

Project Number: DTZ 1713

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

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Submitted:

September 3, 2018

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## Abstract

This project is a four-week simulation the stock market. The goal of this project is to inform the participant about the stock market by gaining experience through a real-time simulation. This project analyzed current market trends, assessed the viability of two distinct trading techniques, and ran simulations on three selected companies with a total investment of \$100,000 per method. Results from this project showed that Swing Trading was a much more profitable method when compared to passive trading. This project allowed the participant to gain relevant trading experience that he will use to benefit himself when investing in the future.

## Acknowledgements

I would like to take a moment and thank all of the people who helped me with my Interactive Qualifying Project (IQP), without these people I would not be where I am today. First and foremost, I would like to thank Professor Tang for his continuous guidance and seemingly infinite patience during the project. Second, I would like to thank Worcester Polytechnic Institute (WPI) for providing me with both the knowledge and resources to perform this project that has taught me so much. Third I would like to thank my mother who has pushed me to achieve so much more than I thought I was ever capable of and has always been there in my times of need.

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## Chapter 1: Introduction

This project is designed to provide some understanding on how indices act as a snapshot into the health of the stock market at any point in time, and to teach strategies that will provide authentic trading experience by simulating the stock market. By investigating the history of the stock market, I am able to understand how certain political and social events have affected the market in the past. This will give me better insight into how current events mold today's market and even shift the values of some stocks. By learning how to read indices as a snapshot of the market, I hope to discover how to adapt trading strategies to current events as the market is constantly in flux. The simulation starts on May 29<sup>th</sup> and lasts four weeks until June 29<sup>th</sup> with a total initial investment of \$100,000. Using the simulation, I will attempt to see if trading exclusively based on the performance of indices works as a viable investing strategy. It is my goal to come away from this project with a stronger understanding of how the stock market works and how to apply positive investment strategies.

### **1.1 Stock Market History**

While the stock market as we know it today did not originate in the United States until the 1800's, the first real stock markets started appearing as early as the 1500's in other parts of the world. One example of a proto "stock market" were the European loan exchanges, at these loan exchanges people took on different loans to avoid taking on a higher risk loan themselves. As this practice of exchanging loans became more commonplace, lenders began to sell the loans to those willing to take them on (Beattie, 2017).

The first recorded stock exchange opened in 1531, in Antwerp, Belgium as a place where stockbrokers and investors could meet and discuss their debts and loans. While this institution acted as a sort of stock exchange no actual stocks were traded, yet money was still made in a manner similar to the stock market as we know it today.

Stock exchanges as they are known today originated in the 1600's when joint stock companies needed a way to mitigate the risk of losing a ship and its cargo on the seas. The solution to this was to find investors that could front the costs of the long voyages and in return would receive a percentage of the profit if the journey was successful. Unsuccessful journeys however resulted in the investments being lost and the investor making no money, to offset these risk investors would often spread out their money on a variety of smaller investments simultaneously (Hur, 2017).

This risky business came to an end in 1773 when the cargo bubble burst and companies couldn't afford to pay back those who had invested in them. Regulations were then put in place to protect investors from fraudulent companies by installing government regulation in the London stock exchange. Then, 19 years later the New York stock exchange opened up; quickly growing to become the most powerful stock exchange the world had ever seen (Beattie, 2017).

## **1.2 Important Factors in the Stock Market**

The stock market as it is known today is a very volatile and unpredictable place, where seemingly incongruent factors can cause changes costing thousands of dollars to investors. According to SpeedTrader there are five major factors that contribute to the

overall price of stocks on the market, they are; supply and demand, float, financial performance, public perception, and industry standards (SpeedTrader, 2018).

Supply and Demand is the cornerstone of stock pricing and the first factor in determining a stock's price. As a stock performs well in the market the demand for that stock is increased, if the stock is in low supply the price for the stock will increase according to how much investors want the stock. On the other side of the coin if there is too much of a stock and not enough demand from investors then the stock will decrease in price until investors deem the price reasonable.

Float is the second factor that affects the pricing of stocks on the market. Float as defined by The Economic times is the total number of available shares of a stock on the market at any one moment. This is used to determine if a company is gaining public or investor interest. Float is found by subtracting the number of privately held shares and subtracting that from the total number of available shares. If a stock has a high float there are more shares on the market, and the more shares on the market instead of in an investor's portfolio indicates a decreased demand for said stock.

Financial Performance is the third major factor on our list as a company must remain financially viable or risk their stock prices becoming devalued. On the other hand, companies that are deemed undervalued can have large swaths of their shares purchased by investors increasing the demand for this stock and in turn the value of the stock to other investors.

Public Perception is the fourth factor that impacts stock values as how the public perceives is how the public trades. Companies with an undesirable public perception are

often forced to sell their stock at a discount since investors will not want to buy the stock at full price until the dust around it settles from the negative press they received. This negative reaction is called a bearish sentiment in the market. Companies with great public perceptions are on the opposite end of the spectrum being able to increase the value of their shares as more investors would want to invest in a company that has a promising future. This positive reaction to public perception is called a bullish sentiment.

Industry Standards are the fifth and final major factor in determining the value of stocks on the market. As investors look for the next big market hoping to discover the goldmine that will change their lives. One way to measure the success of a market is to look at its P/E or its price/earnings over its life cycle. The life cycle of a company is largely due to how well it competes with other companies in their industry. If a company continues to grow without any setbacks it will quickly become an industry standard, once a company reaches this point the company is used as a measuring stick for all other companies to be compared to.

### **1.3 Stock Market Index**

The stock market has a countless amount of stocks and other investments traded every single day, to keep track of all the data flowing out of Wall Street and turn it into something investors can effectively strategize with is a daunting task to say the least. Thankfully the market already does that for investors with indexes the focus of this project. Indexes are groups of stocks that allow investors to see how certain economic sectors or geographical areas are faring on the global market. Some examples of international indices are, MSCI World, S&P 100, The Global Dow, and FTSE. These indices represent a summation of the global economy refined into a single stock. There are also regional

indices such as, The Dow Jones, S&P 500, and NASDAQ to name the more well-known examples. These stocks allow traders to compare how well their return on investment is and allows investors to make more informed decisions when trading stocks.

For the entirety of this project only indexes traded in the American market will be focused on for the four-week duration of this project. Within the American stock exchange there are thirteen major indices of which five will be highlighted for reference in this report, they are the Dow Jones Index, Nasdaq Composite Index, S&P 500, Russell 2000 Index, and MSCI EAFE. While each of these indexes have their own subsectors, they represent an overall average of the American economy in real time.

#### 1.3.1 Dow Jones Indices (DJI)

The Dow Jones Indices is made up of 11 total sub-indices each of which are focused on one specific style of investment. The Dow Jones Industrial Average is the most popular of these sub-indices. The DJIA tracks the thirty largest businesses stocks in the United States at any one time. First published on February 16<sup>th</sup>, 1885, the DJIA is now the poster boy for the Dow Average. Being a price weighted index, higher priced stocks have more weight than lower priced stocks. Table 1.1 shows the 30 companies that make up the DJIA.

*Table 1.1 30 major companies included in Dow Jones Industrial Average Index.*

Company	Company	Company	Company
3M	DowDuPont	JPMorgan Chase	Travelers
American Express	ExxonMobil	McDonald's	UnitedHealth Group
Apple	General Electric	Merck	United Technologies
Boeing	Goldman Sachs	Microsoft	Verizon
Caterpillar	The Home Depot	Nike	Visa
Chevron	IBM	Pfizer	Walmart
Cisco Systems	Intel	Procter & Gamble	Walt Disney
Coca-Cola	Johnson & Johnson		

Currently the DJIA is sitting at a value of \$24,753.09 rising 17% from last year's average of \$21,029.47. Since its inception in 1885 the DJIA has risen approximately 3200% when it used to be worth \$774.72 a share. Below in Figure 1.1 is the DJIA market summary for recent years.



Figure 1.1. DJIA Market Summary from 1978 to 2018 from Google Database

### 1.3.2 Nasdaq Composite Index (NASDAQ)

The Nasdaq is primarily made up of various technology stocks subdivided into three indices, NASDAQ Composite, 100, and Volatility Index. While the NASDAQ-100 makes up the vast majority of the NASDAQ Composite some companies fail to make the cut and remain in the Composite alone. Below on Table 1.2 that lists all of the companies in the NASDAQ-100.

