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Examining the Feasibility and Effectiveness of Utilizing Dark Pool Transactions in Retail
Algorithmic Trading

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ABSTRACT

This paper analyzes if retail investors who are individual non-professional investors buying and selling securities can utilize dark pool information to generate positive returns and outperform the overall market. Specifically, this paper utilizes a very specific personal algorithmic trading strategy that has been created which utilizes dark pool trading information to outperform the S&P 500. Dark Pools are private exchanges where institutional investors can make large trades to not affect prices on public exchanges, ensuring price security when filling a large block of securities being exchanged. The Literature Review section will go future in depth on what these are and how they work.

The results of this study were extremely promising. The algorithmic trading program created to test this thesis ran on a paper portfolio. The Results and Analysis chapter details the specifics of how the paper portfolio was set up. The portfolio generated ~1,163.84% in returns in 60 active days of trading over the course of 6 months. The algorithm bought the share count of each trade to roughly \$8,000.00 in value rounded down to the nearest share, generating excess returns of \$92,401.44.

This paper is not trying to prove the effectiveness of any specific algorithm or algorithmic strategy to beat the market, rather to prove that dark pool information can be effectively used by an algorithm to beat the market. Due to the nature of dark pools being secretive along with the use of an algorithm, we can only make informed hypotheses on the exact market functions behind the outperformance; however, with our high amount of data points and strong results, we are able to conclude that retail investors are able to leverage dark pool information and the trades of institutional investors in these private exchanges to outperform the

market if the investor is able to effectively utilize the information. Details of the analysis are explored in Chapter 4 Results and Analysis section of this paper.

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Chapter 1

Introduction

Trading since the rise of digitalization and computers has drastically changed the way we exchange securities. With the increase of computerization, live prices can be received instantaneously, and trades can be placed within a matter of nanoseconds with the right technology. This has increased market efficiency and led retail and institutional investors alike seeking alpha to find new methods of beating the market. One of the major new methods which have arisen in the past few decades is the utilization of algorithms to trade autonomously. In addition, in the past few decades, we have seen a strong increase in the use of dark pool exchanges. As both continued to grow, dark pools facilitated hidden block trading used by both traditional institutional investors and algorithmic traders. This paper will analyze whether dark pool trade logs can be used by retail investors to leverage the information institutional investors have and outperform the stock market.

The study in this thesis began on September 27, 2021, and concluded on February 28, 2022. The process of working on this thesis started well before September 27, 2021, as this was the date when I finished writing and creating the algorithm and python script beforehand to start implementing it.

The rest of this thesis will cover the literature review, the study conducted, the results, next steps, and the conclusion. The topic I am covering is not something where there is extensive research in. Most literature surrounding dark pools is on their mechanics and effects on price discovery and efficiency in markets, and most literature surrounding algorithmic trading is on its

mechanics and uses in technical analysis and high-frequency trading. To the extent of my research on this topic, no one else has publicly conducted a study involving using live dark pool trades in an algorithm to beat the market.

Chapter 2

Literature Review

Algorithmic Trading

A. Overview

The type of algorithmic trading of what know today really originated in 1987 when Thomas Peterffy created the first fully automated algorithmic trading system which eventually led to the creation of interactive brokers in 1993 (Smigel, 2021). Many steps of automation and digitalization led to this moment to make it possible including listing prices and having exchanges be online. The definition of algorithmic trading is exactly what it sounds like “a process for executing orders utilizing automated and pre-programmed trading instructions” (Chen, 2021). These algorithms can be built to use any number of variables or indicators as a part of their instructions including price and volume.

Many algorithms utilize technical analysis over short periods of time to quickly find resistance points and opportunities to buy which are viewed as favorable to buy based on the algorithm instructions. Therefore, people often associate high-frequency trading with algorithmic trading or even think they are the same thing; however, algorithmic trading is not necessarily high-frequency rather high-frequency trading is just a type of algorithmic trading. Specifically, high-frequency trading defined by the CFA Institute is “a type of algorithmic trading characterized by high speeds, high turnover rates, and high order-to-trade ratios that leverages high-frequency financial data and electronic trading tools” (CFA Institute, 2021). Algorithmic trading, including my algorithm, does not need to be high-frequency rather just a codified and

automated system to place trades based on the factors I ask of it. It could make one trade a day or even in a month and still be an algorithmic trading system.

B. Growth

As technology makes markets more and more efficient, algorithmic trading has grown a significant amount since its early stages. It currently is estimated to be about 60 to 73% of overall equity trading in the United States, and it is expected to grow at a CAGR of 11.23% through 2026 (Mordor Intelligence, 2020). Trading through algorithms and high-frequency trading is not going away anytime soon, especially as it perpetuates efficiencies of the market, leading to more investors seeking faster technologies to outperform.

Dark Pools

A. What is a Dark Pool?

Most retail investors and the general public are familiar with the major exchanges which are public; however, there are many large private exchanges used for trading that are not accessible to the general public known as dark pools. It is called dark pools since it is considered as a “dark pool of liquidity”, and Investopedia explains “the name of these exchanges is a reference to their complete lack of transparency” (Picardo, 2021). These dark pools allow investors to make large block trades without impacting the price of the specific security during the transaction with high volume as it is hidden, and counterparties are secretly matched. A block trade as defined by the CME Group is where investors “privately negotiate a trade with an eligible counterparty and execute a large transaction at a reasonable single price” (CME Group, 2021).

B. Origin

Dark pools are considered an alternative trading system (ATS) since they provide an alternative to trading on public exchanges, and ATSs originated around the late 1960s (Aguilar, 2015). The use of dark pools became much popularized after the U.S. Securities and Exchange Commission (SEC) passed the rules of Regulation National Market System (Reg NMS) in 2005. The Congressional Research Service explains, “There is a widely held view that rules adopted by the SEC in 2005, Regulation National Market System (Reg NMS), boosted the growth of the dark pools” (Shorter, 2014). This is because Reg NMS increased price transparency and data access to promote market efficiency and fairness, and people think the increase in visibility pushed large investors to trade off-exchange (Hayes, 2020).

C. How Dark Pools Are Used

Dark Pools are a major part of our market due to their appeal. Specifically, the SEC reported that dark pools “accounted for nearly 18% of all trading in those stocks at various times over the past two years. That figure represents a more than fourfold increase since 2005, when ATSs accounted for roughly 4% of NMS stock trading” (Aguilar, 2015). There are three main types of dark pools: broker-dealer owned, agency broker or exchange-owned, and electronic market makers (Picardo, 2021).

- **Broker-Dealer Owned** dark pools are set up by large brokers/dealers for their clients and traders. Some examples of broker-dealer dark pools are CrossFinder by Credit Suisse and Sigma X by Goldman Sachs
- **Agency Broker or Exchange Owned** dark pools are ones acting as agents where the prices are from the exchanges themselves and some examples include the NYSE Euronext and Liquidnet

- **Electronic Market Makers** are independent dark pools operated as principals for their own accounts. An example of an independent dark pool is Getco.

Clients and traders with access to these pools can place block trades through these types of dark pools.

One major use of dark pools and reasons for its growth is due to the growth of algorithmic trading and the need for anonymity. The SEC explains, “it has become increasingly acute with the advent of algorithmic trading strategies and the diminished order sizes that have resulted. ATSs responded to this need by offering ever more trading on an anonymous basis, and without displaying specific order information before trades occur” (Aguilar, 2015). The ability to hide information helps allow algorithms to lock in prices in dark pools avoiding slippage caused by traditional trading means.

D. Why They Are Used

Many reasons why dark pools are used have already been alluded to in previous sections, but the primary motivations are that dark pools allow access to trades that do not move markets, are very fast, and are not public.

Starting with the ability to not move prices for your trade, the Congressional Research Service explains that demand for them “arose partly due to demand from institutional investors seeking to buy or sell big blocks of shares without sparking large price movements” (Shorter, 2014). The SEC further supports this explaining, “yet, perhaps the greatest catalyst for the rise of ATSs in recent years has been institutional investors’ growing need to trade large blocks of stock without causing markets to move against them” (Aguilar, 2015). This is a growing need as institutional investors are finding it more costly and challenging to move large orders if others see your moves, disrupting one’s trades and margins.

Another benefit of dark pools is that they are able to execute trades quickly. This is another reason why algorithmic trading and specifically high-frequency trading often trades through dark pools. Dark pools provide a fast way to liquidity without much slippage risk (CFI, 2021). A benefit of this is that it increases market efficiency and liquidity since high-frequency trading is facilitated, allowing for new information to be priced in very quickly into the overall market.

Finally, dark pools provide privacy to trades without the entire market to instantly react to them. The Corporate Finance Institute explains, “public markets tend to overreact or underreact due to news coverage and market sentiment. The pools facilitate trades that will trigger price overreaction or underreaction” (CFI, 2021). Those are the main reasons why institutional investors turn to dark pools for many of their trades.

E. Consequences and Problems

Dark pools were initially considered a safer option for important trades as it was considered to protect investors from front running and predatory traders since it was free from front running. The SEC explains, “Dark pools initially portrayed themselves as havens from predatory traders. They achieved this, in part, by excluding high-frequency traders, who supposedly use brute speed to front-run institutional investors’ large orders. Lured by this promise of safety, institutional traders embraced ATSs as a solution to their trading needs” (Aguilar, 2015).

Ironically, as already discussed in this paper, high-frequency trading is one of the most common uses of dark pools. This started happening because of a crucial question one may have after hearing how dark pools work: where does the liquidity come from? The answer is that the dark pools needed to be able to attract enough liquidity to achieve the function of actually being

a dark pool, so many providers let their own trading desks, affiliates, and high-frequency traders access the pool to ensure there was liquidity and the ability to find counterparties as fast as possible. The SEC provides some context, “Attracting sufficient liquidity to achieve critical mass has proven a continuous challenge for many dark pools.... the implacable need that dark pools have for liquidity has intensified certain conflicts of interest between them and their subscribers. The inability to properly manage these conflicts of interest has led the Commission to bring a number of enforcement actions against dark pool operators in recent years” (Aguilar, 2015). One notable example that illustrates this was a case the SEC brought against a dark pool provider in 2011. In this case, the dark pool provider falsely claimed that no proprietary trading took place in their dark pool. This was false as they not only had proprietary trading in the pool but also used the information flow of incoming dark block trades to front-run their subscribers’ trade (Murphy, 2011). Front running as defined by the Corporate Finance Institute as “the illegal practice of purchasing a security based on advance non-public information regarding an expected large transaction that will affect the price of a security” (CFI, 2021). The reason why this is illegal is that it is essentially insider trading. For example, if someone knew that an investor is placing an extremely large buy order on a stock through their systems, it is not public information. If they then front-run this trade by buying some shares of their own before filling their client’s trade, they could benefit from a soon-to-be influx of bids in the market, even if it is an alternative market. In addition, if the price doesn’t change, they are still mimicking trades from non-public information, creating an unfair marketplace for others. The incident in 2011 is not the time something like this has happened as the SEC has many other case files logging incidents of illegal activity in dark pools favoring certain insiders or subscribers over others. Investopedia sums this up, “While dark pools reportedly have lower trading fees, their lack of price

transparency has sparked concerns about the continued accuracy of consolidated stock price information. In addition, fairness concerns have surfaced in recent regulatory and enforcement actions, in the press, and in Michael Lewis's book *Flash Boys* over allegations that dark pool operators may have facilitated front-running of large institutional investors by high-frequency traders, in exchange for payment, and misrepresented the nature of high-frequency trading in the dark pools" (Picardo, 2021).

Another risk of using dark pools on top of creating an unfair marketplace is that using them may risk the investor's own private information. In one example, the SEC found in 2014 that a dark pool operated by Citigroup, LavaFlow, had violated SEC rules and failed to "establish adequate safeguards and procedures to protect the LavaFlow ECN subscribers' confidential trading information" (Peterson, 2014). With less transparency in the system, security is obviously going to be an increased risk that investors will take when using these alternative markets.

Moving Forward

Dark pools and algorithmic trading are not going away any time soon seeing the growth in both areas and its current uses and demand. Pertaining to dark pools, the first question of growth that many people are asking is should certain policies be added in place so that there is more transparency for these trades. One example the SEC brings up as a possibility is "should market participants redefine block trades as a percentage of average daily trading volume, rather than as a fixed number of shares?" (Aguilar, 2015). Making information such as the percent traded through dark pools more accessible to the public would not jeopardize the function of

dark pools to not move prices of a specific security immediately during the trade, but it would prove more context for retail investors. So, this type of disclosure may be something we see in the future as dark pools continue to grow along with algorithmic trading.

Another question is that the growing demand for dark pools means they need to maintain the ability to have liquidity. It will be interesting to see how this plays out as dark pool liquidity continues to grow at scale. On one hand, we saw the need to meet liquidity needs have led to many illegal actions, so would this perpetuate illegal activity? On the other hand, the continued increase in use may solve this problem as it would naturally provide some additional liquidity to help alleviate the issue if counterparties can be matched.

Overall, this literature review on algorithmic trading and dark pools should provide some context to the rest of this paper and my own research. My algorithm acts almost the opposite to much of what was discussed as the use cases of dark pools above. Instead of actually trading on dark pools for the benefits, I am seeing if knowing what dark pool blocks are placed on tickers without knowing the direction can be used to benefit a retail investor. Additionally, this functions the opposite of front running and more as momentum trading dark pools since we place trades immediately after dark pool blocks using my own methods of deciding whether a trade is a buy or sell since that information is still unavailable to us. If this algorithm is extremely effective long-term, it could prove to show that any form of transparency defeats many purposes of dark pools since methods could be used to accurately piece the rest of the trade information, making those trades essentially a public trade with the benefit of a locked-in price.

Chapter 3

Methodology

For the methodology of this thesis, I first found a platform that provides a list of live dark pool transactions occurring through the day. Then I created a Python script to scrape this information along with a live options flow. Since dark block trades do not show the direction of the trade, the algorithm utilizes the options flow in order to speculate a direction of the dark pool transaction on whether it was a buy or sell order. Once that information is determined, if my algorithm considers the dark pool trade to be a strong buy signal, then it saves the current market price as the buy price for the paper portfolio. It then holds the stock for under 30 minutes and sells again by pulling the market price at the sale time.

