSS at the price of $64.56/share, which cost $24,550.40. 550 shares of MDLZ at the price of $45.34/share, which cost $24963.50. Total cost of first trade $99,217.9, the liquid cash left $782.1. June 12, Monday.

June 13th, Tuesday. Sell JNJ at the price of $131.70/share, total price is $25023, 96.90. The reason why I sell this stock is because when I first buy in it shows a rising trend and just finished a dropping trend, it fits the 2 stage of swing trade after one day, the stock rose to the highest $131.97/share but because I need to wait until it shows a dropping trend to make a trade which is the stage 4, I waited for a bit longer. However, because of I don't have previous trading experience I waited until the price dropped to $131.70/share and then sell, but still have $0.51/share profit. Other stocks are still lower than buying price, because I bought the stocks earlier than they enters stage 2 which is a personal technical fail, but they are showing a rising trend which is a good sign. I bought 340 shares of K for $72.54/share, total $24782.40. Because K stock dropped from $72.87/share at 9:30 to the lowest $72.34/share at 9:40. At the time I bought the stock it just finished a dropping trend and rose back which fits the 2nd stage of swing trading, so from analysis this stock will bring me profit.

Below is the technical chart of JNJ for the past 5 days. (see Figure 3.7) From the chart we can tell there's a slightly dropping trend on 13th after the rising trend on 12th, I sold the stock because it showed a dropping trend after rising trend which fits the 4th stage of swing trading. It's true that there's another rising trend on 14th, however from the day trend of 13th there's already a 4th stages occurred, because I can't predict how the market will go, and for the security of the profit I have to follow the swing trading strategy to sell the stock.

Figure 3.7 Five-Day-Technical-chart of JNJ from June 10th to June 16th

June 14th, Wednesday. Made a trade of selling CLX at the price of $139.01/share, total stock price at $24,975.80, compare to the buying price there's a profit of $206. Selling K at the price of $74.1/share, total $25180.60, compared to buying price there's a profit of $398.2. I sold these two stocks are because the prices rose up and dropped right after, and still maintained a higher price than my buying price, I don't want to wait these two stocks to drop lower which would lose profit. Both of the trades happened around 12 pm, which is after a rising trend from 9:30 to 11 and a dropping trend happened right after. Made another trade of buying 7120 shares of AVP at the price of 3.51/share, because from the analysis chart, this stock just finished a dropping trend and started rising, which fit the 2nd stage of Swing trading. Total buying value is $24911.20. Because of the low price of this stock and a large amount of shares I bought, this stock would be the riskiest one among all the stocks I'm watching, also because the rising trend just showed, it will possibly be the one with the most profit.

Below is the technical chart of CLX for the past 5 days, (see Figure 3.8) there's a drastic increase of the price on June 14th, I bought in the stock June 12th, and the stock kept a rising trend for two days. On June 14th there's a dropping trend within the day which is not showing on the 5 days technical chart, so, by following the swing trading rule, I sold the stocks. Although the price on 14th was not the highest of the week, using swing trading strategy still brought me profit from this trade.

Figure 3.8 Five-Day-Technical-chart of CLX from June 10th to June 16th

Below is K's technical analysis chart for past 5 days, (see Figure 3.9) from this chart, the day I sold the stock K, June 14th shows a perfect 4th stage (buying opportunity) of swing trading strategy, which is a dropping trend after a rising trend from June 12th to 14th.
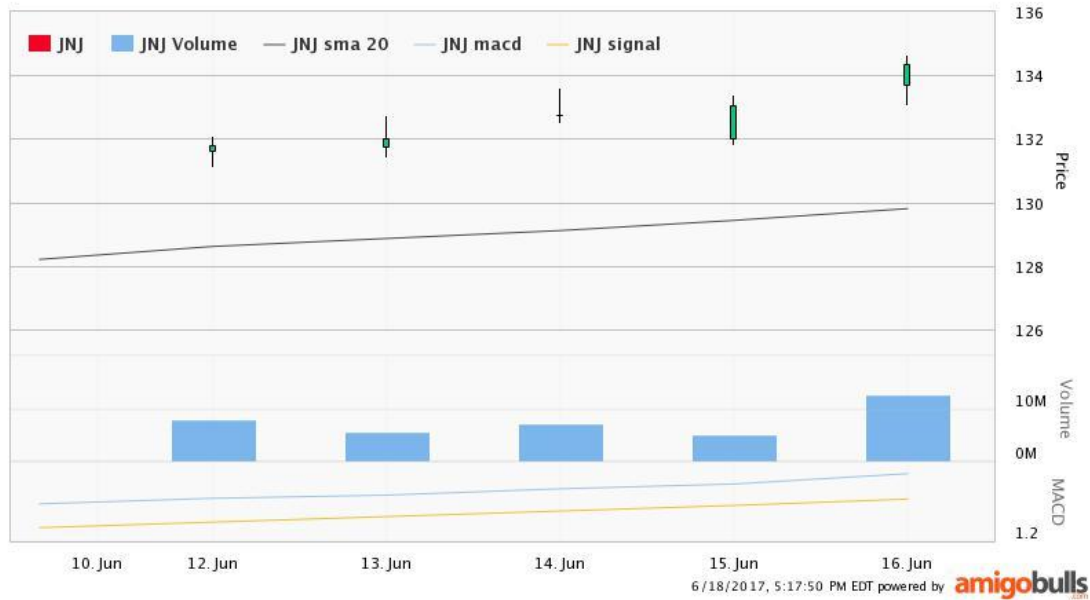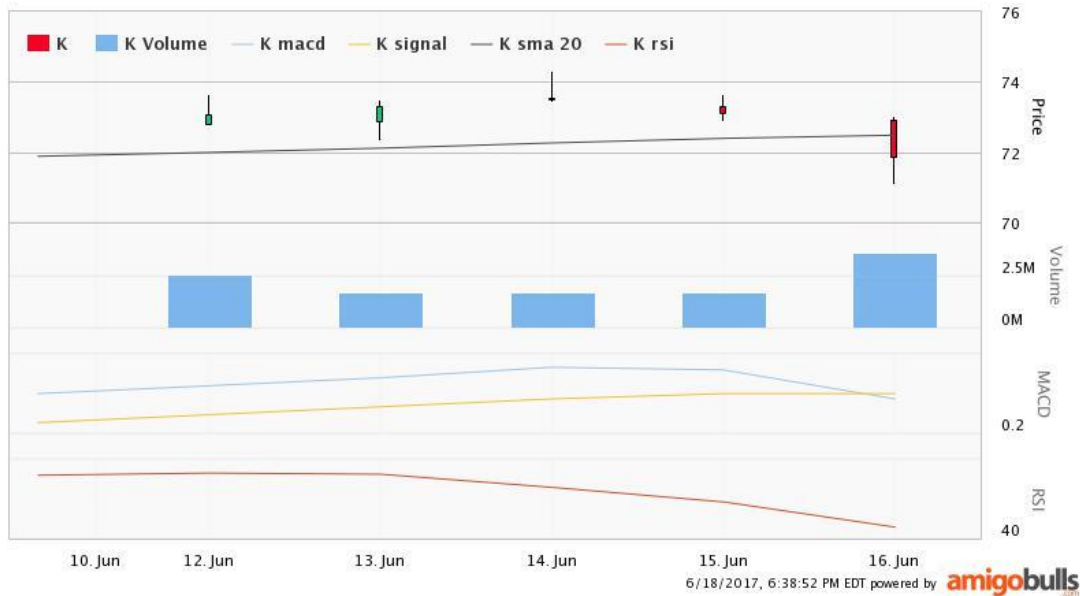
Figure 3.9 Five-Day-Technical-chart of K from June 10th to June 16th

June 15th, Thursday. Made a trade of selling AVP, at the price of $3.56/share, total $25347.6, compared to buying price there's a profit of $427.2. The stock started at highest 3.69 and it dropped rapidly within several minutes, as I recording the price of selling it dropped $0.02/share which leads to about $200 total profit lost. It reached the highest price by the end of yesterday market. And it suddenly dropped since the market opened this morning, which made me decide to sell it. Because after the rising trend a quick dropping trend occurred, which fits the fourth stage of Swing trading selling opportunity, I sold the stock. However, because of greedy, I waited for another 30 minutes to see if it will go up again, which is a common mistake for new traders. You must follow the rule of the trading strategies to secure a profit. Above trade is made around 10am, and by that time all the stocks showing downward trends, which is not a good time for buying in.

Below is the weekly technical chart of AVP. From this chart price of AVP reached the highest price on June 15th, and a dropping trend followed right after, when the price reached the

highest it's the stage 3 of swing trading, (see Figure 3.10) I sold the stock about 1 hr after the price

dropped from the highest, because some trades of other stocks. The time I sold the stock fits the

stage 4 of swing trading, the best-selling opportunity. From the profit I made we can see this swing

trading strategy worked very well.
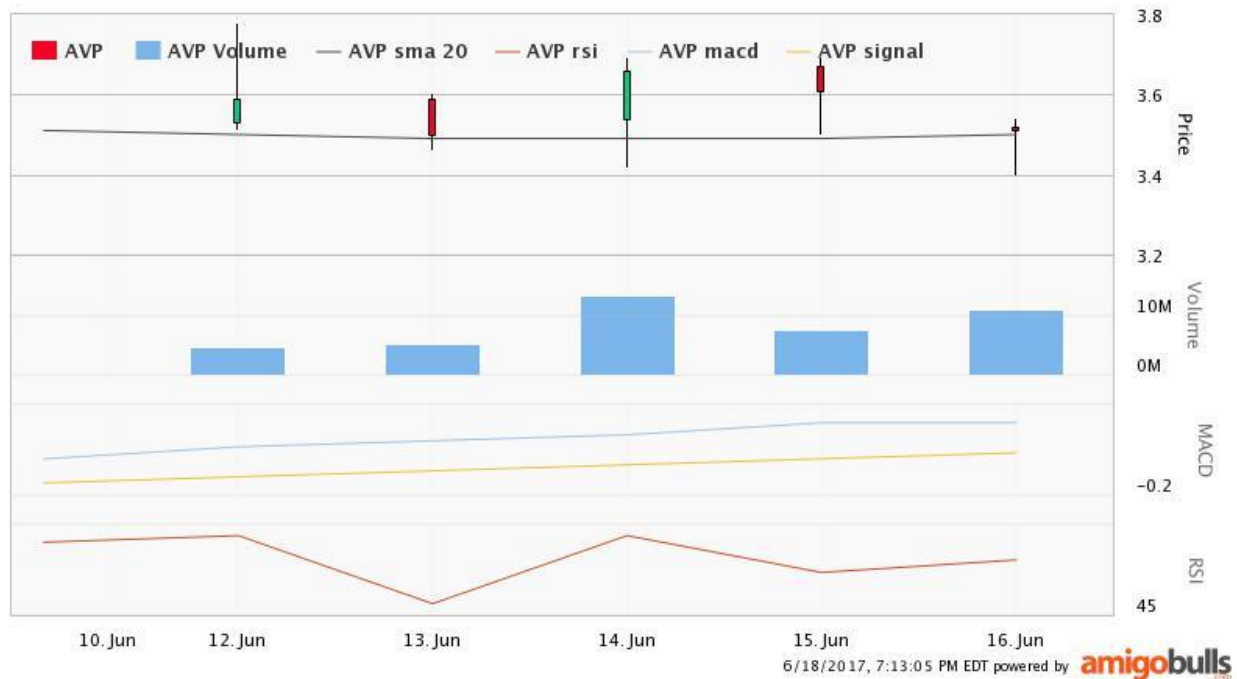
Figure 3.10 Five-Day-Technical-chart of AVP from June 10th to June 16th