Table 1.2 Companies included in NASDAQ-100

Companies	Companies	Companies	Companies
Activision Blizzard	Cisco Systems, Inc.	Intuitive Surgical Inc.	Regeneron Pharmaceuticals
Adobe Systems Incorporated	Citrix Systems, Inc.	J.B. Hunt Transport Services	Ross Stores Inc.
Alexion Pharmaceuticals	Cognizant Technology Solutions	JD.com	Seagate Technology Holdings
Align Technology, Inc.	Comcast Corporation	KLA-Tencor Corporation	Shire plc
Alphabet Inc. Class A	Costco Wholesale Corporation	Lam Research, Inc.	Sirius XM Radio, Inc.
Alphabet Inc. Class C	CSX Corporation	Liberty Global plc Ordinary A	Skyworks Solutions, Inc.
Amazon.com, Inc.	<del>Ctrip</del> International	Liberty Global plc Ordinary C	Starbucks Corporation
American Airlines Group	<del>Deputy</del> Sirona	Liberty Interactive	Symantec Corporation
Amgen Inc.	Dish Network, Inc.	Liberty Interactive	Synopsys, Inc.
Analog Devices	Dollar Tree, Inc.	Marriott International, Inc.	T-Mobile US
Apple Inc.	eBay Inc.	Maxim Integrated Products	Take-Two Interactive, Inc.
Applied Materials, Inc.	Electronic Arts	<del> MercadoLibre</del>	Tesla, Inc.
ASML Holding	Expedia, Inc.	Microchip Technology	Texas Instruments, Inc.
Autodesk, Inc.	Express Scripts, Inc.	Micron Technology, Inc.	The Kraft Heinz Company
Automatic Data Processing	Facebook, Inc.	Microsoft Corporation	The Priceline Group
Baidu.com, Inc.	Fastenal Company	Mondelēz International	Twenty-First Century Fox Class A
Biogen, Inc.	Fiserv, Inc.	Monster Beverage	Twenty-First Century Fox Class B
<del>BioMarin</del> Pharmaceutical	Gilead Sciences, Inc.	Mylan N.V.	<del>Ulta</del> Beauty
Broadcom Limited	Hasbro, Inc.	<del>NetScout</del> Inc.	Verisk Analytics
CA Technologies	Henry Schein, Inc.	Netflix	Vertex Pharmaceuticals
Cadence Design Systems	<del>Hologic</del> Inc.	NVIDIA Corporation	Vodafone Group, plc.
Celgene Corporation	IDEXX Laboratories, Inc.	O'Reilly Automotive, Inc.	Walgreens Boots Alliance
Cerner Corporation	Illumina, Inc.	PACCAR Inc.	Western Digital
Charter Communications, Inc.	<del>Incyte</del> Corporation	Paychex, Inc.	Workday, Inc.
Check Point Software	Intel Corporation	PayPal Holdings, Inc.	Wynn Resorts
Cintas Corporation	Intuit, Inc.	QUALCOMM Incorporated	Xilinx, Inc.



Unlike the Dow the Nasdaq is a market capitalization-weighted index, meaning that companies stock values are determined by the total dollar value of each share (Investopedia, 2018). Nasdaq's market value currently sits at \$7,433.85 up 20% from \$6203.19 last year and approximately 7390% from its inception in 1978 when it started at \$100.63. Pictured below in Figure 1.2 the NASDAQ's market summary is displayed.



Figure 1.2. NASDAQ Market Summary from 1978 to 2018 from Google Database

### 1.3.3 Standard & Poor's 500 Index (S&P 500)

The S&P 500 is made up of over 500 stocks from 500 different companies in the United States. The S&P 500 is also used as an analog for the equity and reveals how the country is performing in respect to large businesses. The S&P 500 is used as a

benchmark for the entirety of the market as the 500 different companies that make up the index also make up the majority of the stock market allowing the S&P 500 to be a sort of litmus test for the market as a whole. These companies are large-cap meaning each of them has a market cap of at least \$10 billion.

While the Dow used to be the golden standard of US indices that title has now shifted to the S&P 500. This shift in preferred index is due to the variety of stocks included in the S&P 500 and how the stocks are weighed compared to the Dow. The S&P gives its weight to larger companies, compared to the DJIA that weighs the value of the stock higher than the size of the company.

S&P 500's current market value sits at \$2,721.33 which is up 13% from last years \$2,412.91, and has increased by over 3000% from when it was introduced to the market in 1978 at \$89.89. Pictured below in Figure 1.3 is the market summary for the S&P 500.



Figure 1.3. S&P 500 Market Summary from 1978 to 2018 from Google Database

### 1.3.4 The Russell 2000 Index (RUT)

The Russell 2000 index measures the performance of 2,000 small-cap companies which falls between \$300 million - \$2 billion, and makes up part of the Russell 3000 index as well. This index represents the average for most small-cap businesses within the United States, with a market cap of \$1.3 billion. While the Russell 2000 is not as large as other indices such as the Dow or the Nasdaq it does serve as an important indicator for the American small business economy (Investopedia, 2018).

Russell 2000 currently has a market value of \$1,629.93 up 18% from last years \$1,371.19, and has increased approximately 30% since its introduction to the stock market in 2016. Below in Figure 1.4 is the market summary for the Russell 2000.

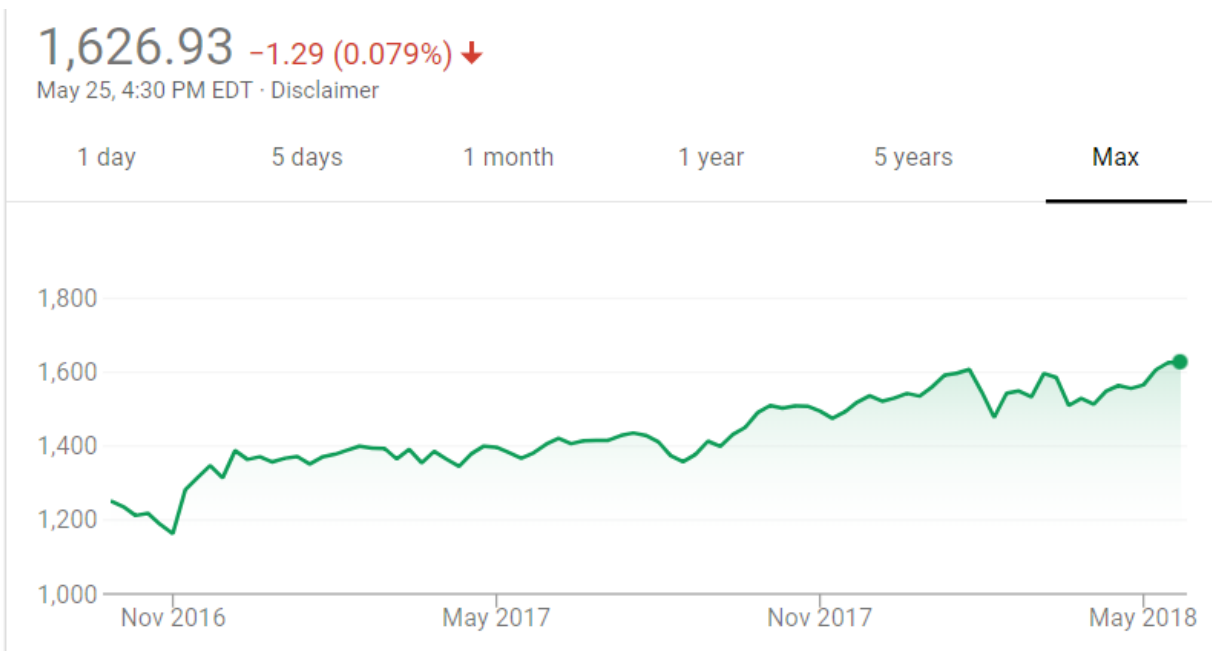


Figure 1.4. Russell 2000 Market Summary from 2016 to 2018 from Google Database

1.3.5 Morgan Stanley Capital International Europe, Australasia, Far East Index (MSCI EAFE)

MSCI EAFE represents both mid and large-cap securities from 21 different markets. These markets are within the regions of Europe, Australasia, and the Far East. This index is widely used as a benchmark for index based financial products (MSCI, 2018). The MSCI EAFE currently sits at \$2,014.52 which is up approximately 10% from last years \$1,833.14, and up 22% from 2013 when the stock was put to market. Below in Figure 1.5 is the market summary for MSCI EAFE.