Finding Dark Pool Trades

As for the first step, I used Black Box Stocks, a subscription service that provides access to live dark pool trades. The platform pulls its dark pool data throughout the day from the Options Price Reporting Authority (Chen, 2020). The OPRA is a market system that serves as an industry-led consortium supporting accurate and timely releases of market data. All trades are reported there, and it collects the data from all the major exchanges (Black Box Stocks, 2022). Black Box Stocks access' the OPRA's services and processes the data into live dark pool transactions on tickers throughout the day. In addition, Black Box Stocks access the exchanges to show live options flow across the market on over 8,000 stocks and up to 900,000 options contracts (Black Box Stocks, 2022).

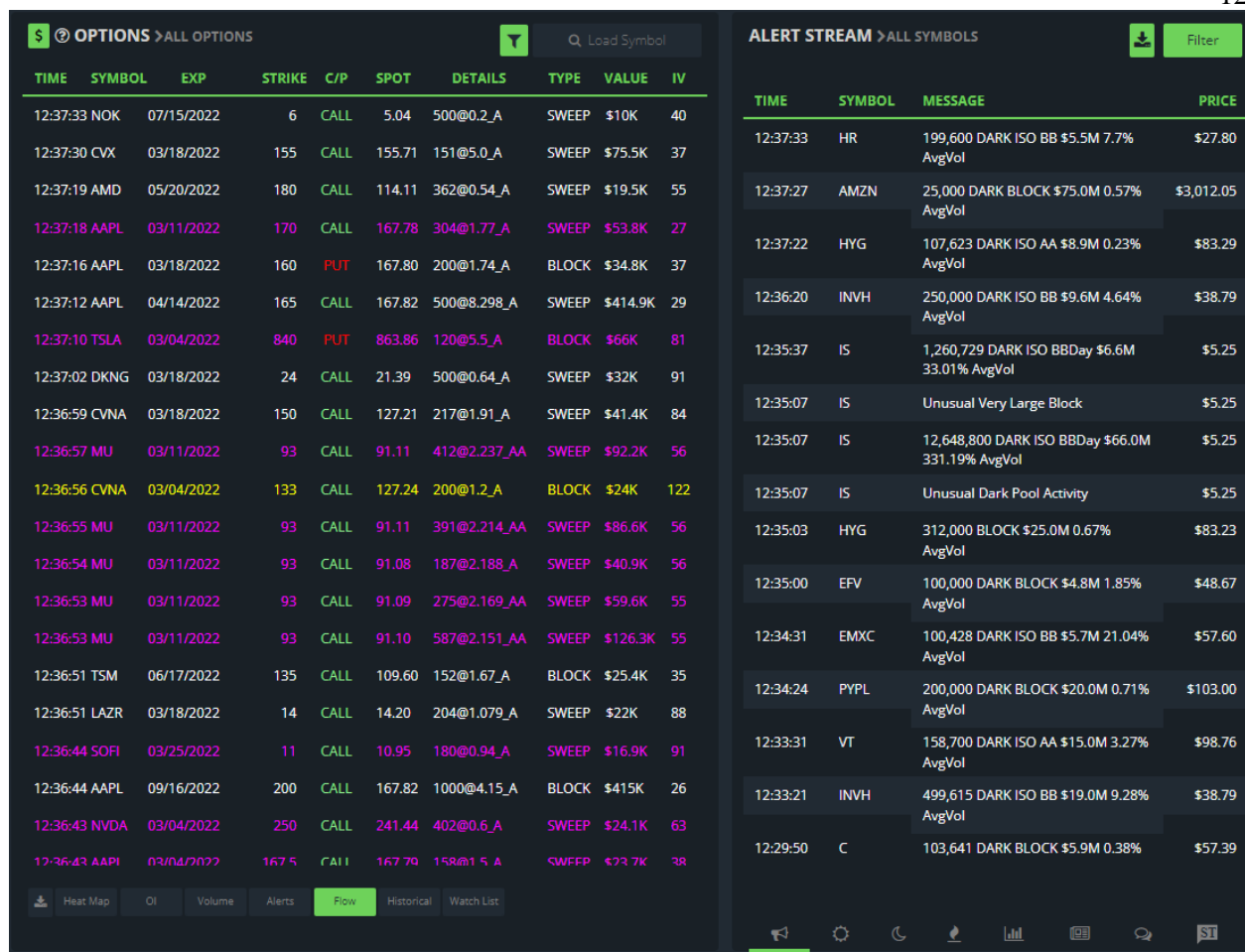


Figure 1: Sample Black Box Stocks Output (Black Box Stocks, 2022)

Figure 1 shows an output from the Black Box Stocks system. The right panel shows the live dark pool trades throughout trading hours with the ticket and value, and the left panel shows the options flow of calls and puts on tickers.

Trading Technique

With access to dark pool information, the trading algorithm uses that information to place trades. Whenever a dark pool trade comes in, the algorithm immediately checks that ticker to determine if that ticker is a buy or a sell. My algorithm only places long orders for this thesis, so

buying is triggered by dark pool trades determined to be strong buy signals. This aspect of the algorithm will be referred to as signal determination for the rest of this paper for simplification. The algorithm is able to perform this in nanoseconds then it immediately pulls the price of the ticker from TD Ameritrade's API so that it is an accurate representation of the market price that a real portfolio can trade off of. This price is stored in a ledger for the paper portfolio. The algorithm then checks that ticker in 30 minutes and again pulls the price of a sell order. I initially chose 30 minutes because it allowed for enough time for any short-term price action to occur. The goal of this type of trading is to capture very short-term momentum on institutional trades and trades where institutions know something on the stock that I would not as a retail investor. This pulling of the buy price and close price within 30 minutes completes one trade, and the algorithm scans every dark pool trade that comes through on its system. Halfway through the thesis, I noticed much of the price action following the dark pool trade happened within or around 10 minutes of the trade, and there often was some form of retracement during the second half of the 30 minutes. A retracement is a minor pullback and change in direction of a stock from the overall direction of the stock (Chen, 2021). Due to this observation, I changed the time of selling from 30 minutes to 15 minutes. That is the general process of how the algorithm works to utilize dark pool trades to place trades.

Implementation & Code

This section will discuss the technical aspect of implementing the actual trading algorithm. I used Python to write the code running all of this as it is the language my partner and I are most familiar with. The first step is pulling in web information from Black Box Stocks into our Python environment. This is done by using the Selenium package, an open-source web

automation tool, in Python. It allows for imports and exports of data from the HTML of a Chrome tab through Chrome's web driver. A web driver is an open-source tool provided by the web browser that allows for automation through packages such as Selenium (Selenium, 2022). This is how I automatically click parts of the site and pull tickers of the dark pool data as they come in.

```
browser.find_element_by_id("chkAlertStreamBlock").click()
browser.find_element_by_id("chkAlertStreamAll").click()
browser.find_element_by_xpath('/html/body/div[7]/div[3]/button[1]').click()
browser.find_element_by_id("menuItemOptions").click()
```

Figure 2: Navigation Code

Figure 2 shows some of the navigation in the site allowed through Selenium functions. It is completed by having the Python code automatically click on items based on HTML IDs and XPATHs which are identifiers of objects on a site. The code shown takes the algorithm to the panels needed to pull the dark pool information.

```
next = browser.find_element_by_xpath(f'//*[@id="alertStreamBody"]/tr[{1}]').text
next_ticker = next.split()[1]
```

Figure 3: Ticker Code

Figure 3 shows a part of the code pulling information from a site. The dark pools are listed in a table on the site as an HTML element, and the code stores the part of the table with the latest ticker into an independent variable.

The next step after the signal determination considers a ticker as a buy is to pull the price for the paper portfolio. There are many methods to pull this including pulling the current price from any number of websites such as Yahoo Finance or Google Finance; however, I chose to use TD Ameritrade's API. The reason for this is because it allows us to pull an exact price from a broker. When day trading at high-frequencies over short periods of time, every second and cent

counts, so pulling from an actual broker provides the most accurate paper portfolio price for a hypothetical trade. A secondary reason for using TD Ameritrade's API is because it allows for submitting real money trades in the future through the same system.

```
def query(symbol):
    endpoint = f"https://api.tdameritrade.com/v1/marketdata/{symbol}/quotes"
    payload={'apikey':td_api_key}
    # headers = {'Authorization': }
    content = requests.get(url=endpoint, params=payload).json() #headers=headers
    return content[symbol]['lastPrice'], content[symbol]['totalVolume']
```

Figure 4: TD Ameritrade API Query

The Python communicates with TD Ameritrade's API by sending back and forth packages to each other with a payload and key. The payload is the information being requested, and the key confirms to TD Ameritrade the identity of the account. TD then sends back through that command the information being requested. Figure 4 shows the function used in my code to pull a query of the last price and total volume for a ticker. The last price is then stored for the buy and sell prices in the paper portfolio.

I wanted to run this automatically throughout the trading day, and that requires a computer to have this always running during market hours. As an active student, it is not feasible to do this with my own laptop, so I ran this using Amazon Web Services free Virtual Machine. It is constantly active allowing for the algorithm to run separately from a personal computer without the need for maintenance during the trading day.

Chapter 4

Results & Analysis

Performance

Over the course of this thesis, trading started on September 27, 2021, through February 28, 2022, with a total of 4,006 trades during 60 trading days.

Table 1: Individual Trade Calculations (*full trade log in appendix)

Date	Ticker	Buy Price	Sell Price	1 Share	Real Shares	Value	delta	% Return
9/27/2021	CCL	27.2044	26.65	(\$0.55)	294	7998.0936	(\$162.99)	-2.038%
9/27/2021	DMYI	12.45	12.64	\$0.19	642	7992.9	\$121.98	1.526%
9/27/2021	BP	27.01	27.09	\$0.08	296	7994.96	\$23.68	0.296%
9/27/2021	Z	90.0325	91.03	\$1.00	88	7922.86	\$87.78	1.108%
9/27/2021	GGPI	10.23	10.315	\$0.08	782	7999.86	\$66.47	0.831%
9/27/2021	RH	697.4908	700.865	\$3.37	11	7672.3988	\$37.12	0.484%
9/27/2021	GGPI	10.2392	10.3	\$0.06	781	7996.8152	\$47.48	0.594%
9/27/2021	GGPI	10.24	10.295	\$0.05	781	7997.44	\$42.95	0.537%
9/27/2021	CLNE	8.725	8.93	\$0.21	916	7992.1	\$187.78	2.350%
9/27/2021	GGPI	10.24	10.3	\$0.06	781	7997.44	\$46.86	0.586%
9/27/2021	PFE	44.0273	44.05	\$0.02	181	7968.9413	\$4.11	0.052%
9/27/2021	SLB	30.4	30.24	(\$0.16)	263	7995.2	(\$42.08)	-0.526%
9/27/2021	MGM	45.89	45.88	(\$0.01)	174	7984.86	(\$1.74)	-0.022%
9/27/2021	GGPI	10.3	10.3915	\$0.09	776	7992.8	\$71.00	0.888%
9/27/2021	MGM	45.87	45.905	\$0.04	174	7981.38	\$6.09	0.076%
9/27/2021	TSLA	781.01	789.04	\$8.03	10	7810.1	\$80.30	1.028%

Table 1 shows a sample of the full list of trades in the paper portfolio and some calculations performed on each trade. The date, ticker, buy price, and sell price are outputs of the algorithm, and below details the calculations of the additional columns used for analysis:

- 1 Share: Profit from 1 share traded by subtracting buy price from the sell price
- Real Shares: For the paper portfolio we assumed each trade as \$8,000 so the real shares are the number of shares that can be bought at the buy price with \$8,000 rounded down to the nearest share. Using a specific value normalizes the trades so that each trade is

weighted the same for nominal profit. The \$8,000 is arbitrary in this situation and the portfolio assumes that it trades on margin.

- Value: Since the shares are rounded down, value shows the actual value of each trade
- Delta: The delta is the profit from each trade with an \$8,000 transaction being shares multiplied by the 1 Share column.
- % Return: Percentage return of each trade $\text{Sell Price}/\text{Buy Price} - 1$

With all the trades at \$8,000, the paper portfolio generated a return of \$92,401.44 at the end of the trading period. Assuming we can trade on margin with \$8,000 starting in the portfolio facilitating the trades, it generates a percentage return of 1,163.84%. This is calculated by summing all of the percentage returns on the trades. To effectively assess our performance, I used the S&P 500 as a benchmark index to compare my paper portfolio with. Since the algorithm is only active during active market hours, I used the intra-day return of the S&P 500 on each trading day as a comparison. For each day, this is calculated by the percent return from the open and close prices on the same day.