June 16th, Friday. Made a trade at 11:30 of buying JNJ 185 shares at the price of 133.18,

cost 24611.25. From the day technical chart this stock just dropped and started rising, which is the

best buying opportunity fits the 2nd stage of Swing trading. All other stocks are dropping, I missed

a opportunity to sell the stocks Thursday when the stock was higher than my buying price cause I

was recording the price of another stock, which lead to a dropping trend keep happening and two

other stocks are lower than buying price. I will hold these two stocks and see the trend until next

market day which is Monday. Also, the day trend of all other stocks except JNJ are dropping so

it's not a good chance until any of the stocks starts rising. Following are the summary of week one

transaction history and portfolio. (see Table 3.1, 3.2 &3.3)

Weekly order history:

Date	Order	Symbol	Share	Trade Price	Net Cost/ Proceeds	Total Cash	Profit /loss	Total Profit
6/12/2017	- Buy	JNJ	190	131.19	-$24,934.20	$75,065.8		
6/12/2017	- Buy	CLX	180	137.62	-$24,769.80	$50,296		
6/12/2017	- Buy	JBSS	380	64.59	-$24,550.40	$25,725.6		
6/12/2017	- Buy	MDLZ	550	45.37	-$24,963.50	$799.1		
6/13/2017	- Sell	JNJ	-190	131.69	+$25023	$25,832.1	+$96.90	$96.90
6/13/2017	- Buy	K	340	72.86	-$24,782.4	$1,049.7		
6/14/2017	- Sell	CLX	-180	138.79	+$24975.8	$26,025.5	+$206	$302.90
6/14/2017	- Sell	K	-340	74.07	+$25180.6	$51206.1	+$398.2	$701.1
6/14/2017	- Buy	AVP	7120	3.50	-$24,911.20	$26294.9		
6/15/2017	- Sell	AVP	-7120	3.52	+$25,347.6	$51642.5	+$427.2	$1128.3
6/16/2017	- Buy	JNJ	185	133.18	-$24,611.25	$27031.25		

Table 3.1. Week 1 transactions.

Portfolio:

Portfolio Value	$99,782.50
Percentage Return	-0.22%
SPY ETF% Return	-0.32%
SPY ETF at start date	$243.41
Current SPY ETF	$242.64

Table 3.2 Week 1 Portfolio

Date	Value	#Trades
6/11/2017	$100,000.00	0
6/12/2017	$100,006.72	4
6/13/2017	$100,407.38	6
6/14/2017	$102,170.16	9
6/15/2017	$100,655.21	10
6/16/2017	$99,778.12	11
6/17/2017	$99.780.31	11

Table 3.3 Week 1 Total Value Portfolio

3.4 Week 2 Simulation

June 19th, Monday. Made first trade of selling MDLZ at the price of $45.44, total value $24,992. Compare to the buying price $45.34/share has a profit of $0.10/share, total profit of this trade is $28.5. Made another trade of selling JNJ, because the price dropped after a rising trend of last week and the stock selling price is $134.03, compare to the buying price of $133.18 from last Friday there's a decent amount of profit, also the trend flow fits the selling point of Swing trading. Other stocks are rising which because I missed the buying chance this morning. However, there are two stocks are currently dropping, JNJ and K, the next buying chance would be once these two start rising trend. By 3:30 pm today, JNJ and K started a rising trend. Made two trades, first one, bought 340 shares of K at the price of $71.43/share, total value is $24,310. The second trade is buying 180 shares of JNJ at the price of $133.88/share, total buying value is $24,103.8.

From the chart below we can see that there's a huge drop for MDLZ on 19th after the rising trend, the dropping trend started by the morning right after the market was opened at 9:30. So I sold the MDLZ stock to secure a profit. (see Figure 3.11)

Figure 3.11 One-Month-Technical-chart of MDLZ from May 24th to June 23rd

From this JNJ past month technical chart, we can see that there's a dropping trend on June 19th, after the rising trend, same as MDLZ. Also, follow the Swing Trading strategy this stage is the best chance for selling, then I made the trade of selling JNJ and waiting for the next stage 2 which is a rising trend after dropping trend to buy in stock again. (see Figure 3.12)
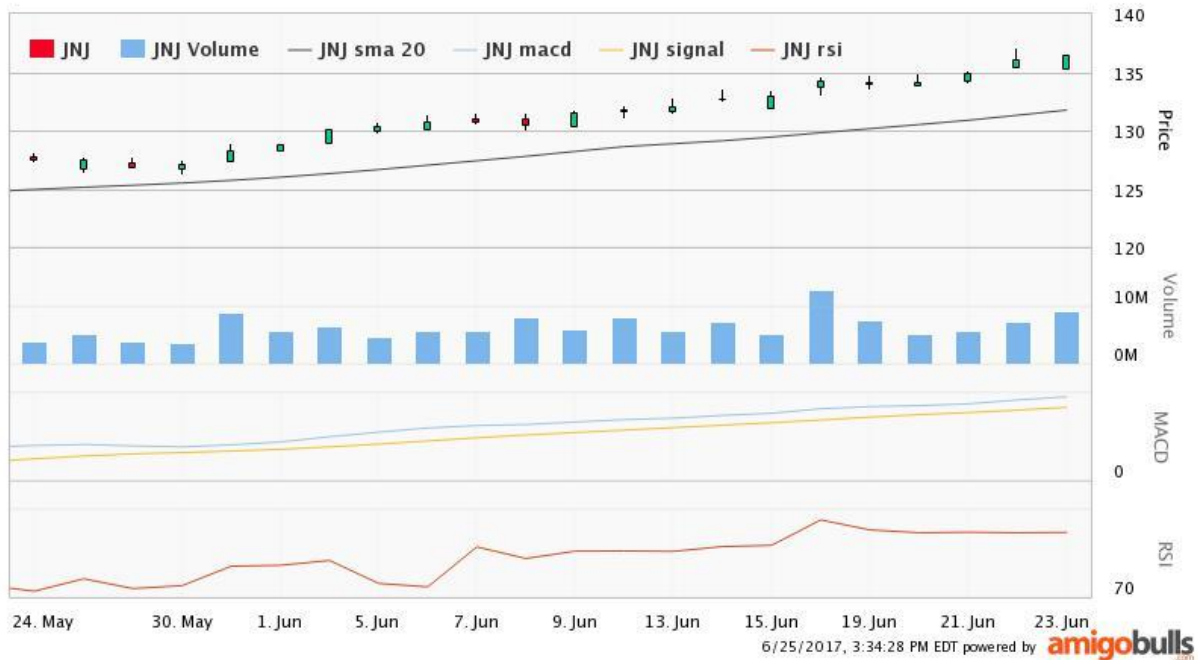
Figure 3.12 One-Month-Technical-chart of JNJ from May 24th to June 23rd

June 20th, Tuesday. Made my first trade today selling JNJ at the price of $134.30/share, total selling value is $24,176.60 and profit of this trade is $72.8. Throughout the day, I'm watching AVP stock because it's showing a significantly dropping trend from 9:30. Once the price goes up it will be a good buying chance. By 10:30 AVP started rising, so I made the trade of buying 7120 shares of AVP at the price of $3.52/share, total buying value is $25,286.

From the chart above, there's a rising trend between 19th and 20th, so after I sold JNJ by the morning of 19th, I bought in JNJ with a lower price than morning price at 3:30, and after one night the price rose and reached the peak and started dropping so I decided to sell the stock base on Swing Trading technique, however, because of swing trading is a short term with a range of

several hours to days, my prediction of the stock is based on the swing of the trend. In this case I don't want to take any risk for a larger rising trend, so I sold the stock right after a dropping trend occurred. Although look back the monthly technical chart I missed the chance of getting a large profit, I still secured a small amount of profit.

June 21st, Wednesday. After I made the trades of buying stocks all the stocks rose just a little bit and suddenly all dropped within half hour. Which makes today become a day of holding the stocks, since the Swing Trading strategy is a short-term strategy and it allows investor take several days of time to observe the trend of prices, I would keep watching how the stocks goes.

June 22nd, Thursday. Bought 180 shares of JNJ at the price of $136.96/share, total value of $24,643.80. Below is the recent 5-day price trend of JNJ, it just finished a dropping trend which is a good time for buying in. (see Figure 3.13)
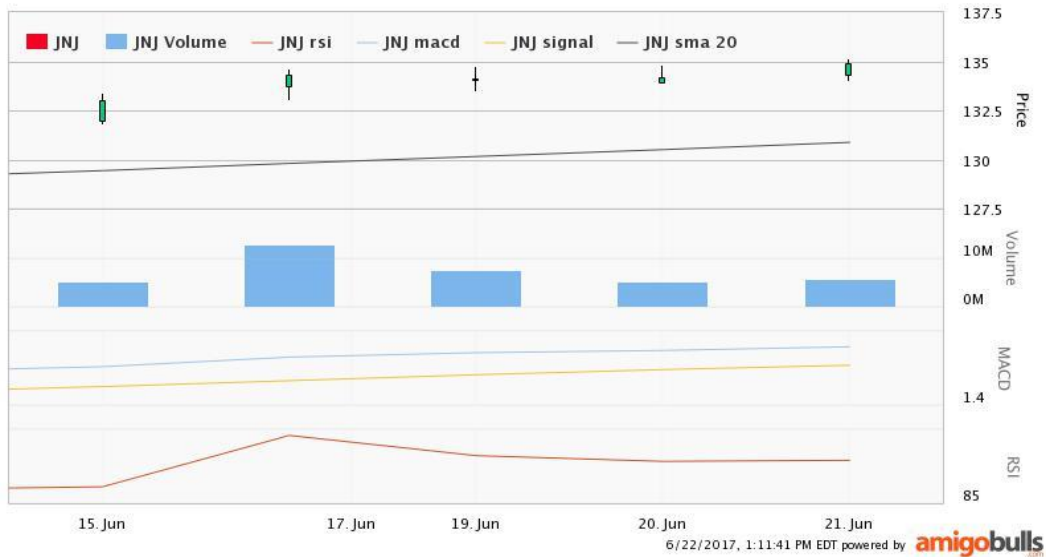