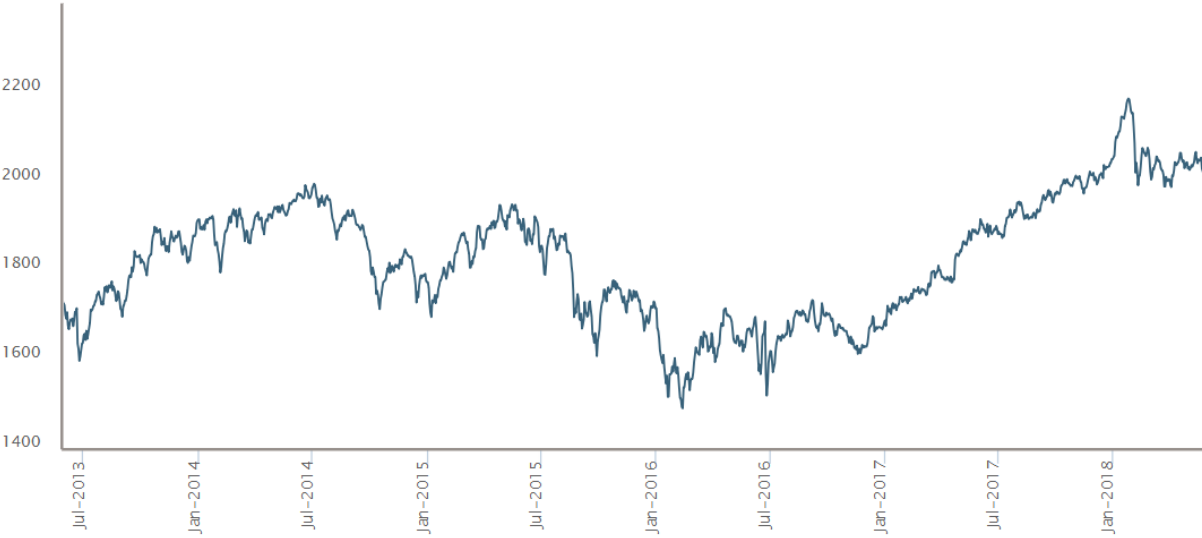


Figure 1.5. MSCI EAFE Market Summary from 2013 to 2018 from MSCI's website

## **1.4 Past Research into Stock Simulations**

### **1.4.1 WPI research**

With 126 total studies performed by WPI students on the intricacies of the stock market, the WPI library database provides a bounty of information on how to effectively trade stocks. One project performed last year compared the effectiveness of passive trading versus swing trading in two different simulations. In their first simulation the student used the swing trading as their preferred method and made a profit of \$80. At the same time their second simulation used passive trading as their preferred method and ended up \$7500 in “debt”. While swing trading was the more effective in this scenario, \$80 is hardly worth the amount of time put into the simulations (Yang, 2018).

Other groups had more success with their project as one project compared trading indices versus penny stocks. While the penny stock simulation did make more money when compared to index trading the author claimed that just because penny stocks are a safer option it does not always make it the best option (Vanner, 2018).

### **1.4.2 Non-WPI research**

In an academic journal published in 1985 the authors discuss how the stock market is such a volatile place. The authors claim that a large part of that volatility is due to the general public’s tendency to overreact to small news resulting in certain stocks called “losers” to tank and “winners” to remain on top. This study showed that “loser” stocks that were allowed to recover after 36 months often outperformed the “winner” stocks that replaced them. This goes on to reveal that if the populace kept a level head when dealing

with stocks that most people would be making more than if they quickly traded their “loser” stocks away in a panic.

### **1.5 Stock Market Crashes Throughout History**

A “crash” in the stock market occurs when large parts of the stock market suddenly and rapidly drop in price. While crashes can be driven by major negative events throughout the world, the majority of the time crashes are driven by a smaller negative event that blooms out of control due to mass panic by the general populace. Once this panic reaches its peak large investors start to sell their shares and the market follows resulting in the prices of stocks falling through the floor (Amedo, 2018).

The notorious example of stock market crashes gone terribly wrong is the Wall Street Crash of 1929, where the splendor of the roaring 20’s was brought to a screeching halt and then replaced with the great depression. Before the market came to a halt people believed that the market would never fail and that this was the beginning of a new era of prosperity, however on March 25, 1929 this was proven incorrect. Investors began rapidly selling their stocks hoping to get something money back from the market, yet share prices continued to drop until the market came to a crashing halt on as the Dow fell 24.55% in just two days indicating the beginning of a dark time in American history (Wikipedia, 2018).

In the resulting chaos of a stock market failure, companies might begin to lay off thousands of employees or even go bankrupt. As the uncertainties of a stock market crash grow greater day by day people who still have money left to spend tend to keep it in a rainy-day fund. The lack of spending cripples the economy further as a lack of spending will keep the economy from propping itself back up after falling.

A more recent example of a rapid market crash is the financial crisis that struck America in 2008. What is widely considered the greatest financial crisis since the Great Depression, the Global Financial Crisis started when American banks gave out countless low-income mortgages to Americans who were deemed “high risk”. When these mortgages were defaulted on many financial institutions who had taken out investments on these low-income mortgages lost large swaths of money causing the banks to declare bankruptcy. This in turn led to large scale foreclosures and unemployment with a loss of wealth estimated to be in the trillions of dollars. This collapse of the American economy caused a noticeable decline in the international economy specifically in the European market where banks also failed, and commodities greatly decreased in market value. Since 2008 the world economy has recovered and continued on a path of continual development as banks have had protections put in place to prevent anything of this nature from happening again (Wikipedia, 2018).

## *Chapter 2: Methodology*

### **2.1 Stock Market Simulator**

While there are a variety of different online trading tools for new investors to use for trading in the stock market such as Etrade, RobinHood, or Charles Schwab the idea of putting real money into an unfamiliar market is terrifying for people who want to understand the market before they make any moves. One way to solve their problems is to instead use a stock market simulation. These simulations are accurate, responsive, and most importantly fun. With a safe environment for new investors to develop trading skills, stock market simulations seek to help new investors better understand the market and make wiser decisions. There are a variety of online simulations for the stock market, for this project the MarketWatch simulator will be used as the analog for the real stock market. MarketWatch was chosen due to its account system that allows for users to compare themselves to similar users and rank one another based upon performance in the market.

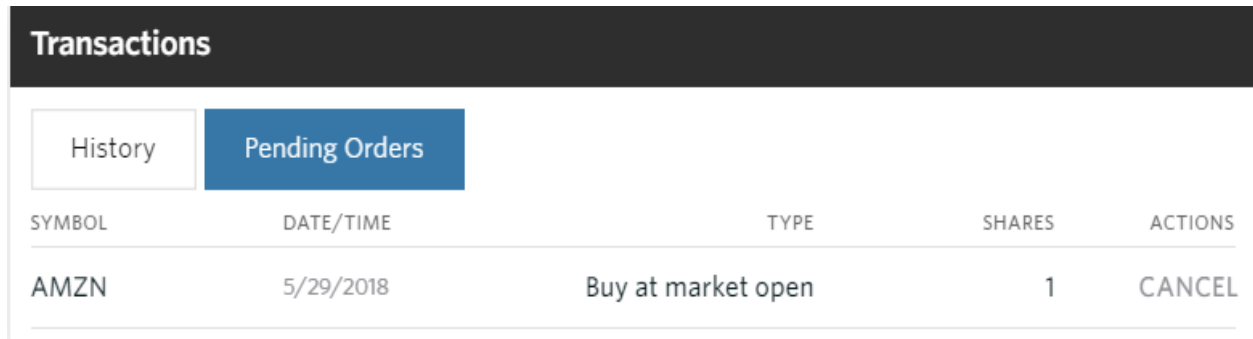
With a starting balance of \$100,000 the simulation will run for four weeks where at the end, all of the data recorded will be compiled and put up for display. The simulator has a user-friendly interface that displays all the information needed to start investing in the simulated stocks. This includes features such as a ticker running along the bottom of the page, a watch list to notify users if any particular stocks are improving, a transaction history page, and a visual representation of how diverse the users' portfolio is.

To buy/sell stocks users search using the companies name or symbol where a list of possible options pops up for users to select. The site shows fee per share, numbers of



shares purchased, quantities available, and even has a \$10 fee to simulate commissions as they are in the market.

After transactions are finalized the stocks are added to the user's portfolio and the money taken from their account as shown in figures 2.1 and 2.2 below.



The screenshot shows a web interface for 'Transactions'. At the top, there is a dark header with the word 'Transactions' in white. Below the header, there are two tabs: 'History' and 'Pending Orders'. The 'Pending Orders' tab is selected and highlighted in blue. Below the tabs is a table with the following columns: SYMBOL, DATE/TIME, TYPE, SHARES, and ACTIONS. The table contains one row of data: AMZN, 5/29/2018, Buy at market open, 1, and CANCEL.