Table 2: Daily Portfolio Statistics

Date	Trades	Nominal Return (8k trades)	Margin Return	Cash Account Cost	Cash Account Return	SP500 Intra-Return	Alpha
27-Sep	27	849.6981	10.70%	214869.18	0.40%	0.02%	10.67%
28-Sep	42	-534.5904	-7.15%	330760.40	-0.16%	-1.51%	-5.64%
29-Sep	70	1519.4951	19.21%	549056.56	0.28%	-0.07%	19.28%
30-Sep	74	1145.8814	14.25%	586811.40	0.20%	-1.44%	15.70%
1-Oct	70	2298.1041	28.97%	552993.88	0.42%	0.92%	28.05%
5-Oct	76	-7065.2467	-88.16%	602867.57	-1.17%	0.83%	-88.99%
6-Oct	40	555.9493	6.98%	317739.56	0.17%	1.02%	5.97%
8-Oct	119	3871.3731	48.55%	944999.96	0.41%	-0.34%	48.90%
11-Oct	75	2457.164	30.96%	595344.19	0.41%	-0.55%	31.51%
12-Oct	80	1410.6088	17.62%	636932.09	0.22%	-0.40%	18.02%
13-Oct	77	2500.1045	31.39%	608783.71	0.41%	0.13%	31.26%
14-Oct	88	1932.2451	24.24%	695987.49	0.28%	1.17%	23.07%
15-Oct	93	4470.8262	56.21%	732494.67	0.61%	0.53%	55.67%
18-Oct	39	735.1914	9.26%	309580.39	0.24%	0.51%	8.76%
19-Oct	67	4412.0791	55.35%	533198.35	0.83%	0.50%	54.85%
20-Oct	89	8195.3687	102.73%	709746.70	1.15%	0.26%	102.47%
21-Oct	125	3647.8517	46.07%	987615.56	0.37%	0.39%	45.68%
22-Oct	100	10794.8143	135.15%	790990.25	1.36%	-0.03%	135.18%
26-Oct	50	834.0761	10.45%	393165.94	0.21%	-0.09%	10.54%
27-Oct	55	-518.0478	-6.21%	431213.39	-0.12%	-0.62%	-5.59%
28-Oct	123	7564.1624	95.53%	966556.95	0.78%	0.74%	94.79%
29-Oct	111	1609.6143	20.59%	874365.79	0.18%	0.71%	19.87%
1-Nov	121	5205.7848	65.60%	958083.14	0.54%	0.07%	65.54%
2-Nov	114	3485.5963	44.78%	897305.07	0.39%	0.38%	44.41%
9-Nov	76	470.8622	5.80%	600250.38	0.08%	-0.47%	6.27%
11-Nov	123	4194.5876	52.61%	978208.09	0.43%	-0.22%	52.83%
12-Nov	121	1030.9785	13.14%	955339.7194	0.11%	0.59%	12.55%
16-Nov	123	7268.0394	91.92%	972782.386	0.75%	0.46%	91.46%
17-Nov	90	383.8148	4.94%	714393.2992	0.05%	-0.27%	5.21%
18-Nov	114	181.8664	2.30%	904877.7557	0.02%	0.08%	2.22%
23-Nov	126	-70.7115	-1.17%	994033.5901	-0.01%	0.26%	-1.43%
29-Nov	76	1376.9334	17.24%	604451.382	0.23%	0.57%	16.67%
30-Nov	98	773.4514	9.73%	778584.4053	0.10%	-1.58%	11.30%
1-Dec	45	2112.8003	26.50%	357744.8389	0.59%	-1.95%	28.45%
8-Dec	8	-18.3945	-0.20%	61705.1744	-0.03%	0.22%	-0.42%
9-Dec	27	435.172	5.44%	213514.7565	0.20%	-0.50%	5.94%
14-Dec	12	-14.0633	-0.14%	94682.482	-0.01%	-0.19%	0.05%
15-Dec	36	1751.6054	23.05%	272953.7814	0.64%	1.58%	21.47%
20-Dec	19	-84.4006	-1.12%	149493.0912	-0.06%	-0.43%	-0.68%
21-Dec	66	596.3297	7.31%	521981.5443	0.11%	1.18%	6.13%
28-Dec	25	166.5385	2.07%	197637.6842	0.08%	-0.19%	2.26%
31-Dec	10	119.5755	1.50%	79775.765	0.15%	-0.19%	1.68%
3-Jan	34	500.4243	6.39%	267815.4058	0.19%	0.39%	6.01%
4-Jan	54	166.9974	2.01%	426761.5783	0.04%	-0.23%	2.24%
5-Jan	28	79.5928	1.04%	218882.0483	0.04%	-1.83%	2.86%
24-Jan	16	605.2058	7.79%	124935.0441	0.48%	1.24%	6.55%
25-Jan	71	1190.1096	15.05%	563190.8759	0.21%	-0.23%	15.29%
26-Jan	32	61.767	0.76%	254380.4408	0.02%	-1.33%	2.09%
28-Jan	35	78.9605	1.00%	278215.9592	0.03%	2.21%	-1.21%
31-Jan	24	605.788	7.85%	189065.6236	0.32%	1.89%	5.96%
1-Feb	59	425.3218	5.30%	469776.9246	0.09%	0.60%	4.70%
2-Feb	33	183.103	2.29%	262790.1627	0.07%	0.50%	1.79%
8-Feb	181	464.5315	5.75%	1429901.711	0.03%	0.93%	4.83%
10-Feb	57	681.1531	8.52%	452101.2847	0.15%	-1.08%	9.60%
11-Feb	46	-34.6125	-0.45%	365695.0817	-0.01%	-1.94%	1.50%
14-Feb	34	506.1433	6.37%	266635.5931	0.19%	-0.25%	6.61%
15-Feb	28	917.8831	11.44%	220828.4733	0.42%	0.94%	10.50%
17-Feb	71	2411.9467	29.84%	553377.8952	0.44%	-1.70%	31.55%
25-Feb	45	1301.9765	16.39%	349016.3872	0.37%	2.01%	14.39%
28-Feb	38	202.0607	2.49%	300547.9138	0.07%	0.45%	2.04%
Sums:	4006	92401.4417	1163.84%	31667790.73	15.00%	4.63%	1159.21%

Table 2 consolidates all 4,006 trades into each trading date compared to the S&P 500 intraday return. Below details the columns:

- Nominal Return (8k trades): Sums the trades' profit/losses for \$8,000 per trade. It is calculated by summing all of the "delta" values from Table 1 for all 4,006 trades.
- Margin Return: Return on each day assuming we are trading the stocks on margin, and it is the sum of the percentage returns for each day's trades.
- Cash Account Cost: This column shows the amount of money traded each day by summing the "value" from Table 1 for all trades.
- Cash Account Return: This shows the percent return if the portfolio would have the cash to front each trade. This means the Cash Account Cost is all in the portfolio ready to use. It is calculated as the $(\text{Daily Profit/Loss} + \text{Daily Cash Account Cost}) / (\text{Daily Cash Account Cost}) - 1$
- SP500 Intra-Return: As described above, it takes the close and open of the specific day of the S&P 500 and finds the percentage return as a comparison for the portfolio
- Alpha: This column finds the daily percentage outperformance between the Margin Return and SP500 Intra-Return.

Analyzing the return of the portfolio, the alpha compared to the S&P 500 is ~1,159.21% which is well above expectations upon starting this experiment. The S&P 500 returned ~4.63% during the periods the algorithm was active. The cash account returned ~15.00%, a vast difference from the margin return of ~1,163.84%. This is because trading on margin leverages a small amount of capital for the returns. This study did not account for any margin call requirements along with the day trading minimum portfolio value for the sake of purely focusing

on the trades. Even if it was just a cash account where the portfolio needs the value of the full cost of every trade, the cash account still outperformed the S&P 500 by ~10.36% which is still exceptionally strong performance. Considering most hedge funds can't outperform the S&P 500, it is promising to see these results.

If I used the S&P 500 total return between September 27, 2021 and February 28, 2022, my portfolio outperformed even further. The S&P opened at \$4,442.12 on September 27, 2021, and closed at \$4373.94 on February 28, 2022. This is a return of negative 1.53%. This means the margin alpha is ~1165.37% and cash account alpha is ~16.53%. For the sake of being conservative, I will continue to use the intraday return of the S&P as a benchmark for the rest of the analysis. But it is interesting to see stronger outperformance from accounting for the S&P during the entire period. In addition to conservatism, our algorithm did not trade on every trading day which would make the numbers insignificant by using the entire period.

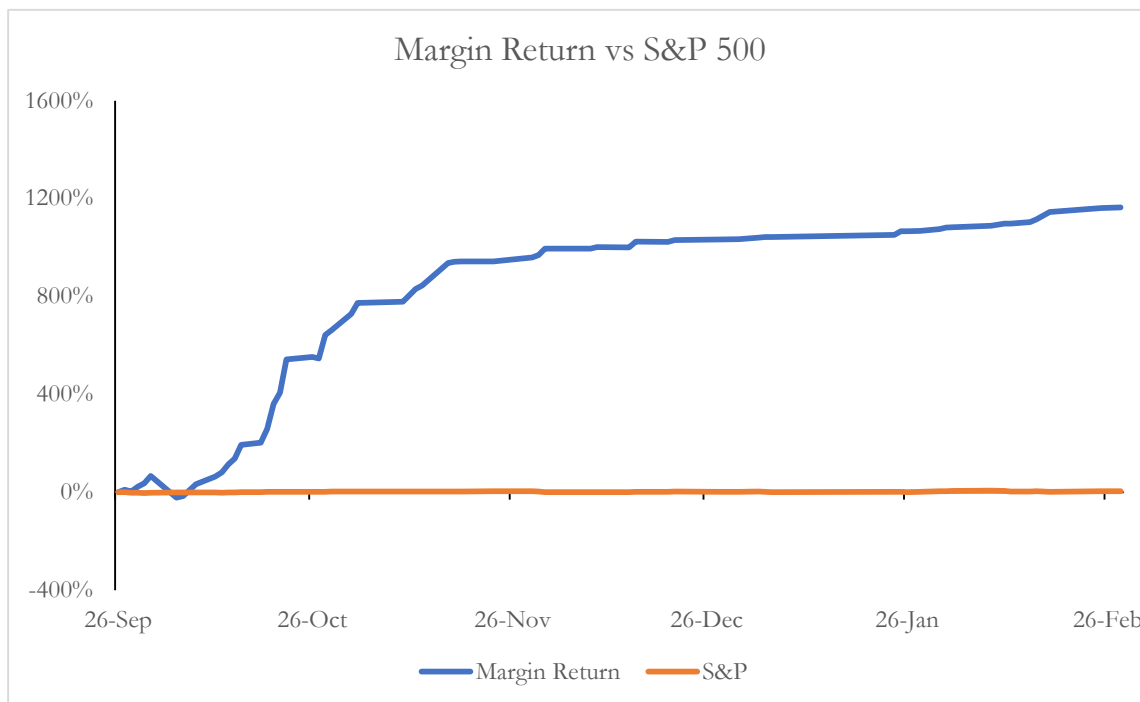


Figure 5: Margin Account Relative Return vs S&P500

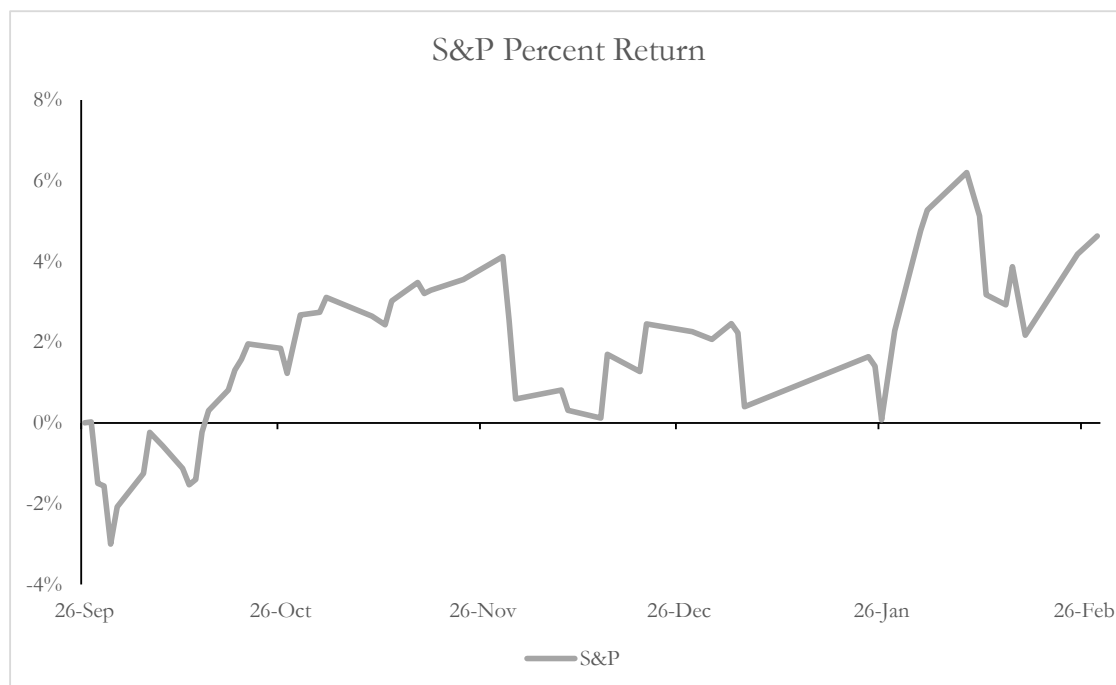


Figure 6: S&P 500 Relative Intraday Return During Active Traded Days

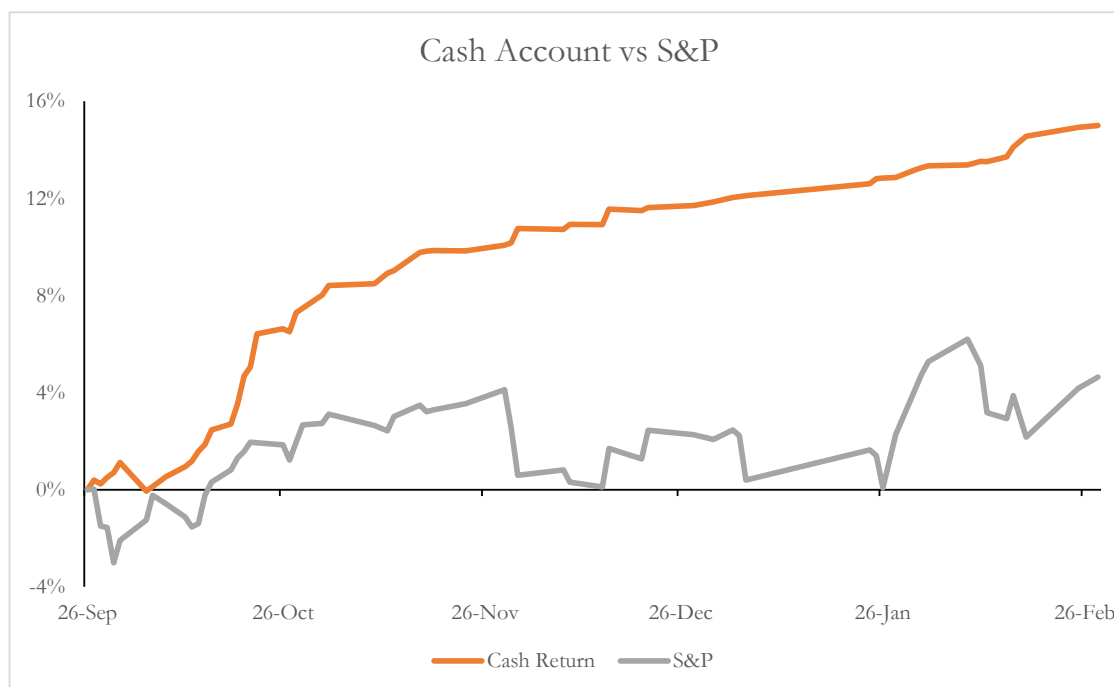


Figure 7: Cash Account Relative Return vs S&P 500

Figure 5 shows the relative return of the margin account compared to the respective intraday returns of the S&P 500 from Table 2. As shown, the return of the margin portfolio dwarfed the S&P with the S&P returns over the period looking like a straight line. Figure 6 expands the S&P by graphing it alone from the Table 2 numbers showing that its movements aren't small, just extremely inconsequential compared to the paper portfolio. Figure 7 shows the cash account comparison to the S&P. As previously, discussed, not trading on margin significantly decreases net returns, but it is still showing strong outperformance to the S&P.

