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Stock Market Simulation

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By

Tianyang Gao

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Approved by Professor Dalin Tang, Project Advisor

This report represents the work of three WPI undergraduate students submitted to the faculty as evidence of completion of a degree requirement. WPI routinely publishes these reports on the web without editorial or peer review.

Abstract

The goal of this Interactive Qualifying Project was to use real-time stock market simulations to get better understanding of the stock market and to compare which trading strategies would be a better methodology. Two individual four-week stock simulations were performed based on two trading strategies: position and swing trading methods. Each simulation used one method and the initial capital was set up to be \$500,000. The results collected from each simulation indicated that Position Trading (3.79% return) generated more profits than Swing Trading (1.12% return). Experiences learned in this project will be helpful for future investment in the stock market.

Acknowledgements

As my Interactive Qualifying project (IQP) successfully accomplished, I would like to express my special thanks to Professor Tang who provided me with continuous support and guidance throughout the project. Next, I would like to thank my tutor Michael J. Dedek who helped me with structuring the outline and polishing my writing. Moreover, I would also like to thank my parents for their emotional and financial support. Furthermore, I would like to express my gratitude towards my school, Worcester Polytechnic Institute (WPI) for giving me this golden opportunity to do this wonderful project. My heartfelt thanks.

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Chapter 1. Introduction

The ultimate goal of this IQP is becoming a successful investor through observing, simulating, and understanding the stock market. In order to thrive in the unpredictable stock market, understanding the stock fundamentals and strategies are essential. For the first three weeks, I will acquire all the information this project needs before I do the stock simulation. Then, I will select two investing strategies and spend the next 4 weeks doing two separate simulations. In the end, I will make comparisons on the two simulations and conclude the cause and effect from each investing strategy based on the data and results I collected. Overall, I expect myself to learn the nature of the stock market from the perspective of a real investor and develop a keen investing sense. In another word, I hope that I can understand the stock market and make rational and reasonable investing moves.

1.1. Stock History

The stock market was not simultaneous and worldwide trading like today. The first "stock market" emerged at 1531s. However, it was only serving brokers and lenders to deal with their business, government, and individual debt issues. By the 1600s, the idea of the stock market was changed due to Britain, France, and the Netherlands all charting voyages to the East Indies. In order to make an overseas trade voyage affordable to more explorers, limited liability companies and the idea of trading money for the equal value of shares were formed. Worldwide, the Dutch East India company was the first company selling their shares to outside investors. In 1602s, they opened their stocks and bonds to the public through the Amsterdam Stock Exchange which no other companies had done it before.[1] From there, the journey of the stock market has begun.

The United States did not have the stock market until the 1790s. It started at the Philadelphia Stock Exchange. In 1792s, the New York Stock Exchange was started by only 24 investors on Wall Street and soon it expanded rapidly in New York. Now, the NYSE is dealing trillions of dollars every year which make it the largest stock exchange in the world [1].

1.2. Important factors of stock markets

In order to become a successful investor, anticipating and operating on the market changes are the key to the success. However, it is impossible for people to make the right moves based on their idle guessing. That's why we need to understand what is affecting the stock market and how to find it. Based on the research, there are four main factors concluded affecting

First of all, economic growth is one of the biggest and most direct factors. There are many things related to economic growth such as interest rates, unemployment, and consumption level. With a strong economic growth, interest rates and unemployment rates usually go down and the consumption level goes up. As a result, a bull market will most likely appear. On the contrary, with a weak economic growth, people will prefer to save their money instead of investing. Therefore, a bear market will usually happen. For example, the 2008 stock market crash, it took place in September 2018 with a 777.68 percent fall of Dow Jones Industrial Average. Many people would blame the Congress for rejecting the bank bailout bill. However, the truth was that people lost the ability to afford their high consumption level. At the end of January 2008, there were 17000 jobs lost. Even worse, the unemployment rate hit 10 percent in the United States by September 2008. The stock market was hit very hard and there were nearly eight trillion dollars lost during the stock crash [3]. Therefore, economic growth is a direct factor to the stock market.

Secondly, politics is another key factor to the stock market. Unlike economic growth, it is an indirect factor. For example, the stock market responded positively of Biden' presidency. It seemed that the presidency had nothing to do with the stock market. However, there was a 24.1 percent S&P 500 increase for Biden's first 100 days in office. As you can see, politics do affect the stock market somehow [4,5].

Thirdly, daily news is also an indirect factor to the stock market. Stock prices usually tie with the public's buying power. If more people believe a stock is worth buying and they are buying it, the stock's price will increase. On the contrary, if people believe a stock is losing its potential and starting to sell it, the price will decrease naturally. Based on the idea, daily news is feeding information to the public. In some way, the daily news and the stock market are affecting each other. For example, airline stocks were outperformed after medias reported that the Trump administration banned Chinese airlines to the United States. According to the finance report, United Airlines stock price increased by 11.8 percent, Delta Airlines' stock surged around 8.2 percent, and American Airlines' stock increased by 8.6 percent [6,7]. Those stocks were benefited by that news. Therefore, daily news is affecting the stock market indirectly.

Last factor to the stock market is natural disasters. With any natural disasters, Casualties and economic losses are impossible to avoid. Either casualties or economic loss is causing the value of the society. As a result, the stock market will respond to it. Here is a simple logic behind this, after a natural disaster, some products' production and liquidity will decrease which will also cause the prices to go up. Eventually, the economy will get affected as well as the stock market. For example, the Covid-19 was a worldwide pandemic. People were scared to go out. All schools were switching in person classes to online classes. Lots of physical stores lost their businesses,

especially restaurants. [8,9] Most importantly, people are losing their sources of finance which will cause the volatility of the stock market.

Overall, the stock market is affected by various factors such as economic growth, politics, daily news, and natural disasters. Understanding how to analyze those factors will be beneficial to investors.

1.3. Stock Market Indices

Stock market indexes are mainly used for tracking the performance of the stock market. It usually serves a whole market or an industry instead of serving a specific stock. Those indexes are calculated based on the prices of the underlying holdings. Also, some indexes may be calculated based on market-cap weighting, revenue-weighting, etc.

There are many different stock market indexes such as Dow Jones Indices, NASDAQ Composite Index, and Standard & Poor's 500 Index. Furthermore, these three indexes are the most popular indexes to evaluate the performance of the US stock market. I will utilize those indexes to evaluate the stock market and make investment decisions upon them [10].

Dow Jones Index

The Dow Jones Index is called the Dow Jones Industrial Average (DJIA) which is also known as "the Dow". It was created by Dow & Jones Company founder and Wall Street Journal editor Charles Dow. Then, it launched in 1896s and only tracked 12 US companies.

Now, It is one of the most popular indexes in the US stock market and it is tracking the market performance of 30 US leading companies listed on the NASDAQ or the New York Stock Exchange. Among the 30 companies, there are various fields taken such as technology, health, and

retail, etc. Furthermore, the Dow is a price-weighted index. There will be an average taken based on each company's stock price. For example, there are three companies with stock prices \$50, \$30, and \$20. The most expensive stock will stand for 50% of all stocks value in the index [11]. In Figure 1.1, it is a summary of June 18th, 2021, one-day price chart.

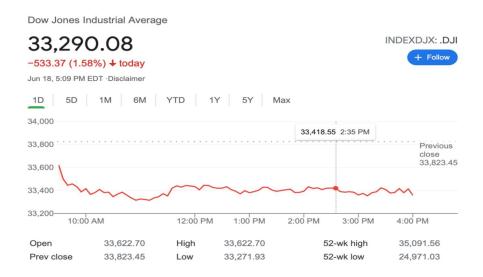


Figure 1.1 Dow Jones Industrial Average one day

Figure 1.2 shows five years' performance of Dow Jones Index. It has been performing well since there is a total 88.92% rise in value. Especially during the Covid-19 pandemic, it was dropped to the state of Year 2016. However, it got recovered within couple month. And even better, it kept increasing.

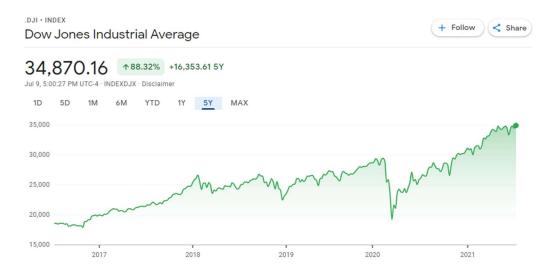


Figure 1.2 Dow Jones Industrial Average five year

NASDAQ Composite Index

NASDAQ Composite Index is a market capitalization index which includes over 2500 stocks. It is primarily focusing on technology stocks. There are over 50% technology stocks, and they are considered as prominent industries in the future such as Apple, Facebook, and Google. Sometimes, people do not favor Nasdaq as they do for Dow Jones. That's because higher market cap companies will have more weight than smaller cap companies which will cause a bias. The market summary on Jun 18th, 2021, is shown in the Figure 1.2.

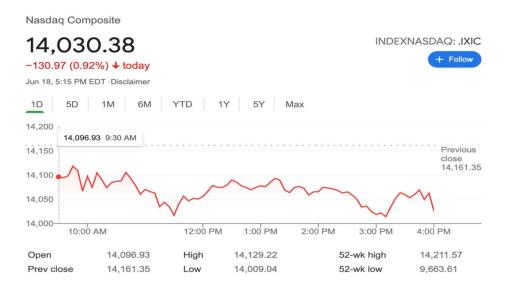


Figure 1.3 NASDAQ Composite Index one day

In Figure 1.3, this is a five year summary of the NASDAQ. According to this figure, the NASDAQ value has been increased from \$5029.59 to \$14701.92 which is 192.31% rise in value. It has been doing a great job. Even during the Covid-19 pandemic, it got bounced back within a couple months. That's because those companies found a reopen solution which was working remotely from home.

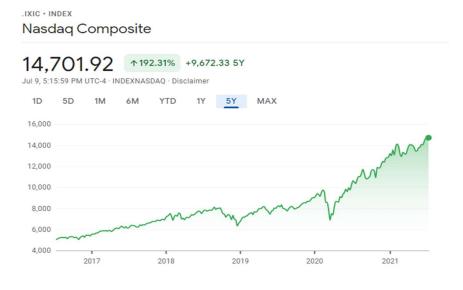


Figure 1.4 NASDAQ Composite Index Five year

Standard & Poor's 500 Index

The Standard & Poor's 500 Index is another popular index to track the performance of the US stock market. Similar to NASDAQ Composite Index, the S&P 500 is also a market capitalization index which means it also provide more weight for higher cap companies. There is a bias usually happens. However, it tracks the top 500 US companies instead of over 2500 companies. Another unique character is that S&P 500's tracking list changes constantly [13]. The market summary on Jun 18th, 2021, is shown in the Figure 1.4.



Figure 1.5 Standard & Poor's 500 Index one day

In Figure 1.6, this is a five year's summary of S&P 500 from 2016 till now. According to the observation, there was a 102.13% rise in value over the past five year. Similar to the previous two indexes, S&P 500 got recovered within a couple month during the pandemic. Overall, the US market did a good job to recover and maintain the stock market.

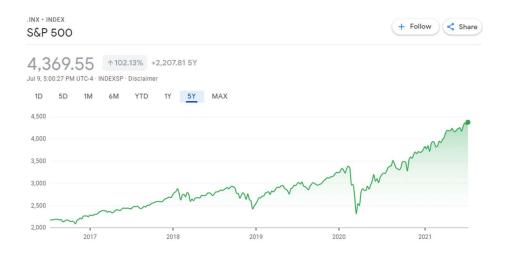


Figure 1.6 Standard & Poor's 500 Index five year

Chapter 2. Trading Methods

This chapter introduces selected trading methods. Selecting the appropriate trading strategies is critical. Different strategies will determine the way to view the stock market and those stocks. Since I intend to become a successful investor, I need to understand the outcome of both long term and short-term trading strategies. After the research, Position Trading and Swing Trading are perfect fits for this project [14,15].