Figure 3.13 One-Week-Technical-chart of JNJ from June 15th to June 21st

June 23rd, Friday. Made a trade of selling 7120 shares of AVP at the price of $3.59/share, with total value of $25,479.6, compare to the buyig price $3.52/share, have a $193.6 profit. From the chart below there's a huge rising trend on the last day of market, I bought in the stock by the

end of june 20th, which is the starting price of 21th, and it's slightly lower than the selling price, but I bought 7120 shares which is a large amount, so even the small profit of each share still can bring me large amount of total profit. (see Figure 3.14) Following are the transaction history and portfolio for week two. (Table 3.4 & 3.5)
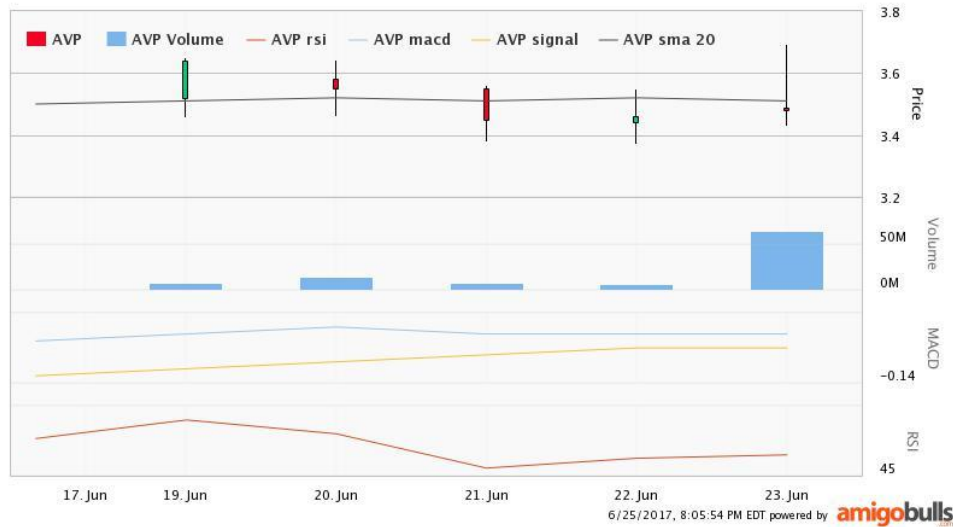
Figure 3.14 One-Week-Technical-chart of AVP from June 15th to June 21st

Weekly order history:

Date	Order	Symbol	Share	Trade Price	Net Cost/ Proceeds	Total Cash	Profit /loss	Total Profit
6/23/2017	-Sell	AVP	-7120	3.58	+$25,479.6	$28,120.3	$193.6	$1,423.2
6/22/2017	-Buy	JNJ	180	136.89	-$24,643.8	$2,640.7		
6/20/2017	-Buy	AVP	7120	3.55	-$25,286	$27,284.5		
6/20/2017	-Sell	JNJ	-180	134.37	+$24,176.6	$52,570.5	$72.8	$1,229.6
6/19/2017	-Buy	JNJ	180	133.92	-$24,103.8	$24,103.8		
6/19/2017	-Buy	K	340	71.50	-$24,310	$52,497.7		
6/19/2017	-Sell	JNJ	-185	133.97	+$24,784.45	$768,07.7		
6/19/2017	-Sell	MDLZ	-550	45.17	+$24,992	$52,023.25	$28.5	$1,156.8

Table 3.4. Week 2 transactions history.

Portfolio

Portfolio Value	$99,828.85
Percentage Return	-0.17%
SPY ETF % Return	-0.12%
SPY ETF at start date	$243.41
Current SPY ETF	$243.13

Table 3.5 Week 2 Portfolio

3.5 Week 3 Simulation

This week I only made one trade on June 28th, was buying 180 shares of CLX at the price of 137.85 total cost $24,841. My three other stocks dropped the second day after I bought in, and it happened within the first two hours of the market opened. When I was still observing one of the stock the other stock would drop with a high rate which is the reason of missing those buying opportunities. Also after I bought in CLX stocks it showed a small uprising trend within that day, but the opening price of the next day was already lower than my buying price which is beyond expectation, so it ends up holding the stocks to seek a rising trend again and selling the stock after the price gets higher than buying price.

The chart below is the technical chart of CLX of the past month and I made the trade on June 28th, as we can see there was a rising trend within 28th but the opening price of 29th is dropped all the way lower than lowest price of 28th, which is the reason why I didn't sell the stock on time and kept this stock on hold and waiting for the next selling opportunity. (see Figure 3.15)
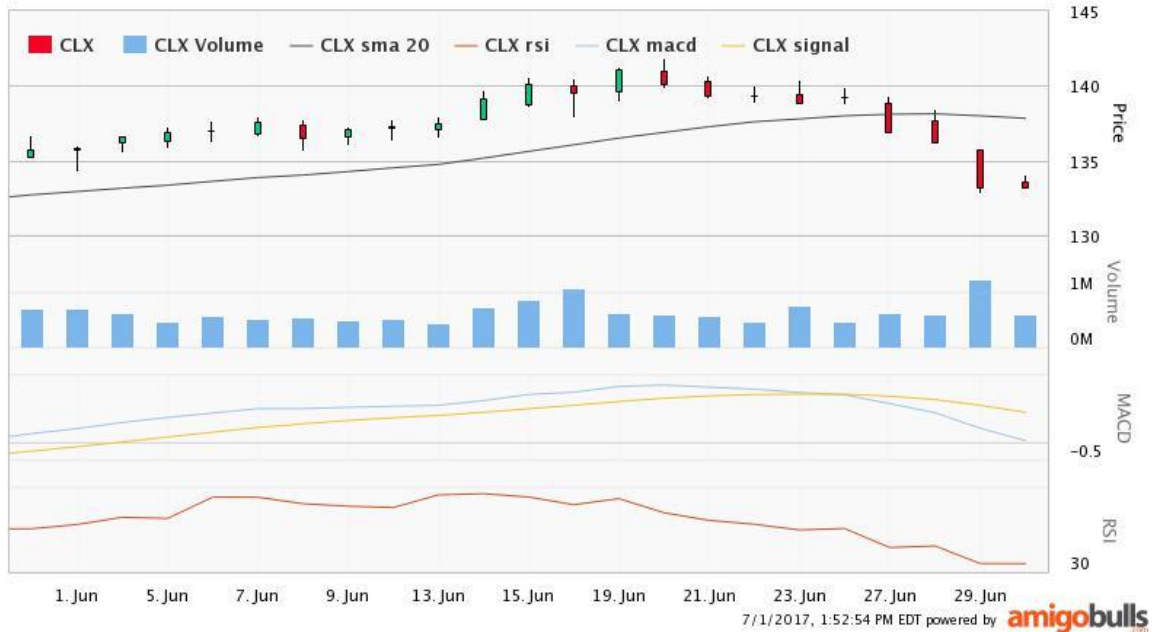
Figure 3.15 One-Month-Technical-chart of CLX from June 1st to June 29th

I made a trade of buying JNJ on 19th and sold it on 20th, cause there's a lowest point occurred, that was the time I made the trade, after 2 days on 22nd, there was another rising trend after the local lowest price, however from the large trend we can see it's only the trend within that day, the overall price dropped the day I made the trade and my buying price was relatively higher than all the day price after 23rd, which is a fail trade, but as long as I don't sell it I still have the chance for waiting the price swing back up. (see Figure 3.16)

Figure 3.16 One-Month-Technical-chart of JNJ from June 1st to June 29th

JBSS is one of my biggest fail, I made the trade of buying JBSS on June 12th, which we can see a rising trend was happening at that time, but from the stage-wise is a little bit later than 2nd stage of swing tradi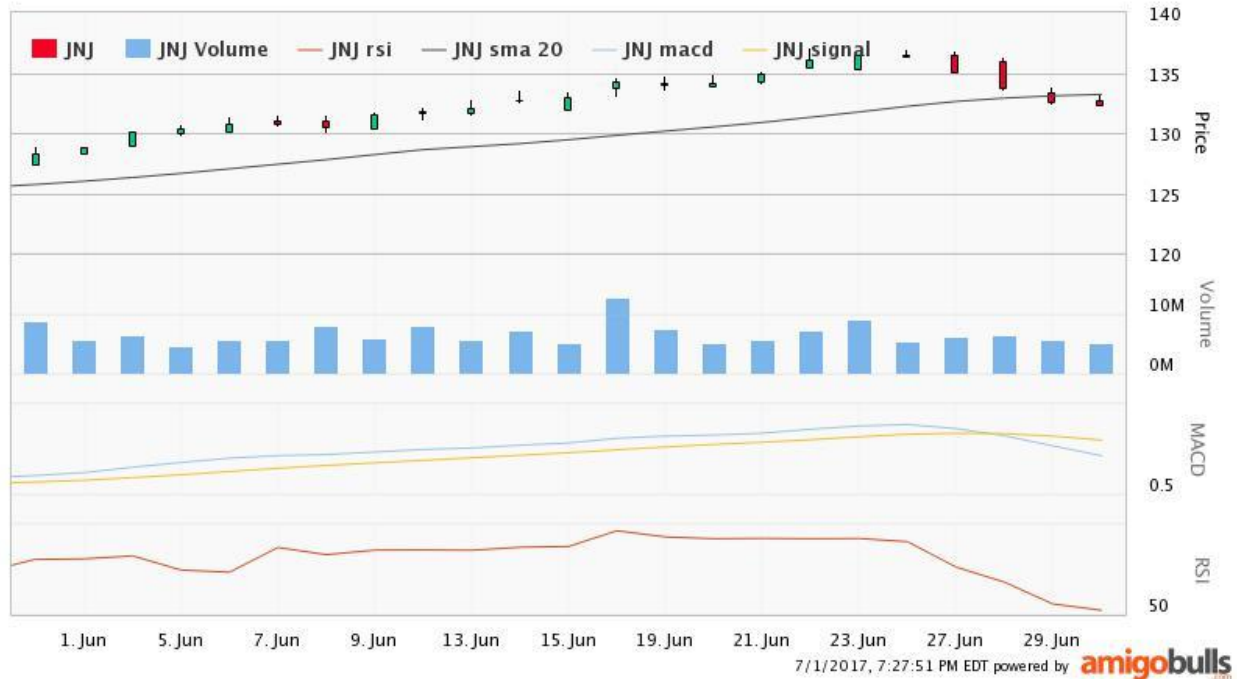ng, however the price dropped the second day I bought in the stock. From the chart we can see the day I bought the stock has almost the highest price of this half month however from the analysis on that specific day it did show the stage 2 of swing trade, but the stage three of this situation was really short which was within one day, so I missed the chance of selling.(see Figure 3.17) Fortunately, I can still hold the stock until the price rise up again, however this miss of chance delayed the selling opportunity for over three weeks. However, the stock is showing a rising trend after 20th, which is a good sign. The potential of this stock is still there, now I just need time and be patient to wait this stock rise up and surpass the buying price on June 12th.