From the performance statistics so far, it feels very evident that the algorithm has proven that dark pool trades can be used to not only make a profit through algorithmic trading but also outperform the market as a whole. Next, I used a two-sample T-Test to find the significance of

my findings. I am using a two-sample T-test as it is two samples of the population of returns on the portfolio and intraday returns on the S&P 500:

- The null hypothesis states the return of the portfolio equals the return on the S&P 500's intraday returns
- The alternative hypothesis states the return of the portfolio does not equal the return on the S&P 500's intraday returns
- The alpha level will be set at 0.01 for a 99% confidence level

Table 3: Two-Sample T-Test

	Margin Return	S&P IntraDay			
Mean	19.40%	0.08%		T Statistic:	4.68
Standard Deviation	31.98%	0.95%		DF:	118
# of Samples	60	60		P Value:	3.858E-06

The Two-Sample T-Test generated a p-value of 0.000003858 which lets us reject the null hypothesis and show that these results are significant with over a 99% confidence level.

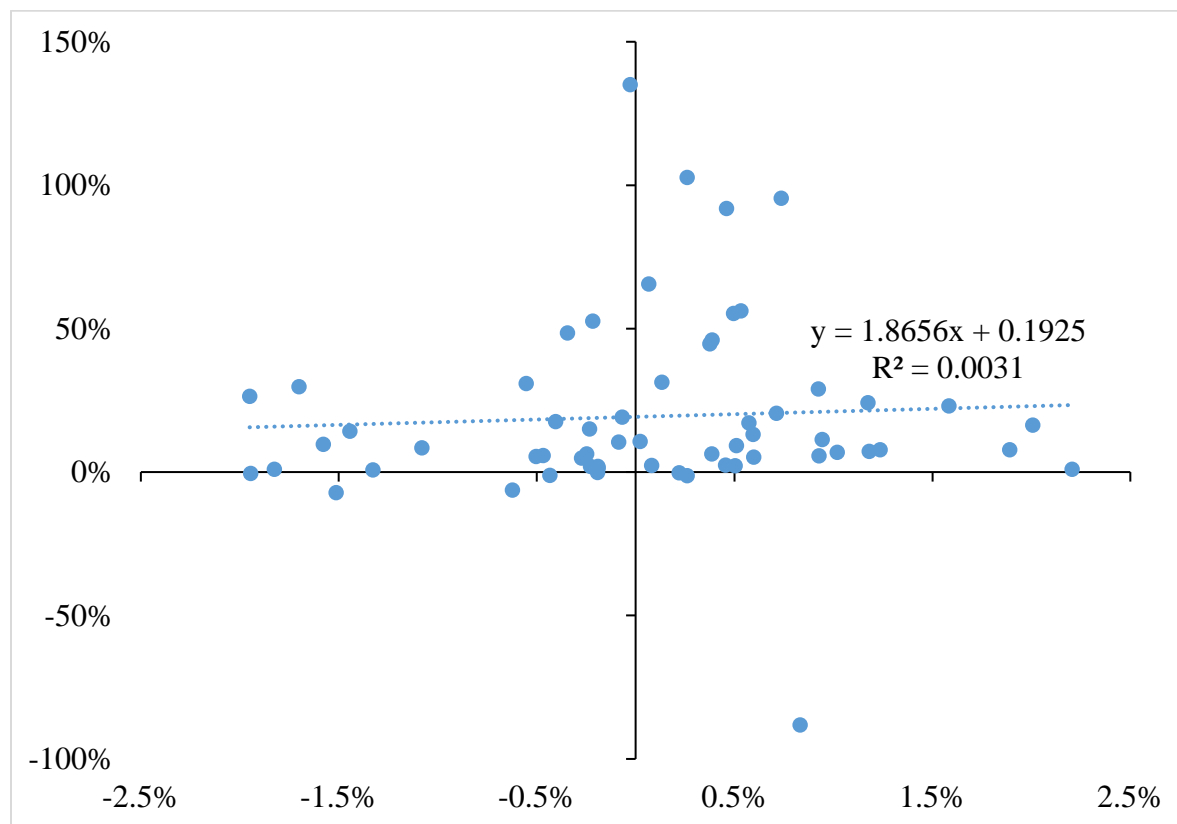


Figure 8: Regression Analysis

Figure 8 shows a regression analysis of the stock returns. In addition to the two-sample T-test, the regression is extremely promising for my results. Specifically, the R-squared value is just 0.0031, meaning ~0.31% of the variance in the portfolio returns is attributable to the S&P 500 returns. This shows generally my algorithm performance is not heavily explained by the S&P 500's performance. The beta of the portfolio is calculated as ~1.8656.

Overall, for performance, the algorithm performed exceptionally well in terms of nominal returns and relative returns. In addition, it showed that the results are not heavily dependent on the market returns themselves and is statistically significant in beating the market over the sample period. All of this is very promising for this project moving forward, and it statistically shows that dark pool data can be used by retail traders to beat the market.

Limitations

Even with the success of the performance, I must discuss some of the shortfalls and limitations during this period of research and overall methodology.

First, the specific method used in signal determination on the dark pools is something not discussed in this thesis as I plan on continuing my work after graduation. This part is purely speculative since there is no release of actual directions of trades for dark pool trades. This means in the sense of direction prediction, it is impossible to know how accurate I am. Looking at the performance, however, I feel confident that my signal determination is generally correct for dark pool trades. Since this thesis is just trying to prove that dark pools can be used in algorithmic trading to make a profit, I have accomplished that in this thesis by looking at the performance section.

One limitation that is currently being solved is the Random Access Memory (RAM) capabilities of the virtual machine provided by Amazon Web Services. With the way the algorithm was built, it continues to use more and more of the virtual machine's RAM the longer it runs. Eventually, this leads to a crash of the virtual machine when it can no longer handle the high memory usage. This meant I needed to reset the algorithm each day. As a student, I could not run it every day at market open depending on classes and activities, attributing to the algorithm not having data for every market open day in the study's period.

Another major reason for the lack of data for every trading day is due to pop-up notifications on the dark pool web platform. When a certain alert came up, it changed the HTML script of the site making the algorithm not function. This led to many more days where trading did not occur even after I ran the algorithm since I am not constantly monitoring if the HTML

obstruction happens during the day. I am working on finding a way to automatically detect this and close the pop-up for future usage.

The final limitation is on the exact types of transactions that the algorithm attempts to capture. An investor may trade through the dark pool for a variety of reasons that has nothing to do with a short-term move. The specific trades that the algorithm would profit from are the ones where I can capture short-term momentum after the buy and situations where institutions know a short-term move is coming and places a quick dark block order to enter the position. In other instances of buying the stock where it has nothing to do with the short-term performance, the expected value over time of those types of dark pools being captured should be zero. Therefore, although this is a limitation where retail investors do not know the intent of the dark pool, it really is not a problem for this methodology of investing since the expected value of trades that are not intended with short term gains should logically have an expected value of zero over this short-term period.

Chapter 5

Next Steps & Live Trading

Live Trading Implementation

Due to the success of returns on the paper portfolio, the next major step is to implement live trading with real money. I have already started this process with it being mostly functional. Since the TD Ameritrade API is already in use, it makes live trading with real money much easier. It is the same process as before but now the package sent to the API is sending the connected TD Ameritrade account an order into the market. With live trading, I wanted to be more careful, so in addition to selling after 15 minutes, I added a trailing stop loss for live orders.

```
request_request = requests.Request(  
    method='post',  
    headers={  
        'Authorization': f'Bearer {access_token}',  
        'Content-Type': 'application/json'  
    },  
    url='https://api.tdameritrade.com/v1/accounts/XXXXXXXX/orders',  
    params=None,  
    data=None,  
    json={  
        "orderType": "MARKET",  
        "session": "NORMAL",  
        "duration": "DAY",  
        "orderStrategyType": "SINGLE",  
        "orderLegCollection": [  
            {  
                "instruction": "Buy",  
                "quantity": shares,  
                "instrument": {  
                    "symbol": symbol,  
                    "assetType": "EQUITY"  
                }  
            }  
        ]  
    }  
}
```

Figure 9: TD Market Buy Code

```

request_request = requests.Request(
    method='post',
    headers={
        'Authorization': f'Bearer {access_token}',
        'Content-Type': 'application/json'
    },
    url='https://api.tdameritrade.com/v1/accounts/XXXXXXXX/orders',
    params=None,
    data=None,
    json={
        "orderType": "TRAILING_STOP",
        "session": "NORMAL",
        "stopPriceLinkBasis": "BID",
        "stopPriceLinkType": "VALUE",
        "stopPriceOffset": round(price-price*stopPercent, 2),
        "duration": "DAY",
        "orderStrategyType": "SINGLE",
        "orderLegCollection": [
            {
                "instruction": "SELL",
                "quantity": shares,
                "instrument": {
                    "symbol": symbol,
                    "assetType": "EQUITY"
                }
            }
        ]
    }
)

```

Figure 10: TD Trailing Stop Sell Code

Figures 9 and 10 show sample Python Codes to send orders to the TD Ameritrade API. Figure 9 shows the current code to send a market order for a ticker for a specified share count. Figure 10 shows the trailing stop I created for the algorithm. I added a trailing stop because it is with real money and the stakes are higher if a trade does not go the direction the algorithm expects. Other than that addition, there are no major changes for live trading needed except for some adjustments for new challenges discussed in the next section. I have tested and run the live

trading a few times; however, there are not enough data points with a consistent algorithm to effectively assess it in this thesis.

Live Trading Challenges

The major challenge of live trading compared to a paper portfolio with an algorithm trading at high frequencies is the tradeoff between slippage and market timing. Slippage refers to when a trader receives a different execution price than intended, typically in the opposite direction of what would be beneficial (Hayes, 2021). For example, if I pull the market price for a stock as \$10.00 then I submit a market order for the stock, often the order will be subject to slippage of a tiny amount above \$10.00, hurting per-share returns.

With high-frequency trading, every cent counts towards the profit and just a few cents on every share makes a giant difference on returns. This is obviously very problematic for my methodology, and slippage becomes more prevalent the lower the open interest on a stock and the high volume I trade.

The first method to solve this is using limit orders instead of market orders; however, I found this to be worse than market orders. This is because when the algorithm is correct on upward movement, it is happening almost immediately after the dark pool trade. If I place a limit order of the price I pull, the value of the shares has already exceeded that value and the order will never fill, and I lose out on the upside.

The next solution is to continue using market orders and change the number of shares I buy so that slippage is minimal. The reason I do this is because if you submit a large market order for a small-cap stock with low volume, it will cost much more to find sellers and drive-up

slippage on all shares. By making the shares count proportional to a small fraction of volume, I can get better price discovery. This is the current method I implemented; however, the best method would be finding a way to pull a market price and submit an order quickly enough to match that price.

The slow speed of pulling the current price through TD Ameritrade's API to submit an order is a major cause of the problem since the price has already changed by the time the order is sent. I am considering pulling prices from another source to attempt better speeds on this to avoid less slippage. With slippage eating up returns on every single share, it makes algorithmic trading for quick intervals much more difficult than on a paper portfolio.

Continued Improvements & Steps

In addition to live trading, there are also further improvements and steps that could be added and tested to improve returns. Markets are always changing and continued updating will be needed for the continued viability of the algorithm.

The first improvement is to optimize the holding time of stocks. This can be accomplished by running a sensitivity analysis of holding the stocks for different increments and finding how many minutes allows for the best returns on average. I do not have the computational processing and code to do this yet; however, it could be extremely beneficial. For the thesis, I used 30 and 15 minutes for the holding time which was speculative based on subjective analysis.

Another similar improvement is testing various determination signals. This can include any way to determine the direction of a dark block trade. The current algorithm is promising by

looking at the performance; however, others may be stronger. This would compare average returns of the different methods to find the strongest or a mix of multiple.

The final improvement that could be worked on now is including shorting to the algorithm. This would work the same way as buying stocks through the algorithm with everything reversed for shorting. If implemented for live trading, additional changes would be needed to account for the additional risks involved with shorting including margin calls.

Chapter 6

Conclusion & Reflection

This paper is not like most papers on algorithmic trading or dark pools as it seeks to utilize dark pool data to generate profits through algorithmic trading as a retail investor. The conclusion from the results of this original study is that retail investors can definitively use dark pool data to generate a profit with algorithmic trading. The remarkable returns generated, and statistical significance of the results show how viable my strategy has been. Since it is a generally unexplored area, speculation and limitations exist; however, those do not at all disprove the conclusion of this thesis since it is purely assessing the profitability of algorithmic systems using dark pool information. This thesis shows that it is possible and can be profitable for retail investors.

Looking back on my work over the last year, this thesis topic has been extremely rewarding. I have been able to learn subjects past my own degree, expanding into many complex topics in computer science in addition to finance. With the success of the paper portfolio, I plan on continuing to use and improve the algorithm of this thesis.