2.1. Position Trading

Position Trading is one of the most popular long-term trading strategies. Investors will hold their stocks after their purchase which is called hold positions. Usually, investors will ignore short term stock prices change and focus on the fundamental analysis instead. They often use Forex indicators which are mostly implemented for long term trading. Therefore, position trading is called Forex trading sometimes. It is a very good trading strategy for calm and patient people. There was a famous position trade made by Philip A. Fisher. He bought a stock named Motorola in 1955 and held it until his death. During the 20 years, the price of the stock was doubled ten times and even more. Fisher chose the stock wisely and held the position patiently. Like he said, "The best time to sell a stock is almost never." Therefore, the key to make successful position trades is choosing wisely and holding patiently [16].

2.2. Swing Trading

The goal of Swing Trading is predicting a stock' price potential move. Based on the move, a success swing trader will buy a stock right after its countertrend disappears and sell it when the price swings to his/her expectation. The Swing Trade Process usually lasts a few days to a few weeks.

During the buying process, a swing trader will focus on the market trends and open positions by using many different technical indicators such as Trend Following Indicators, Bollinger Bands Indicator, etc. After the swing trader analyze the trends within a range of 15, he/she will be able to determine whether is the bearish or bullish trends. Then, the trader will look for downward trend which is also called countertrend. When the countertrend disappears, the trader will be able to pick the entry point. However, selling a stock is a more important process because it is impossible to predict the trend of a stock. For example, if you purchase a stock at a price of \$100/share, you sell the stock at value of \$200/share and the stock's value rises to \$1000/share next day, it will be considered a \$800/share loss. Another scenario is that you do not sell the stock and the price decreases to \$50/share, it will also be considered a \$50/share loss.

Therefore, swing trade is strategy which can be very profitable or losable. It is a very risky method. On the contrary, this character makes swing trade a good method to study on.

Also, . considering the indeterminacy of the stock market, before I entry a position, I will use Bollinger Bands Indicator to find the entry point as low as it possible. Also, I will indicate a goal price or called a selling price. Some operations might not be exactly follow those rules due the

changeable market. As an investor, I will make sure making the maximum profit to be my priority. [17, 18]

Chapter 3. Company Selections

The main idea of this chapter is company selections for both simulations. For the following four weeks, two simulations will process synchronously. In order to study two different trading methodologies, two simulations will have the same initial capital within the same time period. Moreover, for the comparison purpose, both simulations will invest the same companies. Most importantly, there will be no abortion in the middle of the simulation for both of them.

3.1. Simulation 1 Position Trading

For simulation 1, the Position Trading method will be implemented. As it discussed before, position trading actively demonstrates as long term trading. So, for the exact purpose, companies with strong and steady performances will be selected. Also, in order to serve for the analysis purpose, I will choose companies from different industries which include technology, Manufacture, Medicine, and IT. In Table 3.1, this is a company selection table for position trade.

Stock Selection	Company Abbr	Current Price/Share(USD)
Tesla Inc	TSLA	\$671.87
Apple Inc	AAPL	\$133.11
Zoom Video Communication Stock	ZM	\$372.47
Microsoft Corporation	MSFT	\$265.02
Google	GOOG	\$2,512.13

Table 3.1 Position Trading Stock Selection (Updated at UTC+8:00, 22:58pm, June 27th)

Tesla

For Tesla, it is an American electric vehicle and clean energy company. The president of Tesla, Elon Musk is also the founder of SpaceX, Neuralink, and the man who promised

interplanetary travels. Since the other two companies are not quoted companies, the stock price of Tesla is very likely to be affected by them. In Figure 3.1, this is Tesla five year's stock performance.

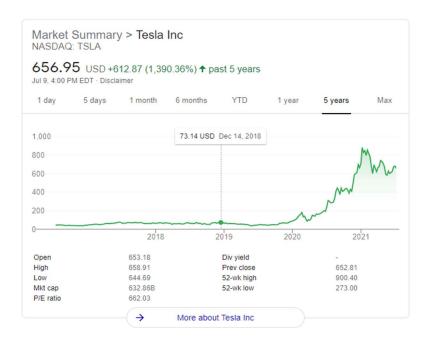


Figure 3.1 Tesla Five year's stock performance

As you can see, it has increased over 1390% value during the past five years. It is a good choice to buy in since there are still lots of potential in Tesla.

Apple

Apple is another company which started a new era of smart phone. Their sale was the top 3 during the past 3 years. This is a five-year performance on Apple's stock in Figure 3.2. It has a 487.49% rise in value which is tripled comparing with Samsung.

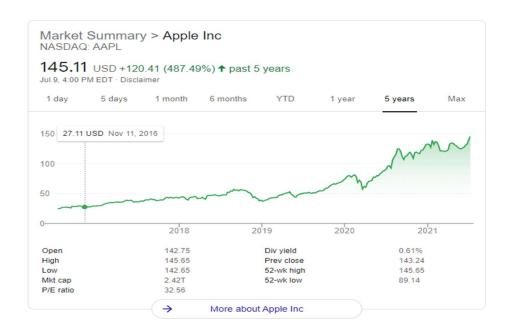


Figure 3.2 Apple Five year's stock performance

Zoom

Another company is Zoom. It has been rising dramatically during the Covid-19 pandemic since lots of companies and schools are using this platform to work and study remotely. Now, there are still companies like Facebook, Google, and Amazon are using it for work purpose. Also, many international students are using zoom for online courses. I think it worth investing in a long term.

Microsoft

Microsoft is diversified technology company. They sell software like Windows, hardware like i-series chips, and computers like Dell and Surface. There are over 73 percent usage on Windows all over the world. They are basically dominating the operating system's market. To me, this is a good company to invest in a long term. Here is a summary of Microsoft Five year's stock performance in Figure 3.3. It has increased 417.58% which is quite impressive.

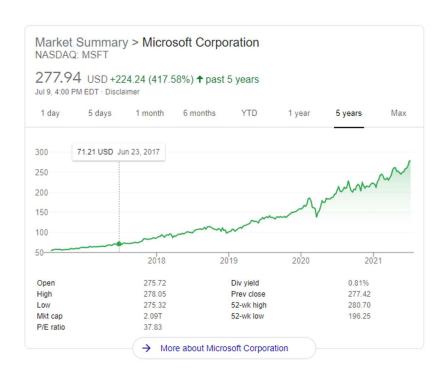


Figure 3.3 Microsoft Five year's stock performance

Google

Lastly, Google is a multinational technology that focuses on internet services and products such as Google search engine, computers, and auto-driving car, etc. Here is a five year's stock performance of Google in Figure 3.4. There is a 1774.74% increase in value which is super staggering. I believe that there will be more potential for Google's stock.

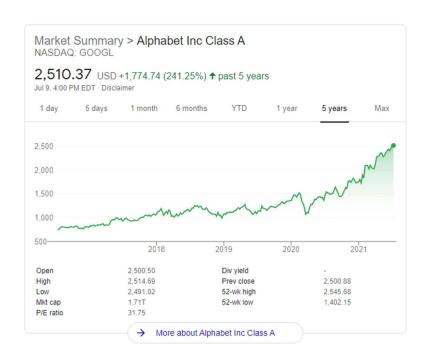


Figure 3.4 Google Five year's stock performance

3.2. Simulation 2 Swing Trading

For simulation 2, the Swing Trading method will be used here. I will choose new and potential companies. Due to the characteristic of the Swing Trading method, it requires a s strong sense of investing. Unlike position trading, swing trading is a short-term trading method. It intends to make the revenue in a short period of time. Therefore, there will be more companies selected compared to the simulation 1 which will depend on the changing market. In Table 3.2, it is a list of companies which have advantages for swing trade.

Stock Selection	Company Abbr	Current Price/Share(USD)
BSQARE Corporation	BSQR	\$4.72
Quantum-Si Inc	QSI	\$13.56
Tilray Inc	TLRY	\$16.17

Table 3.2 Swing Trading Potential Stock Selection (Updated at UTC+8:00, 17:14pm, July 9th)

Bsquare

Bsquare is a company focusing on internet of things systems software, system integrator, and technology distributor. Also, it is listed on the NASDAQ. In Figure 3.5, this is a month performance of Bsquare. There were two huge spikes and there might be more which made it a perfect fit for swing trade.

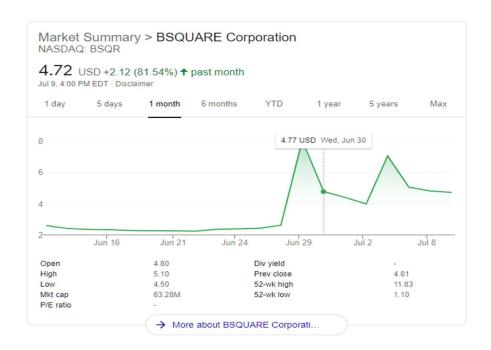


Figure 3.5 BSQUARE one month's stock performance

Quantum-Si

Quantum-Si is a bio-technology company. It was founded in 2013 and it was bought by HighCape Capital LP by February 18th, 2021. They are specializing on the Ion Torrent next-generation sequencing technology and semiconductor chip technology to protein sequencing. They are still at a starting up stage which means that the stock price might be very unstable. It will be a good choice for swing trade.

Tilray

Tilray is a Canadian company which focuses on pharmaceutical and cannabis. They are incorporated in the United and their headquarter is in Toronto, Ontario. It indicates a five year's stock performance in Figure 3.6.

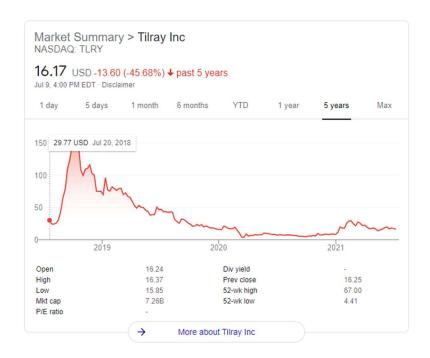


Figure 3.6 Tilray five year's stock performance

As you can see, this company's stock strike at 2018 and it started to fall continuously at 2019. Due to the Covid-19 pandemic, it got hit very hard. However, in this march, New York State legalized the marijuana. The stock price started to rise but that much. As the pandemic going away, more opportunities might happen to Tilray in a short period of time.

Chapter 4. Simulation 1 Position Trading

Chapter 4 is about a four-week simulation which position trading strategy will be applied. As previously mentioned, position trading required long-term holding. Therefore, I tried to hold any stocks I purchased as long as I could and I planned to discover a profitable tactic for my simulation. Before I started, I chose to do all my transactions through Investopedia Simulator and the trading rules would be exact the same as you trade in the real world. However, there would be one minute market time delay due to the system design.

As the simulation 1 begin, there would be \$500,000 as initial capital. The whole simulation would last for four weeks. Each week, I would present my weekly performance which include the total gain/loss, any specific cases, and any changes I made, etc. Most importantly, I would elaborate my actions and my thoughts behind them.

4.1. Week 1

For the first week, it can be considered as a successful beginning. The account value was increased from \$500,000 to \$505,598.55 by the end of the week. There were eight potential stocks purchased which were Tesla, Apple, IBM, Zoom, Pfizer, Shopify, and Google. Over 90% of my initial capital was invested and they were totally worth \$489269. Table 4.1 is Week 1 Position Trading Transactions.

Date	Symbol	Buy/Sell	Price	Shares	Net Cost/ Proceeds	Profit/ Loss	Total Cash	Total Profit
							\$500,000.00	
6/28/21	TSLA	Buy	\$688.65	100	\$68,884	\$0	\$431,116	\$0
6/28/21	AAPL	Buy	\$134.87	300	\$40,481	\$0	\$390,634	\$0
6/28/21	IBM	Buy	\$145.35	50	\$7,287	\$0	\$383,347	\$0
6/28/21	ZM	Buy	\$390.18	50	\$19,528.99	\$0	\$363,818	\$0
6/28/21	MSFT	Buy	\$268.49	50	\$13,444.49	\$0	\$350,374	\$0
6/28/21	PFE	Buy	\$39.40	1000	\$39,060	\$0	\$311,314	\$0
6/29/21	SHOP	Buy	\$1,489.02	50	\$74,471	\$0	\$236,843	\$0
6/29/21	GOOG	Buy	\$2,512.13	90	\$22,6112	\$0	\$107,31	\$0

Table 4.1 Week 1 Position Trading Transaction (June 28th to June 29th)

For a quicker start, some of trading decisions were made to take advantages of how news affect stock prices (see section 1.2 above). I was interested in testing how news help with finding potential stocks. One trading decision made with this method concerned my purchase of Tesla stock. On June 28th, the CEO of Tesla revealed his ideal present for his 50th birthday which was a racket. In his words, "Starship Super Heavy". [19] Usually, news like this would make the stock price appreciated. Surprisingly, the stock price got setback after 100 shares purchase with \$688/share. However, it did not worry me even the stock price did not bounce back in a short period of time because I intended to hold this stock for a long time.