SYMBOL	DATE/TIME	TYPE	SHARES	ACTIONS
AMZN	5/29/2018	Buy at market open	1	CANCEL

*Figure 2.1. Transaction detail on MarketWatch Simulator*

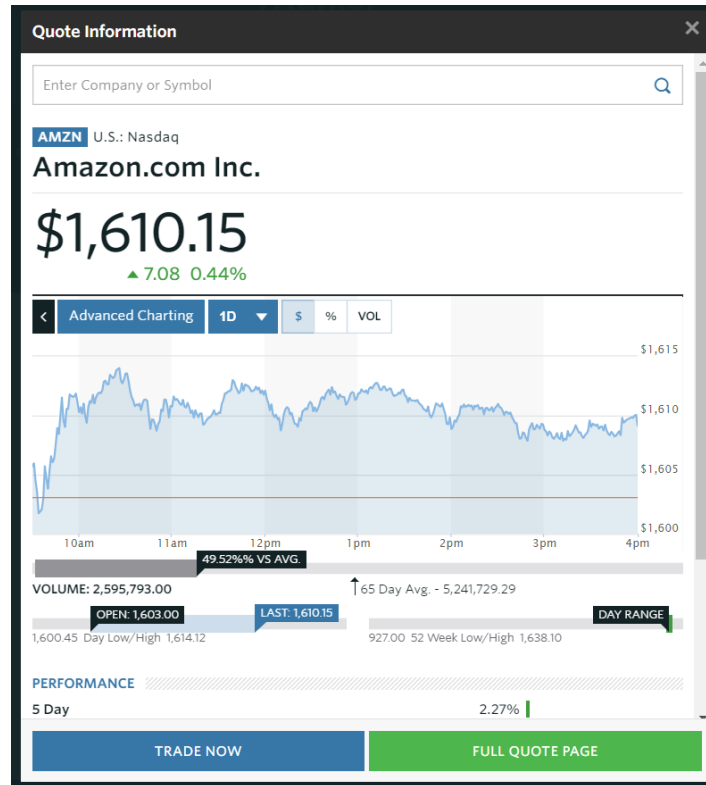


Figure 2.2. Order Stock detail on MarketWatch Simulator

## 2.2 Investment Strategy

### 2.2.1 Passive Trading

Passive trading is a trading technique that aims to maximize returns made over a long period of time by avoiding the fees consistent with frequent trading (Investopedia, 2018). Also known as the “buy-and-hold” strategy this style of trading assumes that the market always comes back and makes up for the money lost when the market dips.

With the introduction of index funds passive trading earns similar returns to those produced naturally by the market over time. This took the hardest part of passive trading out of the equation and made making money off of the stock market into a waiting game.

### 2.2.2 Swing Trading

On the other side of the fence swing trading looks for investors to hold on to shares for only a short amount of time and then trading them back based on the market. This style of trading seeks to find a balance between day trading and passive trading.

Swing trading has two different components based upon how the market is performing. In a bearish market swing trader's will want to get rid of stocks that are underperforming and substitute them with stock that indicate growth in the next market upcycle.

In a bullish market swing trader's will instead try and pick up stocks that will consistently build value over time so that when the market starts on a down cycle once again they can quickly leave and come back when the market is more stable and conducive to trading.

## Chapter 3: Passive Trading

This chapter will contain the records of the stocks that have been traded during the duration of this projects using passive trading. First, the companies chosen for this project and the reasoning behind the choice of said stocks. Along with the selected companies this chapter will also show the progress made by the selected stocks at the end of every week.

### 3.1 Selected Companies

To make this project as authentic as possible the selected companies will come from a diverse range of industries which are e-commerce, technology, and food.

#### 3.1.1 Amazon (AMZN)

Founded in Seattle, Washington on July 5<sup>th</sup>, 1994 by Jeff Bezos Amazon has grown to become one of the most successful companies in recent history. What started as an online bookstore quickly grew into an online market where all sorts of products are cataloged and sold across the world. Amazon continued to grow and in 2015 branched out into the smart home industry along with providing cloud services.

According to the data provided by MarketWatch Amazon had an income of 65.93 billion dollars in 2017 and has had a steadily increasing growth trend over the past five years with a sales growth of 30.8 in 2017 alone.

#### 3.1.2 Apple (AAPL)

Founded in Cupertino, California on April 1<sup>st</sup>, 1976 college dropouts Steve Jobs and Steve Wozniak looked to create a company that would make computers more accessible to the average person. After Jobs left the company in 1985 Apple quickly started to fade into obscurity until his return in 1997. Apple has become a technology

juggernaut producing product lines such as the Mac and the iPhone which are used across the world today.

According to MarketWatch Apple had an income of 86.87 Billion dollars in 2017 with sales growth increasing by 6.7 percent in 2017.

### 3.1.3 Starbucks (SBUX)

Founded in Seattle, Washington on March 31<sup>st</sup>, 1971 by co-founders Jerry Baldwin, Zev Siegl, and Gordon Bowker. Starbucks quickly grew into the largest coffee company in the United States. With over 27,000 shops worldwide Starbucks has grown its brand to encompass teas, juices, merchandise, and food as well as selling their products through other vendors.

According to MarketWatch Starbucks has an income of 5.34 billion dollars in 2017 with a sales increase of 5 percent in 2017.

## 3.2 Simulation

With the three selected companies I invested approximately \$75,000 between each, with \$25,000 kept in reserve for future trades. The trades made will be shown on the table below with each trade coming with a \$10 commission fee.

*Table 3.1 Initial investment on stocks by using passive trading method*

<b>Date</b>	<b>Symbol</b>	<b>Buy/Sell</b>	<b>Price</b>	<b>Shares</b>	<b>Net Cost/ Proceeds</b>	<b>Profit/ Loss</b>	<b>Total Cash</b>	<b>Total Profit</b>
5/29/2018	-	-	-	0	-	-	\$100,000.00	-
5/29/2018	AMZN	Buy	\$1,611.86	30	\$48,665.80	\$0.00	\$51,344.20	\$0.00
5/29/2018	AAPL	Buy	\$187.49	100	\$19,759.00	\$0.00	\$31,575.20	\$0.00
5/29/2018	SBUX	Buy	\$57.23	100	\$6,723.00	\$0.00	\$24,872.20	\$0.00

### 3.2.1 Week One

During the first week of the simulation the selected stocks increased in value by \$1,092.40 from the initial investment shown on table 3.1. However, Starbucks was fell a total of 1.09% costing -\$32.00 worth of profit. Since the selected trading method prevents the shares of Amazon from being sold and the profits reinvested all that can be done right now is to hope that Starbucks bounces back from their loss and becomes a reliable source of growth for the rest of the duration of the simulation. Amazon produced 1.22% growth throughout the week gaining \$890.40 in value or \$29.68 per share, along with Apple who grew 1.65% for a total of \$234.00 in value or \$2.34 per share. Table 3.2 shows how the selected stocks developed throughout the week. While the selected stocks provided stable growth in their provided industries, the U.S. manufacturing sector took a sizeable blow due to tariffs placed on foreign steel and aluminum coming into America. Experts claim that these tariffs ultimately won't have a major impact on global trade they may become part of a larger "tit-for-tat" trade conflict in the coming weeks according to the Wall Street Journal.

*Table 3.2 investment from May 29<sup>th</sup>- June 1<sup>st</sup> using passive trading*

<b>Date</b>	<b>Symbol</b>	<b>Buy/ Sell</b>	<b>Price</b>	<b>Shares</b>	<b>Net Cost/ Proceeds</b>	<b>Profit/ Loss</b>	<b>Total Cash</b>	<b>Total Profit</b>
6/1/2018	-	-	-	-	-	-	\$24,872.20	-
6/1/2018	AMZN	-	\$1,641.54	30	\$0.00	\$0.00	\$24,872.20	\$0.00
6/1/2018	AAPL	-	\$190.24	100	\$0.00	\$0.00	\$24,872.20	\$0.00
6/1/2018	SBUX	-	\$56.91	100	\$0.00	\$0.00	\$24,872.20	\$0.00

### 3.2.2 Week Two

Week two of the simulation revealed the dynamic nature of the stock market with many of the selected stocks dropping in price most noticeably Amazon and Apple who had a week of continuous growth up until Friday. Afraid of how rapidly tech companies such as Amazon and Apple were growing in value, investment bankers warned investors to sell their shares in the tech industry. However, the majority of the market had a stellar week with the world bank estimating worldwide economic growth would exceed 3.0% for the year despite the ever-looming tariffs threatened by President Trump (WSJ Jun 6<sup>th</sup>, 2018). This led to a plummet in share price for the two stocks with Amazon dropping -0.73% or \$14 in value from Fridays open, and Apple quickly followed suit for the day dropping -1.79% or \$1.09 per share as portrayed in figures 3.1 through 3.3.

AMZN U.S.: Nasdaq

# Amazon.com Inc.

# \$1,683.99

▼ -5.31 -0.31%



Figure 3.1 Amazon market trends for the week (June 4<sup>th</sup>-8<sup>th</sup>)



AAPL U.S.: Nasdaq

# Apple Inc.

# \$191.70

▼ -1.76 -0.91%



Figure 3.2. Weekly market trends for Amazon and Apple (June 4<sup>th</sup>-8<sup>th</sup>)

Starbucks continued to drop in value as it took a deep dive dropping -2.04% for the week, slowly climbing Wednesday only to return to past trends and dropping once again compared to weeks open. Table 3.2 shows how the selected stocks developed throughout the week as Apple and Amazon continue to climb.