Figure 3.17 One-Month-Technical-chart of JBSS from June 1st to June 29th

From the monthly technical chart, we can see that the stock of Kellogg kept a downward trend for about 10 days.(see Figure 3.18) The day I made the trade of buying K is on June 19th, the daily price was going up and the uprising trend happened after a dropping trend, so from what I analyzed it was a good buying opportunity, however the same mistake was made as on other stocks I only paid attention on daily trend, thought small rising trend would bring large profit. The stock price dropped the second day with a high rate and the price hasn't reached the buying price yet. Based on the situation of this stock above, there's no trade of K stock has been made this past week.
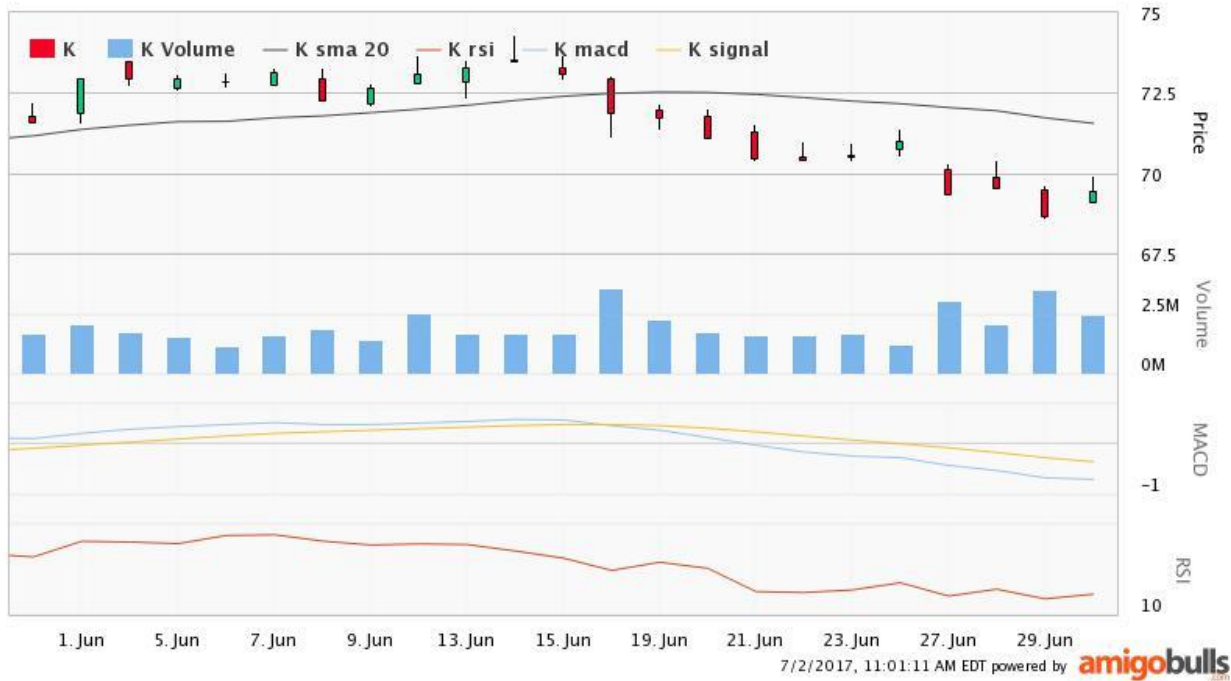
Figure 3.18 One-Month-Technical-chart of K from June 1st to June 29th

Another reason that leads to missing of the buying and selling chance is because this past week is final week of E1 term. It's one of the schedule failure related to personal plans, however, since this is a stock trading simulation, for most of time people wouldn't have full time for observation, which is one of the inevitable matters for trading. Even if people engage in full-time trading, some personal stuff would take time off from trading, for example lunch break. Since the stock price changing rapidly with a very high rate, there would never be a perfect trading without any chances misses. One of the solution is to focus on less stocks as possible so that investor can have more monitoring on the stock prices. The following is transaction history of week three. (Table 3.6)

Date	Order	Symbol	Share	Trade Price	Net Cost/ Proceeds	Total Cash	Profit /loss	Total Profit
6/28/2017	- Buy	CLX	+180	137.95	-$24,831	$3,289.3		

Table 3.6 Week three Transactions

3.6 Week 4 Simulation

Because of the huge drop of prices last week, most of the trades will not happen until the price rise back and surpass the buying prices. This week most of the stock showed a rising trend, but the prices are still lower than the buying price. There are small fluctuations of the price each day but the large trend is going up, since the price is still lower, I chose to hold the stocks. Below are the prices details of each stock throughout this past week. The buying price of K is $71.50; buying price of JNJ is $136.89; buying price of JBSS $64.59; buying price of CLX is $137.95. (see Figure 3.19)

SYMBOL COMPANY		QTY	PRICE PAID	LAST PRICE	DAY'S CHANGE	MARKET VALUE	% PROFIT/LOSS	
K Kellogg Company		340	71.50	68.76	-0.70	$23,378.40	-931.60 (-3.83%)	TRADE
JBSS John B. Sa...		380	64.59	63.27	0.16	$24,042.60	-501.60 (-2.04%)	TRADE
JNJ Johnson & ...		180	136.89	132.90	0.61	$23,922.00	-718.20 (-2.91%)	TRADE
CLX The Clorox...		180	137.95	133.78	0.54	$24,080.40	-750.60 (-3.02%)	TRADE

Total Market Value Long: $95,423.40 | Total Market Value Short: $0.00

« Previous   1 of 1   Next »

RESET PORTFOLIO

Figure 3.19 Prices of Stock K, JBSS, JNJ and CLX on July 4th

After day two, the price of CLX, JNJ, and JBSS all rose a little bit and got closer buying price except the price of Kelloggs. (see Figure 3.20)

Figure 3.20 Prices of Stock K, JBSS, JNJ and CLX on July 5th

On day three JBSS started dropping and K is still dropping, however, the other two stocks are rising steadily which is likely will swing back and surpass buying price soon. (see Figure 3.21)

Figure 3.21 Prices of Stock K, JBSS, JNJ and CLX on July 6th

SYMBOL COMPANY		QTY	PRICE PAID	LAST PRICE	DAY'S CHANGE	MARKET VALUE	% PROFIT/LOSS	
JNJ Johnson & ...	▤ ∿ ☰ ▦	180	136.89	132.35	-0.17 ◐	$23,823.00	-817.20 ◐ (-3.32%)	TRADE
JBSS John B. Sa...	▤ ∿ ☰ ▦	380	64.59	62.56	0.36 ◐	$23,772.80	-771.40 ◐ (-3.14%)	TRADE
CLX The Clorox...	▤ ∿ ☰ ▦	180	137.95	134.69	0.92 ◐	$24,244.20	-586.80 ◐ (-2.36%)	TRADE
K Kellogg Company	▤ ∿ ☰ ▦	340	71.50	66.61	0.06 ◐	$22,647.40	-1,662.60 ◐ (-6.84%)	TRADE

⟳Total Market Value Long: $94,530.40 | ⟳Total Market Value Short: $0.00

« Previous   1 of 1   Next »

Figure 3.22 Prices of Stock K, JBSS, JNJ and CLX on July 7th

From the charts above, we can see that the price of four stocks are still lower than buying price, although three of these stocks are showing a rising price, the price of stocks is never predictable base on the rapidly changes of prices.(see Figure 3.2) Since I haven't make any trades during this past week, next week I will sell one or two of the stocks with a losing price, and get out some cash in order to put the money onto winning stocks, although I can keep holding the stock, however I'm using swing trade not passive buy and hold. The best way to turn around the losing situation is to buy more shares of uprising trend stock. More shares mean more total profit, hopefully it will fill up the gap caused by the losing trend from last two weeks. The first stock I will sell is K, since from the technical chart the price of K has been dropping for almost a month, this stock is no longer a winning stock. (see Figure 3.23)

Figure 3.23 One-Month Technical Chart of K stock

From the technical chart of JBSS below (see Figure 3.24) we can see that the current is getting close to my buying price on June 12th, so for next week I will keep holding this stock to observe the price trend. This stock still has potential of passing the buying price.

Figure 3.24 One-Month Technical Chart of JBSS stock

From the one-month technical chart of JNJ below (see Figure 3.25) we can see the price is way lower than the buying price on June 22nd, and the price is hardly going up which means this stock does not have potential of surpass the buying price in short term. So, a trade of selling is planned for next week, and the money withdraw from this stock will be using on buying the stock with better potential.
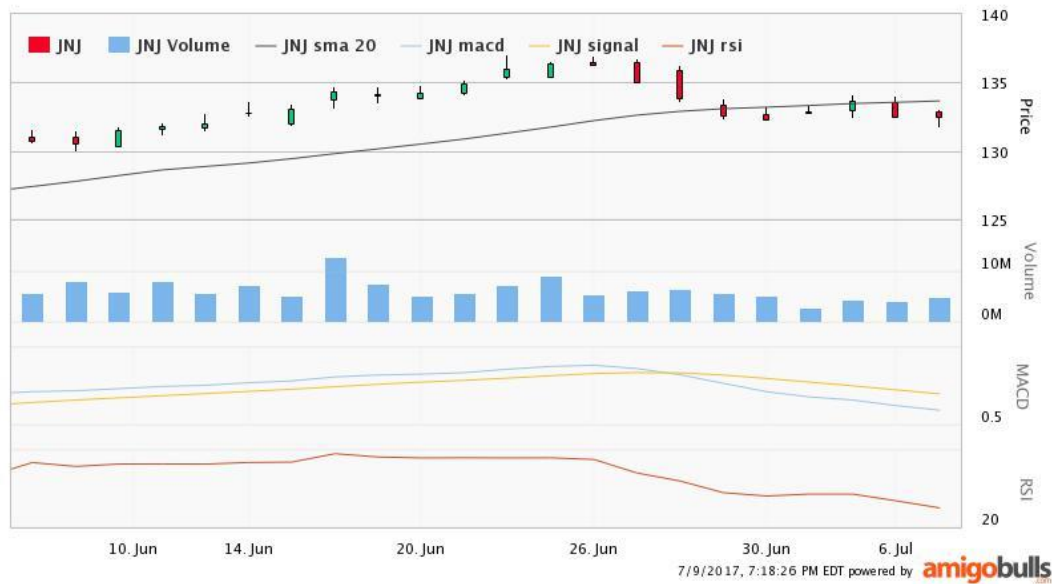

Figure 3.25 One-Month Technical Chart of JNJ stock

From the chart below we can see the current price of CLX is getting close to the buying price on June 28th, (see Figure 3.26) which shows the potential of this stock, so for next week, a holding will happen and wait until the price swing up and pass $137.95.
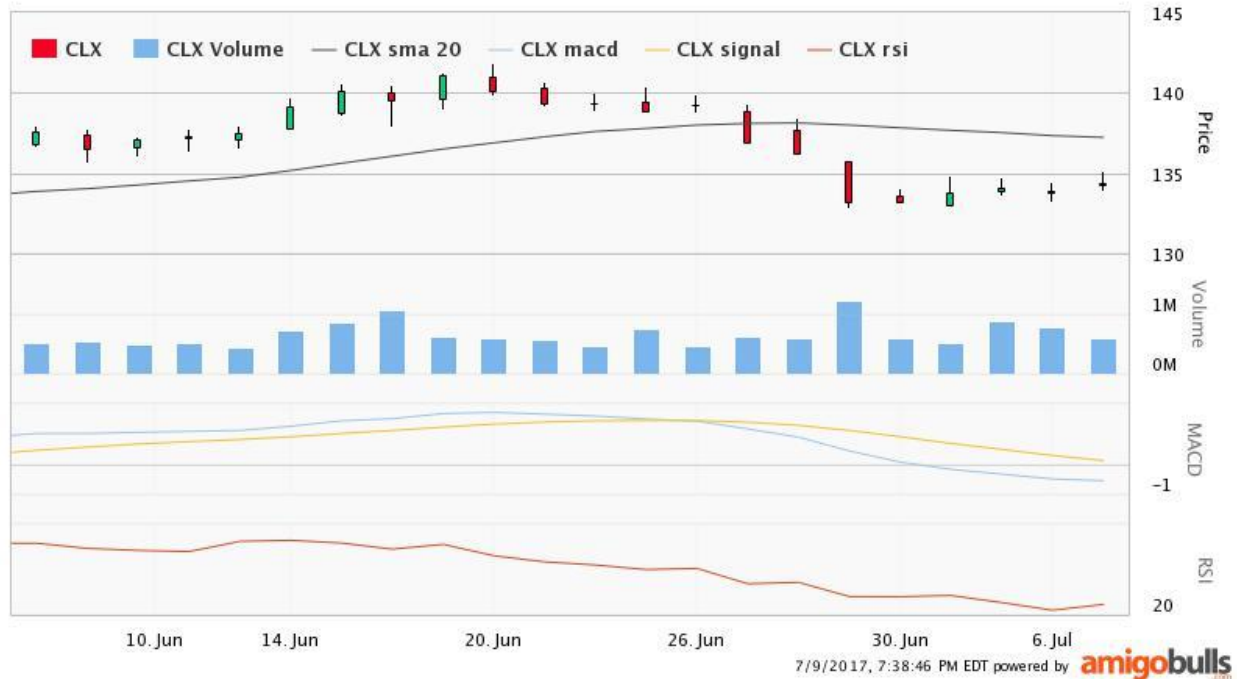
Figure 3.26 One-Month Technical Chart of CLX stock

3.7 Week 5 Simulation

As the plan, the first two trades for this week are selling JNJ and K, since the price will be hardly surpassing the buying price again. The trades happened on Monday, sold 180 shares of JNJ at the price of $132.19, total value of the stock sold is $23,777. Sold K stock at the price of $66.02, total selling value is $22,464. Although, the selling value is lower than buying value which means a huge lost for the past weeks, however, selling out the losing stocks also give me more chance and assets to buy in other stocks with rising trend.