The second stock I purchased was Apple. For a very good reason, Apple is a high-quality stock to have. They had been doing well during the past five years. After analyzing the past month performance, I found that the average lowest stock price was \$133/share and the lower, the better.

As a result, I entered the position at \$134.87 for 300 shares. It was a little bit unfortunate because I missed the open market price \$133.33/share.

Another stock I purchased based on its past performance was IBM, I have been monitored this stock since the market opened. In Figure 4.1, this is a summary of IBM stock daily performance at June 28th,2021.

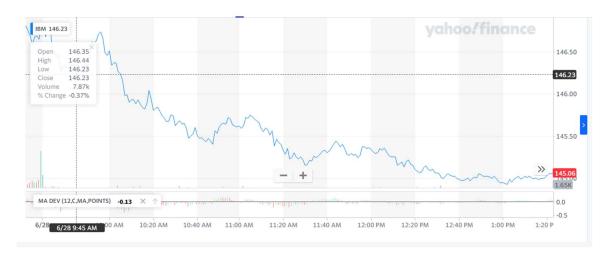


Figure 4.1 IBM Stock Week 1 Position Trading

This stock price was going down without any negative news. I assumed the reason behind that was the market itself. Sometimes, one stock price would fall when there was no external stimulus. After two countertrends on this stock, I worried the stock would bounce back so that I might missed the lowest price. Hence, I entered the position at \$145.35. It turned out the timing was still a little bit early.

Then, I purchased Zoom, Microsoft, and Pfizer based on my conjectures about the future. All of three companies would have more business demand from the public. It had been over two years after the outbreak of the Covid-19. Most of schools and companies in the United States planned to reopen by the fall of 2021 due to the popularization of the Covid-19 vaccines. However, there were still many countries refusing to reopen such as Australia. For the reason that, Pfizer, as

the most popular Covid-19 vaccine supplier, would have a huge growth on business since there were nearly half of Americans got vaccinated not even to mention world vaccinated population. I bet the stock price would reflect on its business expansion. For a similar reason, Zoom, the representative of online meetings, would have a huge growth on the international businesses in the future. Speak of Microsoft, their revenue would increase tremendously when a new system released. According to the report, the company had a 15% Windows OEM pro revenue and a 1% Windows OEM revenue growth when the system Windows 10 released. By now, they were on the last stage of developing the new system Windows 11. It would a huge increase on their business within a couple month. Eventually, I entered a position on Zoom at \$390.18 for 50 shares, Microsoft at \$268.49 for 50 shares, and Pfizer at \$39.40 for 1000 shares.

In order to further distribute my capital, I invested rest of money on Google and Shopify. I did not select those two companies randomly. Top 10 companies among S&P500 were the priority choices. Google had the highest positive change rate during the past week. Therefore, it became my first choice. Moreover, Google decided to work more closely with Shopify. Google had the largest search engine and Shopify specialized on offering a platform for self-manage online stores. It was a new model for online shopping which no other companies had done it such as Amazon or eBay. After my careful consideration, I believed that Google and Shopify both would be very potential stocks. Thus, I purchased 50 shares of Shopify at \$1489.02 and 90 shares of Google at \$2512.13.

Overall, this was a smooth start. I invested companies which were fit for position trading, and I intended to hold and observe them for a long term. So, I had no plan for selling them. However, if there are any stocks have a 10% price drop, I will sell it without any hesitation.

4.2. Week 2

Week 2 was a profitable week. The portfolio had \$10549.57 gain which was 1.2% increase in value. Compared with the first week portfolio, there was zero change on the asset allocation. Observing the eight stocks' performance in a long term was my intention. Among the eight stocks, four of them which were Microsoft, Pfizer, Apple, and Google made profits and the others (Tesla, Zoom, IBM, Shopfiy) did not. Figure 4.2 exhibits the detail of the stock portfolio.

e (USD) \$510,369.66 🍪 Buying Power\$255,430.06 🍪 Cash \$4	190.46 😡	Annual Ret	turn 59.72 %	0		
ORTFOLIO				Trade Stock	Symbol Look	up How-To Guide
OOL DESCRIPTION	QTY	PURCHASE PRICE	CURRENT PRICE	TOTAL VALUE	TODAY'S CHANGE	TOTAL GAIN/LOSS
TESLA INC	115	\$687.69	\$653.38	\$75,138.70	\$0.00(0.00 %)	- \$3,946.20(-4.99 %) •
ZOOM VIDEO COMMUNICATIONS INC - ORDINARY SHARES - CLASS A	50	\$390.18	\$360.61	\$18,030.50	\$0.00(0.00 %)	- \$1,478.50(-7.58 %) •
T MICROSOFT CORPORATION	50	\$268.49	\$282.51	\$14,125.50	\$0.00(0.00 %)	\$701.00(5.22 %) +
PFIZER INC.	1000	\$39.04	\$39.95	\$39,950.00	\$0.00(0.00 %)	\$910.00(2.33 %) +
L APPLE INC	300	\$134.87	\$149.15	\$44,745.00	\$0.00(0.00 %)	\$4,283.97(10.59 %)
INTERNATIONAL BUSINESS MACHINES CORP.	50	\$145.35	\$139.82	\$6,991.00	\$0.00(0.00 %)	- \$276.50(-3.80 %) •
P SHOPIFY INC - ORDINARY SHARES - CLASS A	50	\$1,489.02	\$1,463.00	\$73,150.00	\$0.00(0.00 %)	- \$1,301.00(-1.75 %) •
OG ALPHABET INC - ORDINARY SHARES - CLASS C	90	\$2,512.13	\$2,641.65	\$237,748.50	\$0.00(0.00 %)	\$11,656.80(5.16 %)
			Total	\$509,879.20	\$0.00(0.00 %)	\$10,549.57 (2.11 %)
	ORTFOLIO IOL DESCRIPTION TESLA INC ZOOM VIDEO COMMUNICATIONS INC - ORDINARY SHARES - CLASS A T MICROSOFT CORPORATION PFIZER INC. L APPLE INC INTERNATIONAL BUSINESS MACHINES CORP. P SHOPIFY INC - ORDINARY SHARES - CLASS A	ORTFOLIO OOL DESCRIPTION QTY A TESLA INC 115 ZOOM VIDEO COMMUNICATIONS INC - ORDINARY SHARES - 50 CLASS A T MICROSOFT CORPORATION 50 PFIZER INC. 1000 L APPLE INC 300 INTERNATIONAL BUSINESS MACHINES CORP. 50 P SHOPIFY INC - ORDINARY SHARES - CLASS A 50	ORTFOLIO QTY PURCHASE PRICE A TESLA INC 115 \$687.69 ZOOM VIDEO COMMUNICATIONS INC - ORDINARY SHARES - 50 \$390.18 T MICROSOFT CORPORATION 50 \$268.49 PFIZER INC. 1000 \$39.04 L APPLE INC 300 \$134.87 INTERNATIONAL BUSINESS MACHINES CORP. 50 \$145.35 P SHOPIFY INC - ORDINARY SHARES - CLASS A 50 \$1,489.02	ORTFOLIO QTY PURCHASE PRICE CURRENT PRICE A TESLA INC 115 \$687.69 \$653.38 ZOOM VIDEO COMMUNICATIONS INC - ORDINARY SHARES - 50 \$390.18 \$360.61 T MICROSOFT CORPORATION 50 \$268.49 \$282.51 PFIZER INC. 1000 \$39.04 \$39.95 L APPLE INC 300 \$134.87 \$149.15 INTERNATIONAL BUSINESS MACHINES CORP. 50 \$145.35 \$139.82 P SHOPIFY INC - ORDINARY SHARES - CLASS A 50 \$1,489.02 \$1,463.00 OG ALPHABET INC - ORDINARY SHARES - CLASS C 90 \$2,512.13 \$2,641.65	ORTFOLIO Trade Stock IOL DESCRIPTION QTY PURCHASE PRICE CURRENT PRICE TOTAL VALUE A TESLA INC 115 \$687.69 \$653.38 \$75,138.70 ZOOM VIDEO COMMUNICATIONS INC - ORDINARY SHARES - CLASS A 50 \$390.18 \$360.61 \$18,030.50 T MICROSOFT CORPORATION 50 \$268.49 \$282.51 \$14,125.50 PFIZER INC. 1000 \$39.04 \$39.95 \$39,950.00 L APPLE INC 300 \$134.87 \$149.15 \$44,745.00 INTERNATIONAL BUSINESS MACHINES CORP. 50 \$1,45.35 \$139.82 \$6,991.00 P SHOPIFY INC - ORDINARY SHARES - CLASS A 50 \$1,489.02 \$1,463.00 \$73,150.00	DRTFOLIO Trade Stock Symbol Look IOL DESCRIPTION QTY PURCHASE PRICE CURRENT PRICE TOTAL VALUE TODAY'S CHANGE I TESLA INC 115 \$687.69 \$653.38 \$75,138.70 \$0.00(0.00 %) ZOOM VIDEO COMMUNICATIONS INC - ORDINARY SHARES - 50 \$390.18 \$360.61 \$18,030.50 \$0.00(0.00 %) CLASS A 50 \$268.49 \$282.51 \$14,125.50 \$0.00(0.00 %) T MICROSOFT CORPORATION 50 \$268.49 \$282.51 \$14,125.50 \$0.00(0.00 %) PFIZER INC. 1000 \$39.04 \$39.95 \$39,950.00 \$0.00(0.00 %) L APPLE INC 300 \$134.87 \$149.15 \$44,745.00 \$0.00(0.00 %) INTERNATIONAL BUSINESS MACHINES CORP. 50 \$145.35 \$139.82 \$6,991.00 \$0.00(0.00 %) P SHOPIFY INC - ORDINARY SHARES - CLASS A 50 \$1,489.02 \$1,463.00 \$73,150.00 \$0.00(0.00 %) OG ALPHABET INC - ORDINARY SHARES - CLASS C 90 \$2,512.13 \$2,641.65 \$237,748.50 \$0.00(0.00 %)

Figure 4.2 Week 2 Position Trading Portfolio

The drop of the four lost stocks were unexpected and I made decisions based on the news and conjectures about the future trends. Tesla was on the top of "Surprising Me List". By the end of the week 2, Tesla stock alone cost me nearly \$4000 which was 60% of my total loss over the week. And it took me awhile to discover the possible reason behind this unusual price drop. According to a news, published by Tim Levin, "Tesla's first European plant was supposed to open on July 1, but permit delays.... have postponed it indefinitely" [21]. Clearly, this piece of news was very likely shaking many investors' confidence in Tesla and causing a devastating hit on its stock

price. Like many other Tesla investors, I got worried and planned to sell the Tesla's stock and reallocate my assert. After my second thought, I chose to keep this stock for another week and two reasons behind that. One, there were still three weeks before Tesla was going to reveal their 2021 Q1 financial report and the stock's performance had many possibilities before that. Two, \$4000 loss worth around 5% of the investment on Tesla. My bottom line was 10% and it was still under my limit. Thus, I did not sell it or reduce any shares.

In continue, the decrease value on Zoom stock was unexpected. During the pandemic, Zoom was one of the most important tools in many people's lives like students, workers, and teachers. As a result, Zoom had 1.4 billion cash flow during the past 12 months. It should keep increasing without any surprises. However, this week, the prime minister of UK announced that there would be no quarantine restrictions in UK anymore and effective by July 19th [22]. Withdrawn the quarantine restrictions meant that Zoom's business might not as highly demanded as before. The market would not lie. Around 4% volume dropped on July 9th compared with the average volume on July 8th. To my portfolio, there was around \$1500 loss on this single stock. Nevertheless, I believed that people would be rational again and they would realize that Zoom still could not be apart from their lives.

Unlike Tesla and Zoom, IBM had zero negative news during week 2. However, IBM had a minor loss \$276.5. By reviewing my previous section 1.2, I could not find any fits to explain this situation. Therefore, I treated this as a normal price floating situation. I decided to keep this stock for the following week.

