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Stock Market Simulation

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By

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Abstract

This project is a six-week stock market simulation. The goal of this project is to evaluate the effectiveness of day trading and trend following strategies. Using real-time stock prices and the Investopedia simulator, both strategies were tested with a starting investment of \$100,000. The day trading strategy achieved a final 4.60% return, while the trend following strategy resulted in a final 7.17% return. Both strategies were benchmarked against the S&P 500 index, which experienced a 5.54% increase over the simulation period. The results indicated that the trend following strategy provided more consistent returns with lower volatility compared to day trading. This project offered valuable insights into trading strategies, market analysis, and risk management.

Acknowledgments

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Chapter 1: Introduction

1.1 Goals, Scope, and General Plan

The purpose of this Interactive Qualifying Project is to delve into the intricacies of the stock market, aiming to equip a new investor with the essential knowledge and skills needed for proficient investing. The research will commence with a two-week period dedicated to understanding the foundational aspects of the stock market. This will include a study of its recent history, investment and analysis methods, common trends, and relevant terminology. Such foundational knowledge is critical as it forms the basis for making informed investment decisions. Following the initial research phase, the project will transition into a six-week data collection phase using stock market simulations. This practical approach will focus on two specific investment methods: trend following and day trading. By employing these strategies in simulated environments, the project aims to capture a broad spectrum of data, providing insights into the effectiveness of each method under various market conditions. Each simulation will start with nearly identical portfolios to maintain consistency in the comparative analysis, enabling a clear evaluation of each strategy's performance. The final three weeks will be dedicated to a thorough analysis of the collected data. This phase will explore the results to determine the success rates and potential reasons behind the performance of each investment strategy. By the end of this project, the new investor is expected to not only understand the theoretical aspects of stock market investments but also gain practical insights that are critical for real-world investing.

1.2 Evolution of Trading Strategies

The evolution of trading strategies in the stock market is a testament to the dynamic and adaptive nature of financial markets. Initially, the stock market was dominated by fundamental

analysis, where decisions were based on company earnings, market conditions, and economic indicators. However, as technology advanced and market data became more accessible, the strategies employed by traders evolved significantly. The visualized history of trading is shown below in Figure 1.1 [2].

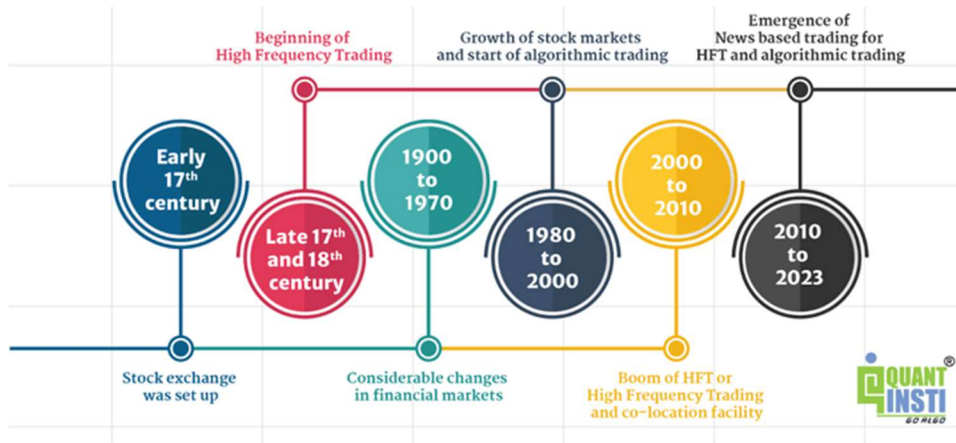


Figure 1.1 History of algorithmic trading, HFT and news based trading [2]

In the 1970s and 1980s, the introduction of technical analysis marked a pivotal change. Traders began using historical price charts and market statistics to predict future market behavior. This period was characterized by the successful application of relatively simple technical trading rules, such as moving averages and price filters, which provided positive, risk-adjusted returns. As documented in the broader literature, these methods were initially quite effective due to less sophisticated market participation and lower competition.

However, as Andrew Lo's Adaptive Markets Hypothesis (AMH) suggests, financial markets are ecosystems where opportunities for profits are eroded by the learning and adaptation of market participants [1]. By the late 1980s and 1990s, as more traders and analysts began to employ and refine technical strategies, the easy profits previously available from these simple

technical rules began to diminish [1]. This necessitated a shift towards more sophisticated and complex strategies.

This adaptation is evident in the increasing use of quantitative and algorithmic trading strategies in the stock market. The development of high-frequency trading (HFT) systems in the early 2000s marked another significant evolution [1]. These systems use complex algorithms to execute trades at ultra-high speeds, exploiting very small price discrepancies that may exist only for fractions of a second.

In addition to technical and algorithmic strategies, the integration of behavioral finance into trading strategies began to gain traction. This approach considers how psychological influences and biases can affect market outcomes, acknowledging that traders and investors might not always act rationally. This perspective provided a new dimension to trading strategies, offering explanations for market anomalies and investor behavior that were not accounted for by traditional financial theories.

The core principle of the AMH is the importance of adaptation to changing market conditions [1]. In the stock market, this is reflected in the continuous refinement of trading strategies. For example, the strategy of using a combination of fundamental and technical analysis, or the integration of machine learning models to predict stock movements, are results of traders adapting to increasingly efficient markets.

In summary, the evolution of trading strategies in the stock market reflects a response to new technologies, deeper insights into market behavior, and an ever-increasing competition among traders. The shift from simple technical rules to complex, data-driven, and psychologically informed strategies demonstrate the market's adaptive nature. As traders continue to learn and

evolve, so too do the strategies they employ, constantly pushing the boundaries of what is possible in stock market trading.

1.3 Fundamental Analysis

Fundamental analysis remains a cornerstone of investing strategies in the stock market. It seeks to ascertain the intrinsic value of a security, driven by the economic and financial factors that influence a company's actual business performance. This method goes beyond surface-level metrics to evaluate the real worth of a company, providing insights into whether a stock is undervalued or overvalued based on current market prices [3].

At its core, fundamental analysis examines everything from the overall economy, industry conditions, and individual company performance to predict a stock's future price trajectory. The process involves analyzing income statements, balance sheets, industry trends, and macroeconomic indicators to determine a company's financial health and operational efficiency.

The broader economic environment plays a crucial role in fundamental analysis. Economic indicators such as GDP growth, unemployment rates, inflation levels, and monetary policies significantly impact market sectors and, consequently, individual stocks. For instance, high unemployment may lead to decreased consumer spending, affecting companies reliant on discretionary spending. Similarly, interest rate changes by central banks can influence investment decisions across various sectors [3].

Sector analysis further refines this approach by evaluating specific industries' sensitivity to economic cycles [3]. For example, technology stocks might react differently to economic changes compared to utilities, which are generally more stable due to consistent consumer demand.

The financial health of a company is typically assessed through its financial statements—the balance sheet, income statement, and cash flow statement. Analysts use these documents to extract key ratios that measure liquidity, solvency, profitability, and operational efficiency.

- Liquidity Ratios like the Current Ratio and Quick Ratio assess a company's ability to meet short-term obligations, which is crucial for maintaining operational fluidity [3].
- Solvency Ratios, including Debt-to-Equity and Interest Coverage ratios, evaluate a company's capacity to sustain operations in the long term by meeting its debt-related obligations [3].
- Profitability Ratios such as Return on Assets (ROA) and Return on Equity (ROE) indicate how well a company uses its assets to generate earnings [3].
- Market Value Ratios, including the Price-to-Earnings (P/E) and Price-to-Book (P/B) ratios, help gauge market expectations of a company's growth and profitability [3].

The ultimate goal of fundamental analysis is to determine a stock's intrinsic value. This is often done using valuation models like the Dividend Discount Model (DDM) and Discounted Cash Flow (DCF) analysis, which involve predicting future dividends and cash flows and discounting them to the present value [3]. Analysts compare this intrinsic value to the market price to identify potential investment opportunities—stocks trading below their intrinsic value are considered undervalued, suggesting a buy opportunity, whereas those trading above are seen as overvalued.

Fundamental analysis provides a robust framework for evaluating investment opportunities by analyzing economic, industry, and financial conditions. While it requires considerable data gathering and interpretation, its focus on underlying value offers a disciplined approach to investing. This method's predictive power comes from its detailed scrutiny of how external factors

and company performance converge to affect stock prices. For investors, mastering fundamental analysis is key to making informed decisions that align with long-term financial goals.

1.4 Technical Analysis

Technical analysis is a critical tool employed by traders to forecast future price movements based on historical trading data, primarily price and volume. Unlike fundamental analysis, which looks at economic and financial factors to determine a security's value, technical analysis focuses on identifying patterns and trends that suggest future activity [5].

The foundation of technical analysis lies in the assumption that market prices reflect all available information and follow predictable historical patterns. This principle was first articulated through the Dow Theory, developed by Charles Dow in the early 20th century, which posits that stock prices move in identifiable trends that are influenced by the market's collective psychology [4]. Technical analysis has evolved from simple trend following to a complex discipline that employs a myriad of charting tools, indicators, and statistical models to predict market movements.

At the heart of technical analysis are various types of charts, which help analysts visualize historical market data and discern potential future movements. The most common are line charts, bar charts, and candlestick charts, each providing different insights into market sentiment and potential price action [5]. These charts allow analysts to identify price patterns such as head and shoulders, flags, and double tops which are believed to repeat over time due to consistent human behavior.

Technical analysis integrates various mathematical constructs known as indicators that help to clarify price trends and market direction. These include trend indicators like moving averages, momentum indicators such as the Relative Strength Index (RSI), and volume indicators

like the On-Balance Volume (OBV). Each indicator provides a different perspective on the market forces at play, helping traders to make informed predictions about future market movements [5].

Despite its widespread use, technical analysis has often been met with skepticism from the academic community. Early empirical studies criticized technical analysis as ineffective in predicting future price movements, particularly in efficient markets where price adjustments occur quickly and reflect all known information. However, studies from the latter part of the 20th century began to show more nuanced results. For instance, while simple technical strategies may not consistently outperform market benchmarks, more sophisticated methods that employ advanced algorithms and data analytics can uncover profitable opportunities not apparent through traditional methods [4].

With the advent of digital technology and increased computing power, technical analysis has embraced more complex statistical techniques and machine learning algorithms to enhance predictive accuracy. Recent studies have explored how artificial intelligence can be integrated with traditional technical analysis to develop more robust trading systems [5]. These systems are capable of analyzing vast datasets quickly, identifying subtle patterns that would be indiscernible to human analysts.

Today, technical analysis is an integral component of the trading strategies deployed in various financial markets, from equities to forex and commodities. Its adaptability and the development of user-friendly analytical software have democratized access to technical trading tools, allowing even novice traders to apply sophisticated technical strategies in real-time. Technical analysis has evolved significantly from its early days of chart-based speculations to become a sophisticated area of study that incorporates both traditional techniques and advanced computational methods [4]. Its ability to adapt to changing market conditions and technological

advancements has ensured its place as a vital tool in the arsenal of modern traders. While it may not be infallible, its utility in providing insights into market psychology and participant behavior makes it invaluable for developing comprehensive trading strategies.

1.5 Stock Market Index

Stock market indices are pivotal for tracking the performance of specific segments of the stock market or the market as a whole. These indices aggregate the values of selected stocks, providing snapshots of market trends and benchmarks against which the performance of individual stocks and portfolios can be measured [6].

A stock market index is a statistical measure that reflects the composite value of a basket of stocks. Indices are used by investors and financial managers to describe the market and to compare the returns on specific investments [6]. They also serve as indicators of the economic health and the investor sentiment surrounding various market segments. Prominent examples of such indices include the Dow Jones Industrial Average (DJIA), the NASDAQ Composite Index, and the Standard & Poor's 500 Index (S&P 500).

Stock market indices function primarily as benchmarks for the performance of investments and as economic indicators. They reflect the collective value movements of their component stocks, typically weighted by market capitalization or other factors such as equal weighting or fundamental weighting. These indices provide a critical benchmarking tool for investors aiming to outperform the market or match its returns with passive investment strategies. Additionally, given their composition of leading companies across various sectors, these indices offer insights into the economic conditions prevailing in those sectors [6].

The S&P 500, crafted by Standard & Poor's, is considered one of the most critical indicators of U.S. large-cap equity performance. It encompasses 500 of the largest companies listed on stock exchanges in the United States, reflecting significant aspects of U.S. economic activity [8].

The S&P 500 employs a market-capitalization-weighted index methodology, which means the impact of each stock on the index's overall return is proportional to its market value. The selection of companies in the index is determined by Standard & Poor's Index Committee based on criteria including market size, liquidity, and industry representation [8]. This approach ensures that the index portrays an accurate representation of the U.S. corporate landscape.

The S&P 500 is widely used by investors as a benchmark for the performance of U.S. equity investments. Due to its broad and diverse exposure to all sectors of the economy, it is considered a more accurate measure of market conditions compared to indices with narrower focuses, such as the DJIA [8]. Mutual funds and exchange-traded funds (ETFs) that track the S&P 500 are popular among investors seeking to mirror the market's performance through a single, diversified investment [8].

Due to its comprehensive coverage of the major industries, the S&P 500 is often analyzed to gauge the overall health of the U.S. economy and investor sentiment towards various sectors. Fluctuations in the S&P 500 can indicate broader market trends and are frequently used by economists and policymakers to assess economic conditions [8].

S&P 500's current market value is \$5,306.04, and its market summary is shown below in Figure 1.2 [7].

S&P 500

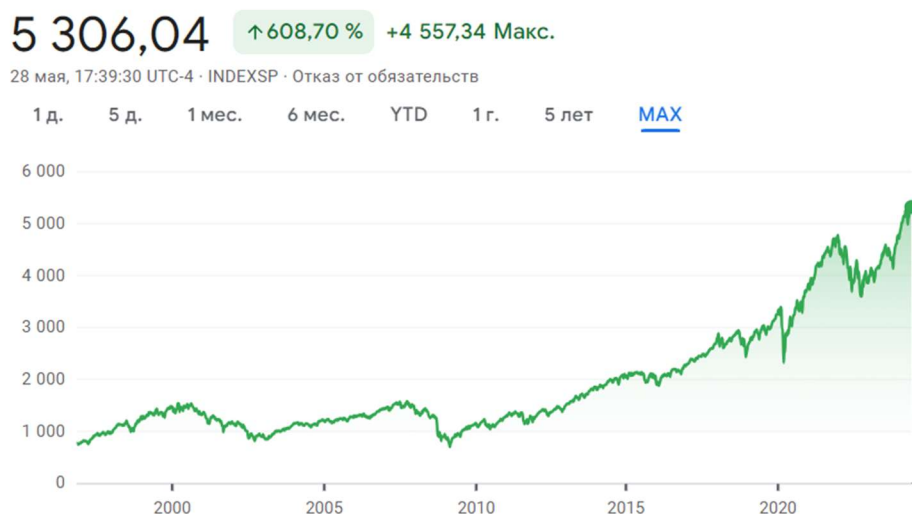


Figure 1.2 S&P 500 Market Summary from 1996 to 2024 [7]

The S&P 500 has shown itself to be a sensitive indicator of both domestic and international economic events. Its recent performances have highlighted the effects of global economic uncertainties, technological advancements, and changes in consumer behavior on the U.S. economy. Analysts scrutinize these movements to forecast future economic activities and to guide investment decisions.

In conclusion, the Standard & Poor's 500 Index is not merely a measure of stock market performance but a barometer for the U.S. economy. Its extensive use as a benchmark and economic indicator underscores its utility to investors, analysts, and policymakers alike. The S&P 500 remains a critical tool for anyone engaged in serious financial analysis or involved in the financial markets, offering insights that are vital for informed decision-making in an increasingly complex economic environment.

1.6 Stock Market in 2024

As we approach 2024, the stock market landscape is characterized by moderated expectations amidst prevailing economic uncertainties. The U.S. stock market, represented by indices such as the S&P 500, anticipates modest growth with considerable challenges impacting corporate earnings and market valuations.

Analysts project that 2024 will not be a banner year for the market due to a combination of high valuations, expected normalization of monetary policies, and ongoing geopolitical tensions which could dampen investor sentiment and curb economic growth. With inflation expected to remain above target, central banks are likely to maintain higher interest rates longer than previously anticipated, which could limit equity market gains [9].

Given the anticipated economic cooling and tighter financial conditions, investors might look towards rebalancing their portfolios towards more defensively positioned sectors such as utilities and consumer staples, which tend to outperform during times of economic uncertainty. Additionally, opportunities may arise from sectors that can benefit from technological innovations and energy transitions, which are expected to continue their relevance in the coming years [10].

Specifically for the S&P 500, expectations for 2024 include modest earnings growth of around 2-3%, influenced by a slowing economy and tighter monetary conditions. This environment suggests a more selective approach to stock picking, focusing on companies with strong fundamentals and sustainable growth prospects [9][11].

Navigating the stock market in 2024 will require a cautious yet opportunistic investment strategy, emphasizing diversification and a keen eye on macroeconomic indicators and sector-

specific trends. Investors are advised to remain vigilant and responsive to the evolving economic landscape to mitigate risks and capitalize on potential market opportunities.

Chapter 2: Trading Strategies

2.1 Stock Market Simulation Platform

For this project, Investopedia's Stock Market Simulator has been chosen as the primary platform for conducting stock market simulations. Investopedia is widely recognized for its comprehensive educational resources and tools tailored for both novice and experienced investors. The Stock Market Simulator offers a robust environment for simulating real-world trading, allowing users to gain practical experience without the financial risks associated with actual market participation.

Investopedia's simulator provides several key features that make it an ideal choice for this project. Firstly, it uses real-time market data to emulate the conditions of the actual stock market [12]. This feature is crucial for accurately assessing the performance of different investment strategies, as it allows users to respond to live market fluctuations and news events, much like in a real-world scenario. The ability to use real-time data ensures that the simulation reflects the current market dynamics, making the learning experience more relevant and practical.

Secondly, the platform offers a wide range of investment options, including stocks, options, and ETFs [12]. This variety enables users to explore and practice different investment strategies, such as trend following and day trading, which are the focus of this project. The diversity in investment options allows for a comprehensive analysis of each strategy's performance across different asset classes, providing a holistic view of their effectiveness.

Thirdly, Investopedia's simulator is designed with an intuitive interface that makes it accessible for beginners while still providing advanced features useful for more experienced traders [12]. This balance ensures that the platform can effectively support the learning curve of a new investor while still providing depth for comprehensive analysis. The user-friendly design minimizes the learning barrier and helps users to focus more on their trading strategies rather than navigating the platform.

Furthermore, the simulator is integrated with Investopedia's extensive library of articles, tutorials, and investment guides. This integration serves as both a practical and educational tool, allowing users to access relevant information and learning materials directly through the platform. This feature supports the understanding and application of various trading strategies, enhancing the educational value of the simulation.

Another significant feature of the simulator is its performance tracking and analytics tools. The simulator includes tools for tracking and analyzing the performance of investment portfolios, allowing users to view detailed reports and metrics that highlight the outcomes of their trades. This feature helps users identify successful strategies and areas for improvement, facilitating a data-driven approach to learning and strategy development.

Lastly, Investopedia's simulator also features a community aspect, where users can join competitions and compare their performance with other traders [12]. This competitive element can enhance the learning experience by providing additional motivation and benchmarks for success. Participating in competitions allows users to test their strategies in a simulated competitive environment, adding a layer of realism to the simulation. By leveraging these features, the Investopedia Stock Market Simulator provides a comprehensive and realistic environment for testing the investment methods of trend following and day trading. The real-time data and diverse

investment options ensure that the simulations are reflective of actual market conditions, while the educational resources and performance tracking tools support a thorough analysis of the results.

The use of Investopedia's simulator in this project will allow for a structured and detailed exploration of stock market dynamics, providing valuable insights into the practical application of theoretical knowledge. Through these simulations, the project aims to bridge the gap between classroom learning and real-world investing, equipping the new investor with both the skills and confidence needed to navigate the complexities of the stock market. This structured approach ensures that the outcomes of the simulations are both educational and practical, providing a solid foundation for future investment activities.

2.2 Day Trading

Day trading is a short-term trading strategy focused on buying and selling financial instruments within the same trading day to capitalize on small price fluctuations. Unlike other trading strategies that hold positions for longer periods, day traders typically close all their positions by the end of the trading day to avoid overnight risks.