On July 12th, I bought in K again because it's showing an uprising trend. I bought in 370 share at the price of $66.03, and total buy in value is $24,444.8. The price of Kellogg was keeping a dropping trend for the past several weeks, the reason I bought in this stock on 12th is because the dropping trend ended that day and drastically rising trend occurred. (see Figure 3.27) because of the rising trend happened really fast which would possibly cause a loss because the price rise to

very high in a short time range. However, the time I bought in is still early morning for the market day, so the price was keep rising after I made the trade which is a good sign.

Figure 3.27 Five-day Technical Chart of K stock

The next trade for this week is selling out the K stock after two days. The price on July 14th is $66.31/share which is way higher than my buying price, and the reason that made me decided to sell this stock is the dropping trend, based on swing trading strategy this is the time that I should sell the stock in case the dropping trend keep going and causing the loss of profit. (see Figure 3.28) the point with the price of 66.36 is near where I sold the stock. I sold the stock with a lower price because I need to make sure there's a dropping trend happening otherwise the loss of profit would be inevitable. Because nobody can predict how the market price would go, I sold the stock, and

the stock price kept rising after the small fluctuation. However, I secured the profit which is a safe move.

Figure 3.28 Five-day Technical Chart of K stock

There are another two trades happened on 14th, first bought in 7120 shares of AVP at the price of $3.69/share, total value is $26,354; then bought in 180 shares of JNJ at the price of $131.31/share, total value is $23,839.6. I bought in AVP based on the swing trading strategy there's a rising trend in sudden happened on 14th, after the long dropping trend. (see Figure 3.30) However, the price flow within the day dropped back down, it'd not a good sign but still need further observation. Also there's a clearly swing back of JNJ stock price on 14th after a significant

dropping trend. This is the typical stage 2 of swing trading, the best buying chance. The trade of

buying JNJ is already bringing profit within the day. (see Figure 3.29)

Figure 3.29 Five-day Technical Chart of JNJ stock

Figure 3.30 Five-day Technical Chart of AVP stock

Date	Order	Symbol	Share	Trade Price	Net Cost/ Proceeds	Total Cash	Profit /loss	Total Profit
7/14/2017	- Buy	JNJ	+180	132.37	-$23,826.6	$535.5		
7/14/2017	- Buy	AVP	+7120	3.70	-$26,344	$23,291.1		
7/14/2017	- Sell	K	-370	66.26	$24,516.2	$49,635.1	+$81.8	-$717.2
7/12/2017	-Buy	K	+370	66.04	-$24,434.8	$25,118.9		
7/10/2017	-Sell	K	-340	66.11	$22,477.4	$49,533.7	-$1,832.6	-$799
7/10/2017	- Sell	JNJ	180	132.15	$23,787	$27,076.3	-$389.6	$1,033.6

Table 3.7 Week Five Transactions

3.8 Week 6 Simulation

Tuesday July 18th, made a trade of selling 180 shares of JNJ at the price of $134.35. Total value is $24,236. From the following figure (see Figure 3.31), we can see that there's a huge raise of price on 18th after a relatively long term of dropping. This rising trend followed by a small dropping trend around 12pm, and the trend kept dropping until about 12:30 until I sold this stock. Although the stock price rose after July 18th, but from the price flow at that moment, selling is the best decision.

Figure 3.31 Five-day Technical Chart of JNJ stock

Thursday July 20th, made a trade of selling 380 shares of JBSS at the price of $66.20. Total value is $24,921.80. from the figure below (see figure 3.32), there's a small fluctuation on the day I made this trade, no huge dropping. However, within the day the drop was big enough for me to make the decision of selling the stock. Based on swing trading strategy I sold the stock when there's a dropping trend after the long rising trend. Looking at the 5-day price flow, the drop could be neglected, which is the mistake I made, but there's no loss from this trade.

Figure 3.32 Five-day Technical Chart of JBSS stock

The prices of other two stocks are still lower than the buying prices, so I chose holding the stocks and wait until the price rises up and surpass the buying price. Since the simulation stopped

this week, I can hold the stocks until the prices get back. Also from the trades two weeks ago I lost

a huge amount of money, however, by selling the stocks and using the money to buy in new stocks

I made the profit and filled up the gap which we can tell from the following table the last day total

profit became positive again. (see Table 3.8)

Date	Order	Symbol	Share	Trade Price	Net Cost/ Proceeds	Total Cash	Profit /loss	Total Profit
7/20/2017	- Sell	JBSS	-380	$66.20	+$24,921.8	$49.693.3	+$371.4	+$63.6
7/18/2017	- Sell	JNJ	-180	$134.35	+$24,236	$24,771.5	+$409.4	-$307.8

Table 3.8 Week Six Transactions

3.9 Results of Simulation

The 6-week trading simulation ended with a small profit of roughly $100 compared to the

starting assets. During the 6 weeks, I first got a huge amount of profit from the first two weeks of

trading in behalf of the overall rising trend of entire market. On the third and fourth week, there

were several significant drop which were big impact to swing trading since this strategy is a short-

term and time range is within several days. This situation leads to the loss of several hundred

dollars for almost all of the stocks I bought in. After week three, the stocks had rising trends but

the prices for all the losing stocks were still lower than buying prices, so I made a decision of

selling all the stocks with no potential of surpass the buying price and keep those that have.

Although there's a huge loss by selling the stocks with lower price, I cashed out the money from

losing stocks, prevented a further losing also the cash can be used on some potential wining stocks.

By the week four, I started my plan of getting money back by buying in winning stocks and sell

out the stocks with no hesitates, strictly followed swing trading strategy. The effect of the strategy

was remarkable, I gained small portion of profit from many trades in a very short term. I made

profit by changing the time range to a shorter under the condition of a rising trend. Which helped me make more profit within same amount of time.

From this simulation, I improved the analysis skills for stages of swing trading and had a good practice of following swing trading strategy buying and selling time. The result is not acceptable as an investor, because of the roughly $100 profit compared to starting asset is not efficient for a 6-week trade. However, as a starter for the swing trading strategy, because of the huge impact on multiple stocks, fixing it became a valuable experience and this experience will definitely be helpful for future use for actual trading. The objective of this IQP is to learn about stock market and get some experience of the decision making under different situations, this 6-week simulation achieved it.

3.10 Conclusion and Discussion

For the simulation of week one and two, I tried to follow the swing trading strategy, however, the change of stock market is surprisingly faster than I imagined, which leads to miss buying and selling opportunity and the direct result is loss of profits. Because of the miss of selling chance for those two stock I need to wait for another rotation which means next stage 4 of swing which could be several days of holding. However, on week two, I strictly followed swing trading strategy and made a good amount of profits from several trades. For swing trading the trading time range is hours to several days, there's no specific time to buy and sell, it's all about how the price goes. The total portfolio after 2 weeks is actually lower than starting funds, because the stocks on hold having a lower price than buying price, however, holding means the stocks still have potential so the portfolio can't directly reflect my assets. Overall, the first 2 weeks of simulation is relatively success, since there's no stock has been sold with a price lower than buying price. From the first two weeks of trading, we can see the importance of monitoring the stocks is obvious and the fact

that there would always be inevitable situations like a job or school may delay the trading time and lead to a loss.

The simulation of week three and four had a totally different situation from first two weeks. By the effect of dropping trend of the entire market, all of the stocks I bought in had drastically dropping trend right after I made the buying trade. Under this situation, there were two choices for me: first is holding the stocks until the price rises back up, however, from the amount of price that dropped, it seems impossible and because of the fact that I based my IQP on a 6-week trading simulation, this move is not allowed time-wise; second choice is to sell the stocks to stop further losing, and use the cash for other stocks with potential. The decision I made was first to hold the stocks because based on the knowledge I had on stock trading I wasn't able to do the right analysis and make the best decision for more profit. I held the stocks for one entire week to see if the price would go back up again, which lead to a larger amount of loss. However, if there's never mistakes have been made the consequence would always be unknown. From this misjudgment for the situation there's a knowledge for what is the right decision we should make under specific trading situation.

4. Simulation 2 Passive (Buy & Hold)

This chapter is the second part of my simulation for this project and the trading strategy that will be used is passive investment (Buy & Hold). Passive investment is a strategy that buys the stock and wait for a long time range for an overall rising trend. Because of it's a buy and hold strategy there will be no trades going on, this section will record the price flow during the 6 weeks of simulation. For buy and hold I will use the same companies from Swing trading in order to get a good comparison. By the end of the simulation I will record the final price of different stocks to compare to the starting price, then analysis whether it's a winning investment or not. However, the buy & hold strategy normally takes at least a decade which makes 6-week simulation have small effect. However, research will be going on during the simulation and combine the 6 weeks actually observation and the history trend, a conclusion can be made without too much error.