SBUX U.S.: Nasdaq

# Starbucks Corp.

# \$56.60

▼ -0.54 -0.95%



Figure 3.3 Starbucks market trends for the week (June 4<sup>th</sup>-8<sup>th</sup>)

*Table 3.3 investment from June 4<sup>th</sup>- June 8<sup>th</sup> using passive trading*

<b>Date</b>	<b>Symbol</b>	<b>Buy/ Sell</b>	<b>Price</b>	<b>Shares</b>	<b>Net Cost/ Proceeds</b>	<b>Profit/ Loss</b>	<b>Total Cash</b>	<b>Total Profit</b>
6/8/2018	-	-	-	-	-	-	\$24,872.20	-
6/8/2018	AMZN	-	\$1,683.99	30	\$0.00	\$0.00	\$24,872.20	\$0.00
6/8/2018	AAPL	-	\$191.70	100	\$0.00	\$0.00	\$24,872.20	\$0.00
6/8/2018	SBUX	-	\$56.60	100	\$0.00	\$0.00	\$24,872.20	\$0.00

### 3.2.3 Week Three

With week three coming to a close the performance of the selected stocks showed promise for the upcoming week of trading. This week of steady stock growth came despite the ever imminent U.S. & North Korean summit. Prior to this meeting members of the Federal Reserve, European Central Bank (ECB), and the Bank of Japan met to discuss monetary policy which is expected to provide a large swing to stock prices later on in the week (WSJ Jun 11<sup>th</sup>, 2018). Amazon (AMZN) climbed 1.84% for the week. Amazon has been my most consistent stock as week after week Amazon has grown in value comprising the majority of my returns. Figures 3.4 through 3.7 show how the selected stocks grew throughout the week.

AMZN U.S.: Nasdaq

## Amazon.com Inc.

# \$1,715.97

▼ -7.89 -0.46%



Figure 3.4 weekly growth of AMZN (June 11<sup>th</sup>-15<sup>th</sup>)

Apple had a different story this week as its stock (AAPL) dropped by -1.51% for the week. This drastic drop in value is most likely caused by the tariffs put in place by the United States, which stoked fear for a looming trade war with China. While Apples drop in value is disappointing making rash decisions and having poor impulse control does not work for making long-term money on the stock market.

AAPL U.S.: Nasdaq

# Apple Inc.

# \$188.84

▼ -1.96 -1.03%



Figure 3.5 Apples (AAPL) market trends (June 11<sup>th</sup>-15<sup>th</sup>)

On the bright side Starbucks (SBUX) finally ended the week on a positive note climbing 0.9% or \$0.54 per share. While this growth is not as significant when compared to AMZN or AAPL. This positive growth may be indicative of Starbucks climbing back to its previous values. Table 3.4 shows the change in value for the selected stocks during week three.

SBUX U.S.: Nasdaq

# Starbucks Corp.

# \$57.11

▲ 0.09 0.16%



Figure 3.6 SBUX growth chart for the week (June 11<sup>th</sup>-15<sup>th</sup>)

*Table 3.4 investment from June 11<sup>th</sup>- June 15<sup>th</sup> using passive trading*

<b>Date</b>	<b>Symbol</b>	<b>Buy/ Sell</b>	<b>Price</b>	<b>Shares</b>	<b>Net Cost/ Proceeds</b>	<b>Profit/ Loss</b>	<b>Total Cash</b>	<b>Total Profit</b>
6/15/2018	-	-	-	-	-	-	\$24,872.20	-
6/15/2018	AMZN	-	\$1715.97	30	\$0.00	\$0.00	\$24,872.20	\$0.00
6/15/2018	AAPL	-	\$188.84	100	\$0.00	\$0.00	\$24,872.20	\$0.00
6/15/2018	SBUX	-	\$57.11	100	\$0.00	\$0.00	\$24,872.20	\$0.00

### 3.2.4 Week Four

As week four came to a close much of the progress that had been made in previous weeks was lost to the volatility the market is known for. This market volatility is largely due to the president's foreign investment deals with China and Europe. These proposed tariffs ranged between 20~25% on European vehicles as well as putting a large hamper on Chinese companies that work with American tech firms according to the Wall Street Journal. While market analysts are maintaining upbeat as earnings continue to increase despite the tumultuous turn of events throughout the week. During the fourth week of trading Amazon (AMZN) fell by -0.05% points for the week. While Amazon has provided consistent growth throughout the four weeks of trading this is the lowest Amazon has ever ended for the week.

AMZN U.S.: Nasdaq

# Amazon.com Inc.

# \$1,715.67

▼ -14.55 -0.84%



Figure 3.7 AMZN growth chart for the week (June 18<sup>th</sup>-22<sup>th</sup>)

Apple has continued its trend of poor performance into this week falling another - 1.83% since last week. This sharp drop in share value is likely inspired by the tariffs placed on China last week as Apple assembles their devices in China and the tariffs were put in place to curb foreign investment in American tech firms. As figures 3.7 through 3.9 show the growth of the selected stocks during week four.



AAPL U.S.: Nasdaq

# Apple Inc.

# \$184.92

▼ -0.54 -0.29%



Figure 3.8 AAPL growth chart for the week (June 18<sup>th</sup>-22<sup>th</sup>)

Starbucks has shown itself as a poor investment throughout the majority of this project. This was most apparent when Starbucks plummeted in value upon Wednesdays open. Causing the stock to drop -10.26% in value for the week. As table 3.5 reveals the final results for the month long passive trading simulation.

SBUX U.S.: Nasdaq

# Starbucks Corp.

# \$51.24

▲ 0.62 1.22%



Figure 3.9 SBUX growth chart for the week (June 18<sup>th</sup>-22<sup>th</sup>)

*Table 3.5 investment from June 18<sup>th</sup>- June 22<sup>nd</sup> using passive trading*

<b>Date</b>	<b>Symbol</b>	<b>Buy/ Sell</b>	<b>Price</b>	<b>Shares</b>	<b>Net Cost/ Proceeds</b>	<b>Profit/ Loss</b>	<b>Total Cash</b>	<b>Total Profit</b>
6/22/2018	-	-	-	-	-	-	\$24,872.20	-
6/22/2018	AMZN	sell	\$1,715.67	30	\$51,470.10	\$3,074.30	\$76,342.30	\$3,074.30
6/22/2018	AAPL	sell	\$184.92	100	\$18,492.00	\$1,267.00	\$94,834.30	\$1,807.30
6/22/2018	SBUX	sell	\$51.24	100	\$5,124.00	\$649.00	\$99,958.30	\$1,158.30

### **3.3 Results**

After performing a passive trading strategy throughout the four-week stock simulation I earned a -0.01 return on my \$100,000 investment at \$99,958.30. My first three weeks of trading showed a consistent climb in profit with room to continue growing past a 3.5% return on investment. Then on June 29<sup>th</sup> President Trump expanded the tariffs placed upon China. This expansion of previous tariffs on Chinese exports heavily impacted tech companies like Apple and Amazon both of which made up the majority of my portfolio during my four weeks of trading as shown by figures 3.10 through 3.12.

AMZN U.S.: Nasdaq

# Amazon.com Inc.

# \$1,699.80

▼ -1.65 -0.10%



Figure 3.10 AMZN growth chart throughout the duration of the simulation.

AAPL U.S.: Nasdaq

# Apple Inc.

# \$185.11

▼ -0.39 -0.21%



Figure 3.11 AAPL growth throughout the duration of the simulation

Both figures reflect this plummet in value during the third week of simulation revealing just how impactful geopolitical events can be on the stock market as a whole.

Starbucks on the other hand was a consistent disappointment throughout the four-week simulation. From week one Starbucks had been on a downward trend and with few exceptions stuck to that script of continually operating at a loss throughout the duration of my report.

SBUX U.S.: Nasdaq

# Starbucks Corp.

# \$48.85

▲ 0.31 0.64%



Figure 3.12 SBUX growth throughout the duration of the simulation

## Chapter 4: Swing Trading

### 4.1 Selected Companies

To maintain continuity and to provide a comparison between the effectiveness of the two trading methods the selected companies for both passive and swing trading are the same (Amazon, Apple, Starbucks) with the same number of initial shares to provide a truly controlled environment.

### 4.2 Simulation

With the three selected companies I invested approximately \$75,000 between each, with \$25,000 kept in reserve for future trades. The trades made will be shown on the table below with each trade coming with a \$10 commission fee with the starting values shown by Table 4.1.

*Table 4.1 initial investment on stocks using swing trading method*

<b>Date</b>	<b>Symbol</b>	<b>Buy/Sell</b>	<b>Price</b>	<b>Shares</b>	<b>Net Cost/ Proceeds</b>	<b>Profit/ Loss</b>	<b>Total Cash</b>	<b>Total Profit</b>
5/29/2018	-	-	-	-	-	-	\$100,000.00	-
5/29/2018	AMZN	Buy	\$1,611.86	30	\$48,655.80	\$0.00	\$51,344.20	\$0.00
5/29/2018	AAPL	Buy	\$187.49	100	\$19,749.00	\$0.00	\$31,595.20	\$0.00
5/29/2018	SBUX	Buy	\$57.23	100	\$6,723.00	\$0.00	\$24,872.20	\$0.00

#### 4.2.1 Week One

With much of the data mirroring the previous chapter the first week of the simulation the selected stocks increased in value by \$780.63. However, Starbucks was fell a total of 1.09% costing \$62.88 worth of profit. This rate of growth was lackluster to say the least and due to the poor performance of Starbucks compared to the rest of the investment I am going to sell half of my shares of Starbucks and reinvest the profits equally between Amazon and Apple until Starbucks can prove itself a reliable source of growth. Amazon produced 1.22% growth throughout the week gaining \$594.40 in value along with Apple who grew 1.65% for a total of \$309.11 in value. For these two companies I will continue to invest in them as long as growth remains consistently positive as shown by Table 4.2.