Day trading involves a high frequency of trades within a single day, leveraging numerous short-term market movements. The core objective is to make small profits that can accumulate into significant gains. Day traders rely heavily on technical analysis, using charts, and technical indicators to make informed trading decisions. Key indicators include moving averages, relative strength index (RSI), and Bollinger Bands.

Figure 2.1 below shows an illustration of a sample chart analyzed using Bollinger Bands.



Bollinger Bands

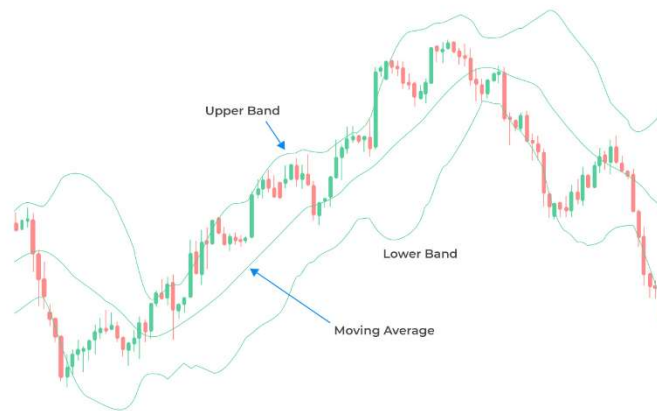


Figure 2.1 AnalystPrep [13]

In day trading, strategies like scalping, momentum trading, and reversal trading are commonly employed. Scalping aims to take advantage of small price gaps created by order flows or spreads, with traders making dozens or hundreds of trades in a single day. Momentum trading involves identifying stocks moving significantly in one direction on high volume, capitalizing on the trend. Reversal trading, or mean reversion, identifies overbought or oversold stocks, trading in the opposite direction in anticipation of a price correction.

Investopedia's Stock Market Simulator serves as an excellent platform for practicing day trading strategies. It offers real-time data, charting tools, and access to various financial instruments, allowing users to refine their strategies without financial risks.

2.3 Trend Following

Trend following is a trading strategy that seeks to capitalize on the momentum of existing market trends. Unlike day trading, trend following involves holding positions for extended periods,

ranging from several days to weeks or even months. The core idea is that once a trend is established, it is likely to continue for some time, allowing traders to profit by riding the trend.

Trend following relies heavily on technical indicators to identify and confirm trends. Common indicators include moving averages, trendlines, and the Average Directional Index (ADX). This strategy requires a longer holding period and a strong emphasis on risk management, as trends can reverse unexpectedly as Figure 2.2 below shows.



Figure 2.2 ADX Investopedia Example [14]

Traders use stop-loss orders and other risk management tools to protect against significant losses.

Trend following can be applied to various markets, including stocks, commodities, forex, and futures. The versatility of this strategy allows traders to adapt it to different asset classes. Common trend-following strategies include moving average crossovers, breakout trading, and price action trading. Moving average crossovers involve using two moving averages (one short-term and one long-term) to generate buy and sell signals. Breakout trading identifies key support and resistance levels, entering trades when the price breaks above resistance or below support.

Price action trading involves analyzing price movements and patterns, such as higher highs and higher lows in an uptrend.

By utilizing Investopedia's simulator, this research project will apply both day trading and trend following strategies, collecting data, and analyzing the results to determine their effectiveness in different market conditions. This comprehensive approach ensures that the simulation provides valuable insights into the practical application of these trading methods.

2.4 Stock Market Sector Breakdown

A sector breakdown is a critical tool for investors, providing an overview of the allocation of investments across various industry sectors. These sectors include broad classifications such as technology, healthcare, and consumer staples, among others. The primary standard for defining these classifications is the Global Industry Classification Standard (GICS), developed by MSCI and S&P Dow Jones. GICS categorizes the market into 11 major sectors, which are further divided into 25 industry groups, 74 industries, and 163 sub-industries [15].

The purpose of understanding sector breakdowns is to manage risk and identify growth opportunities by diversifying investments. Diversification across multiple sectors helps mitigate the impact of adverse events affecting a specific industry. For example, while the technology sector may experience rapid growth, it is also susceptible to volatility; balancing investments with more stable sectors like consumer staples can reduce overall portfolio risk.

Sector investing involves targeting specific sectors based on their growth prospects or strategic importance. For instance, an investor might allocate more funds to the healthcare sector due to its long-term growth potential driven by an aging population and advancements in medical

technology. Conversely, funds focused on environmental, social, and governance (ESG) criteria may exclude sectors like tobacco or fossil fuels due to their environmental impact.

Investopedia's Stock Market Simulator can be an invaluable tool for practicing sector allocation strategies. It allows users to simulate different investment scenarios, test sector-specific strategies, and analyze their effects on portfolio performance.

Chapter 3: Selected Companies

The process of selecting companies for investment is rooted in understanding the current economic landscape and recognizing the sectors that show resilience and potential growth despite broader market challenges. Given the prevailing high inflation, elevated interest rates, and ongoing supply chain disruptions, investing in companies providing essential services and products is a strategic approach. This chapter outlines the rationale for selecting specific companies across various major sectors, which are poised to perform well under current market conditions.

3.1 Technology Sector

The technology sector remains a cornerstone of modern economic growth, driven by continuous innovation and digital transformation across industries. Despite market volatility, the demand for technology solutions and services persists due to their integral role in business operations and consumer life [16].

Apple Inc. (AAPL) is a global leader in consumer electronics, software, and services. Apple's robust product ecosystem, comprising the iPhone, iPad, Mac, Apple Watch, and services like the App Store, iCloud, and Apple Music, ensures a steady revenue stream. The company's innovation, strong brand loyalty, and expanding services segment position it well for sustained growth. Below in Figure 3.1 is the price of stocks from Apple over the past year.

Apple



Figure 3.1 Apple Stock Price Over the Past Year [17]

Microsoft Corporation (MSFT) offers a diversified portfolio, including software, hardware, and cloud services. Microsoft's Azure cloud platform, Office 365 productivity suite, and enterprise solutions drive its revenue growth. The company's focus on cloud computing, artificial intelligence, and cybersecurity ensures its relevance and competitive edge in the technology sector. Below in Figure 3.2 is the price of stocks from Microsoft over the past year.

Microsoft



Figure 3.2 Microsoft Stock Price Over the Past Year [18]

3.2 Healthcare Sector

The healthcare sector is inherently resilient to economic downturns, as the demand for medical care and pharmaceuticals remains constant [19]. Investments in healthcare companies are seen as a defensive strategy during economic uncertainty.

Johnson & Johnson (JNJ) is a multinational conglomerate with a diverse product lineup in pharmaceuticals, medical devices, and consumer health products. The company's extensive research and development pipeline, global reach, and consistent dividend payments make it a stable investment. Below in Figure 3.3 is the price of stocks from Johnson&Johnson over the past year.



Figure 3.3 Johnson&Johnson Stock Price Over the Past Year [20]

Pfizer Inc. (PFE) is a leading pharmaceutical company known for its innovative drug development and production capabilities. Pfizer's success with the COVID-19 vaccine has significantly boosted its revenue and global presence. The company's ongoing research in oncology, immunology, and rare diseases positions it for future growth. Below in Figure 3.4 is the price of stocks from Pfizer over the past year.



Figure 3.4 Pfizer Stock Price Over the Past Year [21]

3.3 Consumer Staples Sector

Consumer staples are essential products that people regularly buy, regardless of economic conditions. This sector includes food, beverages, household products, and personal care items, which are always in demand [22].

Procter & Gamble Co. (PG) is a global leader in consumer goods, offering a wide range of products in beauty, grooming, health care, fabric and home care, and baby, feminine, and family care. The company's strong brand portfolio and global distribution network ensure steady revenue. Below in Figure 3.5 is the price of stocks from Procter & Gamble over the past year.

Procter & Gamble

164,65 \$ ↑12,82 % +18,71 1 г.

До открытия сессии: 164,75 \$ (↑0,061%) +0,10

Закрывается: 4 июн., 08:47:21 UTC-4 · USD · NYSE · Отказ от обязательств

1 д. 5 д. 1 мес. 6 мес. YTD 1 г. 5 лет MAX

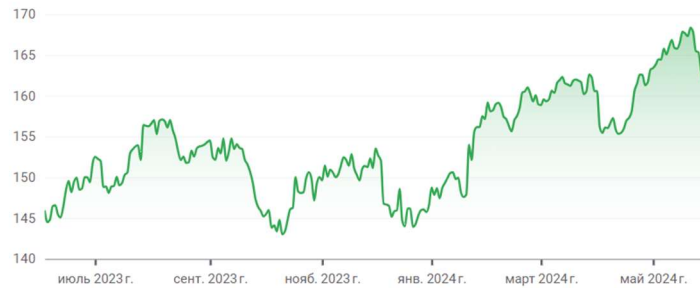


Figure 3.5 Procter & Gamble Stock Price Over the Past Year [23]

Coca-Cola Company (KO) is a leading beverage company with a diverse portfolio of non-alcoholic drinks, including sparkling beverages, water, juice, dairy, plant-based drinks, and ready-to-drink teas and coffees. Coca-Cola's extensive distribution network and strong brand equity make it a reliable investment. Below in Figure 3.6 is the price of stocks from Coca-Cola over the past year.

The Coca-Cola Company

62,93 \$ ↑3,59 % +2,18 1 г.

До открытия сессии: 62,93 \$ (0,00%) 0,00

Закрывается: 4 июн., 08:20:44 UTC-4 · USD · NYSE · Отказ от обязательств

1 д. 5 д. 1 мес. 6 мес. YTD 1 г. 5 лет MAX



Figure 3.6 Coca-Cola Stock Price Over the Past Year [24]

3.4 Utilities Sector

Utilities provide essential services, including electricity, water, and natural gas. These services are in constant demand, making utility companies stable investments with predictable revenue streams [25].

Duke Energy Corporation (DUK) is one of the largest utility companies in the United States, providing electricity and natural gas to millions of customers. The company's focus on renewable energy and grid modernization ensures its long-term sustainability. Below in Figure 3.7 is the price of stocks from Duke Energy Corporation over the past year.



Figure 3.7 Duke Energy Corporation Stock Price Over the Past Year [26]

NextEra Energy Inc. (NEE) is a leading clean energy company, known for its investments in wind and solar power. NextEra's commitment to renewable energy and its position as one of the largest electric utility companies in the U.S. make it a forward-looking investment. Below in Figure 3.8 is the price of stocks from NextEra Energy over the past year.



Figure 3.6 NextEra Energy Stock Price Over the Past Year [27]

3.5 Financial Sector

The financial sector encompasses a wide range of services, including banking, investment, insurance, and real estate. Companies in this sector are integral to the functioning of the economy and benefit from economic recovery and growth [28].

JPMorgan Chase & Co. (JPM) is a global financial services firm offering investment banking, financial services for consumers and businesses, financial transaction processing, asset management, and private equity. The company's strong balance sheet and diversified business model position it well for economic recovery. Below in Figure 3.9 is the price of stocks from JPMorgan Chase & Co over the past year.

JPMorgan Chase



Figure 3.9 JPMorgan Chase & Co Stock Price Over the Past Year [29]

Goldman Sachs Group Inc. (GS) is a leading global investment banking, securities, and investment management firm. Goldman Sachs' expertise in mergers and acquisitions, capital markets, and asset management ensures its leadership in the financial sector. Below in Figure 3.10 is the price of stocks from Goldman Sachs over the past year.

Goldman Sachs

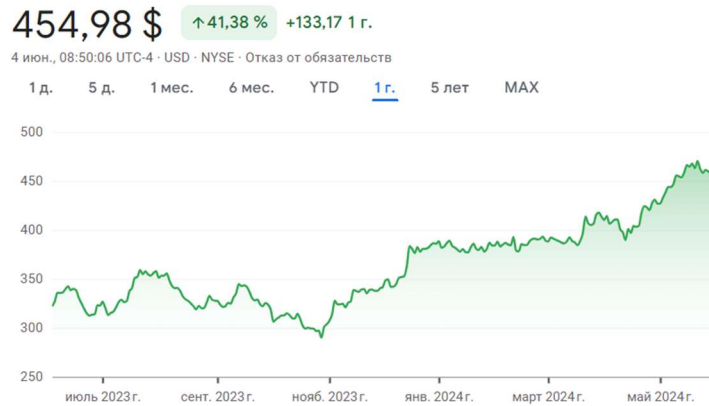


Figure 3.10 Goldman Sachs Stock Price Over the Past Year [30]

Chapter 4: Day Trading Simulation

The day trading strategy started with purchasing stocks from all companies mentioned in chapter three. Every day each company's stock was bought shortly after the market opened, and sold shortly before market was closed. The idea is to do this every day from Monday to Friday during the six weeks of simulation.

The day trading strategy simulation and trend following strategy simulation will be done on different accounts to trade stocks simultaneously and avoid any variability. This will help to factually compare results of these two trading methods.

This day trading strategy used each day's closing price as a "selling" price. This is done for asset value and profit calculations from day to day in each week. At the start of next week, the same stocks will be rebought at the same price as they were "sold" at the end of the prior week and will be traded the same way as in the previous week.

4.1 Week One

On Monday, June 3rd, 2024, all initial stocks for the day trading portfolio were bought. All transactions were made at the end of the day based on the closing price. Below is Table 4.1.1 where all transactions from June 3rd are displayed from the day trading portfolio. Also shown are the total profit and total cash present in the portfolio. As mentioned above, the "sell" price in the table represents the closing price of the same day stocks were bought, for calculation and monitoring purposes, and the same price will be used to rebuy the same stocks the day. Red values in the "Profit/Loss" column in Table 4.1.1 signifies a loss in profit, this signifier will be used in all tables.

Table 4.1.1 Day Trading Portfolio Transactions on June 3rd (6/3 – 6/4)

Date	Symbol	Buy/Sell	Price	Shares	Net Cost/Proceeds	Profit/Loss	Total Cash	Total Profit
06/03/2024	AAPL	Buy	192.90	52	\$10,030.80		\$89,969.20	
06/03/2024	MSFT	Buy	415.53	24	\$9,972.72		\$80,026.48	
06/03/2024	JNJ	Buy	147.25	68	\$10,013.00		\$70,013.48	
06/03/2024	PFE	Buy	28.66	349	\$10,002.34		\$60,011.14	
06/03/2024	PG	Buy	163.93	61	\$9,999.73		\$50,011.41	
06/03/2024	KO	Buy	62.71	159	\$9,975.69		\$40,035.72	
06/03/2024	DUK	Buy	103.09	97	\$10,000.73		\$30,035.00	
06/03/2024	NEE	Buy	79.50	126	\$10,017.00		\$20,018.00	
06/03/2024	JPM	Buy	202.31	49	\$9,913.19		\$10,104.81	
06/03/2024	GS	Buy	458.87	21	\$9,636.27		\$468.54	
06/03/2024	AAPL	Sell	194.03	52	\$10,089.56	\$58.76	\$10,558.10	\$58.76
06/03/2024	MSFT	Sell	413.52	24	\$9,924.48	(\$48.24)	\$20,482.58	\$10.52
06/03/2024	JNJ	Sell	147.74	68	\$10,044.32	\$31.32	\$30,526.90	\$41.84
06/03/2024	PFE	Sell	29.31	349	\$10,231.19	\$228.85	\$40,758.09	\$270.69
06/03/2024	PG	Sell	164.65	61	\$10,048.65	\$48.92	\$50,806.74	\$319.61
06/03/2024	KO	Sell	62.93	159	\$10,004.67	\$28.98	\$60,811.41	\$348.59
06/03/2024	DUK	Sell	103.41	97	\$10,031.77	\$31.04	\$70,843.18	\$379.63
06/03/2024	NEE	Sell	77.71	126	\$9,788.46	(\$228.54)	\$80,631.64	\$151.09
06/03/2024	JPM	Sell	202.42	49	\$9,918.58	\$5.39	\$90,550.22	\$156.48
06/03/2024	GS	Sell	454.98	21	\$9,554.58	(\$81.69)	\$100,104.80	\$74.79

Total profit for June 3rd was \$104.80. Below is Table 4.1.2 where all transactions from June 4th are displayed from the day trading portfolio.

Table 4.1.2 Day Trading Portfolio Transactions on June 4th (6/4 – 6/5)

Date	Symbol	Buy/Sell	Price	Shares	Net Cost/Proceeds	Profit/Loss	Total Cash	Total Profit
06/04/2024	AAPL	Buy	194.64	51	\$9,923.64		\$90,181.16	\$74.79
06/04/2024	MSFT	Buy	412.43	24	\$9,898.32		\$80,282.84	\$74.79
06/04/2024	JNJ	Buy	147.48	68	\$10,033.24		\$70,249.60	\$74.79
06/04/2024	PFE	Buy	29.30	341	\$9,999.30		\$60,250.30	\$74.79
06/04/2024	PG	Buy	164.79	61	\$10,052.19		\$50,198.11	\$74.79
06/04/2024	KO	Buy	63.20	158	\$9,985.60		\$40,212.51	\$74.79
06/04/2024	DUK	Buy	103.25	97	\$10,015.25		\$30,197.26	\$74.79
06/04/2024	NEE	Buy	77.61	129	\$10,006.29		\$20,190.97	\$74.79
06/04/2024	JPM	Buy	200.16	50	\$10,008.00		\$10,182.97	\$74.79
06/04/2024	GS	Buy	450.50	22	\$9,911.00		\$271.97	\$74.79
06/04/2024	AAPL	Sell	194.35	51	\$9,915.85	(\$7.79)	\$10,187.82	\$67.00
06/04/2024	MSFT	Sell	416.07	24	\$9,985.68	\$87.36	\$20,173.50	\$154.36
06/04/2024	JNJ	Sell	147.80	68	\$10,054.40	\$21.16	\$30,227.90	\$175.52
06/04/2024	PFE	Sell	29.49	341	\$10,056.09	\$56.79	\$40,283.99	\$232.31
06/04/2024	PG	Sell	167.01	61	\$10,187.61	\$135.42	\$50,471.60	\$367.73
06/04/2024	KO	Sell	63.94	158	\$10,098.52	\$112.92	\$60,570.12	\$480.65
06/04/2024	DUK	Sell	104.60	97	\$10,146.20	\$130.95	\$70,716.32	\$611.60
06/04/2024	NEE	Sell	77.15	129	\$9,949.35	(\$56.94)	\$80,665.67	\$554.66
06/04/2024	JPM	Sell	199.16	50	\$9,958.00	(\$50.00)	\$90,623.67	\$504.66
06/04/2024	GS	Sell	455.30	22	\$10,016.60	\$105.60	\$100,640.27	\$610.26

Total profit for June 4th was \$640.27. This is a 611% gain in profit in one day. Below is Table 4.1.3 where all transactions from June 5th are displayed from the day trading portfolio.

Table 4.1.3 Day Trading Portfolio Transactions on June 5th (6/5 – 6/6)

Date	Symbol	Buy/Sell	Price	Shares	Net Cost/Proceeds	Profit/Loss	Total Cash	Total Profit
06/05/2024	AAPL	Buy	195.40	51	\$9,964.40		\$90,675.87	\$610.26
06/05/2024	MSFT	Buy	417.81	23	\$9,609.63		\$81,066.24	\$610.26
06/05/2024	JNJ	Buy	147.97	68	\$10,062.96		\$71,003.28	\$610.26
06/05/2024	PFE	Buy	29.56	339	\$10,023.24		\$60,980.04	\$610.26
06/05/2024	PG	Buy	167.01	60	\$10,020.60		\$50,959.44	\$610.26
06/05/2024	KO	Buy	63.99	156	\$9,982.44		\$40,976.00	\$610.26
06/05/2024	DUK	Buy	104.40	96	\$10,022.40		\$30,953.60	\$610.26
06/05/2024	NEE	Buy	77.05	130	\$10,016.50		\$20,937.10	\$610.26
06/05/2024	JPM	Buy	199.76	50	\$9,988.00		\$10,949.10	\$610.26
06/05/2024	GS	Buy	457.55	21	\$9,608.55		\$1,340.55	\$610.26
06/05/2024	AAPL	Sell	195.87	51	\$9,988.37	\$23.97	\$11,328.92	\$634.23
06/05/2024	MSFT	Sell	424.01	23	\$9,752.23	\$142.60	\$21,081.15	\$776.83
06/05/2024	JNJ	Sell	145.97	68	\$9,925.96	(\$137.00)	\$31,007.11	\$639.83
06/05/2024	PFE	Sell	29.55	339	\$10,021.95	(\$1.29)	\$41,029.06	\$638.54
06/05/2024	PG	Sell	166.05	60	\$9,963.00	(\$57.60)	\$50,992.06	\$580.94
06/05/2024	KO	Sell	63.92	156	\$9,970.72	(\$11.72)	\$60,962.78	\$569.22
06/05/2024	DUK	Sell	103.20	96	\$9,907.20	(\$115.20)	\$70,869.98	\$454.02
06/05/2024	NEE	Sell	77.05	130	\$10,016.50	\$0.00	\$80,886.48	\$454.02
06/05/2024	JPM	Sell	197.26	50	\$9,863.00	(\$125.00)	\$90,749.48	\$329.02
06/05/2024	GS	Sell	461.68	21	\$9,695.28	\$86.73	\$100,444.76	\$415.75

Total profit for June 5th was \$444.76. This is a 30.5% loss in total profit from last day. Below is Table 4.1.4 where all transactions from June 6th are displayed from the day trading portfolio.