4.1 Stock Selection

SAFM & MKC, the reason why I chose these two stocks is from the technical chart of the past 10 years both of these companies stocks shows a stable rising trend, despite the small fluctuations they will always bring profit if investor use passive buy and hold strategy. The following are the two technical analysis chart from the past 10 years, normally buy and hold takes more than 10 years which means the short dropping trend will be neglected.
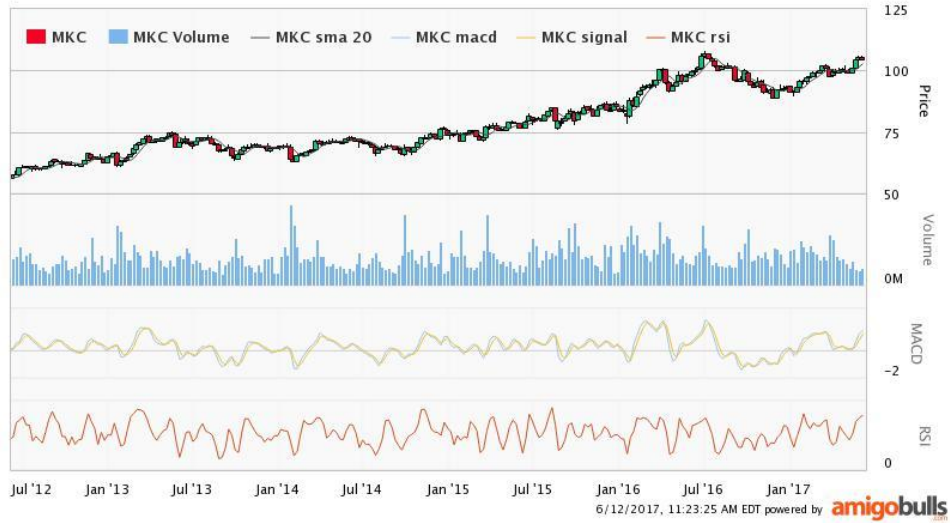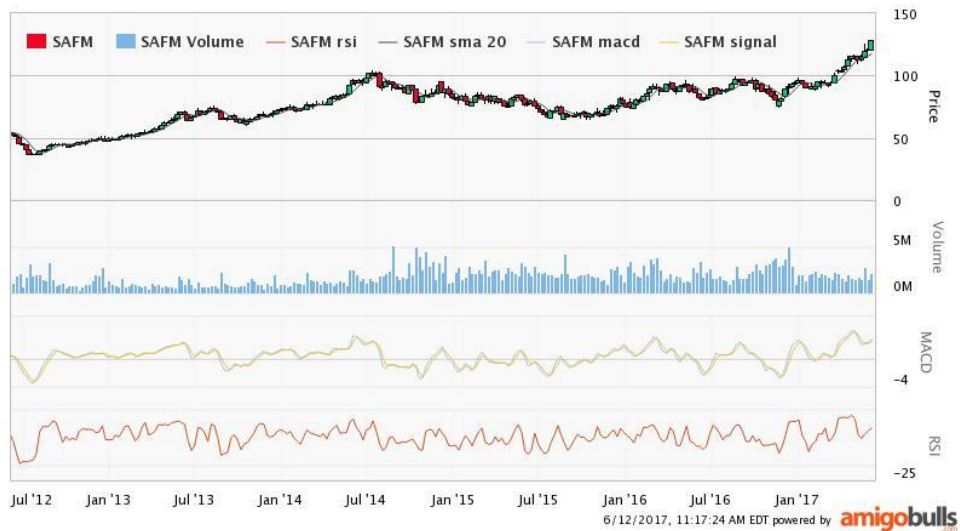
Figure 4.1 Ten-Year-Technical-chart of MKC

Figure 4.2 Ten-Year-Technical-chart of SAFM

4.2 Week 1 Simulation

This simulation I also started with $100,000 funds and first day I bought 390 shares of

SAFM at the price of $126.20/share, cost $49,218. I also bought 470 shares of MKC at the price

of $104.5/share, cost $49115. Total cost $98,333, with $1,667 liquid cash.

June 16th, the price of SAFM is 126.44/share, during the week there are a lot of rapid changes and although the large trend is rising, there was a drastically drop trend happened today, Friday. The overall price is rising and buy and hold trading is working so far, however this strategy is for long-term. This week of observation can only show that the trend is steadily going up. There was a small dropping trend happened every market day, but by the end of each day the stock would raise again and surpass the starting price. Only the last day, Friday had a dropping trend. However, since this buy and hold trading strategy is a long term strategy, this kind of small fluctuations would not be concerned by investors, also from the chart, we can see the overall price is rising throughout the week.
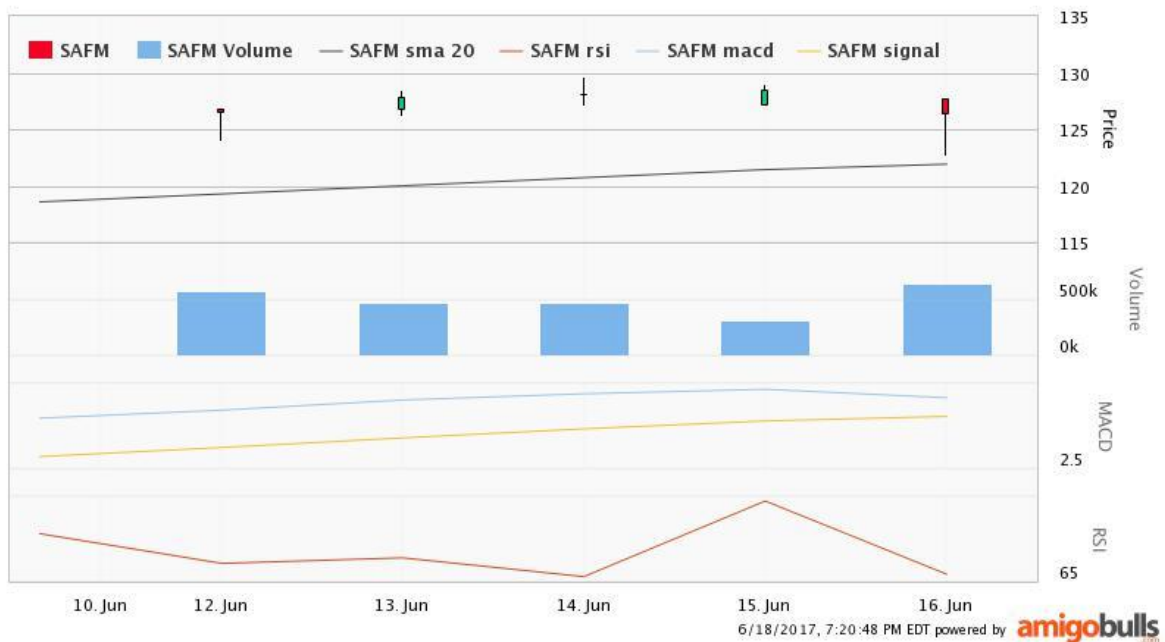

Figure 4.3 One-Week-Technical-chart of SAFM from June 10th to 16th

June 16th, the price of MKC is $101.83/share, which is relatively lower than the buying price at the beginning of the week. However, from the first four market days, the price kept a steadily rising trend. The price within one day on Friday. Overall the price of this stock is still rising but Friday is just that one day with the small fluctuation, again for the long-term passive

trading strategy, this fluctuation can be neglected. The reason of picking these two stock is based on a long-term analysis, so no matter how drastically the price drop within one day, long-term trend is where the passive trader looking at.
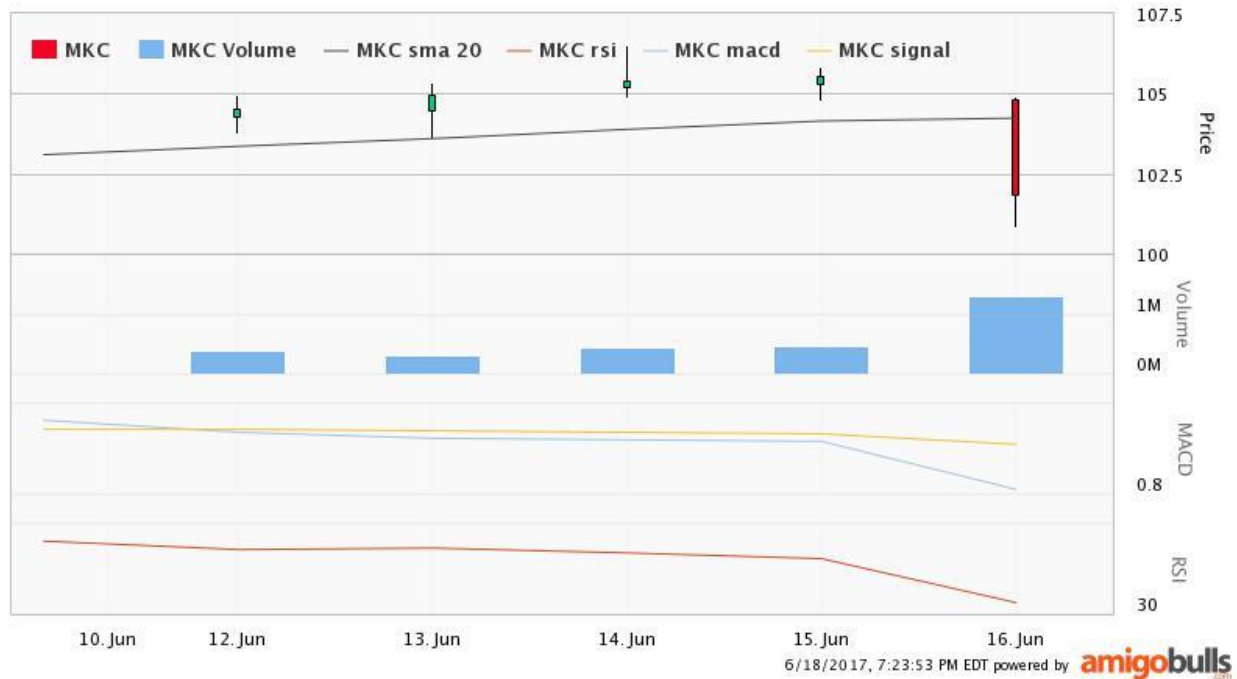

Figure 4.4 One-Week-Technical-chart of MKC from June 10th to 16th

4.3 Week 2 Simulation

June 23rd, Friday. The price of SAFM is $123.93/share, it's relatively lower than the beginning price of this week, the price has randomly swings but the large trend is dropping this week, however for buy and hold this small fluctuation can be ignored, we just need to observe the long-term trend such as the overall trend of these 6 weeks of simulations. Within the week, the stock has rising trend every day, but because the overall trend of stock this week, however, the closing price of each day are all lower than opening price.

By the end of the week, the price of MKC is $100.23/share. Also relatively lower than the starting price, there was a rising trend on June 20th, after that the stock price was keep dropping. Same as SAFM, the small fluctuation within one week would not affect the stock selection.
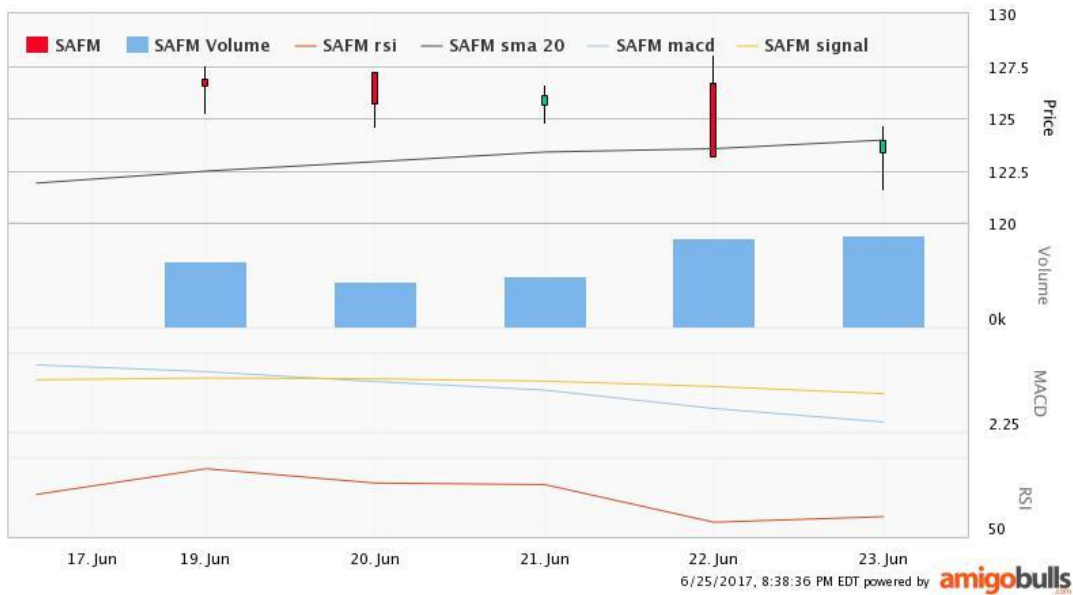