*Table 4.2 investment from May 29<sup>th</sup>- June 1<sup>st</sup> using swing trading*

<b>Date</b>	<b>Symbol</b>	<b>Buy/Sell</b>	<b>Price</b>	<b>Shares</b>	<b>Net Cost/Proceeds</b>	<b>Profit/Loss</b>	<b>Total Cash</b>	<b>Total Profit</b>
6/1/2018	-	-	-	-	-	-	\$24,872.20	-
6/1/2018	AMZN	Buy	\$1,641.54	1	\$1651.54	\$0.00	\$23,222.66	\$0.00
6/1/2018	AAPL	Buy	\$190.23	6	\$1,151.44	\$0.00	\$22,071.22	\$0.00
6/1/2018	SBUX	Sell	\$56.91	50	\$2,835.50	<b>\$36.00</b>	\$24,906.72	<b>\$36.00</b>



#### 4.2.2 Week Two

As this week came with both a surprising rise and a disappointing fall with the selected stocks. However, the selected stocks increased in value by \$1401.10. As Starbucks continues to drop in value, down -0.54% or -\$0.31 a share, I see no reason to keep as many shares as I currently hold. I will again sell half of my shares this weekend, if this trend continues into week three I will sell the remainder of my shares in Starbucks as the company continues to be a poor investment. Amazon and Apple's late drops in price came as a disappointment since they had been growing in value since the beginning of the week. Amazon has continued to grow since the start of the project as Amazon has grown quite rapidly at a rate of 2.50% this week alone making \$38.50 a share giving me no legitimate reason to sell any shares. Apple on the other hand dropped in value -0.91% or -\$1.76, while Apple has gone down in value since the beginning of the day the stock still ended at an all-time high alongside Amazon as tech firms provided a record setting boost to the Nasdaq as well. This growth was attributed to the "structural growth" observed in the tech sector as expert's hedge on continual growth in the near future (WSJ Jun 5<sup>th</sup>, 2018). It is for this reason that I will keep my shares as long as Apple continues to grow back to its value before the dip in value as shown by table 4.3.

Table 4.3 investment from June 4<sup>th</sup>- June 8th using swing trading

<i>Date</i>	<i>Symbol</i>	<i>Buy/Sell</i>	<i>Price</i>	<i>Shares</i>	<i>Net Cost/Proceeds</i>	<i>Profit/Loss</i>	<i>Total Cash</i>	<i>Total Profit</i>
6/8/2018	-	-	-	-	-	-	\$24,906.72	\$36.00
6/8/2018	AMZN		\$1,683.99	31	\$0.00	\$0.00	\$24,906.72	\$0.00
6/8/2018	AAPL	Buy	\$191.70	7	\$1351.90	\$0.00	\$23,554.82	\$0.00
6/8/2018	SBUX	Sell	\$56.60	25	\$1,405.00	\$25.75	\$24,959.82	\$51.75

#### 4.2.3 Week Three

Week three came with a variety of surprises from my selected stocks. Amazon has continued to be a great investment as it increased in value by \$25.83 per share for the week, producing \$800.73 of growth for the week. As Amazon has been such a large part of my portfolio getting rid of my shares would result in a great loss of returns.

Apple on the other hand took a major fall for the week as the tariffs put in place Friday inspired fear in investors who were quick to liquidate stocks. Apple fell by -\$3.05 per share costing -\$341.60 in revenue for the week. Due to the sheer amount of money that was lost with Apple's dive I decided to sell 10 shares of AAPL and invest them into Amazon instead. Finally, Starbucks defied expectations by finishing the week with a degree of positive growth. From its open at \$56.57, SBUX grew by \$0.54 per share resulting in \$13.50 worth of growth for the week. As this is the first week Starbucks has been a profitable venture for the project; selling my remaining shares would only be a

viable strategy if AMZN or AAPL suddenly became much more valuable as shown by table 4.4.

*Table 4.4 investment from June 11<sup>th</sup>- June 15<sup>th</sup> using passive trading*

<b>Date</b>	<b>Symbol</b>	<b>Buy/Sell</b>	<b>Price</b>	<b>Shares</b>	<b>Net Cost/Proceeds</b>	<b>Profit/Loss</b>	<b>Total Cash</b>	<b>Total Profit</b>
6/15/2018	-	-	-	-	-	-	\$24,959.82	<b>\$61.75</b>
6/15/2018	AMZN	Buy	\$1,715.97	1	\$0.00	\$0.00	\$23,243.85	\$0.00
6/15/2018	AAPL	Sell	\$188.84	10	\$1878.40	<b>\$29.16</b>	\$25,122.69	<b>\$90.91</b>
6/15/2018	SBUX		\$57.11	25	\$1,405.00	\$0.00	\$25,122.69	\$0.00

#### 4.2.4 Week Four

Week four came as a disappointment as the selected stocks were on a positive growth trend set to break a 3.5% return on investment by the end of the week. Then my selected stocks fell between Tuesday and Wednesday plummeting my return on investments by over 1%. Amazon increased in value by \$8.15 per share for a weekly increase in value of \$260.80 overall. Amazon has provided positive weekly growth throughout the entire project so with the money I will make from selling other shares I will then invest into Amazon. Apples stocks plummet on Tuesday of this week came as a surprise with Apple dropping -\$2.26 per share resulting in a loss of -\$230.52 in totality.

Due to Apples poor performance over the last two weeks I feel as though I should reduce my investment to 50 shares selling the remainder to purchase other stocks specifically Amazon. Starbucks performed poorly for the week as expected, SBUX dropped -\$5.04 per share or -\$126.00 in total. Starbucks was on its last legs for a while only being kept afloat by last week's performance, however due to just how abysmal this week was for Starbucks I intend to sell my remaining shares as nothing good has come from them overall as shown by table 4.5

*Table 4.5 investment from June 18<sup>th</sup>- June 22<sup>nd</sup> using swing trading*

<b>Date</b>	<b>Symbol</b>	<b>Buy/Sell</b>	<b>Price</b>	<b>Shares</b>	<b>Net Cost/Proceeds</b>	<b>Profit/Loss</b>	<b>Total Cash</b>	<b>Total Profit</b>
6/22/2018	-	-	-	-	-	-	\$25,122.69	-
6/22/2018	AMZN	Sell	\$1,715.67	32	\$54,891.44	\$3,311.60	\$80,014.13	\$3,220.70
6/22/2018	AAPL	Sell	\$184.92	103	\$19,036.76	\$316.94	\$99,105.89	\$2,903.76
6/22/2018	SBUX	Sell	\$51.24	25	\$1,271.00	\$159.75	\$100,376.89	\$2,744.01

### 4.3 Results

With swing trading I saw an increased amount of return when compared to passive trading. With my Active trading simulation my return on investment reached as high as 3.9% until the recent tariffs were put in place. These tariffs brought my returns down to 0.03% of the original \$100,000 at \$100,376.89 where the ended the simulation. Most of this growth came from Amazon who took a nosedive when the tariffs were announced but bounced back to where the stock rested earlier in the simulation. Apple on the other hand had not recovered from the tariffs by the end of the simulation resulting in the stock ending on a negative note. This sentiment was also shared with Starbucks; however, I did not feel the full brunt of Starbucks drop in value due to the fact that I had sold all of my shares the previous week and exchanged them for the more profitable Amazon. Without doing any in depth Analysis based upon the raw results of my two simulations it seems to be that Swing Trading is slightly more effective than Passive trading just looking at the returns from the month of trading. However, the disruptive nature of the trade war between the United States and China may not allow for the true nature of the two trading methods to be revealed until put up to a more scrupulous analysis.