The performance of Shopify stock was confusing. Last week, Google announced that the strong alliance with Shopify. To Google, this alliance would be evaluated as diversified development. On the Shopify side, this strong alliance would be a great opportunity to empower

their business. From a investor perspective, it was a good timing to invest. Unexpectedly, the Shopify stock price decreased \$26/share and \$1301 loss in total. The loss made me less determined to this stock as before. As I started to think of selling this stock, Google gave me tremendous confidence for holding position on Shopify.

By the end of the week 2, Google was the savior of this week by performing tremendous growths of \$11565.8 over our initial investment of \$226112. With this information, I knew that it was just matter of time for Shopify stock' price increase.

Overall, week 2 had over ten thousand dollars gain which was a happy result. However, I could gain at least around \$1500 more if I used swing trading strategy here. In the middle of the week, the Google's stock price reached \$2663/share which was \$22/share higher than the current level. If I sold this stock at that time and purchased it back by the end of the week, that would be another \$1980 profit. Sometimes, giving up short term profits could be a downside to the position trading method. As I very much wanted to agree with what Philip A. Fisher said, "The best time to sell a stock is almost never", I would expect myself to make some temporary changes next time since I put profits as my priority. Most importantly, I wish there will be a better performance on these stocks in the future.

4.3. Week 3

The third week was ideal but not really. I sold one set of stocks because I changed investment focus a bit and the new tactic caused my portfolio unstable at the beginning. Although there was over \$10,000 profit generated, the account value, however, decreased around \$3000. Moreover, my portfolio changed from a \$10549.57 gain last week to a \$3648.58 loss this week. By the end of the week, there were seven stocks left and four of them (Tesla, Zoom, IBM, Shopify)

had negative gain. The other three (Microsoft, Apple, Google) were doing well. Overall, it was not a good week for sure since over half of the stocks were losing money. It still needed time to determine if the new tactic would apply well on the position trading. Figure 4.3 provides details of Week 3 stock portfolio and Table 4.2 gives details of Week 3 trading information.

Account Value (I	USD) \$507,769.45 Buying Power\$254,724.27 Cash \$1	,679.10 6	Annual F	Return 32.50	% 😡		
STOCK POP	RTFOLIO				Trade Stock	Symbol Look	up How-To Guide
SYMBOL	DESCRIPTION	QTY	PURCHASE PRICE	CURRENT PRICE	TOTAL VALUE	TODAY'S CHANGE	TOTAL GAIN/LOSS
+ Sell TSLA	TESLA INC	115	\$687.69	\$644.22	\$74,085.30	\$0.00(0.00 %)	- \$4,999.60(-6.32 %) •
+ Sell ZM	ZOOM VIDEO COMMUNICATIONS INC - ORDINARY SHARES - CLASS \ensuremath{A}	50	\$390.18	\$361.97	\$18,098.50	\$0.00(0.00 %)	- \$1,410.50(-7.23 %) •
+ Sell MSFT	MICROSOFT CORPORATION	50	\$268.49	\$280.75	\$14,037.50	\$0.00(0.00 %)	\$613.00(4.57 %)
+ Sell AAPL	APPLE INC	300	\$134.87	\$146.39	\$43,917.00	\$0.00(0.00 %)	\$3,455.97(8.54 %)
+ Sell IBM	INTERNATIONAL BUSINESS MACHINES CORP.	50	\$145.35	\$138.90	\$6,945.00	\$0.00(0.00 %)	- \$322.50(-4.44 %) •
+ Sell SHOP	SHOPIFY INC - ORDINARY SHARES - CLASS A	50	\$1,489.02	\$1,442.63	\$72,131.50	\$0.00(0.00 %)	- \$2,319.50(-3.12 %) •
+ Sell GOOG	ALPHABET INC - ORDINARY SHARES - CLASS C	105	\$2,624.20	\$2,636.91	\$276,875.55	\$0.00(0.00 %)	\$1,334.55(0.48 %)
				Total	\$506,090.35	\$0.00(0.00 %)	- \$3,648.58 (-0.72 %) •

Figure 4.3 Week 3 portfolio (July 12th to July 18th)

Date	Symbol	Buy/Sell	Price	Shares	Net Cost/ Proceeds	Profit/ Loss	Total Cash	Total Profit
7/13/21	TSLA	Buy	\$681.36	15	\$10,240	\$0	\$490	\$0
7/16/21	GOOG	Sell	\$2,631.24	90	\$236,792	\$10,680	\$237,282	\$10,680
7/16/21	PFE	Sell	\$40.00	1000	\$39,978	\$918	\$277,260	\$11598
7/16/21	GOOG	Buy	\$2,626.60	60	\$157,616	\$0	\$119,644	\$11598
7/16/21	GOOG	Buy	\$2,621.00	45	\$117,965	\$0	\$1,679	\$11598

Table 4.2 Week 3 Trading Transactions

In the Table 4.2, there were two major sells on Pfizer and Google, and the money which included principal and profit was reinvested to Google and Tesla stocks. This was my new tactic

for the position trading strategy. I started to pay attention on profitable stocks instead of focusing on reducing the loss. For example, there was only \$918 profits on Pfizer after three weeks hold plus \$39978 investment. It was only 2% revenue after three weeks which was way too low. Therefore, some of my initial judgments on those stocks were not appropriate or they did not fit for those stocks any more. Reevaluation on those stocks was necessary. One potential stock among the seven stocks, Google, was selected.

I invested more money on Google because it was evaluated as a very potential stock for two reasons. First, according to a research posted on July 12th, 2021, "Google is in a very good position for interested buyers. Not only is the stock trading in a buy zone, but it also is expected to report rising profits for its upcoming June-ended quarter. As earnings season kicks off, the tech giant is set to report Tuesday, July 27, after the market closes" [23]. Google's stock was very potential as its presented in this research to many investors. However, it would not be enough for just evaluation Google' stock alone. Google was a diversified company, so, its parent companies matter as well. According to the research, Google's three parent companies, Alphabet, RH, and PayPal feature strong fundamental and technical performances. Three of them had a strong performance on their stocks during the past year. The average growth among the three companies was around 30%, which proved indirectly that Google had more potential than we could imagine. Second, the float rate of the stock price usually reaches the highest point before its financial report gets revealed except situations like bankruptcy or financial crisis. Google's next financial report was set to report by July 27th. It would be the best time to find a lowest enter position. According to the Market Smith analysis, "an ideal buy point of 2431.48. The based mostly above support at its 50-day moving average" [23]. Therefore, Google would be a good invest guidance for the next phase and I decided to invest Google heavily.

For other options, I have also considered Apple and Microsoft. However, either of them had such advantages to compete with Google. Therefore, I decided not to invest on them. Here is why, Apple had the second most gain this week and Microsoft had the third most gain. However, Apple was not a diversified company like Google and there was no up-coming new product recently. Same idea applied to Microsoft, they just released the new system (Windows 11) and nothing more on its agenda. It would be risky to invest on them after their stocks' prices made big jumps. Compared with Google, they had alliance with many companies. And the most recent one was Shopify, a new form of shopping platform. I had introduced their relationship in previous week summary. Their alliance might overturn the old online shopping mode. Therefore, Google had more energy and ability to keep expanding compared with other companies.

Overall, this was a important week because I changed my invest tactics. I would focus more on profitable stocks instead of worried too much about losing stocks. Will concentrated investment help the outcome of the position trading or diversified investment has more advantages? I am excited to see what this tactic can do to the position trading especially with this question. Figure 4.4 provides the graph of Portfolio index versus S&P500 index. Finally, it's good see that the portfolio index finally surpasses S&P 500 index.

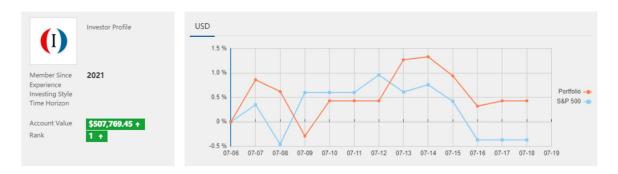


Figure 4.4 Week 3 Portfolio index vs S&P 500 index

4.4. Week 4

Week 4 was the last week of the simulation and July 23rd was the last trading day. The change of strategy from Week 3 luckily paid off and I kept the tactic for this week's simulation. The result was thrilling by the end of the week. The account value increased tremendously over \$10,000. Without considering the unsold stocks, the profit was almost doubled. It was definitely a beautiful win to wrap up the whole simulation. However, a new situation made me realize that the new tactic was not perfect for the position trading and I would elaborate why was that in below. Figure 4.5 provides Week 4 stock portfolio and Table 4.3 gives details of Week 4 trading information.



Figure 4.5 Week 4 portfolio (July 19th to July 23th)

Date	Symbol	Buy/Sell	Price	Shares	Net Cost/ Proceeds	Profit/ Loss	Total Cash	Total Profit
7/21/21	AAPL	Sell	\$145.17	300	\$43,531	\$3,050	\$45,210	\$14,648
7/21/21	IBM	Sell	\$141.02	50	\$7,031	(\$256)	\$52,241	\$14,391
7/21/21	ZM	Sell	\$352.07	50	\$17,584	(\$1,945)	\$69,825	\$12,446
7/21/21	SHOP	Sell	\$1,556.83	50	\$77,822	\$3,351	\$147,646	\$15,796
7/22/21	AAPL	Buy	\$146.38	500	\$73,211	\$0	\$74,436	\$15,796
7/22/21	GOOG	Sell	\$2,662.04	105	\$279,494	\$3,913	\$353,929	\$19,709
7/22/21	TSLA	Buy	\$656.81	300	\$197,063	\$0	\$156,866	\$19,709
7/22/21	TSLA	Buy	\$656.26	200	\$131,272	\$0	\$25,594	\$19,709

Table 4.2 Week 4 Trading Transactions

In the middle of the week, the new tactic finally paid off. Google was heavily invested, and it generated another \$4000 profit within 3 days. Therefore, I decided to repeat the same process to gain more money at the last week. There were two steps evaluation and invest. As it shown in the Table 4.3, there was total \$328,335 invested in Tesla's stock by July 22nd. Tesla was the chosen for two reasons. First, Tesla's financial report and sale over the year were outstanding. According to a piece of news on Investopedia, "Tesla reported earnings per share (EPS) of \$1.45 and revenue of \$11.96 billion, exceeding analysts' expectations calling for EPS of \$0.98 and revenue of \$11.30 billion Notably, the company record its first ever quarter with over \$1 billion in income and saw a 97% year-over-year increase in automotive revenue growth" [24]. With such great earning and sale reports, investors should have confidence with this company. It would be matter of time for their stock price coming back. Second, Tesla's stock price was super low(\$656/share). During the past 10 days, the highest price was around \$690/share and it had dropped around \$35/share. This could be a very good enter position. However, it still could be very risky because I would invest

most of money on this stock. If the stock price did not bounce back, I had to hold this stock as long as I had to and I would lose many other great opportunities. Therefore, I checked other companies as well. Shopify and Google had the same issue Apple had last week. Compared with Tesla, it would be riskier to invest stocks which just made big jumps. Shopify and Google did have a strong alliance. But their success required time and opportunities. Investors might had lost their passion for them. The outcome would very likely to be unstable stock price. After analyzing and comparing, I decided to heavily invest on Tesla.

Overall, week 4 was contentiously doing great. The account value has increased over \$11,000. The annual return was doubled from 32.5% to 62.52%. The most exciting part was Tesla's performance. The total loss decreased from \$5000 to \$2943.63 within two days. However, the portfolio index was not perfect. Figure 4.6, provides the graph of Portfolio index versus S&P500 index. In the graph, S&P500 index crossed and surpassed Portfolio index on July 22nd.

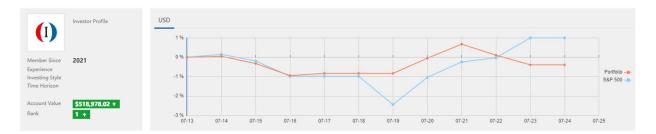


Figure 4.6 Week 4 Portfolio index vs S&P 500 index

Chapter 5. Simulation 2 Swing Trading

Chapter 5 is about a four-week simulation which swing trading strategy will be applied. On the opposite to simulation 1, swing trading stood for short or median term trading. Therefore, I intended to keep buying and selling when there was profit to make. Before I started, I chose to do all my transactions through Investopedia Simulator and the trading rules would be exact the same as you trade in the real world. However, there would be one minute market time delay due to the system design.