Appendix A

Trading Log

Table 4: Trade Log

Date	Ticker	Buy Price	Sell Price
9/27/2021	CCL	27.2044	26.65
9/27/2021	DMYI	12.45	12.64
9/27/2021	BP	27.01	27.09
9/27/2021	Z	90.0325	91.03
9/27/2021	GGPI	10.23	10.315
9/27/2021	RH	697.4908	700.865
9/27/2021	GGPI	10.2392	10.3
9/27/2021	GGPI	10.24	10.295
9/27/2021	CLNE	8.725	8.93
9/27/2021	GGPI	10.24	10.3
9/27/2021	PFE	44.0273	44.05
9/27/2021	SLB	30.4	30.24
9/27/2021	MGM	45.89	45.88
9/27/2021	GGPI	10.3	10.3915
9/27/2021	MGM	45.87	45.905
9/27/2021	TSLA	781.01	789.04
9/27/2021	MGM	45.9	45.96
9/27/2021	BAC	43.1757	43.1739
9/27/2021	RIDE	7.715	7.7427
9/27/2021	GE	105.84	105.94
9/27/2021	IRNT	24.2578	24.7
9/27/2021	GE	105.9	105.94
9/27/2021	TSLA	784.56	788.37
9/27/2021	GE	105.845	105.95
9/27/2021	DT	71.925	72.05
9/27/2021	ON	49.59	49.52
9/27/2021	ON	49.635	49.57
9/28/2021	XOM	59.8	60.23
9/28/2021	BK	53.44	53.92
9/28/2021	GOOGL	2786.3	2749.5808
9/28/2021	BK	53.44	53.9
9/28/2021	TSLA	785.1	786.75
9/28/2021	AMC	38.5	37.83
9/28/2021	AMC	38.58	37.851
9/28/2021	OXY	30.71	30.3855
9/28/2021	HPQ	28.59	29.165
9/28/2021	TSLA	786.1	785.1666
9/28/2021	HPQ	28.59	29.16
9/28/2021	HPQ	28.59	29.155
9/28/2021	BAC	43.41	43.59
9/28/2021	F	14.59	14.5364
9/28/2021	DBRG	6.24	6.24
9/28/2021	WFC	46.56	46.13
9/28/2021	BP	27.66	27.57
9/28/2021	GLW	38.46	38.36
9/28/2021	BP	27.71	27.56
9/28/2021	AMZN	3340	3329.1499
9/28/2021	AMC	38.07	37.91
9/28/2021	F	14.525	14.37
9/28/2021	AMC	37.9002	37.89
9/28/2021	S	55.635	55.26
9/28/2021	ABT	118.87	118.435
9/28/2021	XOM	60.1007	59.845
9/28/2021	TSLA	786.824	783.973
9/28/2021	ATVI	75.488	75.97

Date	Ticker	Buy Price	Sell Price
9/28/2021	S	55.87	55.82
9/28/2021	BHP	53.21	53.36
9/28/2021	F	14.2919	14.43
9/28/2021	KL	40.94	40.125
9/28/2021	KL	40.915	40.14
9/28/2021	CCL	26.28	26.2735
9/28/2021	BABA	150.33	149.425
9/28/2021	NVAX	205.1417	202.945
9/28/2021	NEM	54.06	54.33
9/28/2021	BABA	150.18	149.42
9/28/2021	NTES	83.935	83.97
9/28/2021	BP	27.46	27.245
9/28/2021	BP	27.469	27.255
9/28/2021	DDOG	136.25	138
9/29/2021	CMG	1849.8199	1862.6869
9/29/2021	SNAP	74.12	74.45
9/29/2021	LICY	11.2669	12.1426
9/29/2021	GOLD	17.93	17.72
9/29/2021	BAC	42.9	43.045
9/29/2021	F	14.3995	14.39
9/29/2021	TSLA	787.92	791.76
9/29/2021	F	14.4059	14.385
9/29/2021	TSLA	789.59	790.7099
9/29/2021	UBER	46.095	46.455
9/29/2021	BAC	43.0155	43.015
9/29/2021	SLI	8.8367	9.05
9/29/2021	RBLX	77.12	77.91
9/29/2021	F	14.3699	14.32
9/29/2021	BAC	43.01	43.105
9/29/2021	AMZN	3330.1101	3338.02
9/29/2021	DLTR	99.35	100.05
9/29/2021	AMZN	3330	3340.2051
9/29/2021	BAC	42.945	43.1
9/29/2021	BAC	42.96	43.195
9/29/2021	SDC	5.5329	5.555
9/29/2021	WFC	46.685	46.97
9/29/2021	LYV	91.95	92.48
9/29/2021	MRK	74.11	74.375
9/29/2021	BAC	43.05	43.21
9/29/2021	BAC	43.105	43.23
9/29/2021	PLUG	26.1399	25.75
9/29/2021	TSM	111.81	111.32
9/29/2021	CAG	34.685	34.925
9/29/2021	AZN	59.345	59.305
9/29/2021	BAC	43.15	43.2
9/29/2021	AZN	59.36	59.355
9/29/2021	PLUG	25.815	25.755
9/29/2021	MRK	74.455	74.6751
9/29/2021	BAC	43.18	43.2299
9/29/2021	GOOGL	2702.21	2693.96
9/29/2021	AZN	59.275	59.36
9/29/2021	AXTA	30.065	30.035
9/29/2021	XLRN	182.39	183.22
9/29/2021	XOM	60.035	59.7473
9/29/2021	INTC	53.425	53.4

Date	Ticker	Buy Price	Sell Price
9/29/2021	LSPD	103.09	101.83
9/29/2021	GM	52.61	52.67
9/29/2021	FB	339.72	340.7295
9/29/2021	GILD	70.65	70.58
9/29/2021	KO	53.005	52.93
9/29/2021	GILD	70.55	70.6762
9/29/2021	BYND	106.66	106.205
9/29/2021	LCID	27.1618	27.1199
9/29/2021	AMZN	3308.0901	3305.885
9/29/2021	ZEN	116.33	117.06
9/29/2021	ZEN	116.26	116.98
9/29/2021	XOM	59.78	59.815
9/29/2021	XOM	59.8	59.8
9/29/2021	MRK	74.41	74.81
9/29/2021	MRK	74.445	74.92
9/29/2021	BA	225.32	226.9
9/29/2021	AMZN	3303.3569	3324.3931
9/29/2021	BYND	106.2099	107.1
9/29/2021	BP	27.115	27.17
9/29/2021	WBA	48.465	48.845
9/29/2021	AMD	101.12	100.9388
9/29/2021	FSR	14.78	14.77
9/29/2021	AXTA	29.975	29.865
9/29/2021	USB	60.615	60.365
9/29/2021	MRK	75.35	75.535
9/29/2021	BHP	52.67	52.765
9/29/2021	T	27.4539	27.4562
9/29/2021	GSK	38.3943	38.36
9/29/2021	JCI	70.74	70.575
9/30/2021	PROG	1.23	1.2785
9/30/2021	ZM	258.24	260.24
9/30/2021	NVDA	208.54	209.64
9/30/2021	AMD	103.61	103.64
9/30/2021	BABA	148.505	148.05
9/30/2021	SPCE	25.129	25.95
9/30/2021	AMD	103.52	103.52
9/30/2021	M	23.27	22.665
9/30/2021	VLTA	7.89	7.95
9/30/2021	SNAP	73.37	72.82
9/30/2021	GOOG	2705.4399	2695.0149
9/30/2021	VALE	14.325	14.2999
9/30/2021	F	14.22	14.225
9/30/2021	CPNG	27.9	27.8907
9/30/2021	SCHW	75.1	74.7
9/30/2021	XLRN	174.73	174.84
9/30/2021	SOFI	15.8	15.71
9/30/2021	SOFI	15.8197	15.77
9/30/2021	SKX	43.51	44.11
9/30/2021	SOFI	15.825	15.785
9/30/2021	WFC	46.8698	46.985
9/30/2021	GENI	17.09	17
9/30/2021	CPNG	27.88	27.8857
9/30/2021	AMD	103.33	103.825
9/30/2021	GENI	17.14	17.02
9/30/2021	GENI	17.14	17.008

Date	Ticker	Buy Price	Sell Price
9/30/2021	GENI	17.135	17.03
9/30/2021	SOFI	15.69	15.835
9/30/2021	GENI	17.48	17.27
9/30/2021	ABBV	109.713	109.375
9/30/2021	MSFT	286.4101	284.87
9/30/2021	SOFI	15.79	15.6051
9/30/2021	CCL	25.075	24.855
9/30/2021	CPNG	28.035	27.885
9/30/2021	UNFI	50.9729	50.115
9/30/2021	UNFI	51.0668	49.94
9/30/2021	SOFI	15.753	15.61
9/30/2021	BMY	59.98	59.925
9/30/2021	SNAP	73.1299	73.37
9/30/2021	SNAP	73.17	73.32
9/30/2021	C	70.49	70.105
9/30/2021	SOFI	15.62	15.685
9/30/2021	BBBY	16.94	16.95
9/30/2021	BBIG	6.57	6.37
9/30/2021	AVGO	486	486.2
9/30/2021	UAA	20.09	20.2
9/30/2021	CLR	46.63	46.14
9/30/2021	IAA	54.71	54.895
9/30/2021	AAPL	141.89	141.9557
9/30/2021	SAVA	62.67	62.8185
9/30/2021	LYV	91.57	92.09
9/30/2021	LAUR	17.04	17.01
9/30/2021	EQT	20.425	20.515
9/30/2021	Z	87.9	87.685
9/30/2021	CTVA	42.37	42.335
9/30/2021	LVS	36.62	36.635
9/30/2021	EQT	20.48	20.54
9/30/2021	WFC	46.62	46.6
9/30/2021	COTY	7.745	7.875
9/30/2021	WFC	46.615	46.635
9/30/2021	AMD	103.934	104.14
9/30/2021	SNAP	74.401	75.055
9/30/2021	WFC	46.65	46.69
9/30/2021	MRK	75.48	75.72
9/30/2021	WFC	46.61	46.68
9/30/2021	VZ	54.08	54.245
9/30/2021	SNAP	74.61	75.11
9/30/2021	AMC	35.885	39.91
9/30/2021	SNAP	74.52	75.02
9/30/2021	AMC	37.86	39.2
9/30/2021	SKX	42.46	42.32
9/30/2021	WFC	46.77	46.725
9/30/2021	DMYI	10.16	10.38
9/30/2021	MT	30.315	30.31
10/1/2021	NEE	78.04	78.52
10/1/2021	HLT	137.255	136.53
10/1/2021	MRK	82.37	81.06
10/1/2021	MRK	82.2735	80.8
10/1/2021	MRK	82.3186	81.0982
10/1/2021	SDC	5.298	5.385
10/1/2021	AAPL	139.285	139.6687
10/1/2021	AAPL	139.3085	139.99
10/1/2021	FB	340.5	342.3813
10/1/2021	NEO	50.66	49.1
10/1/2021	TSLA	766.81	773.39
10/1/2021	GOLD	17.7791	17.87

Date	Ticker	Buy Price	Sell Price
10/1/2021	TSLA	770.2099	778.3901
10/1/2021	MRK	81.11	81.96
10/1/2021	GOLD	17.74	17.9
10/1/2021	KSS	47	47.83
10/1/2021	GOLD	17.77	17.905
10/1/2021	FUBO	23.73	23.9933
10/1/2021	TSLA	771.4799	778.705
10/1/2021	MRK	81.55	82.2101
10/1/2021	GOLD	17.81	17.9493
10/1/2021	AMC	38.29	39.2996
10/1/2021	MRK	81.8844	82.28
10/1/2021	MRK	81.84	82.436
10/1/2021	GOLD	17.87	17.945
10/1/2021	PCG	9.6	9.66
10/1/2021	XOM	60.035	60.155
10/1/2021	WMT	136.82	137.08
10/1/2021	JWN	26.595	26.795
10/1/2021	SOFI	16.08	16.17
10/1/2021	MRNA	339.65	334.9619
10/1/2021	COP	69.27	69.6
10/1/2021	BCYC	42.95	42.87
10/1/2021	XOM	60.43	60.57
10/1/2021	ASTS	10.43	10.55
10/1/2021	IGT	27.99	28.005
10/1/2021	AMZN	3267.1001	3271.8501
10/1/2021	BABA	144.07	144.16
10/1/2021	UAA	20.45	20.58
10/1/2021	BABA	144.288	144.12
10/1/2021	MGM	44.78	44.905
10/1/2021	GPS	23.29	23.445
10/1/2021	BOX	24.4056	24.55
10/1/2021	CTVA	43.02	43.45
10/1/2021	CTVA	43.03	43.46
10/1/2021	AAPL	140.9453	141.4801
10/1/2021	NTR	67.24	67.46
10/1/2021	AAPL	141.085	141.715
10/1/2021	HBI	17.4	17.555
10/1/2021	MRK	82.07	82.67
10/1/2021	ABT	117.02	117.195
10/1/2021	MRK	82.225	82.865
10/1/2021	RVLV	61.9	63.055
10/1/2021	TSLA	768.075	771.4101
10/1/2021	TSLA	768.93	770.83
10/1/2021	BABA	143.8	144.0366
10/1/2021	FB	343.91	343.96
10/1/2021	UAA	20.64	20.76
10/1/2021	C	71.57	71.54
10/1/2021	WOOF	21.3632	21.84
10/1/2021	MRK	82.87	82.415
10/1/2021	IGT	28.245	28
10/1/2021	WOOF	21.38	21.795
10/1/2021	TSLA	770.71	775.585
10/1/2021	OPEN	20.5341	20.71
10/1/2021	AMZN	3282.99	3285.0249
10/1/2021	AFRM	116.9	117.58
10/1/2021	SOFI	16.26	16.2655
10/1/2021	COP	69.89	70.05
10/1/2021	CMCSA	57.295	57.295
10/5/2021	JPM	167.81	169.52
10/5/2021	BEKE	18.09	17.97