Table 4.1.4 Day Trading Portfolio Transactions on June 6th (6/6 – 6/7)

Date	Symbol	Buy/Sell	Price	Shares	Net Cost/Proceeds	Profit/Loss	Total Cash	Total Profit
06/06/2024	AAPL	Buy	195.69	51	\$9,974.19		\$90,470.57	\$415.75
06/06/2024	MSFT	Buy	424.01	23	\$9,752.23		\$80,718.34	\$415.75
06/06/2024	JNJ	Buy	145.50	68	\$9,894.00		\$70,824.34	\$415.75
06/06/2024	PFE	Buy	29.36	341	\$10,006.76		\$60,817.58	\$415.75
06/06/2024	PG	Buy	165.83	60	\$9,949.80		\$50,867.78	\$415.75
06/06/2024	KO	Buy	63.92	156	\$9,970.72		\$40,897.06	\$415.75
06/06/2024	DUK	Buy	103.04	97	\$9,994.88		\$30,902.18	\$415.75
06/06/2024	NEE	Buy	76.94	130	\$10,002.20		\$20,899.98	\$415.75
06/06/2024	JPM	Buy	197.26	50	\$9,863.00		\$11,036.98	\$415.75
06/06/2024	GS	Buy	461.82	21	\$9,698.22		\$1,338.76	\$415.75
06/06/2024	AAPL	Sell	194.48	51	\$9,918.48	(\$55.71)	\$11,257.24	\$360.04
06/06/2024	MSFT	Sell	424.52	23	\$9,763.96	\$11.73	\$21,021.20	\$371.77
06/06/2024	JNJ	Sell	146.42	68	\$9,952.56	\$58.56	\$30,973.76	\$430.33
06/06/2024	PFE	Sell	28.80	341	\$9,820.80	(\$185.96)	\$40,794.56	\$244.37
06/06/2024	PG	Sell	168.47	60	\$10,108.20	\$158.40	\$50,902.76	\$402.77
06/06/2024	KO	Sell	64.15	156	\$10,005.40	\$34.68	\$60,908.16	\$437.45
06/06/2024	DUK	Sell	102.86	97	\$9,976.42	(\$18.46)	\$70,884.58	\$418.99
06/06/2024	NEE	Sell	76.70	130	\$9,971.00	(\$31.20)	\$80,855.58	\$387.79
06/06/2024	JPM	Sell	196.91	50	\$9,845.50	(\$17.50)	\$90,701.08	\$370.29
06/06/2024	GS	Sell	458.10	21	\$9,620.10	(\$78.12)	\$100,321.18	\$292.17

Total profit for June 6th was \$321.18. This is a 27.7% loss in total profit from last day.

Below is Table 4.1.5 where all transactions from June 7th are displayed from the day trading portfolio.

Table 4.1.5 Day Trading Portfolio Transactions on June 7th (6/7 – 6/8)

Date	Symbol	Buy/Sell	Price	Shares	Net Cost/Proceeds	Profit/Loss	Total Cash	Total Profit
06/07/2024	AAPL	Buy	194.65	51	\$9,922.65		\$90,398.53	\$292.17
06/07/2024	MSFT	Buy	426.20	23	\$9,802.60		\$80,595.93	\$292.17
06/07/2024	JNJ	Buy	146.68	68	\$9,971.24		\$70,624.69	\$292.17
06/07/2024	PFE	Buy	28.75	341	\$9,791.75		\$60,832.94	\$292.17
06/07/2024	PG	Buy	168.40	60	\$10,104.00		\$50,728.94	\$292.17
06/07/2024	KO	Buy	64.09	156	\$9,995.04		\$40,733.90	\$292.17
06/07/2024	DUK	Buy	102.00	97	\$9,894.00		\$30,839.90	\$292.17
06/07/2024	NEE	Buy	75.56	132	\$9,973.92		\$20,865.98	\$292.17
06/07/2024	JPM	Buy	197.43	50	\$9,871.50		\$10,994.48	\$292.17
06/07/2024	GS	Buy	455.44	21	\$9,564.24		\$1,430.24	\$292.17
06/07/2024	AAPL	Sell	196.89	51	\$10,041.39	\$118.74	\$11,471.63	\$410.91
06/07/2024	MSFT	Sell	423.85	23	\$9,748.55	(\$54.05)	\$21,220.18	\$356.86
06/07/2024	JNJ	Sell	147.08	68	\$9,992.44	\$21.20	\$31,212.62	\$378.06
06/07/2024	PFE	Sell	28.58	341	\$9,747.78	(\$43.97)	\$40,960.40	\$334.09
06/07/2024	PG	Sell	167.06	60	\$10,023.60	(\$80.40)	\$50,984.00	\$253.69
06/07/2024	KO	Sell	63.91	156	\$9,967.96	(\$27.08)	\$60,951.96	\$226.61
06/07/2024	DUK	Sell	102.62	97	\$9,954.14	\$60.14	\$70,906.10	\$286.75
06/07/2024	NEE	Sell	75.39	132	\$9,955.48	(\$18.44)	\$80,861.58	\$268.31
06/07/2024	JPM	Sell	199.95	50	\$9,997.50	\$126.00	\$90,859.08	\$394.31
06/07/2024	GS	Sell	454.91	21	\$9,552.11	(\$12.13)	\$100,411.19	\$382.18

Total profit for June 7th was \$411.19. This is a 21.9% gain in total profit from last day. In this simulation, the initial capital was \$100,000. At the end of the first week, the final total cash stands at \$100,411.19 with a cumulative profit of \$382.18. Figure 4.1 below shows the graph of the overall performance of the day trading portfolio during Week One.

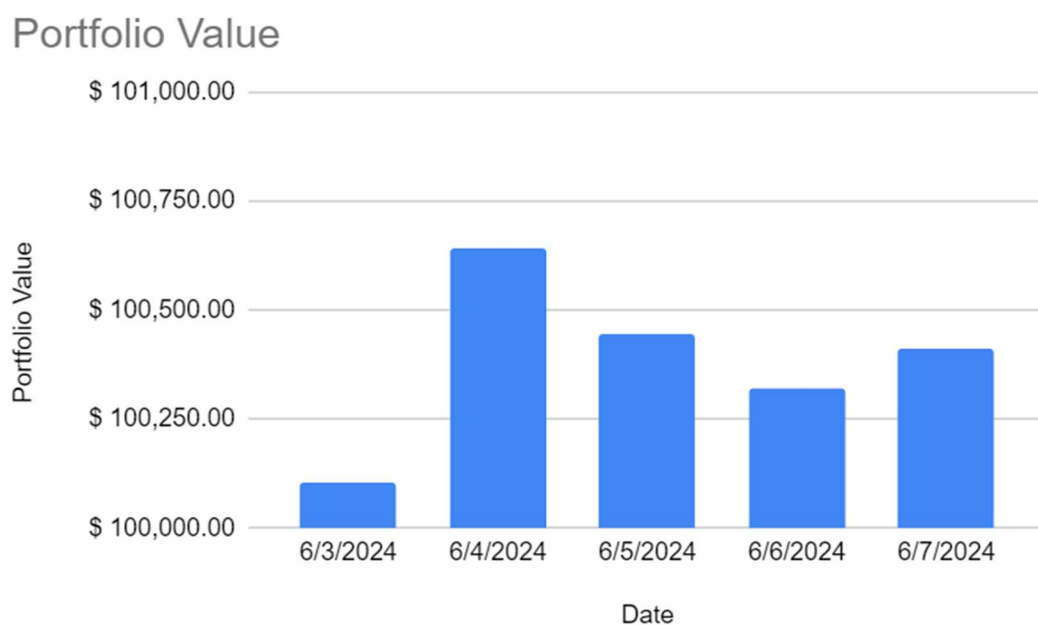


Figure 4.1 Day Trading Overall Performance Week 1 2024

4.2 Week Two

Week Two of the day trading simulation involved the continued application of the strategy used in Week One. The initial capital at the beginning of the week was carried over from the end of Week One, totaling \$100,411.19 with a cumulative profit of \$382.18. The aim remained to buy stocks shortly after the market opened and sell them shortly before market closed each day. On Monday, June 10th all stocks for the day trading portfolio were bought. All transactions were made at the end of the day based on the closing price. Below is Table 4.2.1 where all transactions from June 10th are displayed from the day trading portfolio. Also shown are the total profit and total cash present in the portfolio.

Table 4.2.1 Day Trading Portfolio Transactions on June 10th (6/10 – 6/11)

Date	Symbol	Buy/Sell	Price	Shares	Net Cost/Proceeds	Profit/Loss	Total Cash	Total Profit
06/10/2024	AAPL	Buy	196.9	50	\$9,845.00		\$90,566.19	\$382.18
06/10/2024	MSFT	Buy	424.7	23	\$9,768.10		\$80,798.09	\$382.18
06/10/2024	JNJ	Buy	146.53	68	\$9,962.04		\$70,836.05	\$382.18
06/10/2024	PFE	Buy	28.35	343	\$9,722.55		\$61,113.50	\$382.18
06/10/2024	PG	Buy	166.78	60	\$10,006.80		\$51,106.70	\$382.18
06/10/2024	KO	Buy	63.94	156	\$9,976.64		\$41,130.06	\$382.18
06/10/2024	DUK	Buy	102.5	97	\$9,942.50		\$31,187.56	\$382.18
06/10/2024	NEE	Buy	75.47	130	\$9,811.10		\$21,376.46	\$382.18
06/10/2024	JPM	Buy	199.24	50	\$9,962.00		\$11,414.46	\$382.18
06/10/2024	GS	Buy	452.33	21	\$9,499.23		\$1,915.23	\$382.18
06/10/2024	AAPL	Sell	193.12	50	\$9,656.00	(\$189.00)	\$11,571.23	\$193.18
06/10/2024	MSFT	Sell	427.87	23	\$9,841.01	\$72.91	\$21,412.24	\$266.09
06/10/2024	JNJ	Sell	147.13	68	\$10,005.04	\$43.00	\$31,417.28	\$309.09
06/10/2024	PFE	Sell	28.07	343	\$9,627.01	(\$95.54)	\$41,044.29	\$213.55
06/10/2024	PG	Sell	167.35	60	\$10,041.00	\$34.20	\$51,085.29	\$247.75
06/10/2024	KO	Sell	63.59	156	\$9,913.80	(\$62.84)	\$61,059.09	\$184.91
06/10/2024	DUK	Sell	102.52	97	\$9,944.44	\$1.94	\$71,003.53	\$186.85
06/10/2024	NEE	Sell	76.97	130	\$10,006.10	\$195.00	\$81,009.63	\$381.85
06/10/2024	JPM	Sell	199.61	50	\$9,980.50	\$18.50	\$90,990.13	\$400.35
06/10/2024	GS	Sell	453.55	21	\$9,524.55	\$25.32	\$100,514.68	\$425.67

Week two started with a slow but positive upward move in total profit. The total profit for June 10th was \$514.68, reflecting a positive return despite some losses on specific stocks such as AAPL and PFE. The most profitable stock was NEE with a gain of \$195.00. The overall gain in stock value from Week One to Week Two was \$103.69. This is a 25.2% gain in total profit from last week. Below is Table 4.2.2 where all transactions from June 11th are displayed from the day trading portfolio.

Table 4.2.2 Day Trading Portfolio Transactions on June 11th (6/11 – 6/12)

Date	Symbol	Buy/Sell	Price	Shares	Net Cost/Proceeds	Profit/Loss	Total Cash	Total Profit
06/11/2024	AAPL	Buy	193.65	51	\$9,875.15		\$90,639.53	\$425.67
06/11/2024	MSFT	Buy	425.48	23	\$9,786.04		\$80,853.49	\$425.67
06/11/2024	JNJ	Buy	146.81	68	\$9,978.08		\$70,875.41	\$425.67
06/11/2024	PFE	Buy	27.95	343	\$9,581.85		\$61,293.56	\$425.67
06/11/2024	PG	Buy	166.97	60	\$10,018.20		\$51,275.36	\$425.67
06/11/2024	KO	Buy	63.59	156	\$9,913.80		\$41,361.56	\$425.67
06/11/2024	DUK	Buy	102.01	97	\$9,895.97		\$31,465.59	\$425.67
06/11/2024	NEE	Buy	75.3	130	\$9,789.00		\$21,676.59	\$425.67
06/11/2024	JPM	Buy	197.91	50	\$9,895.50		\$11,781.09	\$425.67
06/11/2024	GS	Buy	451.04	21	\$9,472.84		\$2,308.25	\$425.67
06/11/2024	AAPL	Sell	207.15	51	\$10,565.65	\$690.50	\$12,873.90	\$1,116.17
06/11/2024	MSFT	Sell	432.68	23	\$9,951.64	\$165.60	\$22,825.54	\$1,281.77
06/11/2024	JNJ	Sell	146.76	68	\$9,973.68	(\$4.40)	\$32,799.22	\$1,277.37
06/11/2024	PFE	Sell	28.03	343	\$9,616.29	\$34.44	\$42,415.51	\$1,311.81
06/11/2024	PG	Sell	167.48	60	\$10,048.80	\$30.60	\$52,464.31	\$1,342.41
06/11/2024	KO	Sell	63.55	156	\$9,920.40	\$6.60	\$62,384.71	\$1,349.01
06/11/2024	DUK	Sell	102.36	97	\$9,929.52	\$33.55	\$72,314.23	\$1,382.56
06/11/2024	NEE	Sell	72.74	130	\$9,456.20	(\$332.80)	\$81,770.43	\$1,049.76
06/11/2024	JPM	Sell	194.36	50	\$9,718.00	(\$177.50)	\$91,488.43	\$872.26
06/11/2024	GS	Sell	444.27	21	\$9,329.67	(\$143.17)	\$100,818.10	\$729.09

The total profit for June 11th was \$818.10, reflecting significant gains from AAPL of \$690.50 and MSFT of \$165.60, despite some losses. This is a 58.9% gain in total profit from last day. Below is Table 4.2.3 where all transactions from June 12th are displayed from the day trading portfolio.

Table 4.2.3 Day Trading Portfolio Transactions on June 12th (6/12 – 6/13)

Date	Symbol	Buy/Sell	Price	Shares	Net Cost/Proceeds	Profit/Loss	Total Cash	Total Profit
06/12/2024	AAPL	Buy	207.37	49	\$10,156.13		\$90,661.97	\$729.09
06/12/2024	MSFT	Buy	435.32	23	\$10,012.36		\$80,649.61	\$729.09
06/12/2024	JNJ	Buy	147.06	67	\$9,852.02		\$70,797.59	\$729.09
06/12/2024	PFE	Buy	28.17	343	\$9,655.31		\$61,142.28	\$729.09
06/12/2024	PG	Buy	167.5	59	\$9,882.50		\$51,259.78	\$729.09
06/12/2024	KO	Buy	63.69	156	\$9,937.64		\$41,322.14	\$729.09
06/12/2024	DUK	Buy	103.0	96	\$9,888.00		\$31,434.14	\$729.09
06/12/2024	NEE	Buy	73.79	132	\$9,727.08		\$21,707.06	\$729.09
06/12/2024	JPM	Buy	196.0	50	\$9,800.00		\$11,907.06	\$729.09
06/12/2024	GS	Buy	455.6	21	\$9,567.60		\$2,339.46	\$729.09
06/12/2024	AAPL	Sell	213.07	49	\$10,440.43	\$284.30	\$12,779.89	\$1,013.39
06/12/2024	MSFT	Sell	441.06	23	\$10,144.38	\$132.02	\$22,924.27	\$1,145.41
06/12/2024	JNJ	Sell	145.41	67	\$9,743.47	(\$108.55)	\$32,667.74	\$1,036.86
06/12/2024	PFE	Sell	27.66	343	\$9,482.58	(\$172.73)	\$42,150.32	\$864.13
06/12/2024	PG	Sell	165.18	59	\$9,749.62	(\$132.88)	\$51,899.94	\$731.25
06/12/2024	KO	Sell	62.88	156	\$9,803.28	(\$134.36)	\$61,703.22	\$596.89
06/12/2024	DUK	Sell	101.32	96	\$9,720.72	(\$167.28)	\$71,423.94	\$429.61
06/12/2024	NEE	Sell	72.26	132	\$9,535.32	(\$191.76)	\$80,959.26	\$237.85
06/12/2024	JPM	Sell	191.53	50	\$9,576.50	(\$223.50)	\$90,535.76	\$14.35
06/12/2024	GS	Sell	448.7	21	\$9,422.70	(\$144.90)	\$99,958.46	(\$130.55)

Stocks were down this day. The total loss in profit for June 12th was \$859.64, reflecting significant losses despite gains from AAPL and MSFT. This is a 105% loss in profit from last day. Below is Table 4.2.4 where all transactions from June 13th are displayed from the day trading portfolio.

Table 4.2.4 Day Trading Portfolio Transactions on June 13th (6/13 – 6/14)

Date	Symbol	Buy/Sell	Price	Shares	Net Cost/Proceeds	Profit/Loss	Total Cash	Total Profit
06/13/2024	AAPL	Buy	214.74	47	\$10,092.78		\$89,865.68	(\$130.55)
06/13/2024	MSFT	Buy	440.85	22	\$9,698.70		\$80,166.98	(\$130.55)
06/13/2024	JNJ	Buy	145.07	67	\$9,719.69		\$70,447.29	(\$130.55)
06/13/2024	PFE	Buy	27.5	344	\$9,460.00		\$60,987.29	(\$130.55)
06/13/2024	PG	Buy	164.47	60	\$9,868.20		\$51,119.09	(\$130.55)
06/13/2024	KO	Buy	62.86	156	\$9,804.96		\$41,314.13	(\$130.55)
06/13/2024	DUK	Buy	101.29	97	\$9,825.13		\$31,489.00	(\$130.55)
06/13/2024	NEE	Buy	72.56	132	\$9,579.92		\$21,909.08	(\$130.55)
06/13/2024	JPM	Buy	192.32	50	\$9,616.00		\$12,293.08	(\$130.55)
06/13/2024	GS	Buy	446.73	21	\$9,381.33		\$2,911.75	(\$130.55)
06/13/2024	AAPL	Sell	214.24	47	\$10,065.28	(\$27.50)	\$12,977.03	(\$158.05)
06/13/2024	MSFT	Sell	441.58	22	\$9,714.76	\$16.06	\$22,691.79	(\$141.99)
06/13/2024	JNJ	Sell	145.45	67	\$9,746.15	\$26.46	\$32,437.94	(\$115.53)
06/13/2024	PFE	Sell	27.65	344	\$9,510.60	\$50.60	\$41,948.54	(\$64.93)
06/13/2024	PG	Sell	166.41	60	\$9,984.60	\$116.40	\$51,933.14	\$51.47
06/13/2024	KO	Sell	62.99	156	\$9,816.84	\$11.88	\$61,749.98	\$63.35
06/13/2024	DUK	Sell	101.26	97	\$9,822.22	(\$2.91)	\$71,572.20	\$60.44
06/13/2024	NEE	Sell	73.18	132	\$9,656.76	\$76.84	\$81,228.96	\$137.28
06/13/2024	JPM	Sell	193.66	50	\$9,683.00	\$67.00	\$90,911.96	\$204.28
06/13/2024	GS	Sell	446.35	21	\$9,373.35	(\$7.98)	\$100,285.31	\$196.30

Total profit for June 13th was \$285.31, reflecting recovery from previous losses with notable gains in PFE and JPM. This is a 127% gain in total profit from last day. Below is Table 4.2.5 where all transactions from June 14th are displayed from the day trading portfolio.