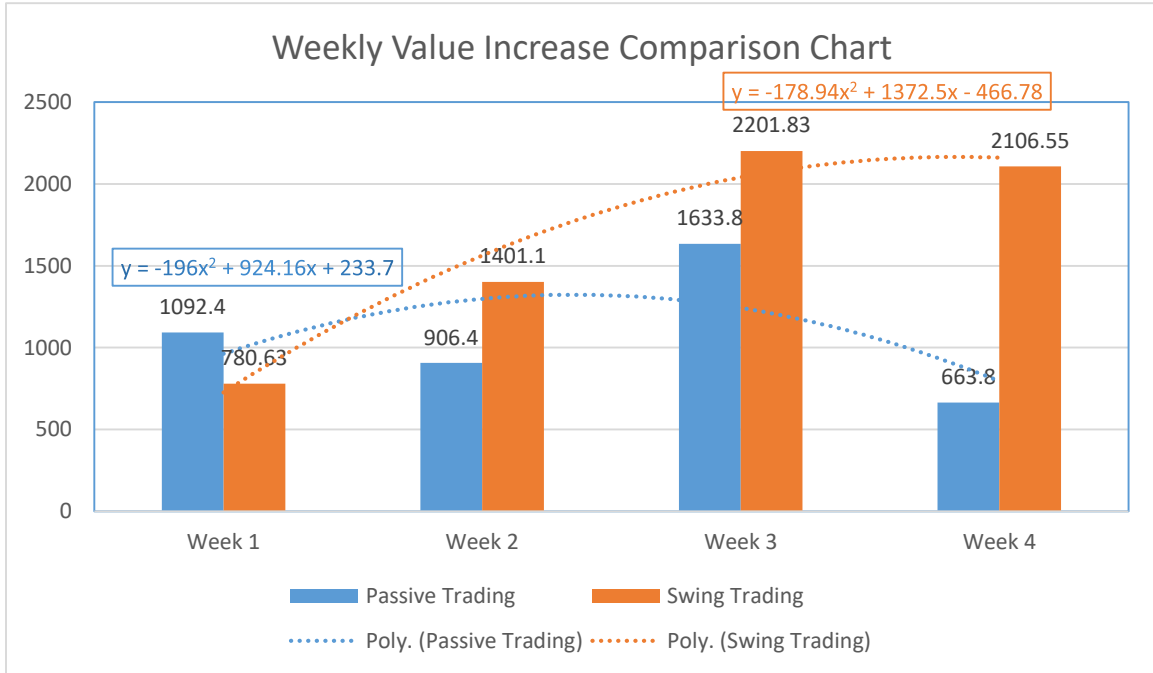
## Chapter 5: Analysis and Comparison

During the four-week simulation I tested the two trading strategies, passive trading and swing trading against one another. Swing trading was more successful compared to passive trading. Wing trading accumulated a total of \$100,376.89 while passive trading made \$99,958.30 this resulted in a 0.03% and a -0.01% return on investment respectively. At their peaks however, swing trading was noticeably more effective over the long term when compared to passive trading which was more effective during the initial weeks of the simulation.

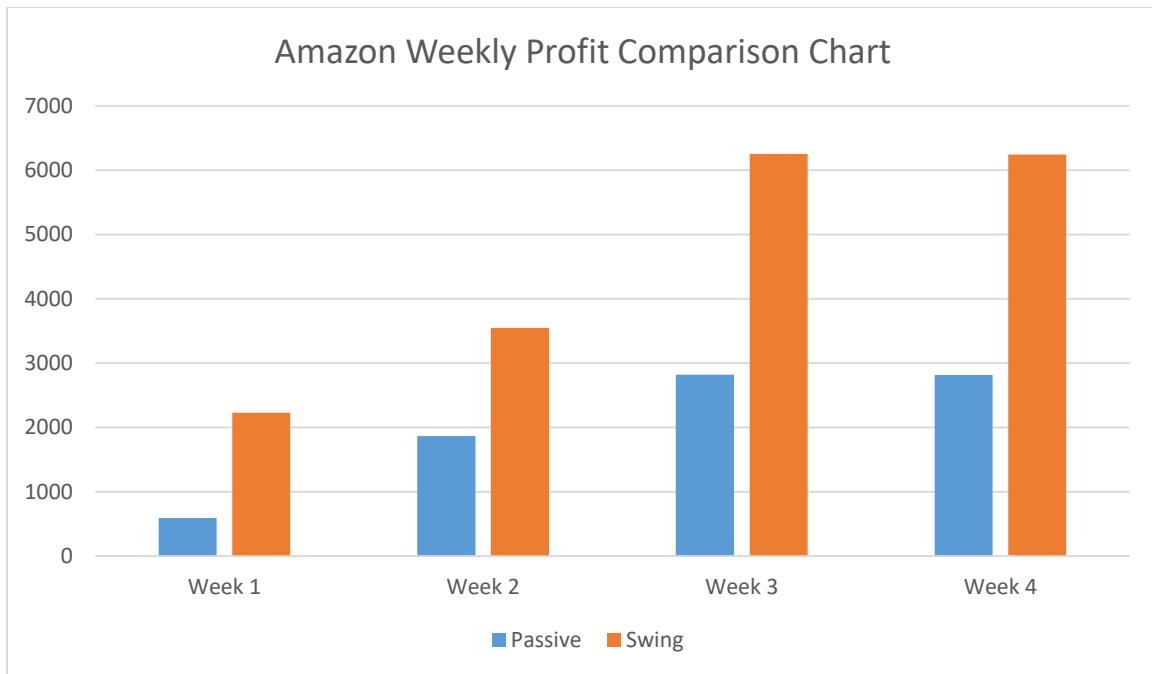
Due to the diversity of my portfolio during the four-week simulation it is fair to say that the results of the simulated trading are genuine. The methodology that I used to select a diverse collection of companies was to pick a “small”, “medium”, and “large” company where it would take multiple “small” shares to be equal in value to a “medium” share and multiple “medium” shares to equal a “large” share. On top of this criteria I also made sure that each company operated in different sectors as to prevent any industry specific events from causing too much damage to my portfolio. This was because the companies were shared between the two trading methods acting as a control between the two.

Figure 5.1 shows the weekly difference in growth between passive and swing trading methods. As the chart shows passive trading starts off at an advantage but ends up decreasing as the market falls. On the other hand, Swing trading shows how even if the market is not performing at peak levels, efficient management of shares can produce growth during times of decline.

Figure 5.1 Weekly Value Increase Comparison Chart



Of the companies that I had selected for this project Amazon was the most successful by far. Both styles of trading led to notable profit, however swing trading brought in more profit over the four-week period compared to passive trading. The results of this shift in trading style is visibly apparent on Figure 5.2 as it shows just how much extra revenue can be brought in just by being prudent while investing.



*Figure 5.2 Amazons Profit Comparison Chart*

On the other hand, swing trading prevented more substantial losses while trading both Apple and Starbucks. In both simulations these stocks lost me money nevertheless; swing trading mitigated my losses at a much higher rate than passive trading did as seen in Figures 5.3 and 5.4.

As my simulation went on political tensions between the U.S. and China progressed as well. These tariffs largely ignored both Amazon and Starbucks, as consumer products were largely untouched. The technology industry took a massive hit from these tariffs, especially Apple who has numerous assembly plants in China. This valley of value loss can be seen in figure 5.3 where my weekly profit off of Apple is shown.



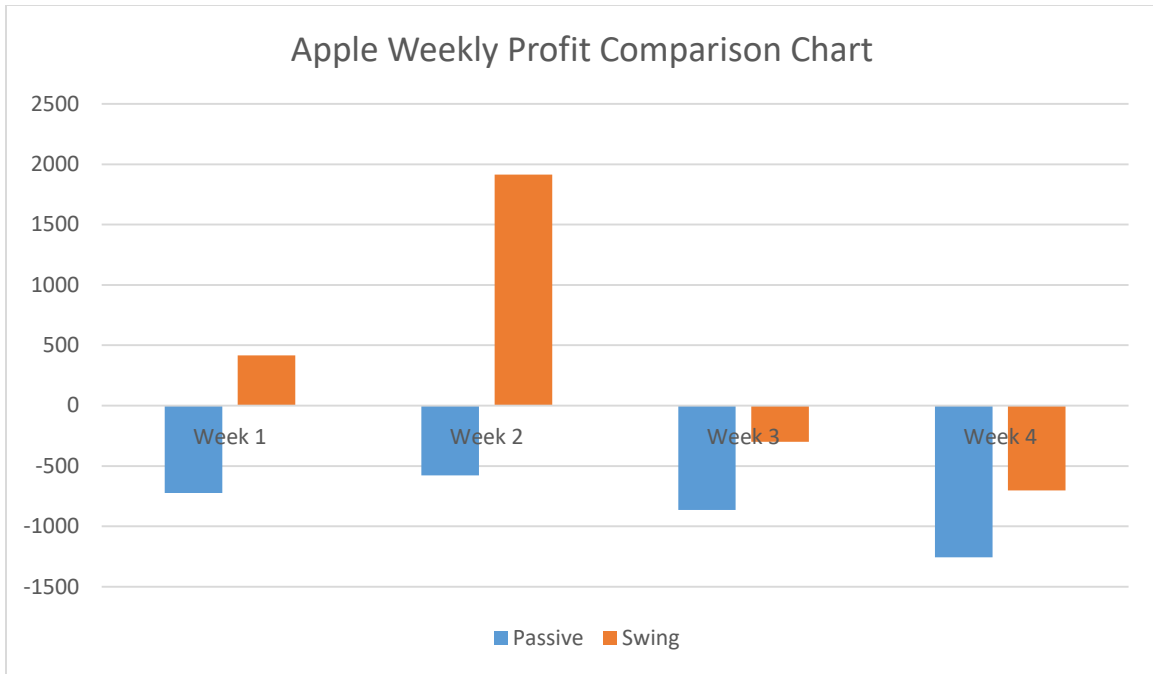


Figure 5.3 Apples Profit Comparison Chart

While Starbucks mostly avoided the tariffs implemented by the Trump administration, their stock still fared poorly compared to Amazon. This failure can be traced back to the arrest of two African American patrons in April. It was because of this arrest and ensuing boycott over the mistreatment of these two men that led to the continual plummet in value that is seen in this report. Figure 5.4 portrays this decline in value as well as the impact swing trading had in tempering the losses felt during the simulation.