Date	Ticker	Buy Price	Sell Price
10/5/2021	BEKE	18.1	18.04
10/5/2021	SNOW	300.81	301
10/5/2021	TWTR	59.77	60.1308
10/5/2021	NVDA	201.7496	204.325
10/5/2021	FB	329.3314	332.91
10/5/2021	AMD	101.585	102.0471
10/5/2021	X	22.245	22.45
10/5/2021	CLF	20.325	20.6382
10/5/2021	BP	28.75	28.65
10/5/2021	BP	28.765	28.645
10/5/2021	BTI	35.145	35.0301
10/5/2021	COP	72.785	72.4
10/5/2021	BTBT	9.07	9.4234
10/5/2021	DKNG	49.6	49.64
10/5/2021	JPM	169.7	169.64
10/5/2021	KSS	49.25	49.128
10/5/2021	ATVI	76.935	77.065
10/5/2021	FB	332.7435	332.48
10/5/2021	ATVI	76.94	77.03
10/5/2021	SCHW	76.34	76.34
10/5/2021	AAPL	140.3867	141.1799
10/5/2021	SCHW	76.3	76.255
10/5/2021	SCHW	76.295	76.25
10/5/2021	AAPL	140.705	141.26
10/5/2021	AAPL	141.02	141.15
10/5/2021	CEI	2.25	1.54
10/5/2021	MRK	82.59	82.055
10/5/2021	CEI	2.25	1.755
10/5/2021	PBR	11.05	11.0244
10/5/2021	JMIA	17.99	17.88
10/5/2021	CEI	2	1.63
10/5/2021	F	14.27	14.205
10/5/2021	NFLX	628.865	630.45
10/5/2021	SAIL	43.91	44.14
10/5/2021	UBER	45.425	45.41
10/5/2021	UBER	45.4984	45.51
10/5/2021	CEI	1.71	1.1759
10/5/2021	DVN	39.525	39.1212
10/5/2021	SOFI	16.2807	16.325
10/5/2021	PLTR	23.1645	23.21
10/5/2021	PBR	10.945	10.9399
10/5/2021	MT	28.995	29.175
10/5/2021	CX	6.895	6.845
10/5/2021	PLTR	23.125	23.215
10/5/2021	ATUS	19.44	19.48
10/5/2021	BITF	5.075	5.18
10/5/2021	NCLH	27.675	27.71
10/5/2021	NCLH	27.705	27.715
10/5/2021	LVS	37.935	37.855
10/5/2021	XOM	61.48	61.625
10/5/2021	JPM	169.34	169.64
10/5/2021	AAPL	141.8875	142.005
10/5/2021	RBLX	73.3199	72.91
10/5/2021	DOW	59.0591	59.01
10/5/2021	AMZN	3255.1299	3258.53
10/5/2021	RBLX	73.28	72.562
10/5/2021	KSS	48.21	48.03
10/5/2021	MA	343.65	345.125
10/5/2021	RBLX	73.0583	72.87
10/5/2021	MA	343.92	345.04

Date	Ticker	Buy Price	Sell Price
10/5/2021	RBLX	72.8	73.13
10/5/2021	ROKU	304.94	305.975
10/5/2021	MA	343.94	345.25
10/5/2021	ROKU	304.77	305.7031
10/5/2021	GM	54.115	54.265
10/5/2021	MSTR	637.96	643
10/5/2021	GM	54.1	54.2701
10/5/2021	F	14.21	14.28
10/5/2021	AIG	57.325	57.51
10/5/2021	SPLG	51.15	51.18
10/5/2021	RBLX	72.93	73.34
10/5/2021	AR	20.375	20.735
10/5/2021	VST	17.195	17.29
10/5/2021	KDMN	8.85	8.805
10/6/2021	GM	54.32	53.88
10/6/2021	WISH	4.7	4.735
10/6/2021	AR	19.775	19.66
10/6/2021	BABA	142.1	143.87
10/6/2021	EA	135.48	134.67
10/6/2021	BABA	144.39	144.13
10/6/2021	BIIB	280.32	282.81
10/6/2021	DVN	38.385	38.71
10/6/2021	TWTR	60.51	60.89
10/6/2021	BABA	143.87	143.915
10/6/2021	X	20.59	20.74
10/6/2021	ROOT	5.19	5.1382
10/6/2021	C	71.3099	71.29
10/6/2021	AFRM	125.955	129.1129
10/6/2021	NVDA	204.99	204.53
10/6/2021	NFLX	633.77	632.25
10/6/2021	NFLX	633.57	632.54
10/6/2021	FIVE	170.75	171.2
10/6/2021	Z	89.0535	88.66
10/6/2021	CLVT	21.93	21.91
10/6/2021	VFC	66.205	66.74
10/6/2021	Z	89.22	88.5
10/6/2021	Z	88.71	88.35
10/6/2021	AAPL	139.7099	140.835
10/6/2021	PXD	181.375	182.09
10/6/2021	BMY	58.745	58.93
10/6/2021	ATVI	77.22	77.46
10/6/2021	PINS	50.45	50.605
10/6/2021	BAC	43.99	44.15
10/6/2021	QCOM	127.205	127.49
10/6/2021	SDC	6.4321	6.6141
10/6/2021	XENE	31.475	31.475
10/6/2021	XENE	31.43	31.475
10/6/2021	JD	71.85	71.88
10/6/2021	OPEN	19.6	19.685
10/6/2021	WISH	4.9672	4.92
10/6/2021	MRK	80.56	80.315
10/6/2021	WISH	4.94	4.89
10/6/2021	DDOG	143.55	143.555
10/6/2021	DIS	175.1	175.0228
10/8/2021	UBER	47.7	47.84
10/8/2021	AMD	104.7	105.7
10/8/2021	AMD	104.48	105.8289
10/8/2021	XPEV	38	37.95
10/8/2021	NIO	35.4512	35.3
10/8/2021	AAPL	143.0701	144

Date	Ticker	Buy Price	Sell Price
10/8/2021	DNA	10.95	10.788
10/8/2021	AAPL	143.3611	144.1893
10/8/2021	DNA	10.83	10.7601
10/8/2021	EBAY	74.4974	74.54
10/8/2021	EBAY	74.47	74.72
10/8/2021	MSFT	295.1542	295.8972
10/8/2021	TSLA	787.2801	788.7
10/8/2021	TSLA	786.9089	788.9095
10/8/2021	TSLA	786.71	788.68
10/8/2021	F	14.6641	14.805
10/8/2021	JD	75.4251	75.89
10/8/2021	OXY	31.38	31.55
10/8/2021	JD	75.51	75.99
10/8/2021	GM	55.305	55.9599
10/8/2021	AAPL	144.005	143.9953
10/8/2021	F	14.7201	14.865
10/8/2021	QCOM	130.2	130.64
10/8/2021	BABA	154.73	157.044
10/8/2021	FCX	33.74	34.135
10/8/2021	ZNGA	7.43	7.545
10/8/2021	MRVL	66.94	66.615
10/8/2021	DNA	10.735	10.909
10/8/2021	SNAP	76.8071	77.05
10/8/2021	XOM	60.405	60.815
10/8/2021	LICY	11.62	11.69
10/8/2021	LICY	11.63	11.6
10/8/2021	CPNG	27.24	27.46
10/8/2021	BABA	156.3816	158.13
10/8/2021	CPNG	27.23	27.45
10/8/2021	TWTR	63.89	63.955
10/8/2021	AMC	37.81	38.385
10/8/2021	CHWY	66.13	66.345
10/8/2021	GM	56.07	56.25
10/8/2021	HES	82.72	83.28
10/8/2021	QCOM	130.55	130.235
10/8/2021	BMY	58.905	59.125
10/8/2021	EBAY	74.62	74.91
10/8/2021	BABA	157.46	157.84
10/8/2021	QCOM	130.29	130.26
10/8/2021	OXY	31.9	31.985
10/8/2021	PLTR	23.8399	23.94
10/8/2021	PFE	42.7101	42.785
10/8/2021	BMY	59.095	59.075
10/8/2021	MTTR	19.52	20.1598
10/8/2021	ATVI	77.99	78.295
10/8/2021	PAGS	46.11	46.9217
10/8/2021	CEI	1.584	1.7885
10/8/2021	SPCE	23.29	23.4
10/8/2021	SPCE	23.2889	23.41
10/8/2021	NIO	36.2815	36.4822
10/8/2021	TSM	111.54	111.565
10/8/2021	MGM	45.115	44.92
10/8/2021	AAPL	143.835	143.835
10/8/2021	AMD	106.0425	105.985
10/8/2021	HBAN	16.08	16.025
10/8/2021	NFLX	640	641.7
10/8/2021	MGM	44.925	45.04
10/8/2021	MGM	44.945	45.04
10/8/2021	GM	58.9627	58.79
10/8/2021	F	15.4159	15.355

Date	Ticker	Buy Price	Sell Price
10/8/2021	GM	58.975	58.88
10/8/2021	ORCL	94.57	94.66
10/8/2021	ENFA	9.94	9.95
10/8/2021	CNK	21.58	21.595
10/8/2021	CMCSA	55.395	55.405
10/8/2021	CCL	24.37	24.295
10/8/2021	F	15.38	15.26
10/8/2021	CCL	24.3006	24.3
10/8/2021	AAPL	143.4	143
10/8/2021	F	15.34	15.17
10/8/2021	MGM	44.8117	44.7899
10/8/2021	GM	58.7601	58.6921
10/8/2021	CCL	24.285	24.11
10/8/2021	MU	70.04	69.915
10/8/2021	CCXI	33.9206	33.465
10/8/2021	MU	70.03	69.9417
10/8/2021	GSK	38.755	38.7
10/8/2021	GSK	38.715	38.705
10/8/2021	GSK	38.7082	38.7055
10/8/2021	GSK	38.71	38.705
10/8/2021	MU	69.955	69.95
10/8/2021	MU	69.95	69.9579
10/8/2021	BABA	161.5588	162.51
10/8/2021	GEO	8.1471	8.3977
10/8/2021	BABA	161.75	162.6701
10/8/2021	UBER	48.02	47.885
10/8/2021	MU	70.005	69.87
10/8/2021	BABA	162.1901	162.01
10/8/2021	NET	138.04	137.975
10/8/2021	AAPL	143.05	142.64
10/8/2021	BABA	162.56	161.9125
10/8/2021	MU	69.87	69.72
10/8/2021	EQT	20.995	20.91
10/8/2021	GOOGL	2787	2788.1926
10/8/2021	DNA	10.547	10.64
10/8/2021	NOK	5.785	5.8
10/8/2021	NOK	5.785	5.8
10/8/2021	XOM	61.895	62.095
10/8/2021	AXP	175.39	175.71
10/8/2021	XOM	61.9278	62.11
10/8/2021	RBLX	71	70.829
10/8/2021	OPEN	21.675	21.59
10/8/2021	ORIC	14.3	15.03
10/8/2021	SIRI	6.105	6.095
10/8/2021	JD	78.088	78.27
10/8/2021	C	72.245	72.325
10/8/2021	AAPL	143.165	143.255
10/8/2021	BAC	44.39	44.51
10/8/2021	SPY	438.78	438.72
10/8/2021	PFE	42.575	42.53
10/8/2021	APA	24.04	24.415
10/8/2021	F	15.1	15.125
10/8/2021	APA	24.045	24.47
10/11/2021	AAPL	142.305	143.8609
10/11/2021	PSX	83.04	83.4209
10/11/2021	GOOG	2791.105	2805.8401
10/11/2021	X	21.15	21.66
10/11/2021	TSLA	787.1	796.63
10/11/2021	X	21.06	21.6801
10/11/2021	X	21.1	21.69

Date	Ticker	Buy Price	Sell Price
10/27/2021	GM	54.6	55.415
10/27/2021	FB	314.47	315.5531
10/27/2021	FB	313.65	315.2943
10/27/2021	TSLA	1049.24	1057.9399
10/27/2021	CPNG	29.55	29.54
10/27/2021	HPE	14.72	14.525
10/27/2021	MSFT	319.585	324.2
10/27/2021	CPNG	29.6	29.565
10/27/2021	MSFT	320.46	324.295
10/27/2021	AMZN	3381.6189	3383.79
10/27/2021	AMZN	3382.5549	3383.79
10/27/2021	HOOD	35.73	35.96
10/27/2021	MSFT	321.81	324.49
10/27/2021	AMZN	3381.9675	3387.3701
10/27/2021	PFE	42.735	42.735
10/27/2021	DASH	198.86	201.43
10/27/2021	PFE	42.75	42.76
10/27/2021	DASH	198.47	201.355
10/27/2021	PFE	42.7562	42.79
10/27/2021	DASH	197.345	197.345
10/27/2021	BAC	47.755	47.695
10/27/2021	SNAP	52.405	51.99
10/27/2021	PFGC	45.55	46.03
10/27/2021	MQ	36.04	34.665
10/27/2021	MSFT	324.4999	323.8
10/27/2021	MQ	36.02	34.72
10/27/2021	TSLA	1061.75	1057.72
10/27/2021	MQ	36.1887	34.32
10/27/2021	GM	54.89	54.68
10/27/2021	OXY	34.59	34.365
10/27/2021	FB	314.24	314.24
10/28/2021	F	16.89	17.375
10/28/2021	F	16.915	17.425
10/28/2021	F	16.91	17.3945
10/28/2021	LCID	28.27	29.6506
10/28/2021	PLUG	35	35.8895
10/28/2021	VLTA	7.14	7.4815
10/28/2021	LRCX	566.14	575.87
10/28/2021	SU	24.92	24.635
10/28/2021	SU	24.98	24.63
10/28/2021	SU	24.92	24.62
10/28/2021	TWLO	282.35	284.405
10/28/2021	SU	24.89	24.62
10/28/2021	F	17.105	17.21
10/28/2021	SU	24.89	24.45
10/28/2021	TWLO	284.336	284.58
10/28/2021	F	17.2487	17.225
10/28/2021	BUD	62.445	63.09
10/28/2021	BUD	62.24	63.07
10/28/2021	GM	54.51	55.1149
10/28/2021	FB	309.5894	312.62
10/28/2021	TWLO	288.5901	292.5101
10/28/2021	ON	47.09	47.06
10/28/2021	RPRX	37.75	37.98
10/28/2021	BAC	47.625	47.905
10/28/2021	PLUG	35.795	37.07
10/28/2021	AMD	122.17	122.82
10/28/2021	LCID	30.2708	30.955
10/28/2021	FCEL	7.445	7.445
10/28/2021	MSFT	322.12	323.015