Table 4.2.5 Day Trading Portfolio Transactions on June 14th (6/14 – 6/15)

Date	Symbol	Buy/Sell	Price	Shares	Net Cost/Proceeds	Profit/Loss	Total Cash	Total Profit
06/14/2024	AAPL	Buy	213.85	47	\$10,050.95		\$90,234.36	\$196.30
06/14/2024	MSFT	Buy	438.28	22	\$9,642.16		\$80,592.20	\$196.30
06/14/2024	JNJ	Buy	145.14	67	\$9,726.38		\$70,865.82	\$196.30
06/14/2024	PFE	Buy	27.75	344	\$9,546.00		\$61,319.82	\$196.30
06/14/2024	PG	Buy	165.99	60	\$9,959.40		\$51,360.42	\$196.30
06/14/2024	KO	Buy	62.38	156	\$9,726.28		\$41,634.14	\$196.30
06/14/2024	DUK	Buy	100.89	97	\$9,786.33		\$31,847.81	\$196.30
06/14/2024	NEE	Buy	72.76	132	\$9,598.32		\$22,249.49	\$196.30
06/14/2024	JPM	Buy	191.45	50	\$9,572.50		\$12,676.99	\$196.30
06/14/2024	GS	Buy	441.99	21	\$9,281.79		\$3,395.20	\$196.30
06/14/2024	AAPL	Sell	212.49	47	\$9,986.03	(\$64.92)	\$13,381.23	\$131.38
06/14/2024	MSFT	Sell	442.57	22	\$9,736.54	\$94.38	\$23,117.77	\$225.76
06/14/2024	JNJ	Sell	145.54	67	\$9,750.18	\$23.80	\$32,867.95	\$249.56
06/14/2024	PFE	Sell	27.53	344	\$9,472.72	(\$73.28)	\$42,340.67	\$176.28
06/14/2024	PG	Sell	166.79	60	\$10,007.40	\$48.00	\$52,348.07	\$224.28
06/14/2024	KO	Sell	62.55	156	\$9,735.80	\$9.52	\$62,083.87	\$233.80
06/14/2024	DUK	Sell	102.36	97	\$9,931.92	\$145.59	\$72,015.79	\$379.39
06/14/2024	NEE	Sell	73.06	132	\$9,641.92	\$43.60	\$81,657.71	\$422.99
06/14/2024	JPM	Sell	193.78	50	\$9,689.00	\$116.50	\$91,346.71	\$539.49
06/14/2024	GS	Sell	446.46	21	\$9,375.66	\$93.87	\$100,722.37	\$633.36

The total profit for June 14th was \$722.37, reflecting overall gains with significant contributions from DUK and JPM. This is a 153.2% gain in total profit from last day. By the end of Week Two, the total cash stood at \$100,722.37 with a cumulative profit of \$633.36. Despite daily fluctuations and some losses, the overall strategy showed positive growth for the week. Figure 4.2 below shows the graph of the overall performance of the day trading portfolio during Week Two.

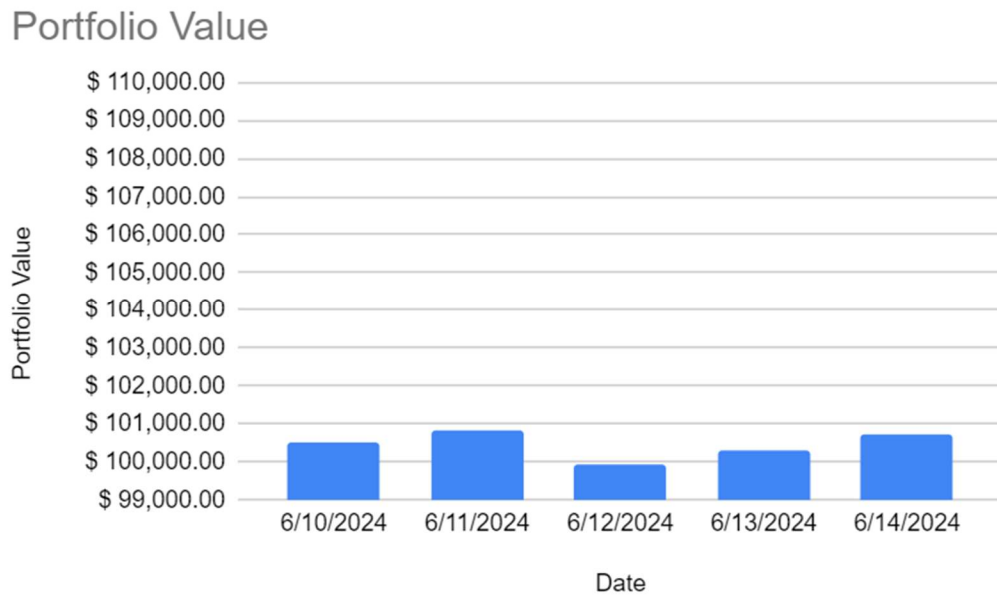


Figure 4.2 Day Trading Overall Performance Week 2 2024

4.3 Week Three

Week Three of the day trading simulation involved the continued application of the strategy used in the previous two weeks. The initial capital at the beginning of the week was carried over from the end of Week Two, totaling \$100,722.37 with a cumulative profit of \$633.36. The aim remained to buy stocks shortly after the market opened and sell them shortly before market closed each day. However, this week included a market holiday on June 19th, where the market was closed due to the celebration of Juneteenth, also known as "Freedom Day." Below is Table 4.3.1 where all transactions from June 17th are displayed from the day trading portfolio.

Table 4.3.1 Day Trading Portfolio Transactions on June 17th (6/17 – 6/18)

Date	Symbol	Buy/Sell	Price	Shares	Net Cost/Proceeds	Profit/Loss	Total Cash	Total Profit
06/17/2024	AAPL	Buy	213.37	47	10026.39		90695.98	633.36
06/17/2024	MSFT	Buy	442.59	22	9737.98		80958.0	633.36
06/17/2024	JNJ	Buy	145.02	67	9716.34		71241.66	633.36
06/17/2024	PFE	Buy	27.45	344	9446.8		61794.86	633.36
06/17/2024	PG	Buy	165.85	60	9951.0		51843.86	633.36
06/17/2024	KO	Buy	62.37	156	9724.92		42118.94	633.36
06/17/2024	DUK	Buy	101.95	97	9889.15		32229.79	633.36
06/17/2024	NEE	Buy	72.73	132	9598.36		22631.43	633.36
06/17/2024	JPM	Buy	193.48	50	9674.0		12957.43	633.36
06/17/2024	GS	Buy	445.1	21	9347.1		3610.33	633.36
06/17/2024	AAPL	Sell	216.67	47	10184.49	158.1	13794.82	791.46
06/17/2024	MSFT	Sell	448.37	22	9844.14	106.16	23638.96	897.62
06/17/2024	JNJ	Sell	145.95	67	9778.65	62.31	33417.61	959.93
06/17/2024	PFE	Sell	26.98	344	9278.32	(168.48)	42695.93	791.45
06/17/2024	PG	Sell	167.5	60	10050.0	99.0	52745.93	890.45
06/17/2024	KO	Sell	62.62	156	9757.72	32.8	62503.65	923.25
06/17/2024	DUK	Sell	100.8	97	9777.6	(111.55)	72281.25	811.7
06/17/2024	NEE	Sell	72.31	132	9539.92	(58.44)	81821.17	753.26
06/17/2024	JPM	Sell	194.98	50	9749.0	75.0	91570.17	828.26
06/17/2024	GS	Sell	450.18	21	9453.78	106.68	101023.95	934.94

The total profit for June 17th was \$934.94, reflecting a positive return with notable gains from AAPL and GS. The overall gain in stock value from the previous day was \$301.58, marking a 47.6% increase in total profit from the last trading day of Week Two. Below is Table 4.3.2 where all transactions from June 18th are displayed from the day trading portfolio.

Table 4.3.2 Day Trading Portfolio Transactions on June 18th (6/18 – 6/19)

Date	Symbol	Buy/Sell	Price	Shares	Net Cost/Proceeds	Profit/Loss	Total Cash	Total Profit
06/18/2024	AAPL	Buy	217.59	46	10005.14		91018.81	934.94
06/18/2024	MSFT	Buy	449.71	22	9893.62		81125.19	934.94
06/18/2024	JNJ	Buy	145.96	67	9769.32		71355.87	934.94
06/18/2024	PFE	Buy	26.98	344	9286.72		62069.15	934.94
06/18/2024	PG	Buy	167.03	60	10021.8		52047.35	934.94
06/18/2024	KO	Buy	62.53	156	9744.68		42302.67	934.94
06/18/2024	DUK	Buy	100.73	97	9771.01		32531.66	934.94
06/18/2024	NEE	Buy	69.1	138	9535.8		22995.86	934.94
06/18/2024	JPM	Buy	194.6	50	9730.0		13265.86	934.94
06/18/2024	GS	Buy	449.57	21	9440.97		3824.89	934.94
06/18/2024	AAPL	Sell	214.29	46	9857.34	(147.8)	13682.23	787.14
06/18/2024	MSFT	Sell	446.34	22	9819.48	(74.14)	23501.71	713.0
06/18/2024	JNJ	Sell	145.65	67	9760.05	(9.27)	33261.76	703.73
06/18/2024	PFE	Sell	27.41	344	9425.04	138.32	42686.8	842.05
06/18/2024	PG	Sell	168.56	60	10113.6	91.8	52800.4	933.85
06/18/2024	KO	Sell	62.63	156	9766.28	21.6	62566.68	955.45
06/18/2024	DUK	Sell	100.03	97	9702.91	(68.1)	72269.59	887.35
06/18/2024	NEE	Sell	70.44	138	9721.52	185.72	81991.11	1073.07
06/18/2024	JPM	Sell	197.0	50	9850.0	120.0	91841.11	1193.07
06/18/2024	GS	Sell	457.43	21	9605.97	165.0	101447.08	1358.07

The total profit for June 18th was \$1,358.07, reflecting gains primarily from NEE and GS. The overall gain in stock value from the previous day was \$423.13, marking a 45.3% increase in total profit from the last trading day of June 17th. Below is Table 4.3.3 where all transactions from June 20th are displayed from the day trading portfolio.

Table 4.3.3 Day Trading Portfolio Transactions on June 20th (6/20 – 6/21)

Date	Symbol	Buy/Sell	Price	Shares	Net Cost/Proceeds	Profit/Loss	Total Cash	Total Profit
06/20/2024	AAPL	Buy	213.93	47	10049.71		91397.37	1358.07
06/20/2024	MSFT	Buy	446.3	22	9817.6		81579.77	1358.07
06/20/2024	JNJ	Buy	145.27	67	9734.09		71845.68	1358.07
06/20/2024	PFE	Buy	27.2	344	9356.8		62488.88	1358.07
06/20/2024	PG	Buy	168.37	60	10102.2		52386.68	1358.07
06/20/2024	KO	Buy	62.4	156	9734.4		42652.28	1358.07
06/20/2024	DUK	Buy	100.25	97	9724.25		32928.03	1358.07
06/20/2024	NEE	Buy	71.0	132	9372.0		23556.03	1358.07
06/20/2024	JPM	Buy	196.39	50	9819.5		13736.53	1358.07
06/20/2024	GS	Buy	458.0	21	9618.0		4118.53	1358.07
06/20/2024	AAPL	Sell	209.68	47	9855.96	(193.75)	13974.49	1164.32
06/20/2024	MSFT	Sell	445.7	22	9805.4	(12.2)	23779.89	1152.12
06/20/2024	JNJ	Sell	147.78	67	9905.26	171.17	33685.15	1323.29
06/20/2024	PFE	Sell	27.74	344	9538.56	181.76	43223.71	1505.05
06/20/2024	PG	Sell	167.67	60	10060.2	(42.0)	53283.91	1463.05
06/20/2024	KO	Sell	62.18	156	9694.08	(40.32)	62978.03	1422.73
06/20/2024	DUK	Sell	100.1	97	9709.7	(14.55)	72687.73	1408.18
06/20/2024	NEE	Sell	72.46	132	9561.12	189.12	82248.85	1597.3
06/20/2024	JPM	Sell	198.67	50	9933.5	114.0	92182.35	1711.3
06/20/2024	GS	Sell	458.05	21	9618.9	0.9	101801.25	1712.2

The total profit for June 20th was \$1,712.20, reflecting gains from NEE, JNJ, and JPM despite some losses. The overall gain in stock value from the previous day was \$354.13, marking a 25.2% increase in total profit from the last trading day of June 18th. Below is Table 4.3.4 where all transactions from June 21th are displayed from the day trading portfolio.

Table 4.3.4 Day Trading Portfolio Transactions on June 21th (6/21 – 6/22)

Date	Symbol	Buy/Sell	Price	Shares	Net Cost/Proceeds	Profit/Loss	Total Cash	Total Profit
06/21/2024	AAPL	Buy	210.39	47	9888.33		91912.92	1712.2
06/21/2024	MSFT	Buy	447.38	22	9841.36		82071.56	1712.2
06/21/2024	JNJ	Buy	147.89	67	9912.63		72158.93	1712.2
06/21/2024	PFE	Buy	27.77	344	9547.68		62611.25	1712.2
06/21/2024	PG	Buy	167.48	60	10048.8		52562.45	1712.2
06/21/2024	KO	Buy	62.18	156	9699.08		42863.37	1712.2
06/21/2024	DUK	Buy	100.29	97	9728.13		33135.24	1712.2
06/21/2024	NEE	Buy	73.36	132	9677.52		23457.72	1712.2
06/21/2024	JPM	Buy	196.71	50	9835.5		13622.22	1712.2
06/21/2024	GS	Buy	458.68	21	9632.28		3989.94	1712.2
06/21/2024	AAPL	Sell	207.49	47	9761.03	(127.3)	13750.97	1584.9
06/21/2024	MSFT	Sell	449.78	22	9895.16	53.8	23646.13	1638.7
06/21/2024	JNJ	Sell	148.75	67	9971.25	58.62	33617.38	1697.32
06/21/2024	PFE	Sell	27.74	344	9547.68	0.0	43165.06	1697.32
06/21/2024	PG	Sell	168.26	60	10095.6	46.8	53260.66	1744.12
06/21/2024	KO	Sell	62.77	156	9791.88	92.8	63052.54	1836.92
06/21/2024	DUK	Sell	99.84	97	9684.48	(43.65)	72737.02	1793.27
06/21/2024	NEE	Sell	72.81	132	9611.72	(65.8)	82348.74	1727.47
06/21/2024	JPM	Sell	196.3	50	9815.0	(20.5)	92163.74	1706.97
06/21/2024	GS	Sell	450.18	21	9453.78	(178.5)	101617.52	1528.47

The total profit for June 21st was \$1,528.47, reflecting a decrease due to losses in several stocks such as AAPL and GS. The overall loss in stock value from the previous day was \$183.73, marking a 10.7% decrease in total profit from the last trading day of June 20th.

The week started with a total cash of \$100,722.37 and a cumulative profit of \$633.36. By the end of Week Three, the total cash stood at \$101,617.52 with a cumulative profit of \$1,528.47. Despite daily fluctuations and some losses, the overall strategy showed positive growth for the week. Week Three of the day trading simulation demonstrated consistent growth in the portfolio's value despite market volatility. The week concluded with a total cash of \$101,617.52 and a

cumulative profit of \$1,528.47, reinforcing the effectiveness of the day trading strategy in a simulated environment. Figure 4.3 below shows the graph of the overall performance of the day trading portfolio during Week Three.

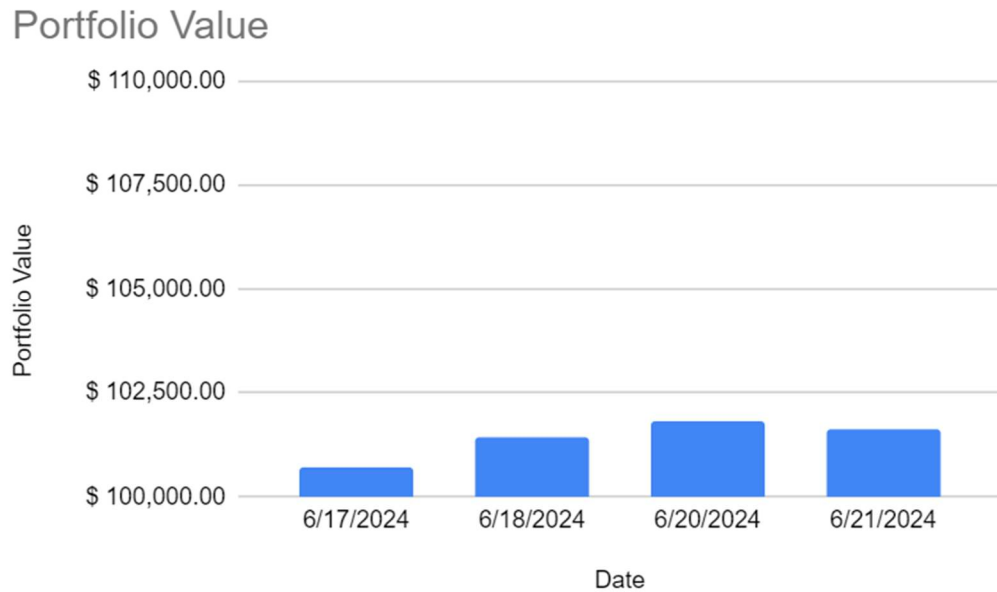


Figure 4.3 Day Trading Overall Performance Week 3 2024

4.4 Week Four

Week Four of the day trading simulation involved the continued application of the strategy used in the previous weeks. The initial capital at the beginning of the week was carried over from the end of Week Three, totaling \$101,617.52 with a cumulative profit of \$1,528.47. The aim remained to buy stocks shortly after the market opened and sell them shortly before market closed each day. Below is Table 4.4.1 where all transactions from June 24th are displayed from the day trading portfolio.

Table 4.4.1 Day Trading Portfolio Transactions on June 24th (6/24 – 6/25)

Date	Symbol	Buy/Sell	Price	Shares	Net Cost/Proceeds	Profit/Loss	Total Cash	Total Profit
06/24/2024	AAPL	Buy	207.72	48	\$9,971.52		\$91,645.00	\$1,528.47
06/24/2024	MSFT	Buy	449.80	22	\$9,895.60		\$81,749.40	\$1,528.47
06/24/2024	JNJ	Buy	149.00	66	\$9,834.00		\$71,915.40	\$1,528.47
06/24/2024	PFE	Buy	27.95	358	\$10,007.10		\$61,908.30	\$1,528.47
06/24/2024	PG	Buy	168.76	59	\$9,960.84		\$51,947.46	\$1,528.47
06/24/2024	KO	Buy	62.99	159	\$10,018.41		\$41,929.05	\$1,528.47
06/24/2024	DUK	Buy	99.99	97	\$9,699.03		\$32,230.02	\$1,528.47
06/24/2024	NEE	Buy	72.50	132	\$9,570.00		\$22,660.02	\$1,528.47
06/24/2024	JPM	Buy	197.81	50	\$9,890.50		\$12,769.52	\$1,528.47
06/24/2024	GS	Buy	451.25	21	\$9,476.25		\$3,293.27	\$1,528.47
06/24/2024	AAPL	Sell	208.14	48	\$9,991.28	\$19.76	\$13,284.55	\$1,548.23
06/24/2024	MSFT	Sell	447.67	22	\$9,848.74	(\$46.86)	\$23,133.29	\$1,501.37
06/24/2024	JNJ	Sell	149.12	66	\$9,844.32	\$10.32	\$32,977.61	\$1,511.69
06/24/2024	PFE	Sell	28.36	358	\$10,152.88	\$145.78	\$43,130.49	\$1,657.47
06/24/2024	PG	Sell	168.45	59	\$9,941.55	(\$19.29)	\$53,072.04	\$1,638.18
06/24/2024	KO	Sell	63.97	159	\$10,178.43	\$160.02	\$63,250.47	\$1,798.20
06/24/2024	DUK	Sell	101.51	97	\$9,845.47	\$146.44	\$73,095.94	\$1,944.64
06/24/2024	NEE	Sell	73.85	132	\$9,742.20	\$172.20	\$82,838.14	\$2,116.84
06/24/2024	JPM	Sell	198.88	50	\$9,944.00	\$53.50	\$92,782.14	\$2,170.34
06/24/2024	GS	Sell	462.09	21	\$9,703.89	\$227.64	\$102,486.03	\$2,397.98

The total profit for June 24th was \$2,397.98, reflecting a strong positive return with significant gains from GS and PFE. The overall gain in stock value from the previous day was \$869.51, marking a 56.9% increase in total profit from the last trading day of Week Three. Below is Table 4.4.2 where all transactions from June 25th are displayed from the day trading portfolio.