Figure 4.5 One-Week-Technical-chart of SAFM from June 17th to 23rd

Figure 4.6 One-Month-Technical-chart of MKC from June 1st to 29th

4.4 Week 3 Simulation

By the end of the week, the price of MKC stock is $97.51/share which is lower than the starting price and buying price. However, because of the overall market price trend is going downward and this simulation is using passive trading strategy holding will keep going and the weekly price drop is not a big matter to this trade. Since the time I started the simulation was basically the time that the entire market has the highest price, the price of most of the stocks I'm watching are dropping recently. However, this passive trading is based on the potential of the company and from the 10 technical chart analysis we saw the long term potential. Also from the monthly technical chart below we can see a small rising trend swing back the last two days, which is not a bad sign for this stock.
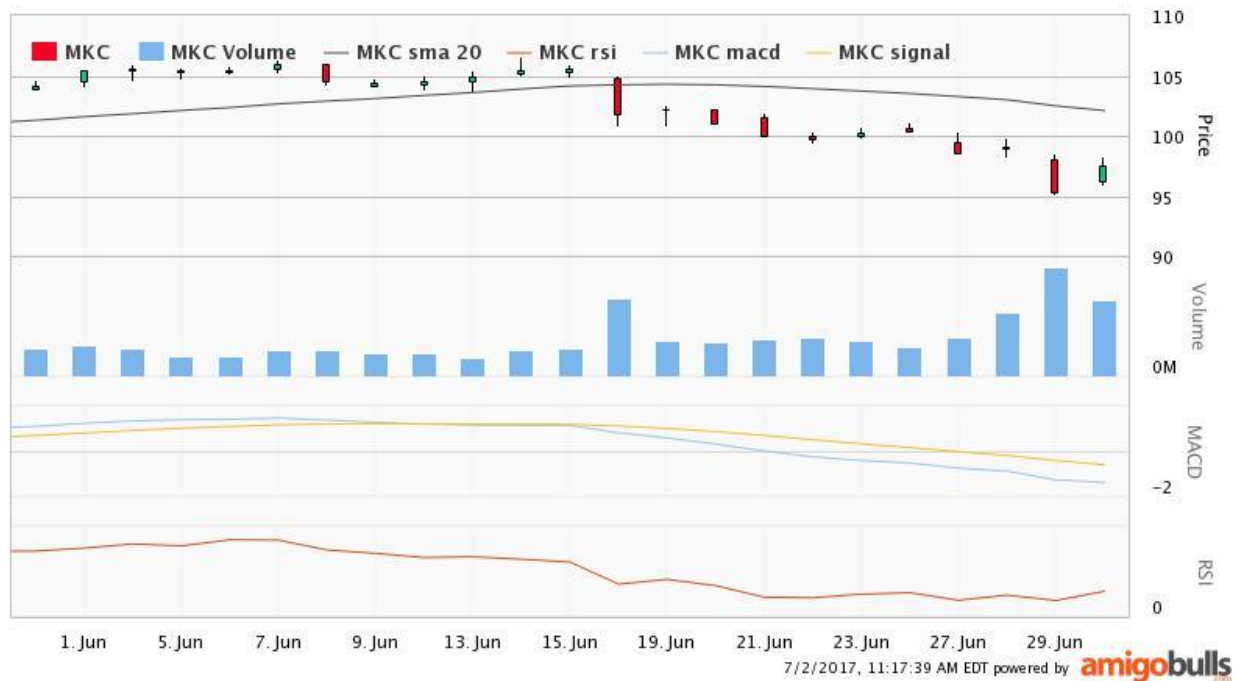

Figure 4.7 One-Month-Technical-chart of MKC from June 1st to 29th

The other stock SAFM price by the end of the week is $115.65/share, which is way lower than the starting price of $123.93/share. Same as most of my other watching stocks, because of the

overall trend of the entire market is going downward this stock is dropping as expect. The good

thing of this week is there's a small rising trend on the last day of market.

Figure 4.8 One-Month-Technical-chart of SAFM from June 1st to 29th
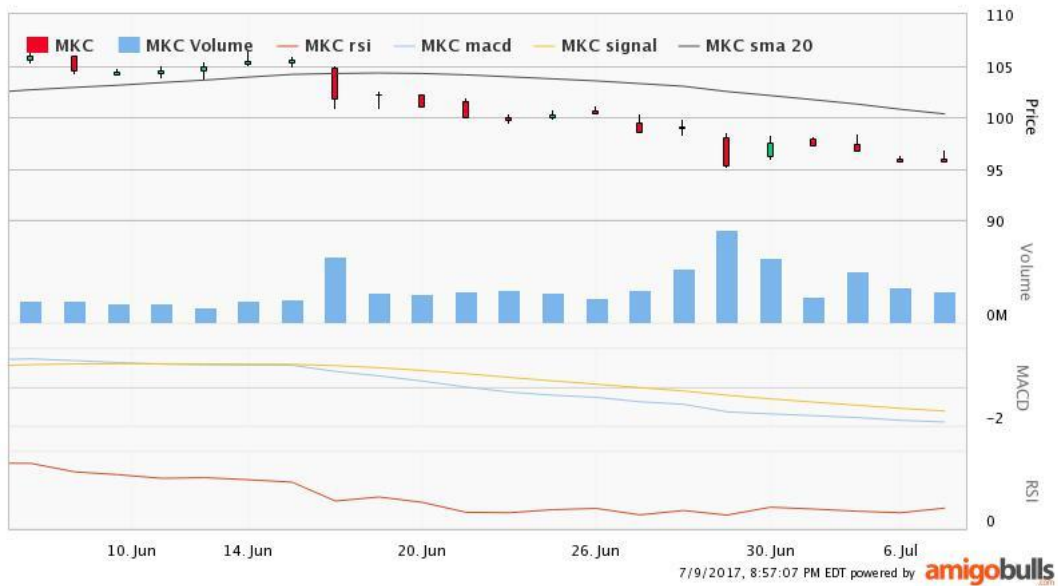
4.5 Week 4 Simulation

Figure 4.9 One-Month-Technical-chart of MKC from June 7th to July 7th

Above is the technical chart of MKC from past one month and it shows that the price of MKC was keep dropping. Based on the overall trend of the entire market, it's normal for this stock for dropping. Because of this part of simulation is using passive trading strategy the dropping trend of past three weeks would not affect the trading decision. Compare to a decade long period of time three weeks of dropping on price is small fluctuation which could be neglected, so the observation will continue, also the dropping rate is very slow, so hopefully in the future two weeks a rising trend will occur.
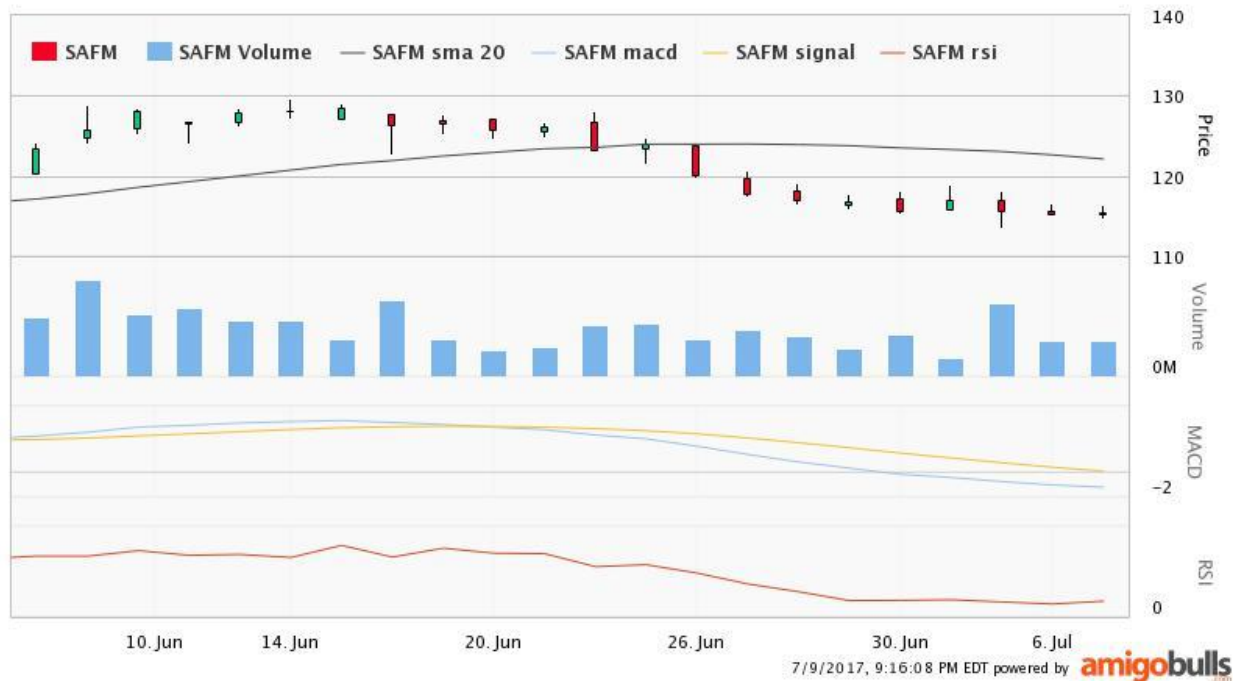
Figure 4.10 One-Month-Technical-chart of SAFM from June 7th to July 7th

From the one-month technical chart of SAFM above we can see there's a slightly rising trend mixed with small fluctuation of dropping happened last week. This is the sign of the price swinging back. The passive trading is looking into 10 years or even longer period of time, although this three weeks of dropping would not affect the trade, a rising trend is always expected for investor. This small swing back of the price will possibly lead to a rising trend and secure the

overall rising trend. The price swing shows the potential of this stock for passive trading, proved that there will be short-term fluctuation happen, however, after the small drop this stock will have a steady rising trend.

4.6 Week 5 Simulation

From the following figure of 1-month price flow of MKC. (see Figure 4.11) This week, July 9th to 16th the price is steadily rising, which matches the overall trend of MKC stock. This is a good sign. The price fluctuation of this stock never has significant change, this is one of the reason why chose this stock. Since there's no big fluctuation it's safe for long-term investment, even there's a dropping trend it will be slow and eventually the price will go up.