Date	Ticker	Buy Price	Sell Price
10/28/2021	TSLA	1062.9999	1069.79
10/28/2021	TSLA	1059.62	1069.9999
10/28/2021	LCID	30.9715	32.0635
10/28/2021	TWLO	294.4499	295.22
10/28/2021	RUN	54.89	55.7
10/28/2021	AAPL	152.435	152.36
10/28/2021	MRK	85.3	85.6947
10/28/2021	WE	10.35	10.23
10/28/2021	MSFT	323.07	323.58
10/28/2021	PINS	45.9594	46.105
10/28/2021	F	16.82	16.84
10/28/2021	LCID	31.9301	33.26
10/28/2021	GSK	41.91	41.99
10/28/2021	MSFT	322.48	323.745
10/28/2021	LW	57.43	57.23
10/28/2021	LKQ	55.81	56.21
10/28/2021	LKQ	55.86	56.225
10/28/2021	GOOG	2914.01	2935.73
10/28/2021	AAL	19.1	19.1028
10/28/2021	WFC	50.975	51.03
10/28/2021	GOOG	2920.71	2931.3301
10/28/2021	WFC	50.995	50.98
10/28/2021	GOOGL	2912.1201	2921.98
10/28/2021	WFC	51.045	50.92
10/28/2021	VLTA	7.75	7.89
10/28/2021	WFC	51.035	50.94
10/28/2021	MSFT	323.706	323.84
10/28/2021	GOOGL	2920.845	2920.3501
10/28/2021	LKQ	55.95	55.99
10/28/2021	MCD	243.7107	244.27
10/28/2021	BAX	82.72	81.81
10/28/2021	UBER	45.1	45.049
10/28/2021	CCL	21.86	21.915
10/28/2021	CCL	21.8699	21.905
10/28/2021	LYV	99.39	100.76
10/28/2021	LYV	99.2908	100.82
10/28/2021	MRK	85.37	85.465
10/28/2021	NOK	5.815	5.79
10/28/2021	TSLA	1069.75	1076.295
10/28/2021	BUD	62.55	62.09
10/28/2021	LCID	33.9834	38.22
10/28/2021	PRCH	19.98	19.78
10/28/2021	MRK	85.47	85.935
10/28/2021	LCID	34.06	38.62
10/28/2021	LCID	35.02	38.0109
10/28/2021	FCEL	7.415	7.6
10/28/2021	NVDA	246.83	247.1333
10/28/2021	WFC	51.095	50.975
10/28/2021	NVDA	246.8963	247.4
10/28/2021	OTLY	13.1	13.2237
10/28/2021	F	16.9058	16.85
10/28/2021	Z	98.27	98.33
10/28/2021	PRCH	19.865	19.6
10/28/2021	FISV	96.94	98.93
10/28/2021	PINS	45.28	45.529
10/28/2021	F	16.82	16.9101
10/28/2021	F	16.815	16.97
10/28/2021	LCID	35.619	34.9299
10/28/2021	MA	331.95	331.03
10/28/2021	NLSN	20.74	20.765

Date	Ticker	Buy Price	Sell Price
10/28/2021	FB	316.16	321.765
10/28/2021	Z	98.01	97.96
10/28/2021	TJX	65.105	65.07
10/28/2021	Z	98.03	97.94
10/28/2021	FB	317.2438	321.2699
10/28/2021	Z	98.05	97.91
10/28/2021	AAPL	152.5901	152.8033
10/28/2021	MOS	41.895	41.905
10/28/2021	Z	98.055	97.8
10/28/2021	PLUG	38.105	37.3699
10/28/2021	FLEX	17.19	17.075
10/28/2021	GPS	22.605	22.805
10/28/2021	FB	320.315	323.9599
10/28/2021	DE	348.625	349.38
10/28/2021	FB	321.105	323.12
10/28/2021	AMZN	3471.5247	3471.355
10/28/2021	VTRS	13.32	13.335
10/28/2021	WFC	51.05	51.05
10/28/2021	XP	33.76	33.56
10/28/2021	FISV	98.225	98.2714
10/28/2021	GPS	22.815	23.11
10/28/2021	AAPL	152.615	152.41
10/28/2021	PINS	45.5374	45.8599
10/28/2021	CCL	21.885	21.955
10/28/2021	V	210.98	210.39
10/28/2021	WIMI	4.085	4.22
10/28/2021	NVDA	247.49	248.57
10/28/2021	OTLY	13.195	13.25
10/28/2021	NIO	40.4007	40.54
10/28/2021	SOFI	19.9397	19.895
10/28/2021	TJX	65.09	65.12
10/28/2021	WFC	51.1	51.28
10/28/2021	OPEN	24.105	24.23
10/28/2021	GOLD	18.975	18.935
10/29/2021	CVX	114.7	114.68
10/29/2021	KO	55.87	56.235
10/29/2021	AMAT	134.955	135
10/29/2021	AMAT	134.74	135.57
10/29/2021	AMZN	3305.8899	3318.9451
10/29/2021	AMC	35.23	34.89
10/29/2021	AMC	35.23	34.87
10/29/2021	LCID	38.51	38.37
10/29/2021	FB	321	323.27
10/29/2021	TSLA	1075.99	1092.3601
10/29/2021	WIMI	5.3388	4.9825
10/29/2021	TSLA	1078.5699	1093
10/29/2021	INTC	48.19	48.2175
10/29/2021	LAC	28.121	29.0399
10/29/2021	INTC	48.175	48.19
10/29/2021	AAPL	147.04	147.51
10/29/2021	QS	27.0013	28.045
10/29/2021	X	26.7138	26.1
10/29/2021	INTC	48.095	48.115
10/29/2021	TSLA	1080.03	1087.9301
10/29/2021	INTC	48.08	48.0995
10/29/2021	ZIP	26.31	26.66
10/29/2021	KO	56.23	56.225
10/29/2021	AAPL	146.66	147.288
10/29/2021	CMCSA	52.14	52.29
10/29/2021	CMCSA	52.15	52.275

Date	Ticker	Buy Price	Sell Price
10/29/2021	MSFT	325.29	326.395
10/29/2021	CMCSA	52.0107	51.99
10/29/2021	WOLF	124.485	125.0637
10/29/2021	MSFT	326.29	327.86
10/29/2021	FE	39.35	38.875
10/29/2021	ABBV	113.57	114.4894
10/29/2021	FE	39.61	38.83
10/29/2021	FE	39.41	38.835
10/29/2021	EPD	22.745	22.7696
10/29/2021	LCID	37.33	37.379
10/29/2021	MCMJ	10.62	10.7782
10/29/2021	SNJ	161.045	161.64
10/29/2021	TSLA	1089.67	1090.65
10/29/2021	C	69.825	69.935
10/29/2021	SPY	457.625	458.14
10/29/2021	C	69.84	69.915
10/29/2021	C	69.86	69.925
10/29/2021	FCEL	7.9021	7.955
10/29/2021	GEVO	7.1015	7.255
10/29/2021	BKKT	28.575	28.48
10/29/2021	FIVE	196.46	198.67
10/29/2021	X	26.655	26.825
10/29/2021	MTTR	21.06	21.4283
10/29/2021	TSLA	1090.35	1094.49
10/29/2021	NVDA	253.405	255.37
10/29/2021	TSLA	1089.975	1093.748
10/29/2021	UPST	329.88	326.23
10/29/2021	TSLA	1090.75	1093.45
10/29/2021	C	69.785	69.755
10/29/2021	AMZN	3345.907	3348.77
10/29/2021	AAPL	148.48	149.1901
10/29/2021	AAPL	148.46	149.3188
10/29/2021	CTRA	21.365	21.235
10/29/2021	MSFT	327.2536	328.48
10/29/2021	SPY	458.34	458.97
10/29/2021	KO	56.325	56.35
10/29/2021	GOOG	2960.77	2958.1201
10/29/2021	KO	56.31	56.335
10/29/2021	KO	56.32	56.3376
10/29/2021	PYPL	235.82	235.81
10/29/2021	SNAP	52.3995	52.92
10/29/2021	SU	26.245	26.13
10/29/2021	BMJ	57.95	57.88
10/29/2021	DAL	38.865	38.89
10/29/2021	GREE	25.7052	26.03
10/29/2021	PINS	44.241	44.59
10/29/2021	BUD	61.4	61.505
10/29/2021	FB	324.42	324.57
10/29/2021	KO	56.355	56.31
10/29/2021	KO	56.33	56.301
10/29/2021	BUD	61.45	61.53
10/29/2021	EBAY	76.14	76.24
10/29/2021	CLF	24.595	24.515
10/29/2021	NVDA	255.5783	256.11
10/29/2021	C	69.5499	69.585
10/29/2021	KO	56.3275	56.285
10/29/2021	WCN	136	136.33
10/29/2021	AAPL	149.38	148.78
10/29/2021	WCN	135.96	136.5
10/29/2021	MRK	88.195	88.35

Date	Ticker	Buy Price	Sell Price
10/29/2021	KO	56.2899	56.295
10/29/2021	MSFT	329.715	330.115
10/29/2021	NVDA	255.9921	256.77
10/29/2021	SNAP	52.52	52.515
10/29/2021	MSFT	329.92	330.39
10/29/2021	MSFT	329.9	330.405
10/29/2021	V	211.425	212.055
10/29/2021	NVDA	256.09	256.25
10/29/2021	V	211.3591	212.05
10/29/2021	PYPL	235.3	235.815
10/29/2021	PYPL	235.15	235.885
10/29/2021	PYPL	235.195	235.875
10/29/2021	BKKT	33.26	34.815
10/29/2021	PLUG	38.03	37.92
10/29/2021	PLUG	37.995	37.825
10/29/2021	SNAP	52.525	52.4879
10/29/2021	PLUG	38.1	37.83
10/29/2021	PLUG	38.04	37.945
10/29/2021	KO	56.215	56.255
10/29/2021	AVTR	40.61	40.64
10/29/2021	KO	56.175	56.2
10/29/2021	MS	102.845	102.83
10/29/2021	ROKU	309.28	306.82
10/29/2021	ABBV	114.415	114.68
10/29/2021	TSLA	1098.1	1101.9399
11/1/2021	TSLA	1138.53	1134.6475
11/1/2021	PFE	44.06	43.757
11/1/2021	FB	325.92	332.27
11/1/2021	BIDU	162.45	167.94
11/1/2021	ON	52.68	53.02
11/1/2021	TME	7.89	8.34
11/1/2021	M	26.75	27.795
11/1/2021	ON	52.85	52.94
11/1/2021	MU	69.12	69.735
11/1/2021	SOS	2.2001	2.225
11/1/2021	PFE	43.82	43.6795
11/1/2021	PFE	43.8	43.62
11/1/2021	V	213.14	214.53
11/1/2021	FB	331.51	332.18
11/1/2021	AAPL	148.3183	148.5307
11/1/2021	INTC	49.0486	49.49
11/1/2021	ON	53.035	53.76
11/1/2021	INTC	49.0396	49.5169
11/1/2021	PINS	44.75	45.0765
11/1/2021	PINS	44.76	45.2035
11/1/2021	FB	331.195	332.2078
11/1/2021	WISH	5.195	5.32
11/1/2021	UBER	44.3	44.62
11/1/2021	COUR	35.145	35.505
11/1/2021	AMD	119.4343	121.195
11/1/2021	PFE	43.5	43.585
11/1/2021	CMCSA	52.19	52.345
11/1/2021	ADBE	643.014	640
11/1/2021	FCX	38.01	38.095
11/1/2021	SNAP	52.95	53.1
11/1/2021	GSK	42.46	42.705
11/1/2021	C	69.435	69.545
11/1/2021	NXTD	3.6099	3.847
11/1/2021	C	69.44	69.535
11/1/2021	NXTD	3.6099	3.855

Date	Ticker	Buy Price	Sell Price
11/1/2021	C	69.43	69.5245
11/1/2021	DM	7.905	8.1548
11/1/2021	PYPL	231.025	230.8
11/1/2021	INTC	49.37	49.405
11/1/2021	PINS	45.12	45.24
11/1/2021	PENN	74.74	74.255
11/1/2021	MRNA	328.1102	328.88
11/1/2021	CMCSA	52.335	52.63
11/1/2021	TSLA	1151.46	1158.37
11/1/2021	CMCSA	52.335	52.615
11/1/2021	CMCSA	52.345	52.615
11/1/2021	TWTR	55.11	55.07
11/1/2021	CSGP	84.88	84.665
11/1/2021	PFE	43.71	43.73
11/1/2021	WE	9.96	9.995
11/1/2021	IGT	31.42	31.3101
11/1/2021	KMI	16.935	17.055
11/1/2021	GME	195.34	192.81
11/1/2021	XOM	65.78	65.95
11/1/2021	HBI	17.825	17.855
11/1/2021	AAPL	148.642	148.82
11/1/2021	TSLA	1155	1166.884
11/1/2021	PFE	43.75	43.635
11/1/2021	MSFT	327.658	327.675
11/1/2021	MSFT	327.64	327.87
11/1/2021	CVS	90.98	90.555
11/1/2021	JD	81.61	81.92
11/1/2021	DIS	169.8666	169.7825
11/1/2021	ATVI	79.62	79.89
11/1/2021	AVTR	40.065	39.94
11/1/2021	PFE	43.67	43.665
11/1/2021	CCJ	25.07	25.1
11/1/2021	VSCO	49.79	49.98
11/1/2021	UAL	47.43	47.595
11/1/2021	UAL	47.4401	47.58
11/1/2021	ACHR	6.44	6.6
11/1/2021	ON	54.135	54.965
11/1/2021	TSLA	1164.29	1171.5769
11/1/2021	DASH	198.12	197.15
11/1/2021	ON	54.5	54.485
11/1/2021	F	17.44	17.645
11/1/2021	ON	54.48	54.54
11/1/2021	F	17.4796	17.63
11/1/2021	FSLR	118.887	118.78
11/1/2021	TSLA	1168.6179	1171.84
11/1/2021	TSLA	1170.91	1176.9
11/1/2021	F	17.545	17.69
11/1/2021	SNAP	53.05	52.99
11/1/2021	M	28.315	28.415
11/1/2021	CCJ	25.23	25.2
11/1/2021	ON	54.55	55.16
11/1/2021	AAPL	148.8685	148.9731
11/1/2021	IMMR	9.27	9.05
11/1/2021	ARVL	17.285	17.55
11/1/2021	M	28.42	28.385
11/1/2021	PLTR	26.435	26.58
11/1/2021	M	28.4059	28.331
11/1/2021	PYPL	230.92	230.47
11/1/2021	GSK	42.83	42.7384
11/1/2021	HUN	33.43	33.445