As the simulation 2 began, there would be \$500,000 as initial capital. The whole simulation would last for four weeks. Each week, I would present my weekly performance which include the total gain/loss, any specific cases, and any changes I made, etc. Most importantly, I would elaborate my actions and my thoughts behind them.

5.1. Week 1

This was the first week simulation for Swing Trading. I got overexcited and super obsessed with making money through stock market. As a result, to a new investor like me, many translations I made did not had sufficient reasons. Many trading decisions were made based on some experienced investors' advice. It does not sound very reliable. However, I was the one got blessed by the goodness of fortune this week. I actually won a large amount of money. I purchased stocks from 11 different companies and there were totally 39 transactions. \$20778.19 profit was generated and there were \$242,952.11 cash left at the end of the last trading day. I would present each day's transactions below. Table 5.1 is the first trading day transactions.

Date	Symbol	Buy/Sell	Price	Shares	Net Cost/ Proceeds	Profit/ Loss	Total Cash	Total Profit
							\$500,000.00	
6/28/21	TLRY	Buy	\$18.89	3000	\$56,689.99	\$0	\$443,310.01	\$0
6/28/21	BB	Buy	\$12.56	500	\$6,299.99	\$0	\$437,010.02	\$0
6/28/21	BYND	Buy	\$154.36	50	\$7,737.99	\$0	\$429,272.03	\$0
6/28/21	QSI	Buy	\$12.18	1000	\$12,198.59	\$0	\$417,073.44	\$0

Table 5.1 Week 1 Swing Trading Transaction (June 28th)

This was my first day's transactions. While I purchased TLRY, BB, QSI, and BYND, I did not put too much thinking on them. For example, Tilray was a Canadian company which focuses on pharmaceutical and cannabis. According to a report, Better Marijuana Stock: Canopy Growth vs. Tilray, posed by Keith Speights, "Tilray also made a big acquisition of its own, buying hemp foods producer Manitoba Harvest in early 2019. This deal has catapulted Tilray into a leadership position in the hemp market with its products available in more than 17,000 retail locations across 20 countries [25]". As you can see, Tilray was in a leading position within the marijuana industry. This could be a potential stock to invest. Therefore, I invested 3000 shares on Tilray with \$18.89/share. It was almost the lowest price during the past two days. Speak of another stock I purchased BlackBerry; I purchased this stock based on its price trend. During the past month, the price raised from \$11.56/share to \$15.88/share. After two counter trends, I decided to invest on this stock for 500 shares at \$12.56/share. For the other two stocks, I made the decisions based on the advice given by a friend named Jason Zhong who had over 5 years market investing experience. He said "Beyond Meat and QSI would be very potential for the next week. Keep an eye on it!" I decided to observe the outcome of market investing based on experienced investors' advice. Therefore, I purchased 50 shares on Beyond Meat, and 1000 shares on QSI. Below is the second day transaction in Table 5.2.

Date	Symbol	Buy/Sell	Price	Shares	Net Cost/ Proceeds	Profit/ Loss	Total Cash	Total Profit
6/29/21	QSI	Sell	\$12.89	1000	\$12,870.01	\$671.42	\$429,943.45	\$671.42
6/29/21	TLRY	Sell	\$18.80	3000	\$56,665.01	(\$24.98)	\$486,608.46	\$646.44
6/29/21	QSI	Buy	\$12.41	10000	\$124,119.99	\$0	\$362,488.47	\$646.44
6/29/21	NFLX	Buy	\$529.87	100	\$53,006.99	\$0	\$309,481.48	\$646.44
6/29/21	IONS	Buy	\$39.59	3000	\$118,789.99	\$0	\$190,691.49	\$646.44
6/29/21	РАТН	Buy	\$67.47	3000	\$202,429.99	\$0	(\$11,738.50)	\$646.44
6/29/21	NFLX	Sell	\$532.17	23	\$12,219.92	\$32.91	\$481.42	\$679.35

Table 5.2 Week 1 Swing Trading Transaction (June 29th)

On Jun 29th, I started to apply the swing trading strategy. I tried to gain profit through quick buy and sell. The first stock I made profit was QSI and there was \$671.42 profit generated. The reason I sold it was the stock price started to fall. According to the yahoo finance analyze, the support price was \$12.93 and current price had already below that. Based on the data, I inferred this stock might kept going down. Therefore, I sold the stock at \$12.89. Another stock I sold was Tilray, the stock price was too stable which did not fit the swing trading strategy's portfolio. Even more, its PEG Ratio was -3.4 which meant that this stock was overestimated and their current income was negative. Therefore, I decided to reinvest those money.

Later, I purchased QSI, Netflix, IONS, and PATH based on my friend's advice as well. I questioned him why should I invested on those stocks. He told me that he had some inside news, and he presented his revenue data which was around 50% during the past month. Without too much thinking, I chose to trust him again and purchased the four stocks.

On the third day, I found out most stocks Zhong recommended were performing very well. PATH had over \$4000 gain, IONS had around \$1000 gain, and QSI had around \$700 gain. Thus, I decided to fully accept my friends' advice. Five more stocks (TRMB, BSQR, XPEV, DIDI, GME, and BLIN) were purchased based on his advice. Table 5.3 presented the trading details of the rest of the week.

D (6 1 1	D /C II	ъ.	CI	Net Cost/	Profit/	T 4 1 C 1	T I D C
Date	Symbol	Buy/Sell	Price	Shares	Proceeds	Loss	Total Cash	Total Profit
6/30/21	PATH	Sell	\$68.99	3000	\$206,950.01	\$4,540.01	\$207,431.43	\$5,219.36
6/30/21	TRMB	Buy	\$82.65	2000	\$165,309.99	\$0.00	\$42,121.44	\$5,219.36
6/30/21	BSQR	Buy	\$5.23	8030	\$42,016.89	\$0.00	\$104.55	\$5,219.36
6/30/21	BSQR	Sell	\$6.90	8030	\$55,387.01	\$13,370.12	\$55,491.56	\$18,589.48
6/30/21	BSQR	Buy	\$6.22	8000	\$49,779.99	\$0.00	\$5,711.57	\$18,589.48
6/30/21	BSQR	Buy	\$6.21	900	\$5,604.00	\$0.00	\$107.57	\$18,589.48
07/1/21	QSI	Sell	\$12.61	3000	\$37,810.01	\$580.01	\$37,917.58	\$19,169.49
07/1/21	IONS	Sell	\$40.23	3000	\$120,670.01	\$1,880.02	\$158,587.59	\$21,049.51
07/1/21	QSI	Sell	\$12.64	1000	\$12,619.51	\$209.51	\$171,207.10	\$21,259.02
07/1/21	BSQR	Buy	\$4.68	2000	\$9,369.99	\$0.00	\$161,837.11	\$21,259.02
07/1/21	QSI	Sell	\$12.64	3000	\$37,899.71	\$669.71	\$199,736.82	\$21,928.73
07/1/21	NFLX	Sell	\$535.22	77	\$41,191.95	\$391.96	\$240,928.77	\$22,320.69
07/1/21	BYND	Sell	\$157.09	50	\$7,834.51	\$96.52	\$248,763.28	\$22,417.21
07/1/21	QSI	Sell	\$12.58	3000	\$37,720.01	\$490.01	\$286,483.29	\$22,907.22
07/1/21	XPEV	Buy	\$46.74	3000	\$140,239.99	\$0.00	\$146,243.30	\$22,907.22
07/1/21	TLRY	Buy	\$17.77	1000	\$17,790.49	\$0.00	\$128,452.81	\$22,907.22
07/1/21	BSQR	Sell	\$4.81	4000	\$19,200.01	(\$5,691.67)	\$147,652.82	\$17,215.55
07/1/21	XPEV	Sell	\$47.29	3000	\$141,854.51	\$1,614.52	\$289,507.33	\$18,830.07
07/1/21	GME	Buy	\$212.10	1000	\$212,120.99	\$0.00	\$77,386.34	\$18,830.07
07/1/21	BSQR	Sell	\$4.68	6900	\$32,237.51	(\$10,700.64)	\$109,623.85	\$8,129.43
07/1/21	BLIN	Buy	\$5.91	5000	\$29,544.99	\$0.00	\$80,078.86	\$8,129.43
07/1/21	GME	Sell	\$214.79	1000	\$214,769.81	\$2,648.82	\$294,848.67	\$10,778.25
07/1/21	DIDI	Buy	\$15.78	5000	\$78,919.99	\$0.00	\$215,928.68	\$10,778.25
07/1/21	VUZI	Buy	\$18.80	1000	\$18,821.49	\$0.00	\$197,107.19	\$10,778.25
07/1/21	PATH	Buy	\$67.59	3000	\$202,795.09	\$0.00	(\$5,687.90)	\$10,778.25
07/1/21	BB	Sell	\$12.00	500	\$6,019.99	(\$280.00)	\$332.09	\$10,498.25
07/2/21	BLIN	Sell	\$7.87	5000	\$39,330.01	\$9,785.02	\$39,662.10	\$20,283.27
07/2/21	PATH	Sell	\$67.77	3000	\$203,290.01	\$494.92	\$242,952.11	\$20,778.19

Table 5.3 Week 1 Swing Trading Transaction (June 30th-July 2nd)

There was one very dramatic stock called BSQR got me thinking and I would like to share.

The stock price was like riding on a roller coaster. On June 30th, BSQR's stock price went up from

\$2.5/share to \$5/share within 2 hours. I sold it after two counter trends and there was total \$13,370.12 generated. Soon, I bought in after \$0.7/share drop. However, I was not as lucky as before. The price dropped from \$6.22/share to \$4.68/share. I was going to sell them and took the loss. However, my friend Zhong suggested me to purchase more to lower the average price because he was so sure that the price would bounce back. Seemed like the goodness of fortune did not favor me anymore. The stock price remained at the average level of \$4.7/share. By the July 1st, I sold the stocks with around \$16,000 loss because I realized that I did not know what I was doing, and I should not listen to anyone's advice blindly. I had to sell this stock before the price decreased more. In Figure 5.1, this was BSQR's performance on June 30th,2021.



Figure 5.1 BSQR Stock (June 30th, 2021)

After the huge loss on BSQR, I decided to analyze those stocks by myself. For example, XPEV and DIDI were two technology companies from China. XPEV was focusing on electric cars and automatic driving technique. During the past year, their revenues were like staged increased. Between the third quarter of 2020 and the fourth quarter of 2020, there was a 43% of growth on the total revenue. According to the Yahoo analysis, there would be 104% sale growth by the next

quarter (Step.2020). However, this current quarter's financial report has not come out yet. It would risky too risky to hold it for a long time. As a result, I hold 3000 shares for around 5 hours and gain \$1,614.52 revenue in total.

Speak of DIDI, it was focusing on vehicles for hire and big data. According to the Yahoo financial, there would be 15% growth compared with the annual revenue of 2020. Also, according to the CBS News, "there were three-quarters of its 493 million annuals active DIDI users are in China" [27]. It would be a very potential company to invest on. Therefore, I invested in DIDI with 5000 shares.

The other companies I invested were also profitable such as GME and BLIN. I have been focused on GME for a long time. It was famous of a cryptocurrency named Dogecoin. 80% of enthusiastic Dogecoin investors were also big fans of GME. Even more, during the past 5 days, GME has increased from \$200/share to max \$220/share. The resistance price was only \$240/share. It was in a very similar situation like XPEV. They were both valuable stocks. However, it was not good for short term investment. That's why I sold on the same trading day instead of waiting over the weekend. There was \$2,648.82 revenue generated.

Bridgeline Digital (BLIN) was the most profitable stock during that two day's trading. The total revenue was \$9,785.02. It noticed this stock by a news which said it was one of the new strong sell stocks. In Figure 5.2, it was a six month summary of BLIN's performance.



Figure 5.2 Six month summary of BLIN

As you can see, it was stable until June 28th,2021. The price came all the way from lowest \$2.2/share to \$14/share. It indicated that the market was investing money in it. Also, due to its instability, it would be cautious to sell them before the weekend.