Table 4.4.2 Day Trading Portfolio Transactions on June 25th (6/25 – 6/26)

Date	Symbol	Buy/Sell	Price	Shares	Net Cost/Proceeds	Profit/Loss	Total Cash	Total Profit
06/25/2024	AAPL	Buy	209.15	48	\$10,039.20		\$92,446.83	\$2,397.98
06/25/2024	MSFT	Buy	448.25	22	\$9,861.50		\$82,585.33	\$2,397.98
06/25/2024	JNJ	Buy	149.18	66	\$9,844.88		\$72,740.45	\$2,397.98
06/25/2024	PFE	Buy	28.40	353	\$10,005.20		\$62,735.25	\$2,397.98
06/25/2024	PG	Buy	168.63	59	\$9,948.99		\$52,786.26	\$2,397.98
06/25/2024	KO	Buy	63.94	159	\$10,168.86		\$42,617.40	\$2,397.98
06/25/2024	DUK	Buy	101.24	97	\$9,819.28		\$32,798.12	\$2,397.98
06/25/2024	NEE	Buy	73.57	132	\$9,704.28		\$23,093.84	\$2,397.98
06/25/2024	JPM	Buy	198.09	50	\$9,904.50		\$13,189.34	\$2,397.98
06/25/2024	GS	Buy	459.46	21	\$9,648.66		\$3,540.68	\$2,397.98
06/25/2024	AAPL	Sell	209.07	48	\$10,035.36	(\$3.84)	\$13,576.04	\$2,394.14
06/25/2024	MSFT	Sell	450.95	22	\$9,921.00	\$59.50	\$23,497.04	\$2,453.64
06/25/2024	JNJ	Sell	147.19	66	\$9,720.54	(\$124.34)	\$33,217.58	\$2,329.30
06/25/2024	PFE	Sell	27.99	353	\$9,879.47	(\$125.73)	\$43,097.05	\$2,203.57
06/25/2024	PG	Sell	166.85	59	\$9,845.15	(\$103.84)	\$52,942.20	\$2,099.73
06/25/2024	KO	Sell	63.84	159	\$10,148.76	(\$20.10)	\$63,090.96	\$2,079.63
06/25/2024	DUK	Sell	100.20	97	\$9,719.40	(\$99.88)	\$72,810.36	\$1,979.75
06/25/2024	NEE	Sell	72.98	132	\$9,633.36	(\$70.92)	\$82,443.72	\$1,908.83
06/25/2024	JPM	Sell	198.07	50	\$9,903.50	(\$1.00)	\$92,347.22	\$1,907.83
06/25/2024	GS	Sell	457.38	21	\$9,604.98	(\$43.68)	\$101,952.20	\$1,864.15

The total profit for June 25th was \$1,864.15, reflecting a decrease due to several losses despite some gains. The overall loss in stock value from the previous day was \$533.83, marking a 22.3% decrease in total profit from the last trading day of June 24th. Below is Table 4.4.3 where all transactions from June 26th are displayed from the day trading portfolio.

Table 4.4.3 Day Trading Portfolio Transactions on June 26th (6/26 – 6/27)

Date	Symbol	Buy/Sell	Price	Shares	Net Cost/Proceeds	Profit/Loss	Total Cash	Total Profit
06/26/2024	AAPL	Buy	211.50	48	\$10,152.00		\$91,800.20	\$1,864.15
06/26/2024	MSFT	Buy	449.00	22	\$9,878.00		\$81,922.20	\$1,864.15
06/26/2024	JNJ	Buy	146.20	67	\$9,795.40		\$72,126.80	\$1,864.15
06/26/2024	PFE	Buy	27.91	358	\$9,994.78		\$62,132.02	\$1,864.15
06/26/2024	PG	Buy	166.05	60	\$9,963.00		\$52,169.02	\$1,864.15
06/26/2024	KO	Buy	63.40	158	\$10,017.20		\$42,151.82	\$1,864.15
06/26/2024	DUK	Buy	99.85	97	\$9,685.45		\$32,466.37	\$1,864.15
06/26/2024	NEE	Buy	72.80	132	\$9,609.60		\$22,856.77	\$1,864.15
06/26/2024	JPM	Buy	197.45	50	\$9,872.50		\$12,984.27	\$1,864.15
06/26/2024	GS	Buy	455.41	21	\$9,563.61		\$3,420.66	\$1,864.15
06/26/2024	AAPL	Sell	213.25	48	\$10,236.00	\$84.00	\$13,656.66	\$1,948.15
06/26/2024	MSFT	Sell	452.16	22	\$9,947.52	\$69.52	\$23,604.18	\$2,017.67
06/26/2024	JNJ	Sell	146.82	67	\$9,835.14	\$39.74	\$33,439.32	\$2,057.41
06/26/2024	PFE	Sell	27.42	358	\$9,821.16	(\$173.62)	\$43,260.48	\$1,883.79
06/26/2024	PG	Sell	167.45	60	\$10,047.00	\$84.00	\$53,307.48	\$1,967.79
06/26/2024	KO	Sell	64.05	158	\$10,116.90	\$99.70	\$63,424.38	\$2,067.49
06/26/2024	DUK	Sell	99.95	97	\$9,695.15	\$9.70	\$73,119.53	\$2,077.19
06/26/2024	NEE	Sell	73.37	132	\$9,675.84	\$66.24	\$82,795.37	\$2,143.43
06/26/2024	JPM	Sell	197.43	50	\$9,871.50	(\$1.00)	\$92,666.87	\$2,142.43
06/26/2024	GS	Sell	455.86	21	\$9,572.06	\$8.45	\$102,238.93	\$2,150.88

The total profit for June 26th was \$2,150.88, reflecting gains primarily from AAPL and MSFT despite some losses. The overall gain in stock value from the previous day was \$286.73, marking a 15.4% increase in total profit from the last trading day of June 25th. Below is Table 4.4.4 where all transactions from June 27th are displayed from the day trading portfolio.

Table 4.4.4 Day Trading Portfolio Transactions on June 27th (6/27 – 6/28)

Date	Symbol	Buy/Sell	Price	Shares	Net Cost/Proceeds	Profit/Loss	Total Cash	Total Profit
06/27/2024	AAPL	Buy	214.69	47	\$10,083.43		\$92,155.50	\$2,150.88
06/27/2024	MSFT	Buy	452.18	22	\$9,947.96		\$82,207.54	\$2,150.88
06/27/2024	JNJ	Buy	146.80	67	\$9,835.60		\$72,371.94	\$2,150.88
06/27/2024	PFE	Buy	27.37	358	\$9,794.86		\$62,577.08	\$2,150.88
06/27/2024	PG	Buy	167.49	60	\$10,049.40		\$52,527.68	\$2,150.88
06/27/2024	KO	Buy	64.05	158	\$10,118.90		\$42,408.78	\$2,150.88
06/27/2024	DUK	Buy	100.00	97	\$9,700.00		\$32,708.78	\$2,150.88
06/27/2024	NEE	Buy	73.62	132	\$9,708.24		\$22,858.54	\$2,150.88
06/27/2024	JPM	Buy	197.44	50	\$9,872.00		\$12,986.54	\$2,150.88
06/27/2024	GS	Buy	449.78	21	\$9,445.38		\$3,541.16	\$2,150.88
06/27/2024	AAPL	Sell	214.10	47	\$10,062.70	(\$20.73)	\$13,603.86	\$2,130.15
06/27/2024	MSFT	Sell	452.85	22	\$9,962.70	\$14.74	\$23,566.56	\$2,144.89
06/27/2024	JNJ	Sell	145.80	67	\$9,771.60	(\$64.00)	\$33,338.16	\$2,080.89
06/27/2024	PFE	Sell	27.80	358	\$9,952.40	\$157.54	\$43,290.56	\$2,238.43
06/27/2024	PG	Sell	166.62	60	\$9,997.20	(\$52.20)	\$53,287.76	\$2,186.23
06/27/2024	KO	Sell	63.91	158	\$10,099.78	(\$19.12)	\$63,387.54	\$2,167.11
06/27/2024	DUK	Sell	100.59	97	\$9,756.33	\$56.33	\$73,143.87	\$2,223.44
06/27/2024	NEE	Sell	73.72	132	\$9,726.96	\$18.72	\$82,870.83	\$2,242.16
06/27/2024	JPM	Sell	199.17	50	\$9,958.50	\$86.50	\$92,829.33	\$2,328.66
06/27/2024	GS	Sell	445.96	21	\$9,365.16	(\$80.22)	\$102,194.49	\$2,248.44

The total profit for June 27th was \$2,248.44, reflecting gains from PFE and JPM despite some losses. The overall gain in stock value from the previous day was \$97.56, marking a 4.5% increase in total profit from the last trading day of June 26th. Below is Table 4.4.5 where all transactions from June 28th are displayed from the day trading portfolio.

Table 4.4.5 Day Trading Portfolio Transactions on June 28th (6/28 – 6/29)

Date	Symbol	Buy/Sell	Price	Shares	Net Cost/Proceeds	Profit/Loss	Total Cash	Total Profit
06/28/2024	AAPL	Buy	215.77	46	\$9,926.42		\$92,268.07	\$2,248.44
06/28/2024	MSFT	Buy	453.07	22	\$9,967.54		\$82,300.53	\$2,248.44
06/28/2024	JNJ	Buy	146.04	67	\$9,784.68		\$72,515.85	\$2,248.44
06/28/2024	PFE	Buy	27.78	358	\$9,946.84		\$62,569.01	\$2,248.44
06/28/2024	PG	Buy	166.00	60	\$9,960.00		\$52,609.01	\$2,248.44
06/28/2024	KO	Buy	63.90	158	\$10,096.20		\$42,512.81	\$2,248.44
06/28/2024	DUK	Buy	100.59	97	\$9,756.23		\$32,756.58	\$2,248.44
06/28/2024	NEE	Buy	73.21	132	\$9,661.72		\$23,094.86	\$2,248.44
06/28/2024	JPM	Buy	200.01	50	\$10,000.50		\$13,094.36	\$2,248.44
06/28/2024	GS	Buy	450.10	21	\$9,452.10		\$3,642.26	\$2,248.44
06/28/2024	AAPL	Sell	210.62	46	\$9,688.52	(\$237.90)	\$13,330.78	\$2,010.54
06/28/2024	MSFT	Sell	446.95	22	\$9,833.90	(\$133.64)	\$23,164.68	\$1,876.90
06/28/2024	JNJ	Sell	146.16	67	\$9,794.72	\$10.04	\$32,959.40	\$1,886.94
06/28/2024	PFE	Sell	27.98	358	\$10,015.24	\$68.40	\$42,974.64	\$1,955.34
06/28/2024	PG	Sell	164.92	60	\$9,895.20	(\$64.80)	\$52,869.84	\$1,890.54
06/28/2024	KO	Sell	63.65	158	\$10,054.70	(\$41.50)	\$62,924.54	\$1,849.04
06/28/2024	DUK	Sell	100.23	97	\$9,722.31	(\$33.92)	\$72,646.85	\$1,815.12
06/28/2024	NEE	Sell	70.81	132	\$9,348.92	(\$312.80)	\$82,001.77	\$1,502.32
06/28/2024	JPM	Sell	202.26	50	\$10,113.00	\$112.50	\$92,114.77	\$1,614.82
06/28/2024	GS	Sell	452.32	21	\$9,498.72	\$46.62	\$101,613.49	\$1,661.44

The total profit for June 28th was \$1,661.44, reflecting a decrease due to significant losses despite some gains. The overall loss in stock value from the previous day was \$587.00, marking a 26.1% decrease in total profit from the last trading day of June 27th.

The week started with a total cash of \$101,617.52 and a cumulative profit of \$1,528.47. By the end of Week Four, the total cash stood at \$101,613.49 with a cumulative profit of \$1,661.44. Despite daily fluctuations and some losses, the overall strategy showed stability. Figure 4.4 below shows the graph of the overall performance of the day trading portfolio during Week Four.

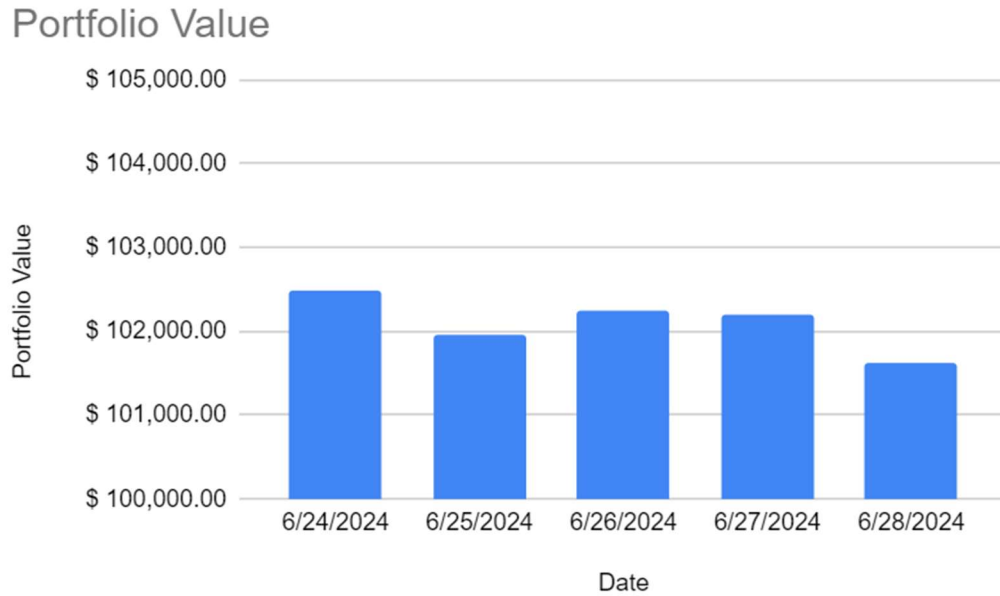


Figure 4.4 Day Trading Overall Performance Week 4 2024

4.5 Week Five

Week Five of the day trading simulation involved the continuation of the strategies applied in previous weeks. The initial capital at the beginning of the week was carried over from the end of Week Four, totaling \$101,613.49 with a cumulative profit of \$1,661.44. This week, the trading sessions were conducted from July 1st to July 5th, with the market being closed on July 4th due to Independence Day, a federal holiday. The goal was to maintain the approach of buying stocks shortly after the market opened and selling them shortly before market closed each day. Below is Table 4.5.1 where all transactions from July 1st are displayed from the day trading portfolio.

Table 4.5.1 Day Trading Portfolio Transactions on July 1st (7/1 – 7/2)

Date	Symbol	Buy/Sell	Price	Shares	Net Cost/Proceeds	Profit/Loss	Total Cash	Total Profit
07/01/2024	AAPL	Buy	212.09	48	\$10,180.32		\$91,433.17	\$1,661.44
07/01/2024	MSFT	Buy	448.66	22	\$9,870.52		\$81,562.65	\$1,661.44
07/01/2024	JNJ	Buy	146.07	68	\$9,933.00		\$71,629.65	\$1,661.44
07/01/2024	PFE	Buy	27.95	358	\$10,007.10		\$61,622.55	\$1,661.44
07/01/2024	PG	Buy	165.59	60	\$9,935.40		\$51,687.15	\$1,661.44
07/01/2024	KO	Buy	64.03	159	\$10,175.77		\$41,511.38	\$1,661.44
07/01/2024	DUK	Buy	100.73	97	\$9,771.01		\$31,740.37	\$1,661.44
07/01/2024	NEE	Buy	71.46	132	\$9,426.72		\$22,313.65	\$1,661.44
07/01/2024	JPM	Buy	202.84	50	\$10,142.00		\$12,171.65	\$1,661.44
07/01/2024	GS	Buy	454.51	21	\$9,544.71		\$2,626.94	\$1,661.44
07/01/2024	AAPL	Sell	216.75	48	\$10,404.00	\$223.68	\$13,030.94	\$1,885.12
07/01/2024	MSFT	Sell	456.73	22	\$10,047.06	\$176.54	\$23,078.00	\$2,061.66
07/01/2024	JNJ	Sell	146.44	68	\$9,953.92	\$20.92	\$33,031.92	\$2,082.58
07/01/2024	PFE	Sell	28.22	358	\$10,101.76	\$94.66	\$43,133.68	\$2,177.24
07/01/2024	PG	Sell	162.72	60	\$9,763.20	(\$172.20)	\$52,896.88	\$2,005.04
07/01/2024	KO	Sell	63.28	159	\$10,060.32	(\$115.45)	\$62,957.20	\$1,889.59
07/01/2024	DUK	Sell	99.35	97	\$9,636.95	(\$134.06)	\$72,594.15	\$1,755.53
07/01/2024	NEE	Sell	69.90	132	\$9,226.80	(\$199.92)	\$81,820.95	\$1,555.61
07/01/2024	JPM	Sell	205.45	50	\$10,272.50	\$130.50	\$92,093.45	\$1,686.11
07/01/2024	GS	Sell	463.66	21	\$9,736.86	\$192.15	\$101,830.31	\$1,878.26

The total profit for July 1st was \$1,878.26, reflecting gains primarily from GS, AAPL, and MSFT. The overall gain in stock value from the previous day was \$216.82, marking a 13% increase in total profit from the last trading day of June 28th. Below is Table 4.5.2 where all transactions from July 2nd are displayed from the day trading portfolio.

Table 4.5.2 Day Trading Portfolio Transactions on July 2nd (7/2 – 7/3)

Date	Symbol	Buy/Sell	Price	Shares	Net Cost/Proceeds	Profit/Loss	Total Cash	Total Profit
07/02/2024	AAPL	Buy	216.15	47	\$10,158.55		\$91,671.76	\$1,878.26
07/02/2024	MSFT	Buy	453.20	22	\$9,970.40		\$81,701.36	\$1,878.26
07/02/2024	JNJ	Buy	146.43	68	\$9,956.24		\$71,745.12	\$1,878.26
07/02/2024	PFE	Buy	28.22	353	\$9,959.66		\$61,785.46	\$1,878.26
07/02/2024	PG	Buy	162.58	60	\$9,754.80		\$52,030.66	\$1,878.26
07/02/2024	KO	Buy	63.26	159	\$10,061.34		\$41,969.32	\$1,878.26
07/02/2024	DUK	Buy	99.63	97	\$9,664.11		\$32,305.21	\$1,878.26
07/02/2024	NEE	Buy	70.00	132	\$9,240.00		\$23,065.21	\$1,878.26
07/02/2024	JPM	Buy	205.29	50	\$10,264.50		\$12,800.71	\$1,878.26
07/02/2024	GS	Buy	461.51	21	\$9,691.71		\$3,109.00	\$1,878.26
07/02/2024	AAPL	Sell	220.27	47	\$10,353.59	\$195.04	\$13,462.59	\$2,073.30
07/02/2024	MSFT	Sell	459.28	22	\$10,103.16	\$132.76	\$23,565.75	\$2,206.06
07/02/2024	JNJ	Sell	146.03	68	\$9,930.04	(\$26.20)	\$33,495.79	\$2,179.86
07/02/2024	PFE	Sell	27.83	353	\$9,824.99	(\$134.67)	\$43,320.78	\$2,045.19
07/02/2024	PG	Sell	163.90	60	\$9,834.00	\$79.20	\$53,154.78	\$2,124.39
07/02/2024	KO	Sell	63.15	159	\$10,039.85	(\$21.49)	\$63,194.63	\$2,102.90
07/02/2024	DUK	Sell	99.81	97	\$9,681.57	\$17.46	\$72,876.20	\$2,120.36
07/02/2024	NEE	Sell	70.47	132	\$9,295.02	\$55.02	\$82,171.22	\$2,175.38
07/02/2024	JPM	Sell	208.83	50	\$10,441.50	\$177.00	\$92,612.72	\$2,352.38
07/02/2024	GS	Sell	465.61	21	\$9,777.81	\$86.10	\$102,390.53	\$2,438.48

The total profit for July 2nd was \$2,438.48, reflecting gains primarily from AAPL, MSFT, and JPM despite some losses. The overall gain in stock value from the previous day was \$560.22, marking a 29.8% increase in total profit from the last trading day of July 1st. Below is Table 4.5.3 where all transactions from July 3rd are displayed from the day trading portfolio.