Figure 4.11 1-month technical chart of MKC

Below is the one-month technical chart of SAFM (see Figure 4.12). From the chart we can see this week July 9th to 16th, had a constant rising trend and a drastically rise the first two days of market. However, just like previous weeks, this small fluctuation wouldn't affect the long-term

passive trade. This is just a small part of the price flow, it shows that the price will go up and has

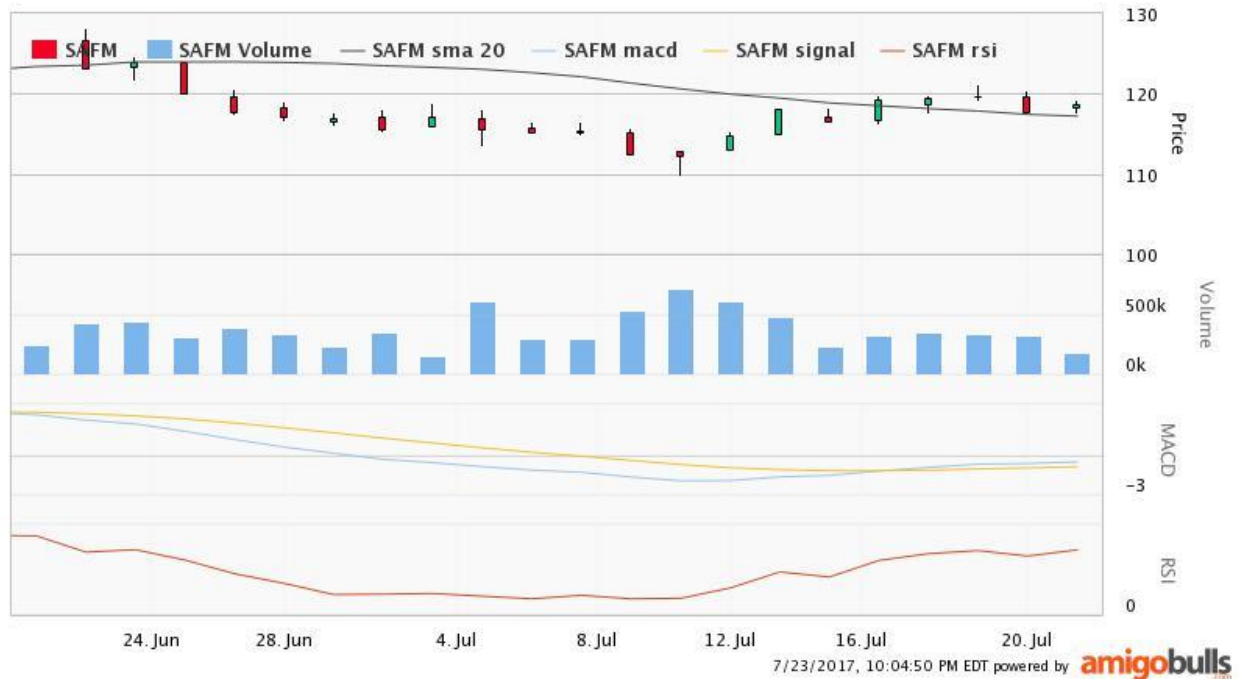the potential also the rate of rising is slow.

Figure 4.12 1-month technical chart of SAFM

4.7 Week 6 Simulation

From Figure 4.11 we can see that the price of MKC had a huge drop in the middle of this

week, July 17th to 23rd. However, after the drastically dropping trend within one day, the price

started rising slowly and steadily. From this trend we can tell the potential of MKC stock for long-

term trading, it has the characteristics of no huge rising or dropping trend, and the price would

always rise steadily.

From Figure 4.12, the price of SAFM kept steady and showed a small dropping trend but

not obvious, the lost could be neglect and the price will swing back easily soon. The overall price

is higher than past week this is what we want to see when we do a passive long-term trading. The

price of SAFM has been rising for the past half month.

From the price flow of both stocks, there are a lot of potentials. Although the price was dropping it was actually because the price of stock when I started the simulation was almost the highest of stock market history, the price of the last three weeks shows that the two stocks would remain a constant rising trend for the future, and it wouldn't have affected by other situations of the market that much. Even there will be dropping trend it's not huge and the gap will be filled with a long-term holding.

4.8 Results of Simulation

The ending price when I finished my simulation of passive trading on July 23rd of MKC was $93.95/share, and for SAFM is $119.67/share. Compare to the buying price which are $104.5/share for MKC and $126.2 for SAFM there's a huge lost. For the 470 shares of MKC, the net loss is $4958.5. For 390 shares of SAFM the net loss is $2546.7. The results are not acceptable for neither an investor nor a starter who's learning the trading strategy, however, since this part of simulation developed with passive trading strategy, which is different from other short-term strategies. The small fluctuation is not important and for this situation, compare to a at least 10-year time range of passive trading, 6 weeks are not long enough to be consider an impact on price trend. Based on this special characteristic of passive trading, the results can only represent that this pass 6-week stock market is happened to be a dropping trend which could be neglect for a long-term trade. Overall, although this part of simulation is a failure on profit-wise there are still valuable experience and knowledge of passive trading gained.

4.9 Conclusion and Discussion

From the result, it doesn't look like a successful trade. There's not supposed to be any trade been made during the 6 weeks even if the price is keep dropping, which is the reason why the stocks has been holding without selling. From the figure below (see Figure 4.13 & 4.14) we can see the trend of MKC is not favor the investor for the past six weeks. However, from the trend of SAFM we can see that, because of the entire market shows a dropping trend SAFM is not an exception, but for the last half month started from July 7th, this stock kept a quiet constant rising trend. Also look back to the ten year technical charts of two stocks (see Figure 4.1 & 4.2), a six-week price fluctuation is very normal and basically neglectable.

Overall although the results are not as good as predicted base on the objective of learning and practice of the trading strategies this simulation achieved the general goals of the project. Furthermore, the passive trading is not a strategy for making profit in 6 weeks, so the simulation is successful in many aspects.

Figure 4.13 3-Month Technical Chart of SAFM

Figure 4.14 3-Month Technical Chart of MKC

5. Comparisons and Conclusions

When comparing two different strategies, from the result Swing trading is no doubt a superior trading strategy. Despite the profit, the Passive trading would be a safer and easier strategy to use. Base on the stock analysis before making a trade, the stocks I chose for passive trading have a lot of potential in the long-term. The only risk is the bankruptcy of the companies, other than that, the prices would always have an overall rising trend based on the development of the companies. Swing trading is more profitable for the trades like this simulation, short-term trading.

There are a lot more details and technics that investor need to be careful for Swing trading than Passive trading. Because the stocks chosen for swing trading usually don't have large overall trend, and investors care more about small fluctuations, time management become one of the most important technics.

Use this simulation as example, I took two courses while I started this project which is my personal choice for schedule. This became a problem for week 2 and 3 when there was a huge drop on price. Because of the class schedule, I missed the chance of selling, since the price swing is really frequent with a high rate. This is a failure on time management, however, when an investor making trades, there's a large possibility of schedule conflict base on the fact that 80% of the investors work part-time. There are always things in daily life that are inevitable, which would definitely affect the trading experience. Under this situation a better time management of everything would be really important, one small technic is making a schedule of taking a break from work or anything we do within 30 minutes, and spend 5 minutes on checking the stock. This way there would not be any time waste, and 30 minutes is a fair time range of price swing, investors would not miss a big buying or selling chance.

      This simulation is not very successful profit-wise. Passive trading simulation has a total approximately $7500 loss, while Swing trading simulation took me three weeks to fill up the gap and get a $80 which is not worth for a 6-week trading. On academic aspect this simulation, it did help to have a general acknowledge of the market and stock trading. On the other hand, I had a good practice on both strategies and a good improvement on decision making while doing the trading. Furthermore, by comparison I found out which strategy is the best for certain time-range. The knowledge gained from the simulation provided a significant amount of experience for being a future intelligent investor, also I hope this report can help others getting acknowledge of what they should do in a trading from my experience.

Reference

[1]. "Avon Products Inc. Company Profile." Reuters, Thomson Reuters, [Online]:

http://www.reuters.com/finance/stocks/companyProfile?symbol=AVP

[2]. "Clorox Co Company Profile." Reuters, Thomson Reuters, [Online]:

http://www.reuters.com/finance/stocks/companyProfile?symbol=CLX.N

[3]. "Definition of 'Stock Market'." The Economic Times, [Online]:

http://economictimes.indiatimes.com/definition/stock-market

[4]. Fedorov, Slav. "Position Trading vs. Swing Trading." Finance - Zacks, [Online]:

http://finance.zacks.com/position-trading-vs-swing-trading-2755.html

[5]. Folger, Jean. "How To Start Trading: Trading Styles." Investopedia, 6 Mar. 2017, [Online]:

http://www.investopedia.com/university/how-start-trading/how-start-trading-trading-styles.asp

[6]. "From Buttonwood Agreement to the NEW YORK STOCK EXCHANGE." Stock

Options Made Easy [Online]:

http://www.stock-options-made-easy.com/buttonwood-agreement.html

[7]. Fuhrmann, CFA Ryan C. "What Are the Main Differences between Return on Equity

(ROE) and Return on Assets (ROA)?" Investopedia, 27 May 2016, [Online]:

http://www.investopedia.com/ask/answers/070914/what-are-main-differences-between-return-equity-roe-and-return-assets-roa.asp

[8]. "Fundamental Analysis." StockCharts.com, 9 June 2014, [Online]

http://stockcharts.com/school/doku.php?id=chart_school:overview:fundamental_a
nalysis

[9]. Glen, Jeffrey. "NASDAQ vs. NYSE." InvestorGuide [Online]:

http://www.investorguide.com/article/15710/nasdaq-vs-nyse-d1412/

[10]. "History of the New York Stock Exchange." History of the NY Stock Exchange: (Business

Reference Services, Library of Congress) [Online]:

https://www.loc.gov/rr/business/hottopic/stock_market.html

[11]. Hur, Johnson. "History of The Stock Market." From The Beginning To Present Time, 20

July 2017 [Online]:

http://bebusinessed.com/history/history-of-the-stock-market/

[12]. "John B Sanfilippo & Son Inc. Company Profile." Reuters, Thomson Reuters, [Online]:

http://www.reuters.com/finance/stocks/companyProfile?symbol=JBSS.O

[13]. "Johnson & Johnson Company Profile." Reuters, Thomson Reuters, [Online]:

http://www.reuters.com/finance/stocks/companyProfile?symbol=JNJ.N

[14]. "Kellogg Co Company Profile." Reuters, Thomson Reuters, [Online]:

http://www.reuters.com/finance/stocks/companyProfile?symbol=K.N

[15]. "May 17: The Buttonwood Agreement." Jewish Currents, 30 Sept. 2016 [Online]:

http://jewishcurrents.org/may-17-the-buttonwood-agreement/

[16]. Mitchell, Cory. "The Four Most Common Indicators in Trend Trading." Investopedia, 8

July 2016, [Online]:

http://www.investopedia.com/articles/active-trading/041814/four-most-

commonlyused-indicators-trend-trading.asp

[17]. "Mondelez International Inc. Company Profile." Reuters, Thomson Reuters, [Online]:

http://www.reuters.com/finance/stocks/companyProfile?symbol=MDLZ.O

[18]. "Money Market." Investopedia, 18 Feb. 2016, [Online]:

http://www.investopedia.com/terms/m/moneymarket.asp

[19]. Parker, Tim. "The Art Of Speculation." Investopedia, 16 Sept. 2012, [Online]:

http://www.investopedia.com/articles/basics/12/art-of-speculation.asp

[20]. "Swing Trading." Investopedia, 28 Jan. 2016, [Online]:

http://www.investopedia.com/terms/s/swingtrading.asp

[21]. "The Amazing Origins of the Stock Market We Know Today." Origins of the Stock

Market [Online]:

http://www.stock-trading-warrior.com/Origins-of-the-Stock-Market.html

[22]. "What's The Difference Between Investing and Speculating?" Motif, 3 June 2016

[Online]:

https://www.motifinvesting.com/blog/whats-difference-investing-speculating

[23]. "What Are Mutual Funds?" Fidelity, [Online]:

https://www.fidelity.com/learning-center/investment-products/mutual-funds/what-are-mutual-funds

[24]. "What Is a Bond?" The Wall Street Journal, Dow Jones & Company, [Online]:

http://guides.wsj.com/personal-finance/investing/what-is-a-bond/