Overall, week 1 was a good start. I made \$20,778.19. My friend Zhong did give me many good advice. However, I realized that analyzing any stocks you were about to invest was a critical step. If you do not understand the stock, you are very likely to lose unless the goodness of fortune fancy you a lot. In the end, there was about 10.4% increase on the portfolio by the end of the first week. Hope next week will have a much better performance.

5.2. Week 2

Week 2 has been rough. By the end of the trading day, my portfolio lost \$22755.20. My account value decreased 2.5%. In the middle of the week, many stocks were deceasing value and I could barely look all of them at the same time. I had no choice but to change my invest tactic. I decided to invest only a few stocks so that I could spend more time studying them and lower failure

investing risk. I used all my cash which was around \$250000 on QSI and AMZN. Below is the table of my week 2 transactions.

Date	Symbol	Buy/ Sell	Price	Shares	Net Cost/ Proceeds	Profit/	Total Cash	Total Profit
07/12/21	QSI	Sell	\$13.36	2000	\$26,690.01	\$3,670.02	\$61,992.64	\$24,448.21
07/12/21	AMZN	Sell	\$3,760.77	50	\$188,018.51	\$3,389.02	\$250,011.15	\$27,837.23

Table 5.4 Week 2 Swing Trading Transactions

DIDI was the main reason that I would like to change my investing tactic. It was the nightmare of the week. On July 2nd, DIDI's app was mandatory restricted because the Chinese government caught DIDI for violating the national security law through collecting users' personal information illegally. Also, the government implied that that information might was leaked to the US government. It was almost a devastated hit on DIDI. The price went from the highest \$15.58/share to the lowest \$11.16/share within two days. When I was going to sell them with a much smaller cost, it was too late. There was nothing I could do but hold. If the price breaks \$11/share below, I will have to sell all of them to prevent more loss. By now, I have lost \$19980.23 in total. DIDI gave me a big warning. I soon realized that I purchased too many stocks and I could not keep an eye on all of them. Therefore, I changed my tactic. Instead of investing lots of stocks in a short period of time, I was going to invest less stocks and more capital on each stock. Quantum-Si and Amazon were two selected stocks and I made these decisions by taking advantages of news and analyzing their price trends.

Quantum-Si was a company developing semiconductor chip-based proteomics. Their products would be released by 2022 and their technology was revelational. According to a news posted on Businesswise, "...on June 9, 2021, provide over \$500 million to fund the further development and planned commercialization of the Company's single-molecule, semiconductor

chip-based protein sequencing and genomics technology [26]". Many experts believed in Quantum-Si and investing money was the best prove. Moreover, according to a journal written by Chris Lange, Cathie Wood's ARK invest Buys nearly 700,000 Shares of Quantum-Si, "Specifically, ARK Genomic Revolution ETF (NYSEARCA: ARKG) bought 688,036 shares of Quantum-Si. At Wednesday's closing price, this would have valued this purchase at roughly \$5.6 million. Even though this is a small fraction of the total holdings, every little bit counts. The fund is up 88% in the past year." This heavy invest made by Cathie Wood who was the chief executive officer indicated this was a very likely an opportunity. Most importantly, this stock was floating a lot which would be a great choice for swing trading strategy. Therefore, Quantum-Si was a good choice to focus on.

The whole week, I was waiting for a lower enter position. The day range was between 11.66 to 12.32. As long as my enter price was lower than 11.66, it would be a profitable trade for me. I set up my goal price at \$11.50/share and the computer purchased it for me. On July 9th, the price bounced back to \$12/share which was a good sign. But my goal selling price was around \$13.5/share. Therefore, I planned to hold the position over the weekend.

Amazon was also selected for my new tactic because it was a super powerful and potential company. It was one of the largest online shopping platforms and the CEO, Jeff Bezos was the wealthiest person on earth who possessed 113 billion US dollars. During the past five years, Amazon' stock had around 400% growth. Therefore, if there was a price drop, it would be the sign to invest. In Figure 5.3, this is a five years' performance of Amazon stock.



Figure 5.3 Amazon Five years' performance

Overall, my portfolio was not performing well during the week 2. In Figure 5.4, my portfolio's value was -0.91% compared to S&P 500 was 0.41% on July 8th. Finally, the value went up to 0.98% because Amazon stock appreciated around \$30/share. The final account value was \$507350. It seems that changing the tactic was a mistake for now. I am looking forward to see the results from the next week.

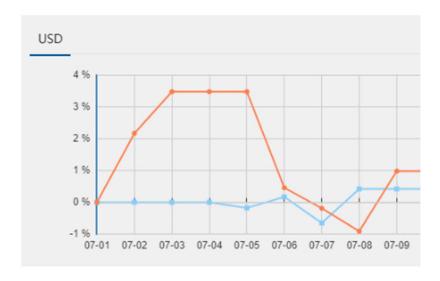


Figure 5.4 Week 2 Swing Trading Portfolio

5.3. Week 3

Week 3's performance was very disappointing. By the end of the week, the value of the portfolio from a total loss of \$2275.20 increase to a total loss of \$7001.92. In another word, our initial \$500,000 investment is only worth approximately \$493,000. Without concerning any sold stocks, each three left stocks also carried out a significant loss. It seemed that there was something wrong with my ability of selecting stocks this week. There was nothing I could do but to wait till next week. In Figure 5.5, it gives summary of the week 3 portfolio and Table 5.6 displayed the trading transactions of week 3.

Acc	ount	Value (U	SD) \$492,998.08 Buying Power\$263,87	7.88 😡	Cash \$34,757.68	Annual R	eturn -22.69 %	6 😡				
ST	OC	K POR	RTFOLIO				Tra	ade Stock	Symbol	Lookup	How-To	Guide
		SYMBOL	DESCRIPTION	QTY	PURCHASE PRICE	CURRENT PRICE	TOTAL VALUE	TODAY'S C	HANGE		TOTAL GAIN,	/LOSS
+	Sell	TRMB	TRIMBLE INC	2000	\$82.65	\$79.22	\$158,440.00	\$0.00(0.	.00 %)	- \$6,850	0.00(-4.14 %	6) +
+	Sell	TLRY	TILRAY INC - ORDINARY SHARES - CLASS 2	1000	\$17.77	\$13.91	\$13,910.00	\$0.00(0.	.00 %)	- \$3,860.	.50(-21.72 %	6) +
+	Sell	AMZN	AMAZON.COM INC.	80	\$3,601.39	\$3,573.63	\$285,890.40	\$0.00(0.	.00 %)	- \$2,220	0.72(-0.77 %	6) +
						Total	\$458,240.40	\$0.00(0.	.00 %)	- \$12,93	1.22 (-2.74 9	%) +

Figure 5.5 Week 3 portfolio (July 12th to July 18th)

Date	Symbol	Buy/Sell	Price	Shares	Net Cost/ Proceeds	Profit/ Loss	Total Cash	Total Profit
07/12/21	QSI	Sell	\$13.36	2000	\$26,690.01	\$3,670.02	\$61,992.64	\$24,448.21
07/12/21	AMZN	Sell	\$3,760.77	50	\$188,018.51	\$3,389.02	\$250,011.15	\$27,837.23
07/13/21	MA	Buy	\$385.38	500	\$192,709.99	\$0.00	\$57,301.16	\$27,837.23
07/13/21	AMZN	Buy	\$3,750.00	10	\$37,519.99	\$0.00	\$19,781.17	\$27,837.23
07/13/21	MA	Sell	\$388.25	500	\$194,105.01	\$1,395.02	\$213,886.18	\$29,232.25
07/16/21	DIDI	Sell	\$12.06	5000	\$60,276.61	\$21,992.22	\$274,162.79	\$7,240.03
07/16/21	VUZI	Sell	\$14.64	1000	\$14,615.00	\$4,206.49	\$288,777.79	\$3,033.54
07/16/21	AMZN	Buy	\$3,580.16	70	\$250,631.11	\$0.00	\$38,146.68	\$3,033.54

Table 5.5 Week 3 Trading Transactions

At the beginning of the week, everything was toward to a positive direction. My tactic was definitely working perfectly and I tried to combine the tactic I used on week 1 as well. Two stocks I selected from last week QSI and Amazon were doing very well. My friend suggested me to quick sell QSI and Amazon and purchase them back.

This time, I did my own research before I took any actions. I found that QSI's performance was super good. The price went up around \$2/share within two days. It was the highest price during the past 3 months. It was even \$0.8/share higher than the support price. On July 12th, the price had been decreasing and I believed that my friend gave me a good warning. Thus, I sold all the QSI stocks with \$3670.02. However, I did not buy in because the current price was too high. And if those major capitals pull out their funding such as ARK fund, individual investors like me could suffer a devastated hit.

I did the same thing for Amazon stock. Very similar situation on this stock, the stock price broke the record and created the highest price in the history on July 8th. I worried that the price would have a huge drop. On Sept 2nd,2020, their stock price made a new record. The following two weeks, the price dropped \$516/share. I was not sure if this would happen again. In order to avoid the risk, I decided to sell the Amazon and waited for one day. There was \$3,389.02 profit made through this sell. Figure 5.6 provided the detail performance of Amazon stock on Step, 2020.

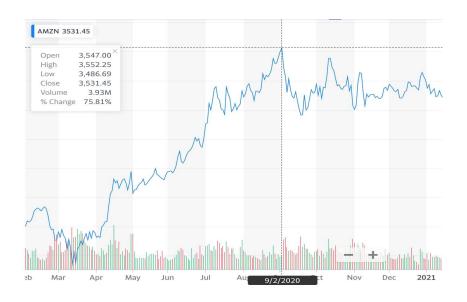


Figure 5.6 Amazon stock performance from March, 2020 to Jan, 2021

On the next day, there was a new company I targeted called Mastercard Inc. This was a top class company worldwide. According to the FORUTNE, "With more than 25,000 financial institutions issuing its branded cards, the financial services corporation provides a range of payment-related processing and services [28]". Mastercard Inc was a very potential company. It could be a perfect fit for long term strategy. However, I saw an opportunity was open. The stock price falls off a cliff on July 8th and it seemed like it hit the bottom. For the following couple days, the price had been increased slowly and steady. Therefore, I invested heavily with 500 shares and I planned to observe for 24 hours. Figure 5.7 presented the stock performance from July 7th to July 12th.

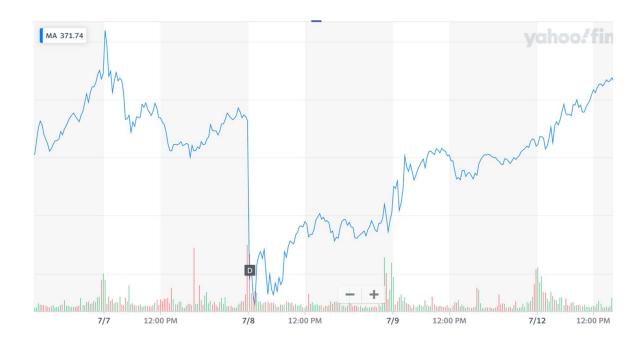


Figure 5.7 MA Stock Performance from July 7th to July 12th

After an hour, I realized that the stock price might start going down because the price went up around \$10/share within 24 hours. Yet, there was no strong factor caused that. It was very likely some big capitals were trying to raise the price intentionally. I chose to play safe and sold all my positions at \$388.25/share which generated around \$1300 profit.

Almost at the same time, I still planned to heavy invest on Amazon and I expressed my reasons on Week 2 report. Amazon had more potential and I would like to spend as less money as I could. However, I was not 100% sure about the price trend. Despite there was a \$10/share drop, I had a feeling that the price would go down. Therefore, I only purchased 10 shares of Amazon back and kept waiting for a better chance.