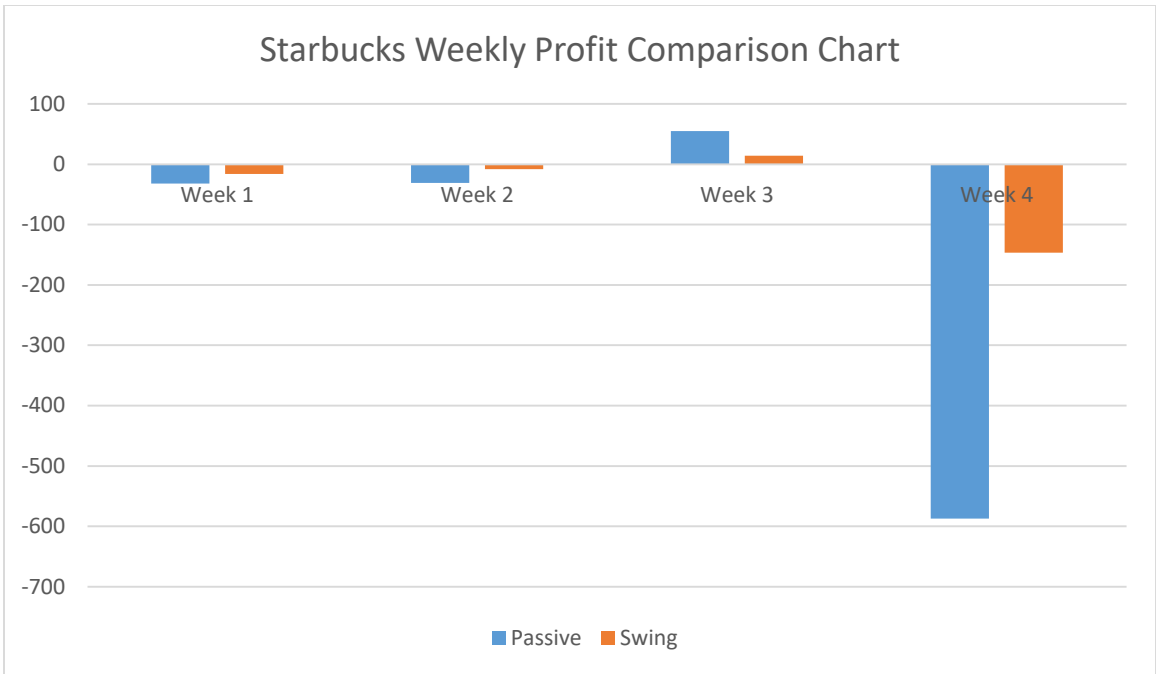


Figure 5.4 Starbucks Profit Comparison Chart

## Chapter 6: Conclusion

Based on the results of the stock market simulation, swing trading is the most effective of the two methods selected for this project. This was shown as the project progressed and passive trading began to stagnate in comparison to swing trading. If the simulation continued I feel as if this stagnation would progress as time went on and swing trading would consistently increase in value. Going into this project as a neophyte to the machinations of the stock market, my trading went much better than I had expected, as well as accomplishing the goals I had set at the beginning of the project.

My first goal was to increase my understanding of the stock markets basic functions. After finishing the simulation, I have indeed accomplished this goal as my preconceived notions of how the stock market worked were shattered and replaced with a more tempered and reasonable set of expectations. Secondly, I strove to apply positive investment strategies throughout the duration of my project. This goal was also accomplished as I learned to use the tools available to me through MarketWatch, to inform my trades which in turn increased the return on investment compared to passive trading. Along with these two goals, I also learned how current events can impact the stock market and cause rapid shifts in stock value compared to naturally occurring fluctuations. This became apparent during the current trade war with China as many of the tariffs and statements that President Trump made impacted the value of the stocks that I held.

I have been able to expand upon my rudimentary understanding of the stock market. Also with the lessons learned from this project I have been able to apply positive trading strategies to stocks under my ownership. I am grateful for the opportunity and

leadership throughout this project that allowed me to immerse myself in a stock market simulation and I feel confident that the knowledge gained through this process will influence how I approach investing in the future.

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## Appendix

Table A Passive Trading simulation profile

Date	Symbol	Buy/Sell	Price	Share	Net Cost / Proceeds	Profit/Loss	Total Cash	Total Profit
5/29/2018	-	-	-	-	-	-	\$100,000.00	-
5/29/2018	AMZN	Buy	\$1,611.86	30	\$48,665.80	\$0.00	\$51,344.20	\$0.00
5/29/2018	AAPL	Buy	\$187.49	100	\$19,759.00	\$0.00	\$31,575.20	\$0.00
5/29/2018	SBUX	Buy	\$57.23	100	\$6,733.00	\$0.00	\$24,872.20	\$0.00
6/1/2018	AMZN	Hold	\$1,641.54	30	\$0.00	\$0.00	\$24,872.20	\$0.00
6/1/2018	AAPL	Hold	\$190.24	100	\$0.00	\$0.00	\$24,872.20	\$0.00
6/1/2018	SBUX	Hold	\$57.23	100	\$0.00	\$0.00	\$24,872.20	\$0.00
6/8/2018	AMZN	Hold	\$1,683.99	30	\$0.00	\$0.00	\$24,872.20	\$0.00
6/8/2018	AAPL	Hold	\$191.70	100	\$0.00	\$0.00	\$24,872.20	\$0.00
6/8/2018	SBUX	Hold	\$56.60	100	\$0.00	\$0.00	\$24,872.20	\$0.00
6/15/2018	AMZN	Hold	\$1715.97	30	\$0.00	\$0.00	\$24,872.20	\$0.00
6/15/2018	AAPL	Hold	\$188.84	100	\$0.00	\$0.00	\$24,872.20	\$0.00
6/15/2018	SBUX	Hold	\$57.11	100	\$0.00	\$0.00	\$24,872.20	\$0.00
6/22/2018	AMZN	Sell	\$1715.67	30	\$51,470.10	\$3,074.30	\$76,342.30	\$3,074.30
6/22/2018	AAPL	Sell	\$184.92	100	\$18,492.00	\$1,267.00	\$94,834.30	\$1,807.30
6/22/2018	SBUX	Sell	\$51.24	100	\$5,124.00	\$649.00	\$99,958.30	\$1,158.30

Table B Swing Trading stock simulation profile

Date	Symbol	Buy/Sell	Price	Share	Net Cost/ Proceeds	Profit/Los s	Total Cash	Total Profit
5/29/2018	-	-	-	-	-	-	\$100,000.00	-
5/29/2018	AMZN	Buy	\$1,611.86	30	\$48,665.80	\$0.00	\$51,344.20	\$0.00
5/29/2018	AAPL	Buy	\$187.49	100	\$19,759.00	\$0.00	\$31,575.20	\$0.00
5/29/2018	SBUX	Buy	\$57.23	100	\$6,733.00	\$0.00	\$24,872.20	\$0.00
6/1/2018	AMZN	Buy	\$1,641.54	1	\$1651.54	\$0.00	\$23,222.66	\$0.00
6/1/2018	AAPL	Buy	\$190.23	6	\$1,151.44	\$0.00	\$22,071.22	\$0.00
6/1/2018	SBUX	Sell	\$56.91	50	\$2,835.50	\$36.00	\$24,906.72	\$36.00
6/8/2018	AMZN	Hold	\$1,641.54	31	\$0.00	\$0.00	\$24,906.72	\$0.00
6/8/2018	AAPL	Buy	\$190.23	7	\$1351.90	\$0.00	\$23,554.82	\$0.00
6/8/2018	SBUX	Sell	\$56.60	25	\$1,405.00	\$25.75	\$24,959.82	\$51.75
6/15/2018	AMZN	Buy	\$1,715.97	1	\$0.00	\$0.00	\$23,243.85	\$0.00
6/15/2018	AAPL	Sell	\$188.84	10	\$1878.40	\$29.16	\$25,122.69	\$90.91
6/15/2018	SBUX	Hold	\$57.11	25	\$1,405.00	\$0.00	\$25,122.69	\$0.00
6/22/2018	AMZN	Sell	\$1,715.67	32	\$54,891.44	\$3,311.60	\$80,014.13	\$3,220.70
6/22/2018	AAPL	Sell	\$184.92	103	\$19,036.76	\$316.94	\$99,105.89	\$2,903.76
6/22/2018	SBUX	Sell	\$51.24	25	\$1,271.00	\$159.75	\$100,376.89	\$2,744.01