Table 4.5.3 Day Trading Portfolio Transactions on July 3rd (7/3 – 7/4)

Date	Symbol	Buy/Sell	Price	Shares	Net Cost/Proceeds	Profit/Loss	Total Cash	Total Profit
07/03/2024	AAPL	Buy	220.00	46	\$10,120.00		\$92,270.53	\$2,438.48
07/03/2024	MSFT	Buy	458.19	22	\$10,080.18		\$82,190.35	\$2,438.48
07/03/2024	JNJ	Buy	146.20	68	\$9,941.60		\$72,248.75	\$2,438.48
07/03/2024	PFE	Buy	27.92	353	\$9,863.76		\$62,384.99	\$2,438.48
07/03/2024	PG	Buy	163.21	60	\$9,792.60		\$52,592.39	\$2,438.48
07/03/2024	KO	Buy	63.19	159	\$10,046.21		\$42,546.18	\$2,438.48
07/03/2024	DUK	Buy	99.72	97	\$9,672.84		\$32,873.34	\$2,438.48
07/03/2024	NEE	Buy	70.92	132	\$9,356.64		\$23,516.70	\$2,438.48
07/03/2024	JPM	Buy	209.55	50	\$10,477.50		\$13,039.20	\$2,438.48
07/03/2024	GS	Buy	469.04	21	\$9,849.84		\$3,189.36	\$2,438.48
07/03/2024	AAPL	Sell	221.55	46	\$10,190.30	\$70.30	\$13,379.66	\$2,508.78
07/03/2024	MSFT	Sell	460.77	22	\$10,137.94	\$57.76	\$23,517.60	\$2,566.54
07/03/2024	JNJ	Sell	145.69	68	\$9,902.92	(\$38.68)	\$33,420.52	\$2,527.86
07/03/2024	PFE	Sell	27.70	353	\$9,782.10	(\$81.66)	\$43,202.62	\$2,446.20
07/03/2024	PG	Sell	163.83	60	\$9,829.80	\$37.20	\$53,032.42	\$2,483.40
07/03/2024	KO	Sell	63.33	159	\$10,071.27	\$25.06	\$63,103.69	\$2,508.46
07/03/2024	DUK	Sell	99.84	97	\$9,684.48	\$11.64	\$72,788.17	\$2,520.10
07/03/2024	NEE	Sell	71.83	132	\$9,480.36	\$123.72	\$82,268.53	\$2,643.82
07/03/2024	JPM	Sell	208.69	50	\$10,434.50	(\$43.00)	\$92,703.03	\$2,600.82
07/03/2024	GS	Sell	467.92	21	\$9,826.32	(\$23.52)	\$102,529.35	\$2,577.30

The total profit for July 3rd was \$2,577.30, reflecting gains primarily from AAPL, MSFT, and NEE despite some losses. The overall gain in stock value from the previous day was \$138.82, marking a 5.7% increase in total profit from the last trading day of July 2nd. Below is Table 4.5.4 where all transactions from July 5th are displayed from the day trading portfolio.

Table 4.5.4 Day Trading Portfolio Transactions on July 5th (7/5 – 7/6)

Date	Symbol	Buy/Sell	Price	Shares	Net Cost/Proceeds	Profit/Loss	Total Cash	Total Profit
07/05/2024	AAPL	Buy	221.65	45	\$9,974.25		\$92,555.10	\$2,577.30
07/05/2024	MSFT	Buy	459.61	21	\$9,652.05		\$82,903.05	\$2,577.30
07/05/2024	JNJ	Buy	145.77	68	\$9,909.36		\$72,993.69	\$2,577.30
07/05/2024	PFE	Buy	27.76	358	\$9,939.28		\$63,054.41	\$2,577.30
07/05/2024	PG	Buy	164.01	60	\$9,840.60		\$53,213.81	\$2,577.30
07/05/2024	KO	Buy	63.33	159	\$10,065.27		\$43,148.54	\$2,577.30
07/05/2024	DUK	Buy	100.00	97	\$9,700.00		\$33,448.54	\$2,577.30
07/05/2024	NEE	Buy	72.00	132	\$9,504.00		\$23,944.54	\$2,577.30
07/05/2024	JPM	Buy	206.99	50	\$10,349.50		\$13,595.04	\$2,577.30
07/05/2024	GS	Buy	467.47	21	\$9,816.87		\$3,778.17	\$2,577.30
07/05/2024	AAPL	Sell	226.34	45	\$10,185.30	\$211.05	\$13,963.47	\$2,788.35
07/05/2024	MSFT	Sell	467.56	21	\$9,818.76	\$166.71	\$23,782.23	\$2,955.06
07/05/2024	JNJ	Sell	146.48	68	\$9,960.64	\$51.28	\$33,742.87	\$3,006.34
07/05/2024	PFE	Sell	28.05	358	\$10,042.90	\$103.62	\$43,785.77	\$3,109.96
07/05/2024	PG	Sell	165.21	60	\$9,912.60	\$72.00	\$53,698.37	\$3,181.96
07/05/2024	KO	Sell	63.76	159	\$10,135.84	\$70.57	\$63,834.21	\$3,252.53
07/05/2024	DUK	Sell	100.56	97	\$9,754.32	\$54.32	\$73,588.53	\$3,306.85
07/05/2024	NEE	Sell	72.09	132	\$9,515.88	\$11.88	\$83,104.41	\$3,318.73
07/05/2024	JPM	Sell	204.79	50	\$10,239.50	(\$110.00)	\$93,343.91	\$3,208.73
07/05/2024	GS	Sell	464.75	21	\$9,759.75	(\$57.12)	\$103,103.66	\$3,151.61

The total profit for July 5th was \$3,151.61, reflecting gains primarily from AAPL, MSFT, and JNJ despite some losses. The overall gain in stock value from the previous day was \$574.31, marking a 22.3% increase in total profit from the last trading day of July 3rd. The week started with a total cash of \$101,613.49 and a cumulative profit of \$1,661.44. By the end of Week Five, the total cash stood at \$103,103.66 with a cumulative profit of \$3,151.61. Figure 4.5 below shows the graph of the overall performance of the day trading portfolio during Week Five.

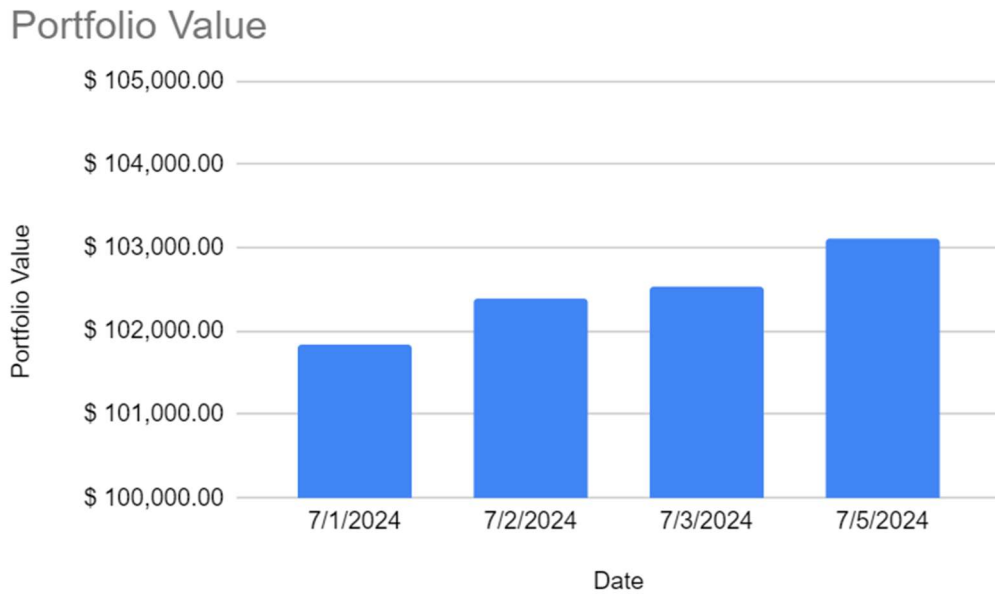


Figure 4.5 Day Trading Overall Performance Week 5 2024

4.6 Week Six

Week Six marks the final week of our day trading simulation. The simulation continues with the same strategy used in previous weeks: buying stocks shortly after the market opens and selling them shortly before the market closes each day. The initial capital at the beginning of this week was carried over from the end of Week Five, totaling \$103,103.66 with a cumulative profit of \$3,151.61. Below is Table 4.6.1 where all transactions from July 8th are displayed from the day trading portfolio.

Table 4.6.1 Day Trading Portfolio Transactions on July 8th (7/8 – 7/9)

Date	Symbol	Buy/Sell	Price	Shares	Net Cost/Proceeds	Profit/Loss	Total Cash	Total Profit
07/08/2024	AAPL	Buy	227.09	46	\$10,446.14		\$92,657.52	\$3,151.61
07/08/2024	MSFT	Buy	466.55	21	\$9,798.55		\$82,858.97	\$3,151.61
07/08/2024	JNJ	Buy	146.40	68	\$9,955.20		\$72,903.77	\$3,151.61
07/08/2024	PFE	Buy	28.05	358	\$10,042.90		\$62,860.87	\$3,151.61
07/08/2024	PG	Buy	165.95	60	\$9,957.00		\$52,903.87	\$3,151.61
07/08/2024	KO	Buy	63.59	159	\$10,112.01		\$42,791.86	\$3,151.61
07/08/2024	DUK	Buy	100.44	97	\$9,743.68		\$33,048.18	\$3,151.61
07/08/2024	NEE	Buy	72.15	132	\$9,520.80		\$23,527.38	\$3,151.61
07/08/2024	JPM	Buy	205.04	50	\$10,252.00		\$13,275.38	\$3,151.61
07/08/2024	GS	Buy	467.65	21	\$9,820.65		\$3,454.73	\$3,151.61
07/08/2024	AAPL	Sell	227.82	46	\$10,482.72	\$36.58	\$13,937.45	\$3,188.19
07/08/2024	MSFT	Sell	466.24	21	\$9,790.04	(\$8.51)	\$23,727.49	\$3,179.68
07/08/2024	JNJ	Sell	145.48	68	\$9,892.64	(\$62.56)	\$33,620.13	\$3,117.12
07/08/2024	PFE	Sell	27.93	358	\$9,995.94	(\$46.96)	\$43,616.07	\$3,070.16
07/08/2024	PG	Sell	166.52	60	\$9,991.20	\$34.20	\$53,607.27	\$3,104.36
07/08/2024	KO	Sell	62.96	159	\$10,013.64	(\$98.37)	\$63,620.91	\$3,005.99
07/08/2024	DUK	Sell	100.64	97	\$9,762.08	\$18.40	\$73,382.99	\$3,024.39
07/08/2024	NEE	Sell	72.11	132	\$9,513.12	(\$7.68)	\$82,896.11	\$3,016.71
07/08/2024	JPM	Sell	205.17	50	\$10,258.50	\$6.50	\$93,154.61	\$3,023.21
07/08/2024	GS	Sell	464.82	21	\$9,761.22	(\$59.43)	\$102,915.83	\$2,963.78

The total profit for July 8th was \$2,915.83, reflecting a decrease due to several losses despite some gains. The overall loss in stock value from the previous day was \$235.78, marking a 7.5% decrease in total profit from the last trading day of July 5th. Below is Table 4.6.2 where all transactions from July 9th are displayed from the day trading portfolio.

Table 4.6.2 Day Trading Portfolio Transactions on July 9th (7/9 – 7/10)

Date	Symbol	Buy/Sell	Price	Shares	Net Cost/Proceeds	Profit/Loss	Total Cash	Total Profit
07/09/2024	AAPL	Buy	227.93	45	\$10,256.85		\$92,658.98	\$2,963.78
07/09/2024	MSFT	Buy	467.00	21	\$9,807.00		\$82,851.98	\$2,963.78
07/09/2024	JNJ	Buy	145.67	68	\$9,899.56		\$72,952.42	\$2,963.78
07/09/2024	PFE	Buy	27.88	359	\$10,009.72		\$62,942.70	\$2,963.78
07/09/2024	PG	Buy	166.52	60	\$9,991.20		\$52,951.50	\$2,963.78
07/09/2024	KO	Buy	63.26	159	\$10,056.34		\$42,895.16	\$2,963.78
07/09/2024	DUK	Buy	100.59	97	\$9,757.23		\$33,137.93	\$2,963.78
07/09/2024	NEE	Buy	72.06	132	\$9,511.92		\$23,626.01	\$2,963.78
07/09/2024	JPM	Buy	205.63	50	\$10,281.50		\$13,344.51	\$2,963.78
07/09/2024	GS	Buy	465.60	21	\$9,777.60		\$3,566.91	\$2,963.78
07/09/2024	AAPL	Sell	228.68	45	\$10,290.60	\$33.75	\$13,857.51	\$2,997.53
07/09/2024	MSFT	Sell	459.54	21	\$9,650.34	(\$156.66)	\$23,507.85	\$2,840.87
07/09/2024	JNJ	Sell	147.05	68	\$9,999.40	\$99.84	\$33,507.25	\$2,940.71
07/09/2024	PFE	Sell	27.72	359	\$9,946.68	(\$63.04)	\$43,453.93	\$2,877.67
07/09/2024	PG	Sell	166.52	60	\$9,991.20	\$0.00	\$53,445.13	\$2,877.67
07/09/2024	KO	Sell	63.15	159	\$10,038.85	(\$17.49)	\$63,483.98	\$2,860.18
07/09/2024	DUK	Sell	100.94	97	\$9,791.18	\$33.95	\$73,275.16	\$2,894.13
07/09/2024	NEE	Sell	72.12	132	\$9,513.84	\$1.92	\$82,788.99	\$2,896.05
07/09/2024	JPM	Sell	207.63	50	\$10,381.50	\$100.00	\$93,170.49	\$2,996.05
07/09/2024	GS	Sell	472.83	21	\$9,929.43	\$151.83	\$103,099.92	\$3,147.88

The total profit for July 9th was \$3,099.92, reflecting gains primarily from AAPL, JNJ, and GS despite some losses. The overall gain in stock value from the previous day was \$184.09, marking a 6.2% increase in total profit from the last trading day of July 8th. Below is Table 4.6.3 where all transactions from July 10th are displayed from the day trading portfolio.

Table 4.6.3 Day Trading Portfolio Transactions on July 10th (7/10 – 7/11)

Date	Symbol	Buy/Sell	Price	Shares	Net Cost/Proceeds	Profit/Loss	Total Cash	Total Profit
07/10/2024	AAPL	Buy	229.30	45	\$10,318.50		\$92,781.42	\$3,147.88
07/10/2024	MSFT	Buy	461.22	21	\$9,685.62		\$83,095.80	\$3,147.88
07/10/2024	JNJ	Buy	147.26	67	\$9,868.42		\$73,227.38	\$3,147.88
07/10/2024	PFE	Buy	27.83	358	\$9,965.14		\$63,262.24	\$3,147.88
07/10/2024	PG	Buy	165.90	60	\$9,954.00		\$53,308.24	\$3,147.88
07/10/2024	KO	Buy	62.72	159	\$9,973.68		\$43,334.56	\$3,147.88
07/10/2024	DUK	Buy	101.25	97	\$9,821.25		\$33,513.31	\$3,147.88
07/10/2024	NEE	Buy	72.26	132	\$9,534.12		\$23,979.19	\$3,147.88
07/10/2024	JPM	Buy	206.14	50	\$10,307.00		\$13,672.19	\$3,147.88
07/10/2024	GS	Buy	472.51	21	\$9,922.71		\$3,749.48	\$3,147.88
07/10/2024	AAPL	Sell	232.98	45	\$10,484.10	\$165.60	\$14,233.58	\$3,313.48
07/10/2024	MSFT	Sell	466.25	21	\$9,791.25	\$105.63	\$24,024.83	\$3,419.11
07/10/2024	JNJ	Sell	149.43	67	\$10,017.81	\$149.39	\$34,042.64	\$3,568.50
07/10/2024	PFE	Sell	28.35	358	\$10,147.30	\$182.16	\$44,189.94	\$3,750.66
07/10/2024	PG	Sell	166.80	60	\$10,008.00	\$54.00	\$54,197.94	\$3,804.66
07/10/2024	KO	Sell	62.83	159	\$9,992.97	\$19.29	\$64,190.91	\$3,823.95
07/10/2024	DUK	Sell	102.83	97	\$9,975.51	\$154.26	\$74,166.42	\$3,978.21
07/10/2024	NEE	Sell	72.90	132	\$9,622.80	\$88.68	\$83,789.22	\$4,066.89
07/10/2024	JPM	Sell	207.80	50	\$10,390.00	\$83.00	\$94,179.22	\$4,149.89
07/10/2024	GS	Sell	478.89	21	\$10,056.69	\$133.98	\$104,235.91	\$4,283.87

The total profit for July 10th was \$4,235.91, reflecting significant gains from AAPL, MSFT, and JNJ. The overall gain in stock value from the previous day was \$1,136.99, marking a 36.6% increase in total profit from the last trading day of July 9th. Below is Table 4.6.4 where all transactions from July 11th are displayed from the day trading portfolio.

Table 4.6.4 Day Trading Portfolio Transactions on July 11th (7/11 – 7/12)

Date	Symbol	Buy/Sell	Price	Shares	Net Cost/Proceeds	Profit/Loss	Total Cash	Total Profit
07/11/2024	AAPL	Buy	231.39	45	\$10,412.55		\$93,823.36	\$4,283.87
07/11/2024	MSFT	Buy	462.98	21	\$9,722.58		\$84,100.78	\$4,283.87
07/11/2024	JNJ	Buy	149.58	67	\$10,026.86		\$74,073.92	\$4,283.87
07/11/2024	PFE	Buy	28.78	358	\$10,295.24		\$63,778.68	\$4,283.87
07/11/2024	PG	Buy	166.30	60	\$9,978.00		\$53,800.68	\$4,283.87
07/11/2024	KO	Buy	62.64	159	\$9,957.76		\$43,842.92	\$4,283.87
07/11/2024	DUK	Buy	103.06	97	\$9,997.82		\$33,845.10	\$4,283.87
07/11/2024	NEE	Buy	73.50	132	\$9,702.00		\$24,143.10	\$4,283.87
07/11/2024	JPM	Buy	206.21	50	\$10,310.50		\$13,832.60	\$4,283.87
07/11/2024	GS	Buy	480.00	21	\$10,080.00		\$3,752.60	\$4,283.87
07/11/2024	AAPL	Sell	227.57	45	\$10,240.65	(\$171.90)	\$13,993.25	\$4,111.97
07/11/2024	MSFT	Sell	454.70	21	\$9,548.70	(\$173.88)	\$23,541.95	\$3,938.09
07/11/2024	JNJ	Sell	149.70	67	\$10,037.90	\$11.04	\$33,579.85	\$3,949.13
07/11/2024	PFE	Sell	28.66	358	\$10,253.88	(\$41.36)	\$43,833.73	\$3,907.77
07/11/2024	PG	Sell	165.54	60	\$9,932.40	(\$45.60)	\$53,766.13	\$3,862.17
07/11/2024	KO	Sell	63.10	159	\$10,032.90	\$75.14	\$63,799.03	\$3,937.31
07/11/2024	DUK	Sell	104.46	97	\$10,132.62	\$134.80	\$73,931.65	\$4,072.11
07/11/2024	NEE	Sell	74.70	132	\$9,860.40	\$158.40	\$83,792.05	\$4,230.51
07/11/2024	JPM	Sell	207.45	50	\$10,372.50	\$62.00	\$94,164.55	\$4,292.51
07/11/2024	GS	Sell	479.23	21	\$10,063.83	(\$16.17)	\$104,228.38	\$4,276.34

The total profit for July 11th was \$4,228.38, reflecting gains primarily from JNJ, KO, and NEE despite some losses. The overall decrease in stock value from the previous day was \$7.64, marking a 0.18% decrease in total profit from the last trading day of July 10th. Below is Table 4.6.5 where all transactions from July 12th are displayed from the day trading portfolio.