After 3 days waiting, my chance finally arrived. The stock price decreased from the highest point \$3766/share to current price \$3580/share. And the price remained at this level though the whole day. I was so convinced that this might just be the turning point. In order to maximum my investing capital, I sold DIDI and VUZI. Both stocks carried a significant loss especially DIDI. I

was expecting the data security crisis might calm down. However, it seemed got worse. According to a journal written by Hill, China counters that the U.S.'s oppression of companies to open backdoors to obtain data is the biggest threat to global cybersecurity, "Chinese Foreign Ministry spokesperson Wang Wenbin claimed today that the United States forcing companies to open "back doors" to obtain user data in violation of regulations is the greatest threat to global cyber security." This was a very serious accusation and it was on the national level. The Chinese government was very likely having some solid evidences of DIDI leaked users' data. To our investors, it was the worst news ever. Therefore, I had no other choice but to sell DIDI to prevent an even worse situation. Unlike DIDI, I sold VUZI for a very simple reason. I purchased this stock because I took my friend' advice without any thinking. And this stock had been losing money since the day one. Therefore, it would be waste of money and time to keep this stock. After I sold DIDI and VUZI, I invested all the money on Amazon as I planned before.

Overall, this was a rough week. It taught me painful lesson that the stock market was indeed spontaneous. It was impossible for us to aware DIDI's data security crisis ahead. I suffered a \$21,992.22 loss on this single which was a true nightmare. Yet, I made another bet on Amazon. This could be a great opportunity to save my portfolio. I really hope there would be no "surprises" like DIDI's crisis happened on Amazon.

5.4. Week 4

Week 4 was the last week of the simulation. After the loss on DIDI and VUZI, I became more careful with my investing decisions. There were two rules I added for Week 4 simulation. One, do not listen to anyone's advice blindly even that guy is Warren Buffet. Two, keep eyes on any news related to those stocks because that news might indicate the price trend.

By the end of the week, the outcome was actually quiet satisfying especially Amazon. However, at the beginning of the week, Amazon was the most loss stock. I was very glad that this stock came back and I insisted with my initial judgements. In general performance of my portfolio, the account value increased from \$492,998.08 to \$505,632.85. The annual return rate changed from negative 22.69% to positive 17%. Figure 5.6 provides Week 4 stock portfolio and Table 5.7 gives details of Week 4 trading information.

Acco	unt Valu	ue (USD) \$505,	623.85 @ Buying Power \$271,	252.09 @ Cash \$36,8	380.33 Annual Retu	rn 17.00 % 🥹			
STO	OCK P	ORTFOLI	0					Trade Stock	Symbol Lookup How-To Guide
		SYMBOL	DESCRIPTION	QTY	PURCHASE PRICE	CURRENT PRICE	TOTAL VALUE	TODAY'S CHANGE	TOTAL GAIN/LOSS
+	Sell	AMZN	AMAZON.COM INC.	93	\$3,596.31	\$3,656.64	\$340,067.52	\$0.00(0.00 %)	\$5,611.01(1.68 %) +
+	Sell	TSLA	TESLA INC	200	\$656.26	\$643.38	\$128,676.00	\$0.00(0.00 %)	- \$2,576.00(-1.96 %) +
						Total	\$468,743.52	\$0.00(0.00 %)	\$3,035.01 (0.65 %) +

Figure 5.8 Week 4 portfolio (July 19th to July 23rd)

Date	Symbol	Buy/Sell	Price	Shares	Net Cost/ Proceeds	Profit/ Loss	Total Cash	Total Profit
07/21/21	TLRY	Sell	\$14.56	1000	\$14,540.01	(\$3,250.48)	\$52,686.69	(\$216.94)
07/21/21	AMZN	Buy	\$3,565.03	13	\$46,365.38	\$0.00	\$6,321.31	(\$216.94)
07/22/21	TRMB	Sell	\$82.62	2000	\$165,220.01	(\$89.98)	\$171,541.32	(\$306.92)
07/22/21	TSLA	Buy	\$656.26	200	\$131,271.99	\$0.00	\$40,269.33	(\$306.92)

Table 5.6 Week 4 Trading Transactions

At the beginning of the week, all stocks were in an awful shape especially Amazon. The funder of Amazon, Jeff Bezos, scheduled his \$28 mn space trip on Tuesday, July 20th. This should be a great news to him, to Amazon, and to human beings. It represented that space trip was finally in a commercialized stage. However, according to a petition called, do not allow Jeff Bezos to return to Earth, on Change.Org, "over 186,000 people want Jeff Bezos to stay in space" [29]. This was definitely a scandal to Jeff Bezos' space trip and indirectly affected Amazon stock for sure.

Soon, the price was like falling off a cliff. At 12:35pm, July 19th, the price hit the bottom and that price was around \$73/share lower than the price I purchased it. Figure 5.9 showed Amazon stock performance from July 16th to July 21st.

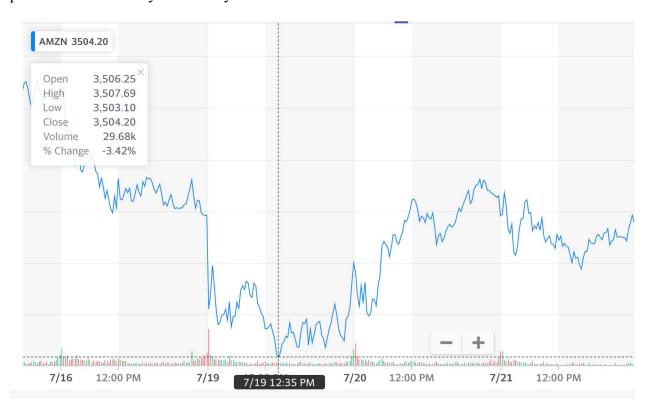


Figure 5.9 Amazon stock performance from July 16th to July 21st

However, I insisted my initial analysis on Amazon, and I believed that the stock price would bounce back in a short period of time. There was one week before they released their second quarter result. According to their first quarter result which was released on April 29th, 2021, "Net income increased to \$8.1 billion in the first quarter, or \$15.79 per diluted share, compared with net income of \$2.5 billion, or \$5.01 per diluted share, in first quarter 2020" [30].

Apparently, Amazon was doing super well and it seemed that they had recovered from the Covid pandemic. Therefore, I purchased 13 more shares on Amazon. In the meantime, I sold TLRY because they had been losing money since last week and it did not stop this week. I wanted to play safe this week so that TLRY was abandoned.

The next day, great news finally came. The first was the TRMB's come back. By the end of Week 3, TRMB had a total \$6850 loss. I felt so desperate that this stock might ended up like DIDI. However, when I saw the stock price raised up to \$83/share and started to fall continuously, I sold them without any hesitations at \$82.61/share. I probably could sell them early. But I got defeated by my greedy in the end. Overall, this was a great news and saved my last week simulation. Coincidentally, Amazon's stock started to rise. The open price was \$3587.23/share which was \$20/share higher compared with yesterday's close price. And the stock price just kept climbing. By the end of the day, the price was already \$3637/share and it was \$41/share higher than my purchased price. Both TRMB and Amazon were the saviors of the week.

After I sold TRMB and TLRY, I had around \$160,000 cash left so that I started to hunt quality stocks again. I noticed Tesla was in a turning point. According to my analyze, Tesla's stock would go up no matter what because their sales and revenues were outstanding. You could find my analyze above (in Chapter 4 Week 4). However, I did not make the right decision for the enter price. Tesla' stock had been increasing yesterday and I got confused. I thought that the turning point had arrived. Thus, I bought in when the market opened. Unexpectedly, the price I purchased was actually the highest during the day. Figure 5.10 provides Tesla's stock performance on July 22^{nd} .

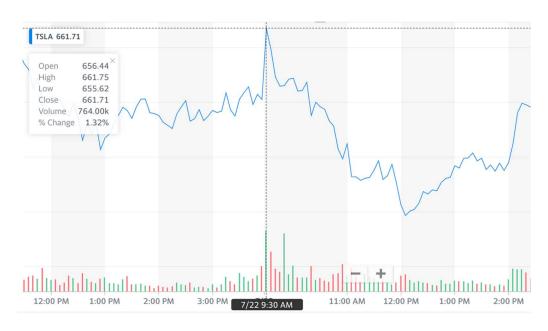


Figure 5.10 Tesla's stock performance on July 22nd

In conclusion, this week was not too bad. The account value increased around \$12,000. The portfolio index went up around 2%. It was a big relief that I, at least, made some profits by the end of simulation. This could not happen if Amazon made a big success and TRMB helped me to avoid a huge loss. However, it was not good enough. I could avoid that \$2576 loss on Tesla if I had analyzed the price trend better. Figure 5.11 provides the graph of Portfolio index versus S&P500 index.

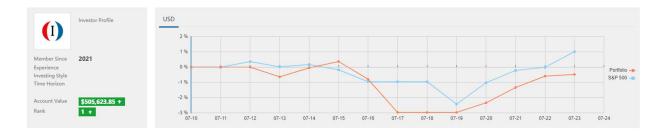


Figure 5.11 Week 4 Portfolio index vs S&P 500 index

Chapter 6. Analysis and Comparison

This main goal of chapter 6 is analyzing and comparing two simulations and determine which one is better. After four-week simulation, data is collected from each simulation with one trading methodology. To have a more accurate conclusion, the process will have analyze and compare the Profit/loss for each strategy and how well each strategy is applied.

6.1. Total Profit/loss for each strategy

In order to visualize the profit and loss for each strategy, I have generalized a profit over time graph to present each simulation's performance. Also, I have added the S&P500 index as an indicator. Figure 6.1 presents the profit or loss by the end of each week and S&P500 Index is included as an indicator.

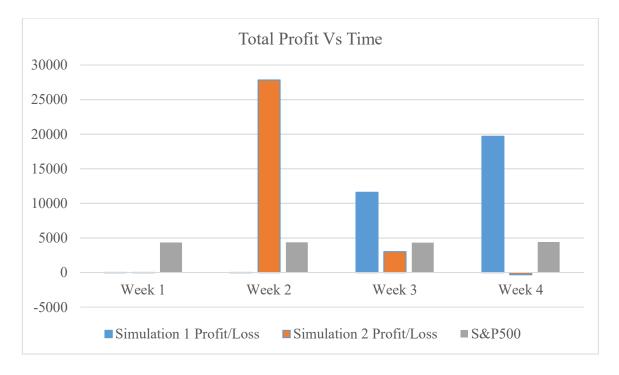


Figure 6.1 Total Profit Vs Time over four weeks

According to the graph, Position trading is the winner here by the end of the week 4. If you take a closer look, you will notice that swing trading was actually leading the race. Week 1, there is zero profit/loss generated because it was all buy in. By the second week, Simulation 2 is doing super well and its profit hit over \$25,000. In the meantime, there is still no sell from simulation 1 which left with zero profit/loss. When the time come to the week 3, something serious happened on simulation 2. The profit decreases from over \$25,000 to only around \$3000. On the opposite, simulation 1 finally take off. There is around \$11,000 revenue make on week 3. Simulation 1 generates \$8000 more than Simulation 2 did. At the last week, the difference is expanded more. Simulation 1 generates around \$20,000 profit and simulation 2 loses \$306.92.

In summary, Simulation 1 which is back up with position trading required more time to generate profits compared to the simulation 2 back up with the swing trading. However, simulation 2 is less stable than the position trading. In the graph, the trend for the simulation 1 is going up continuously. On the contrary, simulation 2's trend is moving dramatically. Considering the profit as the ultimate goal only, simulation 1 is definitely the winner in the end. However, simulation 2 is also meaningful especially week 2's performance. Swing trading proved its potential to generate a large amount of money within a short period of time.

6.2. Account Value for each strategy

Only considering total profit or loss for each strategy was not enough. At each week's ending, those unsold stocks potential profit or loss was not calculated. In order to determine which method is better, it will be necessary to compare their account value as well. Figure 6.2 presents the account value vs. time by the end of each week.

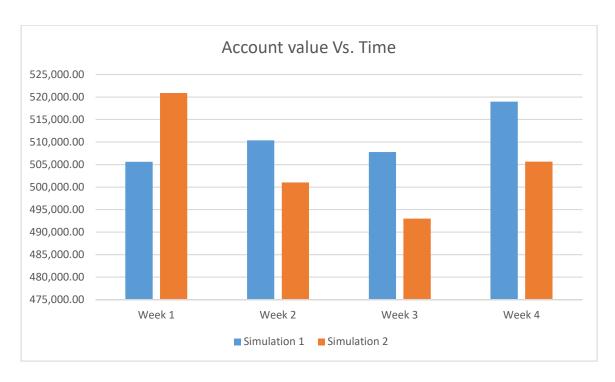


Figure 6.2 Account value Vs Time over four weeks

In this graph, we can visualize and compare the change of account value over time between two simulations. The blue bar represents for the simulation 1 account value and the orange bar stands for the simulation 2 account value.

As you can see, in week 1, Simulation 2's account value is around \$525,000 which is much higher than simulation 1's account value around \$505,000. By the second week, simulation 1's account value surpasses simulation 2's account value with \$10,000. This phenomenon is due to the tremendously decrease in value on simulation 2's account value. At the Week 3, the difference keeps expanding due to the same reason. Simulation 2's account value decreases more which is only \$492,998.08. On the other side, Simulation 1's account value decreases around \$2500 which almost remains at the same level. Both account values increases a lot in week 4. Simulation 1's account value is \$518,978.02 which is 2.56% increase in value. Simulation 2' account value has less increase in value compared with simulation 1 which has only 2.21% increase.

Overall, by the last week, Simulation 1 has 3.79% increase in value compared with the initial capital \$500,000. And Simulation 2 has only 1.12% increase in value which is 2.67% lower than simulation 1's performance. Therefore, within a four-week simulation, position trading (simulation 1) gained more profit than swing trading (simulation 2).

Chapter 7. Conclusion

By concluding from the results, Position trading is a better methodology than swing trading within a four-week simulation. With a longer period, it is hard to tell which methodology will perform better because swing trading is very unstable. For example, in the Chapter 6's graph, you can see that simulation 2 which was using the swing trading strategy generated over \$20,000 profit in week 1. Therefore, swing trading have a great potential but mainly depends on investors' operations. Overall, the whole project goes well and I am satisfied with the results. Not only because I have made profits on both simulations, but also, I have learnt many investing knowledges and gained plenty investing experience.

It is good to see that this project is finished successfully. However, there were many things I have done to make sure the project goes smoothly. First, I spent a week to research some basic trading knowledge and backgrounds. This was a critical step because that knowledge would empower me with the ability to choose proper stocks for different trading methods, and ability to analyze the market and data I collected. Second, I spent another week to search those potential companies. This was the very basic skill for all investors to have. If an investor chooses the wrong stock or choose a unfamiliar stock, he/she will very likely lose money unless the goodness of fortune favor him/her a lot. Most importantly, following those purchased stocks and any news or current events related to them. According to my research (See above Chapter 1 section 1.2), daily news is an indirect factor to the stock market. Therefore, many of my trading decisions were taking advantages on daily news or current events.

In conclusion, this project was beneficial and a rewarding experience. It provided an opportunity for me to learn and experience the current US stock market and it set up a solid

foundation for my future financial investments. This project equipped me with the basic techniques and knowledge to challenge the future American stock market investment.

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Appendix

Table A Swing Trading stock simulation profile

					Net Cost/	Profit/		
Date	Symbol	Buy/Sell	Price	Shares			Total Cash	Total Profit
					Proceeds	Loss		110
							\$500,000.00	
6/28/21	TLRY	Buy	\$18.89	3000	\$56,689.99	\$0	\$443,310.01	\$0
6/28/21	ВВ	Buy	\$12.56	500	\$6,299.99	\$0	\$437,010.02	\$0
6/28/21	BYND	Buy	\$154.36	50	\$7,737.99	\$0	\$429,272.03	\$0
6/28/21	QSI	Buy	\$12.18	1000	\$12,198.59	\$0	\$417,073.44	\$0
6/29/21	QSI	Sell	\$12.89	1000	\$12,870.01	\$671.42	\$429,943.45	\$671.42
6/29/21	TLRY	Sell	\$18.80	3000	\$56,665.01	(\$24.98)	\$486,608.46	\$646.44
6/29/21	QSI	Buy	\$12.41	10000	\$124,119.99	\$0	\$362,488.47	\$646.44
6/29/21	NFLX	Buy	\$529.87	100	\$53,006.99	\$0	\$309,481.48	\$646.44
6/29/21	IONS	Buy	\$39.59	3000	\$118,789.99	\$0	\$190,691.49	\$646.44
6/29/21	PATH	Buy	\$67.47	3000	\$202,429.99	\$0	(\$11,738.50)	\$646.44
6/29/21	NFLX	Sell	\$532.17	23	\$12,219.92	\$32.91	\$481.42	\$679.35
6/30/21	PATH	Sell	\$68.99	3000	\$206,950.01	\$4,540.01	\$207,431.43	\$5,219.36
6/30/21	TRMB	Buy	\$82.65	2000	\$165,309.99	\$0.00	\$42,121.44	\$5,219.36
6/30/21	BSQR	Buy	\$5.23	8030	\$42,016.89	\$0.00	\$104.55	\$5,219.36
6/30/21	BSQR	Sell	\$6.90	8030	\$55,387.01	\$13,370.12	\$55,491.56	\$18,589.48
6/30/21	BSQR	Buy	\$6.22	8000	\$49,779.99	\$0.00	\$5,711.57	\$18,589.48
6/30/21	BSQR	Buy	\$6.21	900	\$5,604.00	\$0.00	\$107.57	\$18,589.48
07/1/21	QSI	Sell	\$12.61	3000	\$37,810.01	\$580.01	\$37,917.58	\$19,169.49
07/1/21	IONS	Sell	\$40.23	3000	\$120,670.01	\$1,880.02	\$158,587.59	\$21,049.51
07/1/21	QSI	Sell	\$12.64	1000	\$12,619.51	\$209.51	\$171,207.10	\$21,259.02
07/1/21	BSQR	Buy	\$4.68	2000	\$9,369.99	\$0.00	\$161,837.11	\$21,259.02
07/1/21	QSI	Sell	\$12.64	3000	\$37,899.71	\$669.71	\$199,736.82	\$21,928.73
07/1/21	NFLX	Sell	\$535.22	77	\$41,191.95	\$391.96	\$240,928.77	\$22,320.69
07/1/21	BYND	Sell	\$157.09	50	\$7,834.51	\$96.52	\$248,763.28	\$22,417.21
07/1/21	QSI	Sell	\$12.58	3000	\$37,720.01	\$490.01	\$286,483.29	\$22,907.22
07/1/21	XPEV	Buy	\$46.74	3000	\$140,239.99	\$0.00	\$146,243.30	\$22,907.22
07/1/21	TLRY	Buy	\$17.77	1000	\$17,790.49	\$0.00	\$128,452.81	\$22,907.22
07/1/21	BSQR	Sell	\$4.81	4000	\$19,200.01	(\$5,691.67)	\$147,652.82	\$17,215.55
07/1/21	XPEV	Sell	\$47.29	3000	\$141,854.51	\$1,614.52	\$289,507.33	\$18,830.07

07/1/21	GME	Buy	\$212.10	1000	\$212,120.99	\$0.00	\$77,386.34	\$18,830.07
07/1/21	BSQR	Sell	\$4.68	6900	\$32,237.51	(\$10,700.64)	\$109,623.85	\$8,129.43
07/1/21	BLIN	Buy	\$5.91	5000	\$29,544.99	\$0.00	\$80,078.86	\$8,129.43
07/1/21	GME	Sell	\$214.79	1000	\$214,769.81	\$2,648.82	\$294,848.67	\$10,778.25
07/1/21	DIDI	Buy	\$15.78	5000	\$78,919.99	\$0.00	\$215,928.68	\$10,778.25
07/1/21	VUZI	Buy	\$18.80	1000	\$18,821.49	\$0.00	\$197,107.19	\$10,778.25
07/1/21	PATH	Buy	\$67.59	3000	\$202,795.09	\$0.00	(\$5,687.90)	\$10,778.25
07/1/21	ВВ	Sell	\$12.00	500	\$6,019.99	(\$280.00)	\$332.09	\$10,498.25
07/2/21	BLIN	Sell	\$7.87	5000	\$39,330.01	\$9,785.02	\$39,662.10	\$20,283.27
07/2/21	PATH	Sell	\$67.77	3000	\$203,290.01	\$494.92	\$242,952.11	\$20,778.19
07/7/21	AMZN	Buy	\$3,692.19	50	\$184,629.49	\$0.00	\$58,322.62	\$20,778.19
07/7/21	QSI	Buy	\$11.50	2000	\$23,019.99	\$0.00	\$35,302.63	\$20,778.19
07/12/21	QSI	Sell	\$13.36	2000	\$26,690.01	\$3,670.02	\$61,992.64	\$24,448.21
07/12/21	AMZN	Sell	\$3,760.77	50	\$188,018.51	\$3,389.02	\$250,011.15	\$27,837.23
07/13/21	MA	Buy	\$385.38	500	\$192,709.99	\$0.00	\$57,301.16	\$27,837.23
07/13/21	AMZN	Buy	\$3,750.00	10	\$37,519.99	\$0.00	\$19,781.17	\$27,837.23
07/13/21	MA	Sell	\$388.25	500	\$194,105.01	\$1,395.02	\$213,886.18	\$29,232.25
07/16/21	DIDI	Sell	\$12.06	5000	\$60,276.61	(\$21,992.22)	\$274,162.79	\$7,240.03
07/16/21	VUZI	Sell	\$14.64	1000	\$14,615.00	(\$4,206.49)	\$288,777.79	\$3,033.54
07/16/21	AMZN	Buy	\$3,580.16	70	\$250,631.11	\$0.00	\$38,146.68	\$3,033.54
07/21/21	TLRY	Sell	\$14.56	1000	\$14,540.01	(\$3,250.48)	\$52,686.69	(\$216.94)
07/21/21	AMZN	Buy	\$3,565.03	13	\$46,365.38	\$0.00	\$6,321.31	(\$216.94)
07/22/21	TRMB	Sell	\$82.62	2000	\$165,220.01	(\$89.98)	\$171,541.32	(\$306.92)
07/22/21	TSLA	Buy	\$656.26	200	\$131,271.99	\$0.00	\$40,269.33	(\$306.92)

Table B Position Trading stock simulation profile

					Net Cost/	Profit/		
Date	Symbol	Buy/Sell	Price	Shares			Total Cash	Total Profit
					Proceeds	Loss		
							\$500,000.00	
6/28/21	TSLA	Buy	\$688.65	100	\$68,884	\$0	\$431,116	\$0
6/28/21	AAPL	Buy	\$134.87	300	\$40,481	\$0	\$390,634	\$0
6/28/21	IBM	Buy	\$145.35	50	\$7,287	\$0	\$383,347	\$0
6/28/21	ZM	Buy	\$390.18	50	\$19,529	\$0	\$363,818	\$0
6/28/21	MSFT	Buy	\$268.49	50	\$13,444	\$0	\$350,374	\$0
6/28/21	PFE	Buy	\$39.40	1000	\$39,060	\$0	\$311,314	\$0
6/29/21	SHOP	Buy	\$1,489.02	50	\$74,471	\$0	\$236,843	\$0
6/29/21	GOOG	Buy	\$2,512.13	90	\$226,112	\$0	\$10,731	\$0
7/13/21	TSLA	Buy	\$681.36	15	\$10,240	\$0	\$490	\$0
7/16/21	GOOG	Sell	\$2,631.24	90	\$236,792	\$10,680	\$237,282	\$10,680
7/16/21	PFE	Sell	\$40.00	1000	\$39,978	\$918	\$277,260	\$11,598
7/16/21	GOOG	Buy	\$2,626.60	60	\$157,616	\$0	\$119,644	\$11,598
7/16/21	GOOG	Buy	\$2,621.00	45	\$117,965	\$0	\$1,679	\$11,598
7/21/21	AAPL	Sell	\$145.17	300	\$43,531	\$3,050	\$45,210	\$14,648
7/21/21	IBM	Sell	\$141.02	50	\$7,031	(\$256)	\$52,241	\$14,391
7/21/21	ZM	Sell	\$352.07	50	\$17,584	(\$1,945)	\$69,825	\$12,446
7/21/21	SHOP	Sell	\$1,556.83	50	\$77,822	\$3,351	\$147,646	\$15,796
7/22/21	AAPL	Buy	\$146.38	500	\$73,211	\$0	\$74,436	\$15,796
7/22/21	GOOG	Sell	\$2,662.04	105	\$279,494	\$3,913	\$353,929	\$19,709
7/22/21	TSLA	Buy	\$656.81	300	\$197,063	\$0	\$156,866	\$19,709
7/22/21	TSLA	Buy	\$656.26	200	\$131,272	\$0	\$25,594	\$19,709