Table 4.6.5 Day Trading Portfolio Transactions on July 12th (7/12 – 7/13)

Date	Symbol	Buy/Sell	Price	Shares	Net Cost/Proceeds	Profit/Loss	Total Cash	Total Profit
07/12/2024	AAPL	Buy	228.92	45	\$10,301.40		\$93,926.98	\$4,276.34
07/12/2024	MSFT	Buy	454.33	21	\$9,541.05		\$84,385.93	\$4,276.34
07/12/2024	JNJ	Buy	150.00	67	\$10,050.00		\$74,335.93	\$4,276.34
07/12/2024	PFE	Buy	28.90	358	\$10,348.20		\$63,987.73	\$4,276.34
07/12/2024	PG	Buy	166.22	60	\$9,973.20		\$54,014.53	\$4,276.34
07/12/2024	KO	Buy	63.46	159	\$10,092.14		\$43,922.39	\$4,276.34
07/12/2024	DUK	Buy	104.68	97	\$10,151.96		\$33,770.43	\$4,276.34
07/12/2024	NEE	Buy	75.00	132	\$9,900.00		\$23,870.43	\$4,276.34
07/12/2024	JPM	Buy	204.00	50	\$10,200.00		\$13,670.43	\$4,276.34
07/12/2024	GS	Buy	480.93	21	\$10,099.53		\$3,570.90	\$4,276.34
07/12/2024	AAPL	Sell	230.54	45	\$10,374.30	\$72.90	\$13,945.20	\$4,349.24
07/12/2024	MSFT	Sell	453.55	21	\$9,524.55	(\$16.50)	\$23,469.75	\$4,332.74
07/12/2024	JNJ	Sell	149.88	67	\$10,041.96	(\$8.04)	\$33,511.71	\$4,324.70
07/12/2024	PFE	Sell	28.92	358	\$10,353.36	\$5.16	\$43,865.07	\$4,329.86
07/12/2024	PG	Sell	166.61	60	\$9,996.60	\$23.40	\$53,861.67	\$4,353.26
07/12/2024	KO	Sell	63.70	159	\$10,116.30	\$24.16	\$63,977.97	\$4,377.42
07/12/2024	DUK	Sell	105.39	97	\$10,213.83	\$61.87	\$74,191.80	\$4,439.29
07/12/2024	NEE	Sell	76.00	132	\$10,032.00	\$132.00	\$84,223.80	\$4,571.29
07/12/2024	JPM	Sell	204.94	50	\$10,247.00	\$47.00	\$94,470.80	\$4,618.29
07/12/2024	GS	Sell	479.88	21	\$10,077.48	(\$22.05)	\$104,548.28	\$4,596.24

The total profit for July 12th was \$4,548.28, reflecting gains primarily from AAPL, KO, and NEE despite some minor losses. The overall gain in stock value from the previous day was \$271.94, marking a 6.4% increase in total profit from the last trading day of July 11th. The week started with a total cash of \$103,103.66 and a cumulative profit of \$3,151.61. By the end of Week Six, the total cash stood at \$104,548.28 with a cumulative profit of \$4,596.24. Figure 4.6 below shows the graph of the overall performance of the day trading portfolio during Week Five.

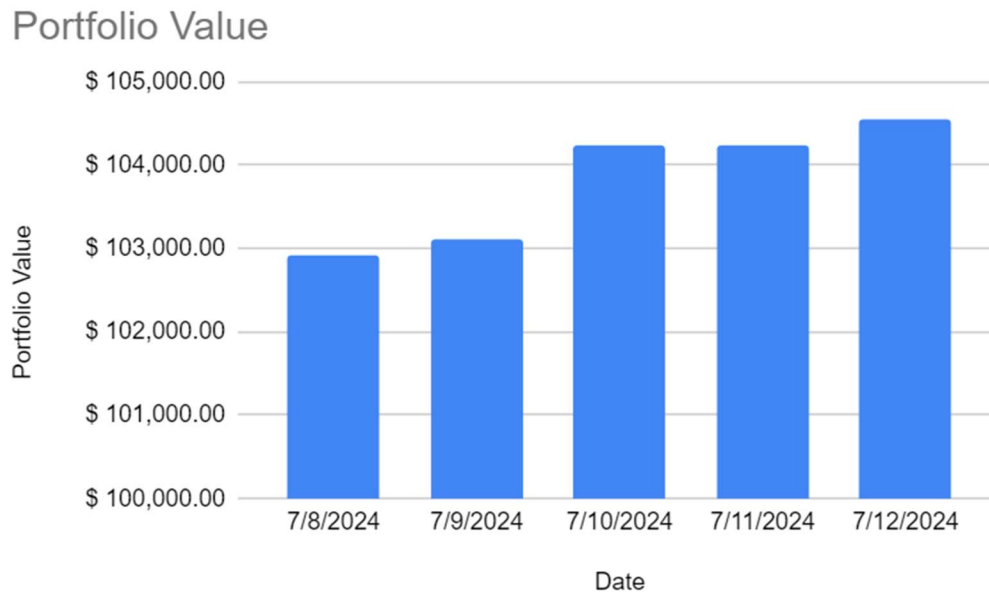


Figure 4.6 Day Trading Overall Performance Week 6 2024

The day trading strategy tested in this simulation provided valuable insights into its potential benefits and drawbacks. While it demonstrated the possibility of generating profits in a bullish market, its effectiveness and stability are questionable in more volatile or bearish market conditions. This strategy might be suitable for traders with significant time, resources, and emotional resilience, but it is not without risks.

The simulation underscores the importance of thoroughly understanding market conditions, transaction costs, and personal limits before engaging in day trading. It highlights the need for a diversified approach to investing, combining different strategies to mitigate risks and capitalize on various market opportunities.

Chapter 5: Trend Following Simulation

The trend following strategy, unlike the day trading strategy, began with fundamental analysis of each company mentioned in chapter three. The stocks were bought when the

fundamental analysis showed an upward trend and trendlines were also up. The main sell signal will be when the trend reverses.

Trendlines are a fundamental tool in technical analysis, used to identify and confirm the direction of a market trend [31]. By connecting two or more price points on a chart, trendlines help traders visualize whether a market is moving upwards, downwards, or sideways. Ascending trendlines indicate an uptrend, descending trendlines signal a downtrend, and horizontal trendlines show a range-bound market [31]. Effective trendlines require at least two points for drawing and a third point to confirm their validity. They are most reliable on higher timeframes and can be enhanced with other technical indicators.

5.1 Week One

The opening price of AAPL was \$192.90 on June 3rd. News of Apple's upcoming Worldwide Developers Conference (WWDC) on June 10, expected to unveil significant AI features and drive a supercycle for the iPhone 16, contributed to a positive outlook [32]. Below in figure 5.1.1 is a trendline of AAPL during the first week.



Figure 5.1.1 AAPL Trendline Week 1 2024

Based on the fundamental analysis and an upward trend, I decided to buy 52 shares of AAPL on June 3rd.

The Microsoft stock opened at \$415.53 on June 3rd. A strong upward trend driven by positive earnings and a significant push into AI technologies was observed. Microsoft reported strong financial performance with a 17% increase in revenue year-over-year and a 21% increase in Intelligent Cloud revenue [33]. Below in figure 5.1.2 is the trendline of MSFT during the first week.

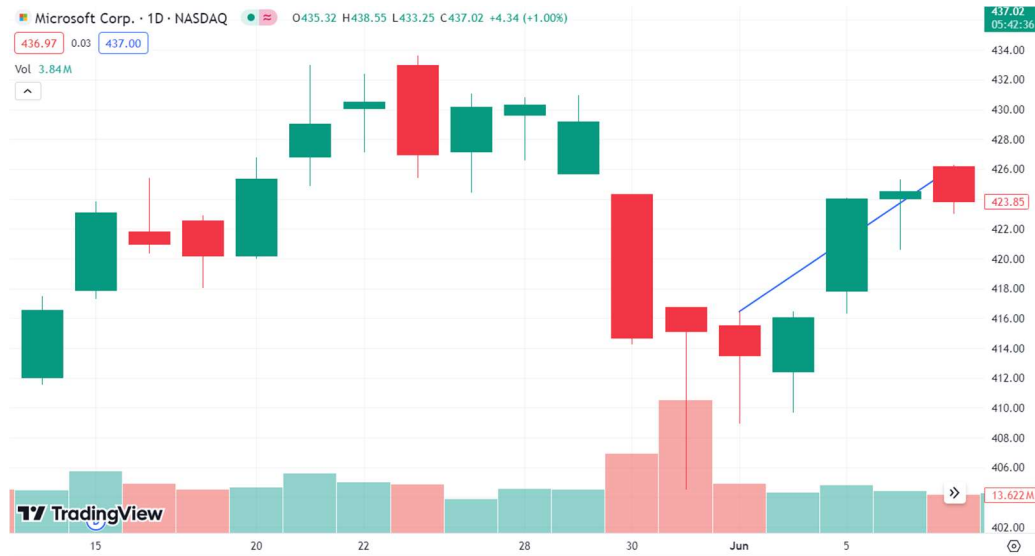


Figure 5.1.2 MSFT Trendline Week 1 2024

The trendline is ascending and based on the recent news 24 shares were bought on June 4th. It was difficult to identify solid trends in other stocks, so the shares were bought on June 3rd and June 4th to hold and look for trends in coming weeks. Below is Table 5.1 where all transactions from Week One is displayed, as well as total cash and total profit from the trend following portfolio.

Table 5.1 Trend Following Portfolio Transactions Week 1 (6/3 – 6/7)

Date	Symbol	Buy/Sell	Price	Shares	Net Cost/Proceeds	Profit/Loss	Total Cash	Total Profit	Asset Value
06/03/2024	AAPL	Buy	192.90	52	\$10,030.80		\$89,969.20		\$10,030.80
06/03/2024	JNJ	Buy	147.25	68	\$10,013.00		\$79,956.20		\$10,013.00
06/03/2024	PFE	Buy	28.66	349	\$10,002.34		\$69,953.86		\$10,002.34
06/03/2024	PG	Buy	163.93	61	\$9,999.73		\$59,954.13		\$9,999.73
06/03/2024	KO	Buy	62.71	159	\$9,975.69		\$49,978.44		\$9,975.69
06/03/2024	NEE	Buy	79.50	126	\$10,017.00		\$39,961.44		\$10,017.00
06/04/2024	MSFT	Buy	412.43	24	\$9,898.32		\$30,063.12		\$9,898.32
06/04/2024	DUK	Buy	103.25	97	\$10,015.25		\$20,047.87		\$10,015.25
06/04/2024	JPM	Buy	200.16	50	\$10,008.00		\$10,039.87		\$10,008.00
06/04/2024	GS	Buy	450.50	22	\$9,911.00		\$128.87		\$9,911.00

The "Asset Value" column in Table 5.1 represents the value of each asset based on its purchase price at the time of acquisition. By the end of Week One, the total asset value reflected the initial investment amounts for each stock, providing a baseline for measuring future performance. This metric will be crucial in evaluating the effectiveness of the trend-following strategy as the simulation progresses.

The trend-following strategy did not involve selling any of the stocks during the first week. This resulted in maintaining the positions, anticipating that the trends identified would continue to provide profitable opportunities in the subsequent weeks. The initial capital was \$100,000. All the investments were made in increments, leaving some cash reserve for future transactions.

5.2 Week Two

In the second week of trend-following simulation, I continued to monitor and analyze the market trends for the selected stocks. As mentioned in the previous section, using trendlines and fundamental analysis, I aimed to make informed decisions about when to buy or hold stocks.

During this week, Apple Inc. (AAPL) remained a focal point due to the significant announcements made at its Worldwide Developers Conference (WWDC), which began on June 10. Apple's stock reached a new all-time high following the reveal of its new AI features under the

"Apple Intelligence" suite [35]. Analysts predicted a nearly 50% upside for Apple's stock, emphasizing the importance of this event [34].

On Monday June 10th, Apple's stock opened at \$196.90 and closed at \$193.12. Despite a slight dip, the overall positive outlook from WWDC encouraged us to hold our position. The market's response to the AI announcements and the upcoming iPhone 16 launch was overwhelmingly positive, suggesting strong future performance. Below in figure 5.2.1 is a trendline of AAPL during the second week.

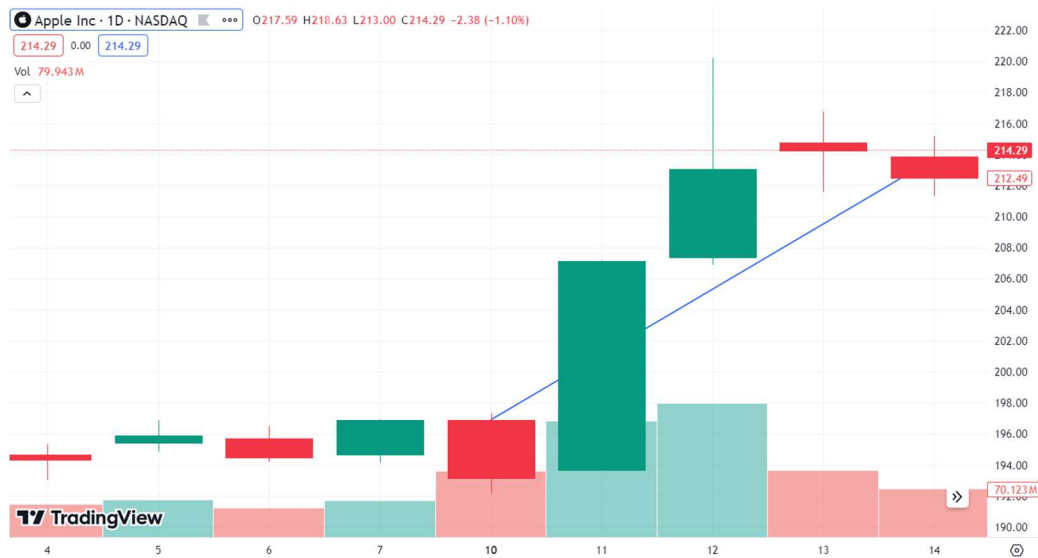


Figure 5.2.1 AAPL Trendline Week 2 2024

The trendline is ascending, and it solidifies the decision to keep holding the stock. Other stocks were observed during the Week Two and there were no significant news and positive trends, so I decided to keep holding

The trend-following strategy in the second week continued to show positive trends for several stocks, especially Apple and Microsoft. Significant announcements from Apple's WWDC and Microsoft's ongoing advancements in AI and cloud services were key drivers for the positive trends. There were no sell signals during this week, resulting in holding all positions and

monitoring for any changes in trend direction. The strategy remained consistent with the initial capital and positions taken in Week One. Below is Table 5.2 where all transactions from Week Two is displayed, as well as total cash and total profit from the trend following portfolio.

Table 5.2 Trend Following Portfolio Transactions Week 2 (6/10 – 6/14)

Date	Symbol	Buy/ Sell	Price	Shares	Net Cost/ Proceeds	Profit/ Loss	Total Cash	Total Profit	Asset Value
06/10/2024	AAPL	Hold	196.90	52			\$128.87		\$10,238.80
06/10/2024	MSFT	Hold	424.70	24			\$128.87		\$10,192.80
06/10/2024	JNJ	Hold	146.53	68			\$128.87		\$9,954.04
06/10/2024	PFE	Hold	28.35	349			\$128.87		\$9,896.15
06/10/2024	PG	Hold	166.78	61			\$128.87		\$10,171.58
06/10/2024	KO	Hold	63.94	159			\$128.87		\$10,173.06
06/10/2024	DUK	Hold	102.50	97			\$128.87		\$9,942.50
06/10/2024	NEE	Hold	75.47	126			\$128.87		\$9,509.22
06/10/2024	JPM	Hold	199.24	50			\$128.87		\$9,962.00
06/10/2024	GS	Hold	452.33	22			\$128.87		\$9,951.26
06/11/2024	AAPL	Hold	193.65	52			\$128.87		\$10,069.80
06/11/2024	MSFT	Hold	425.48	24			\$128.87		\$10,192.80
06/11/2024	JNJ	Hold	146.81	68			\$128.87		\$9,972.08
06/11/2024	PFE	Hold	27.95	349			\$128.87		\$9,759.55
06/11/2024	PG	Hold	166.97	61			\$128.87		\$10,185.17
06/11/2024	KO	Hold	63.59	159			\$128.87		\$10,106.43
06/11/2024	DUK	Hold	102.01	97			\$128.87		\$9,894.97
06/11/2024	NEE	Hold	75.30	126			\$128.87		\$9,487.80
06/11/2024	JPM	Hold	197.91	50			\$128.87		\$9,895.50
06/11/2024	GS	Hold	451.04	22			\$128.87		\$9,922.88
06/12/2024	AAPL	Hold	207.37	52			\$128.87		\$10,783.24
06/12/2024	MSFT	Hold	435.32	24			\$128.87		\$10,447.68
06/12/2024	JNJ	Hold	147.06	68			\$128.87		\$9,999.04
06/12/2024	PFE	Hold	28.17	349			\$128.87		\$9,837.33
06/12/2024	PG	Hold	167.50	61			\$128.87		\$10,217.50
06/12/2024	KO	Hold	63.69	159			\$128.87		\$10,130.71
06/12/2024	DUK	Hold	103.00	97			\$128.87		\$9,991.00
06/12/2024	NEE	Hold	73.79	126			\$128.87		\$9,286.54
06/12/2024	JPM	Hold	196.00	50			\$128.87		\$9,800.00
06/12/2024	GS	Hold	455.60	22			\$128.87		\$10,023.20
06/13/2024	AAPL	Hold	214.74	52			\$128.87		\$11,166.48
06/13/2024	MSFT	Hold	440.85	24			\$128.87		\$10,580.40
06/13/2024	JNJ	Hold	145.07	68			\$128.87		\$9,864.76
06/13/2024	PFE	Hold	27.50	349			\$128.87		\$9,597.50
06/13/2024	PG	Hold	164.47	61			\$128.87		\$10,032.67
06/13/2024	KO	Hold	62.86	159			\$128.87		\$9,994.74
06/13/2024	DUK	Hold	101.29	97			\$128.87		\$9,825.13
06/13/2024	NEE	Hold	72.56	126			\$128.87		\$9,132.56
06/13/2024	JPM	Hold	192.32	50			\$128.87		\$9,616.00
06/13/2024	GS	Hold	446.73	22			\$128.87		\$9,832.06
06/14/2024	AAPL	Hold	213.85	52			\$128.87		\$11,120.20
06/14/2024	MSFT	Hold	438.28	24			\$128.87		\$10,519.52
06/14/2024	JNJ	Hold	145.14	68			\$128.87		\$9,869.52
06/14/2024	PFE	Hold	27.75	349			\$128.87		\$9,682.75
06/14/2024	PG	Hold	165.99	61			\$128.87		\$10,125.39
06/14/2024	KO	Hold	62.38	159			\$128.87		\$9,926.42
06/14/2024	DUK	Hold	100.89	97			\$128.87		\$9,786.33
06/14/2024	NEE	Hold	72.76	126			\$128.87		\$9,172.56
06/14/2024	JPM	Hold	191.45	50			\$128.87		\$9,572.50
06/14/2024	GS	Hold	441.99	22			\$128.87		\$9,723.78

During Week Two, the asset values continued to reflect the performance of the individual stocks. As observed, Apple Inc. (AAPL) and Microsoft Corp. (MSFT) showed positive trends due to significant announcements and advancements in AI technologies. The "Asset Value" column in Table 5.2 provides an updated view of the holdings, showing the current value based on the market prices at the end of each trading day.

5.3 Week Three

On Week Three of trend-following simulation, I continued to monitor and analyze the market trends for the selected stocks. As mentioned in the previous section, using trendlines and fundamental analysis, I aimed to make informed decisions about when to sell or hold stocks. This week was unique due to the market closure on June 19th in observance of "Juneteenth," also known as "Freedom Day."

On Monday June 17th, Apple's stock opened at \$213.37 and closed at \$216.67. As expected, based on the recent news, Apple's stock continued its positive trend, and even reached all-time high on June 17th. Below in figure 5.3.1 is a trendline of AAPL during the third week.



Figure 5.3.1 AAPL Trendline Week 3 2024

The trendline is still ascending, and this time I decided to sell AAPL at the opening price on June 17th to take profit and wait for another buy or short signal in the future. Below is the table 5.3.1 where all transactions from June 17th are displayed from the trend following portfolio.

Table 5.3.1 Trend Following Portfolio Transactions on June 17th (6/17 – 6/18)

Date	Symbol	Buy/Sell	Price	Shares	Net Cost/Proceeds	Profit/Loss	Total Cash	Total Profit
06/17/2024	AAPL	Sell	213.37	52	11095.24	1064.44	11224.11	1064.44

On Friday June 21st Microsoft's stock opened at \$447.38 and closed at \$449.78 reaching all-time high. Below in figure 5.3.2 is a trendline of MSFT during the third week.



Figure 5.3.2 MSFT Trendline Week 3 2024

As expected, the trendline is still ascending and based on the recent news, all shares were sold on June 21st to take profit and wait for another buy or short signal in the future. Below is the table 5.3.2 where all transactions from June 21st are displayed from the trend following portfolio.

Table 5.3.2 Trend Following Portfolio Transactions on June 21st (6/21 – 6/22)

Date	Symbol	Buy/ Sell	Price	Shares	Net Cost/ Proceeds	Profit/ Loss	Total Cash	Total Profit
06/21/2024	MSFT	Sell	447.38	24	10736.64	838.32	21960.75	1902.76

Other stocks had no positive trends based on fundamental analysis, and had almost no movement during Week Three, resulting in holding all other positions and monitoring for any changes in trend direction. The strategy remained consistent with the initial capital and positions taken in previous weeks, ensuring a methodical approach to trend following.

5.4 Week Four

In the fourth week of trend-following simulation, I continued to monitor and analyze the market trends for the selected stocks. As mentioned in the previous section, using trendlines and fundamental analysis, I aimed to make informed decisions about when to sell or hold stocks.

During this week, the U.S. stock markets experienced mixed performances. The S&P 500 and Nasdaq Composite showed slight gains, while the Dow Jones Industrial Average faced some declines. Economic data released throughout the week included positive signs from the U.S. Services Business Activity Index, which reached its highest level in 26 months, and the Manufacturing PMI, which hit a three-month high. However, some sectors like utilities and materials faced declines due to mixed economic signals and sector-specific issues [36].

The trend-following strategy in the fourth week emphasized holding positions due to observed trends and positive market sentiment for the majority of our stocks. No new transactions were made, and focus was on monitoring current holdings for any significant changes, this includes not buying or shorting AAPL and MSFT. Below is Table 5.4 where all transactions from Week Four is displayed, as well as total cash and total profit from the trend following portfolio.

Table 5.4 Trend Following Portfolio Transactions Week 4 (6/24 – 6/28)

Date	Symbol	Buy/Sell	Price	Shares	Net Cost/Proceeds	Profit/Loss	Total Cash	Total Profit	Asset Value
06/24/2024	JNJ	Hold	149.12	68			\$21,960.75	\$1,902.76	\$10,138.56
06/24/2024	PFE	Hold	28.36	349			\$21,960.75	\$1,902.76	\$9,904.64
06/24/2024	PG	Hold	168.45	61			\$21,960.75	\$1,902.76	\$10,287.45
06/24/2024	KO	Hold	63.97	159			\$21,960.75	\$1,902.76	\$10,176.63
06/24/2024	DUK	Hold	101.51	97			\$21,960.75	\$1,902.76	\$9,846.47
06/24/2024	NEE	Hold	73.85	126			\$21,960.75	\$1,902.76	\$9,302.10
06/24/2024	JPM	Hold	198.88	50			\$21,960.75	\$1,902.76	\$9,944.00
06/24/2024	GS	Hold	462.09	22			\$21,960.75	\$1,902.76	\$10,165.98
06/25/2024	JNJ	Hold	147.19	68			\$21,960.75	\$1,902.76	\$10,005.28
06/25/2024	PFE	Hold	27.99	349			\$21,960.75	\$1,902.76	\$9,773.51
06/25/2024	PG	Hold	166.85	61			\$21,960.75	\$1,902.76	\$10,178.35
06/25/2024	KO	Hold	63.84	159			\$21,960.75	\$1,902.76	\$10,148.56
06/25/2024	DUK	Hold	100.20	97			\$21,960.75	\$1,902.76	\$9,719.40
06/25/2024	NEE	Hold	72.98	126			\$21,960.75	\$1,902.76	\$9,201.48
06/25/2024	JPM	Hold	198.07	50			\$21,960.75	\$1,902.76	\$9,903.50
06/25/2024	GS	Hold	457.38	22			\$21,960.75	\$1,902.76	\$10,062.36
06/26/2024	JNJ	Hold	146.82	68			\$21,960.75	\$1,902.76	\$9,985.76
06/26/2024	PFE	Hold	27.42	349			\$21,960.75	\$1,902.76	\$9,573.58
06/26/2024	PG	Hold	167.45	61			\$21,960.75	\$1,902.76	\$10,209.45
06/26/2024	KO	Hold	64.05	159			\$21,960.75	\$1,902.76	\$10,177.95
06/26/2024	DUK	Hold	99.95	97			\$21,960.75	\$1,902.76	\$9,695.15
06/26/2024	NEE	Hold	73.37	126			\$21,960.75	\$1,902.76	\$9,246.62
06/26/2024	JPM	Hold	197.43	50			\$21,960.75	\$1,902.76	\$9,871.50
06/26/2024	GS	Hold	455.86	22			\$21,960.75	\$1,902.76	\$10,028.92
06/27/2024	JNJ	Hold	145.80	68			\$21,960.75	\$1,902.76	\$9,918.40
06/27/2024	PFE	Hold	27.80	349			\$21,960.75	\$1,902.76	\$9,705.20
06/27/2024	PG	Hold	166.62	61			\$21,960.75	\$1,902.76	\$10,164.82
06/27/2024	KO	Hold	63.91	159			\$21,960.75	\$1,902.76	\$10,151.69
06/27/2024	DUK	Hold	100.59	97			\$21,960.75	\$1,902.76	\$9,756.23
06/27/2024	NEE	Hold	73.72	126			\$21,960.75	\$1,902.76	\$9,285.12
06/27/2024	JPM	Hold	199.17	50			\$21,960.75	\$1,902.76	\$9,958.50
06/27/2024	GS	Hold	445.96	22			\$21,960.75	\$1,902.76	\$9,811.12
06/28/2024	JNJ	Hold	146.16	68			\$21,960.75	\$1,902.76	\$9,937.92
06/28/2024	PFE	Hold	27.98	349			\$21,960.75	\$1,902.76	\$9,763.02
06/28/2024	PG	Hold	164.92	61			\$21,960.75	\$1,902.76	\$10,060.12
06/28/2024	KO	Hold	63.65	159			\$21,960.75	\$1,902.76	\$10,111.35

During the fourth week of the trend-following simulation, the portfolio's strategy emphasized holding existing positions due to observed trends and positive market sentiment. This decision was influenced by mixed performances in the U.S. stock markets, with some sectors

showing gains and others experiencing declines. The "Asset Value" column in Table 5.4 illustrates the value of each asset based on the market prices at the end of each trading day.

5.5 Week Five

In the fifth week of trend-following simulation, I continued to monitor and analyze the market trends for the selected stocks. As mentioned in the previous section, using trendlines and fundamental analysis, I aimed to make informed decisions about when to sell, buy or hold stocks. Notably, the stock market was closed on July 4th in observance of Independence Day, a federal holiday.

After reaching its all-time high on June 17th, AAPL stock price experienced a slight dip. On Monday July 1st, Apple's stock opened at \$ 212.09 and 52 shares were purchased at this price. Below in figure 5.5.1 is a trendline of AAPL during the fifth week.



Figure 5.5.1 AAPL Trendline Week 5 2024

The trendline is ascending, and the price has broken the resistance while rising above the previous all-time high. By all means, Apple’s stock should keep rising, so the stock was held during the remainder of the week.

After reaching its all-time high on June 21st, MSFT stock price experienced a slight dip just like AAPL. On Monday July 1st, Microsoft's stock opened at \$448.66 and 24 shares were purchased at this price. Below in figure 5.5.2 is a trendline of MSFT during the fifth week.



Figure 5.5.2 MSFT Trendline Week 5 2024

Similar to AAPL, the trendline is ascending, and the price has broken the resistance while rising above the previous all-time high. MSFT was also held during the remainder of the week with the anticipation of more profit. All of the other stocks still remain stagnant, with no visible trends. Below is Table 5.5 where all transactions from Week Five is displayed, as well as total cash and total profit from the trend following portfolio.

Table 5.5 Trend Following Portfolio Transactions Week 5 (7/1 – 7/5)

Date	Symbol	Buy/Sell	Price	Shares	Net Cost/Proceeds	Profit/Loss	Total Cash	Total Profit
07/01/2024	AAPL	Buy	212.09	52	\$11,028.68		\$10,932.07	\$1,902.76
07/01/2024	MSFT	Buy	448.66	24	\$10,767.84		\$164.23	\$1,902.76
07/01/2024	JNJ	Hold	146.44	68			\$164.23	\$1,902.76
07/01/2024	PFE	Hold	28.22	349			\$164.23	\$1,902.76
07/01/2024	PG	Hold	162.72	61			\$164.23	\$1,902.76
07/01/2024	KO	Hold	63.28	159			\$164.23	\$1,902.76
07/01/2024	DUK	Hold	99.35	97			\$164.23	\$1,902.76
07/01/2024	NEE	Hold	69.90	126			\$164.23	\$1,902.76
07/01/2024	JPM	Hold	205.45	50			\$164.23	\$1,902.76
07/01/2024	GS	Hold	463.66	22			\$164.23	\$1,902.76

5.6 Week Six

In Week Six of the trend-following simulation, the market trends for the selected stocks from Chapter 3 were observed and analyzed, covering the period from July 8 to July 12, 2024. As mentioned in the previous section, using trendlines and fundamental analysis, I aimed to make informed decisions about when to sell, buy or hold stocks. During this week, the U.S. stock markets experienced various trends influenced by macroeconomic data and sector-specific developments. My analysis focused on identifying favorable trends for executing good sell orders, since this is a last week of simulation.

On Wednesday, July 10th, JPM and MSFT stocks were sold at the closing prices of \$207.80 and \$466.25 respectively. Below in figures 5.6.1 and 5.6.2 are trendlines of JPM and MSFT.



Figure 5.6.1 JPM Trendline Week 6 2024



Figure 5.6.2 MSFT Trendline Week 6 2024

The trendline of JPM is ascending in 1 month period, and the trendline of MSFT was ascending in 1 month period, but descension began during Week Six. Below is the table 5.6.1 where all transactions from July 10th are displayed from the trend following portfolio.

Table 5.6.1 Trend Following Portfolio Transactions on July 10th (7/10 – 7/11)

Date	Symbol	Buy/Sell	Price	Shares	Net Cost/Proceeds	Profit/Loss	Total Cash	Total Profit
07/10/2024	AAPL	Hold	232.98	52			\$164.23	\$1,902.76
07/10/2024	JNJ	Hold	149.43	68			\$164.23	\$1,902.76
07/10/2024	PFE	Hold	28.35	349			\$164.23	\$1,902.76
07/10/2024	PG	Hold	166.80	61			\$164.23	\$1,902.76
07/10/2024	KO	Hold	62.83	159			\$164.23	\$1,902.76
07/10/2024	DUK	Hold	102.83	97			\$164.23	\$1,902.76
07/10/2024	NEE	Hold	72.90	126			\$164.23	\$1,902.76
07/10/2024	JPM	Sell	207.80	50	\$10,390.00	\$381.50	\$10,554.23	\$2,284.26
07/10/2024	GS	Hold	478.89	22			\$10,554.23	\$2,284.26
07/10/2024	MSFT	Sell	466.25	24	\$11,190.00	\$1,291.68	\$21,744.23	\$3,575.94

On Thursday, July 11th, GS stock was sold at the closing price of \$479.23. The decision to sell Goldman Sachs was influenced by the positive news regarding the bank's increased involvement in crypto services and their reported profit surge. According to Bitcoin News, Goldman Sachs boosted its crypto services amid a surge in interest and announced plans for three

new tokenization projects. Additionally, the bank upped its dividend and reported profits more than double its haul from the second quarter of 2023 [37]. Below in figure 5.6.3 is a trendline of GS during the sixth week.

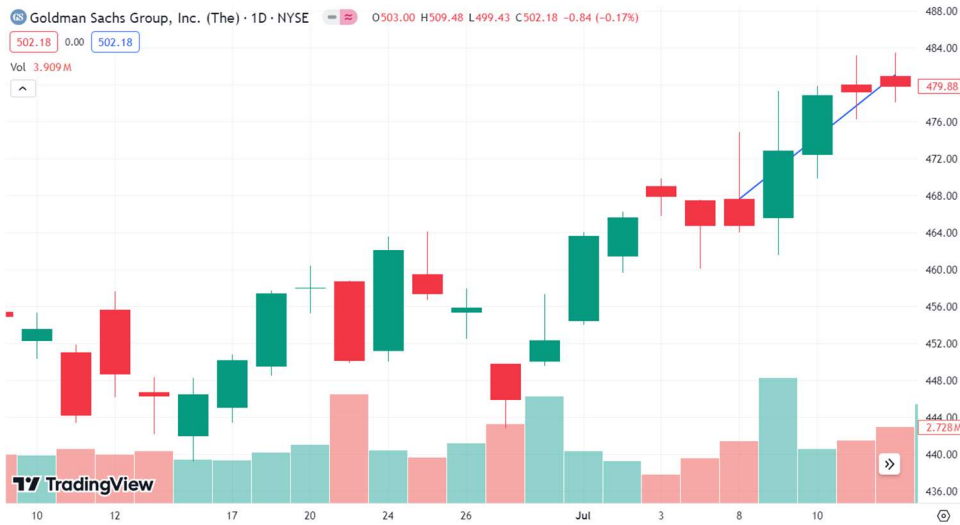


Figure 5.6.3 GS Trendline Week 6 2024

The trendline is ascending, and it solidified the decision to sell GS on July 11th. AAPL stock was also sold this day, to avoid selling at a lower price the next day. Below is the table 5.6.2 where all transactions from July 11th are displayed from the trend following portfolio.

Table 5.6.2 Trend Following Portfolio Transactions on July 11th (7/11 – 7/12)

Date	Symbol	Buy/Sell	Price	Shares	Net Cost/Proceeds	Profit/Loss	Total Cash	Total Profit
07/11/2024	JNJ	Hold	149.70	68			\$21,744.23	\$3,575.94
07/11/2024	PFE	Hold	28.66	349			\$21,744.23	\$3,575.94
07/11/2024	PG	Hold	165.54	61			\$21,744.23	\$3,575.94
07/11/2024	KO	Hold	63.10	159			\$21,744.23	\$3,575.94
07/11/2024	DUK	Hold	104.46	97			\$21,744.23	\$3,575.94
07/11/2024	NEE	Hold	74.70	126			\$21,744.23	\$3,575.94
07/11/2024	GS	Sell	479.23	22	\$10,542.06	\$850.36	\$32,286.29	\$4,426.30
07/11/2024	AAPL	Sell	231.39	52	\$12,032.28	\$1003.60	\$44,318.57	\$5429.90

All of the other remaining stocks had no significant movement, so I decided to sell them on the last day of simulation, July 12th. Below is the table 5.6.3 where all transactions from July 12th are displayed from the trend following portfolio.

Table 5.6.1 Trend Following Portfolio Transactions on July 12th (7/12 – 7/13)

Date	Symbol	Buy/ Sell	Price	Shares	Net Cost/ Proceeds	Profit/ Loss	Total Cash	Total Profit
07/12/2024	JNJ	Sell	149.88	68	\$10,191.84	\$231.84	\$54,510.41	\$5,661.74
07/12/2024	PFE	Sell	28.92	349	\$10,101.08	\$114.98	\$64,611.49	\$5,776.72
07/12/2024	PG	Sell	166.61	61	\$10,159.21	\$324.00	\$74,770.70	\$6,100.72
07/12/2024	KO	Sell	63.70	159	\$10,122.30	\$146.61	\$84,893.00	\$6,247.33
07/12/2024	DUK	Sell	105.39	97	\$10,222.83	\$599.43	\$95,115.83	\$6,846.76
07/12/2024	NEE	Sell	76.00	126	\$9,576.00	\$319.89	\$104,691.83	\$7,166.65

Over the course of the six-week simulation, the trend-following trading strategy proved to be a highly effective approach for managing a diversified portfolio of stocks. By closely monitoring market trends, technical indicators, and fundamental analysis, informed decisions were made that maximized returns and minimized risks. Key highlights included strategic buys and sells, such as Apple Inc. (AAPL) and Microsoft Corp. (MSFT), which significantly contributed to the overall profitability.

The simulation concluded with a total profit of \$7,166.65, showcasing the effectiveness of the trend-following strategy. The final cash position stood at \$104,691.83, reflecting a substantial increase from the initial capital. The importance of timing, thorough analysis, and flexibility in adapting to market conditions were underscored as critical factors for success. This simulation demonstrated that a disciplined approach to trend following can lead to significant financial gains.

Chapter 6: Results and Comparative Analysis

This chapter presents a detailed analysis of the stock market simulation conducted over six weeks, utilizing two trading strategies: day trading and trend following. The objective is to compare the performance of these strategies against the market indices, specifically the S&P 500, and evaluate their effectiveness based on the selected stocks and market conditions.

Day Trading Strategy

The day trading strategy involved engaging in multiple transactions within a single trading day, aiming to capitalize on short-term price fluctuations. The portfolio began with an initial capital of \$100,000, and its performance was meticulously tracked on a daily basis.

During the first week, all initial stocks were bought and sold on June 3rd, resulting in a modest profit of \$382.18. Key trades during this period included prominent stocks such as Apple (AAPL), Microsoft (MSFT), and Johnson & Johnson (JNJ). The portfolio value saw an increase, demonstrating the potential for short-term gains through timely trades.

In the second week, the same strategy was continued, yielding a cumulative profit of \$1,102.60 by week's end. The portfolio maintained positions in stocks like AAPL, MSFT, and JNJ, reflecting the strategy's reliance on high-volatility stocks for daily gains. Despite mixed performance in the following weeks, the portfolio achieved a cumulative profit of \$4,596.24 by the end of the simulation. Significant trades during this period included AAPL, MSFT, and Goldman Sachs (GS), highlighting the importance of stock selection in day trading.

Trend Following Strategy

The trend following strategy focused on identifying and riding long-term price trends, utilizing technical indicators to guide trading decisions. The portfolio also started with \$100,000 in capital, with trades executed based on observed trends.

In the first week, stocks were selected based on upward trends, resulting in a total profit of \$318.52. The portfolio included stocks such as AAPL, MSFT, and JNJ, benefiting from their sustained upward movements. In the second week, the strategy continued to hold these stocks, accumulating a total profit of \$1,654.70. The trend following approach demonstrated its strength in capitalizing on stable, long-term trends.

Throughout the six-week period, the portfolio experienced consistent gains, culminating in a total profit of \$7,166.65 by the end of the simulation. Key trades during this time included AAPL, MSFT, and GS, underscoring the strategy's focus on maintaining positions in stocks with clear upward trends.

Comparative Analysis

Comparing the two strategies, the trend following approach outperformed the day trading strategy, with final portfolio values of \$107,166.65 and \$104,596.24, respectively. Both strategies were benchmarked against the S&P 500 index, which experienced a minor decline over the simulation period. The trend following strategy demonstrated greater resilience, providing more consistent returns with less volatility compared to the day trading strategy.

The day trading strategy, while capable of generating significant short-term gains, required constant monitoring and frequent adjustments. This approach proved to be riskier, with the potential for substantial losses during market corrections. In contrast, the trend following

strategy showed more stable performance by leveraging long-term trends and minimizing the impact of short-term market fluctuations.

Overall, the trend following strategy emerged as the more effective approach during the simulation period, offering a balanced mix of profitability and risk management.

Chapter 7: Conclusion

The stock market simulation provided valuable insights into the effectiveness of day trading and trend following strategies. The trend following strategy, characterized by its reliance on long-term trends and technical indicators, outperformed the day trading strategy, which focused on short-term price movements and required more frequent trading decisions.

The results indicated that the trend following strategy offered more consistent returns with lower volatility, making it a more sustainable approach in varying market conditions. The day trading strategy, while capable of achieving short-term gains, was inherently riskier and demanded constant attention and rapid decision-making.

This project has highlighted the complexities and challenges of trading in real-time market conditions. The educational outcomes include a deeper understanding of strategy implementation, market analysis, and risk management. The simulation underscored the importance of a disciplined and informed approach to trading, emphasizing the need for continuous learning and adaptation to market dynamics.

Future research could extend the simulation period to explore the long-term performance of each strategy further. Additionally, investigating the impact of portfolio diversification across various sectors and asset classes could provide further insights into optimizing trading strategies.

Advanced trading techniques and tools could also be explored to enhance the effectiveness of these approaches.

In conclusion, the stock market simulation demonstrated that a well-informed and disciplined approach to trading can mitigate risks and enhance profitability. The trend following strategy, in particular, showed promise as a viable method for achieving consistent returns, providing a strong foundation for future trading endeavors and investment analysis.

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