Date	Ticker	Buy Price	Sell Price
11/1/2021	HUN	33.43	33.43
11/1/2021	SOFI	22.435	22.385
11/1/2021	HLT	143.9	145.3089
11/1/2021	ON	55.49	54.815
11/1/2021	ON	55.36	54.75
11/1/2021	ON	55.365	54.8799
11/1/2021	F	17.745	17.865
11/1/2021	GREE	27.02	29.27
11/1/2021	AVTR	40.075	40.04
11/1/2021	LUV	48.945	48.78
11/1/2021	AVTR	40.0501	40.02
11/1/2021	AVTR	40.055	40.02
11/1/2021	T	25.495	25.4347
11/1/2021	PFE	43.54	43.57
11/1/2021	T	25.445	25.425
11/1/2021	MSFT	327.8999	328.17
11/1/2021	PINS	45.4	45.105
11/1/2021	PLUG	40.86	40.865
11/1/2021	T	25.455	25.435
11/1/2021	EMB	109.325	109.288
11/1/2021	ZM	276.43	277.73
11/1/2021	CSCO	55.905	56.15
11/1/2021	AAPL	148.4	148.38
11/1/2021	FCEL	9.3476	9.47
11/1/2021	FB	328.83	329.825
11/1/2021	F	17.815	17.89
11/2/2021	NVDA	257.79	259.7157
11/2/2021	AAPL	148.58	150.17
11/2/2021	TSLA	1167.47	1196.04
11/2/2021	SOFI	22.6	22.335
11/2/2021	TSLA	1168.5699	1203.24
11/2/2021	COIN	337.89	337.3683
11/2/2021	AAPL	148.505	149.95
11/2/2021	MSFT	330.095	332.04
11/2/2021	CLX	167.11	165.42
11/2/2021	PFE	45.12	44.39
11/2/2021	UAA	25.33	25.48
11/2/2021	MSFT	330.54	331.98
11/2/2021	UAA	25.29	25.57
11/2/2021	TSLA	1158.25	1192.88
11/2/2021	UAA	25.225	25.59
11/2/2021	PFE	44.96	44.5167
11/2/2021	MRVL	70.265	70.15
11/2/2021	AAPL	150.17	149.43
11/2/2021	DD	74.72	74.51
11/2/2021	AMD	125.22	126.345
11/2/2021	AMD	125.145	126.38
11/2/2021	DD	74.93	74.7523
11/2/2021	TSLA	1205.37	1197.9999
11/2/2021	SNAP	53.269	53.1255
11/2/2021	LOTZ	3.868	4.2582
11/2/2021	F	17.94	18.015
11/2/2021	BAC	47.74	48.08
11/2/2021	PLUG	41.87	41.755
11/2/2021	ABBV	116.02	116.29
11/2/2021	WBA	47.415	47.28
11/2/2021	SOFI	22.66	22.325
11/2/2021	SNAP	53.16	52.925
11/2/2021	T	25.225	25.29
11/2/2021	AAPL	149.6201	150.48

Date	Ticker	Buy Price	Sell Price
11/2/2021	T	25.225	25.295
11/2/2021	TSLA	1200.95	1187.99
11/2/2021	T	25.225	25.22
11/2/2021	BB	11.19	11.25
11/2/2021	VXUS	65.355	65.435
11/2/2021	KO	56.29	56.275
11/2/2021	MRNA	343.48	344.125
11/2/2021	TEVA	9.85	9.885
11/2/2021	F	17.8698	17.925
11/2/2021	MSFT	332.3	331.98
11/2/2021	MRK	89.355	89.59
11/2/2021	MSFT	332.25	331.91
11/2/2021	DAL	40.065	40.09
11/2/2021	F	17.9488	17.9573
11/2/2021	TEVA	9.945	9.995
11/2/2021	SQ	252.61	252.2148
11/2/2021	BNGO	6.155	6.11
11/2/2021	FB	331.63	328.96
11/2/2021	TSLA	1171.545	1168.0601
11/2/2021	PG	143.95	144.24
11/2/2021	NIO	41.7	41.675
11/2/2021	ZI	69.9977	69.72
11/2/2021	DAL	40.045	40.23
11/2/2021	PRTS	16.2427	16.47
11/2/2021	AES	25.31	25.325
11/2/2021	AMD	127.03	127.475
11/2/2021	FB	326.76	326.7847
11/2/2021	PFE	45.74	45.75
11/2/2021	EQT	20.66	20.795
11/2/2021	ABT	128.65	128.62
11/2/2021	AZN	63.935	64.1115
11/2/2021	COP	73.115	73.19
11/2/2021	DVN	42.01	41.8
11/2/2021	AAPL	150.94	151.38
11/2/2021	MSFT	332.4368	332.1928
11/2/2021	NOK	5.565	5.5642
11/2/2021	TSLA	1163.33	1171.87
11/2/2021	NFLX	674.72	683.6899
11/2/2021	AZN	64.1115	64.095
11/2/2021	TSLA	1169.41	1170.89
11/2/2021	PG	144.13	144.46
11/2/2021	GM	55.89	55.7179
11/2/2021	PLUG	40.72	40.35
11/2/2021	TSLA	1161.58	1163.46
11/2/2021	BEN	37.575	37.9
11/2/2021	SNJ	166.8965	166.48
11/2/2021	NCLH	26.55	26.405
11/2/2021	GM	55.855	55.5293
11/2/2021	KKR	80.275	80.545
11/2/2021	PENN	72.51	72.98
11/2/2021	CPRI	55.51	55.57
11/2/2021	FSR	17.15	17.34
11/2/2021	INTC	49.3739	49.3943
11/2/2021	INTC	49.425	49.405
11/2/2021	INTC	49.405	49.385
11/2/2021	BBBY	15.9074	16.01
11/2/2021	CCL	22.645	22.745
11/2/2021	INTC	49.36	49.4428
11/2/2021	ABBV	117.5	116.8829
11/2/2021	RTPY	10.025	10.02

Date	Ticker	Buy Price	Sell Price
11/2/2021	OTLY	12.715	12.87
11/2/2021	MRK	89.87	89.655
11/2/2021	PFE	45.825	45.85
11/2/2021	TJX	67.57	67.825
11/2/2021	NCLH	26.515	26.595
11/2/2021	MAC	21.125	21.31
11/2/2021	TWTR	53.93	53.935
11/2/2021	QQQ	387.97	388.95
11/2/2021	MTTR	23.52	23.86
11/2/2021	MARK	1.7	1.918
11/2/2021	MTTR	23.51	23.815
11/2/2021	CMG	1810	1810.9
11/2/2021	TSLA	1173.17	1178.345
11/2/2021	INTC	49.58	49.65
11/2/2021	TMUS	115.455	115.656
11/2/2021	TWTR	53.8794	53.895
11/2/2021	CPRI	55.445	55.1
11/2/2021	INTC	49.595	49.735
11/2/2021	INTC	49.6377	49.715
11/2/2021	CSCO	57.835	57.77
11/9/2021	LCID	47.58	44.64
11/9/2021	ADT	9.33	9.435
11/9/2021	LCID	47.59	44.4437
11/9/2021	AMD	154.07	150.04
11/9/2021	NUAN	55.04	55.025
11/9/2021	PINS	46.53	47.05
11/9/2021	RBLX	102.0001	100.1199
11/9/2021	PLTR	25.9	24.5599
11/9/2021	AAL	22.125	22.1101
11/9/2021	AAPL	150.4	150.85
11/9/2021	AAPL	150.32	150.88
11/9/2021	NVDA	323.295	313.0308
11/9/2021	AAPL	150.155	150.7998
11/9/2021	SO	62.59	62.9
11/9/2021	REAL	16.13	15.9698
11/9/2021	F	19.785	19.905
11/9/2021	TSLA	1077.24	1098.01
11/9/2021	F	19.765	19.9382
11/9/2021	UBER	44.305	45.1
11/9/2021	UBER	44.55	45.0321
11/9/2021	ZNGA	7.555	7.63
11/9/2021	MSFT	337.19	337.39
11/9/2021	TLRY	11.785	11.96
11/9/2021	RBLX	99.575	104.15
11/9/2021	F	19.925	19.77
11/9/2021	SONY	122.19	122.25
11/9/2021	UBER	45.16	44.795
11/9/2021	TLRY	11.835	12.195
11/9/2021	TTD	95.5907	94.77
11/9/2021	TTD	95.15	95.085
11/9/2021	NOK	5.815	5.8
11/9/2021	LYV	115.85	116.64
11/9/2021	LIDR	6.38	6.55
11/9/2021	LI	30.38	30.215
11/9/2021	TSLA	1077.46	1057
11/9/2021	FIVN	164.51	165.86
11/9/2021	XOM	65.7	65.48
11/9/2021	WMT	149.16	149.24
11/9/2021	NIO	41.5503	41.23
11/9/2021	ZNGA	7.6	7.605

Date	Ticker	Buy Price	Sell Price
11/9/2021	GPS	24.89	25.075
11/9/2021	NIO	41.16	41.015
11/9/2021	CSX	35.195	35.24
11/9/2021	NIO	41.13	40.94
11/9/2021	NVDA	308.5	304.845
11/9/2021	UAL	52.24	52.33
11/9/2021	RIOT	37.459	37.8
11/9/2021	VLTA	11.2503	11.22
11/9/2021	RBLX	102.5001	102.91
11/9/2021	PFE	47.291	47.38
11/9/2021	GOOGL	2970.3501	2969.21
11/9/2021	RBLX	102.9305	102.7599
11/9/2021	WEN	23	22.95
11/9/2021	DIS	175.1	174.995
11/9/2021	EBAY	74.35	74.16
11/9/2021	ADT	10.2205	10.13
11/9/2021	AMZN	3578.8501	3587.3601
11/9/2021	UBER	44.75	45.245
11/9/2021	C	67.485	67.625
11/9/2021	RBLX	103.69	105.0546
11/9/2021	RBLX	103.97	105.1
11/9/2021	AMZN	3584.1499	3583.0701
11/9/2021	GPS	25.52	25.39
11/9/2021	RBLX	104.7215	107.25
11/9/2021	RBLX	105.185	107.71
11/9/2021	IPOF	10.2201	10.665
11/9/2021	UBER	45.25	45.36
11/9/2021	VFF	9.3092	9.34
11/9/2021	MCD	250.98	251.62
11/9/2021	NKE	172.57	173.06
11/9/2021	RBLX	106.725	107.6918
11/9/2021	RBLX	106.77	107.78
11/9/2021	QS	36.69	36.51
11/9/2021	ABT	127	126.74
11/9/2021	CCL	24.015	24.175
11/9/2021	VALE	11.975	11.975
11/11/2021	FCX	38.76	40.29
11/11/2021	AVGO	552.01	553.16
11/11/2021	SNAP	53.52	54.0317
11/11/2021	OPEN	23.5	23.61
11/11/2021	FCX	38.67	40.4
11/11/2021	OPEN	23.51	23.6452
11/11/2021	PFE	49.09	49.4801
11/11/2021	FCX	38.84	40.335
11/11/2021	FB	330.45	330.55
11/11/2021	FCX	39.28	40.48
11/11/2021	AAL	21.4099	21.71
11/11/2021	FCX	39.48	40.66
11/11/2021	SOFI	23.16	23.34
11/11/2021	WISH	5.315	5.61
11/11/2021	FCX	39.915	40.575
11/11/2021	CSIQ	41.04	41.67
11/11/2021	EVLV	7.44	7.16
11/11/2021	ON	58.53	59.18
11/11/2021	WISH	5.835	5.765
11/11/2021	RBLX	96.2	98.39
11/11/2021	RBLX	96.52	98.51
11/11/2021	BAC	47.38	47.41
11/11/2021	KOS	3.79	3.875
11/11/2021	FCX	40.61	41

Date	Ticker	Buy Price	Sell Price
11/11/2021	CCJ	27.84	27.76
11/11/2021	PFE	49.51	49.865
11/11/2021	ZIP	29.95	30.4
11/11/2021	X	26.14	26.475
11/11/2021	PFE	49.5795	50.015
11/11/2021	CCL	23.39	23.22
11/11/2021	CCJ	27.92	27.765
11/11/2021	CCL	23.25	23.33
11/11/2021	COST	510.05	511.6475
11/11/2021	CCL	23.245	23.3372
11/11/2021	CCL	23.235	23.325
11/11/2021	FCX	40.7171	41.085
11/11/2021	FSR	21.28	21.932
11/11/2021	DIS	161.83	162.82
11/11/2021	AMRS	7.7365	7.74
11/11/2021	TSM	119.87	119.07
11/11/2021	STX	103.81	103.98
11/11/2021	ATVI	66.2982	66.44
11/11/2021	ZIM	49.67	49.875
11/11/2021	STEM	26.59	26.925
11/11/2021	FSR	21.87	21.98
11/11/2021	DIS	162.255	163
11/11/2021	FSR	21.895	21.98
11/11/2021	JD	83.555	83.53
11/11/2021	FCX	40.96	41.055
11/11/2021	Z	63.7	63.57
11/11/2021	PFE	50.23	50.141
11/11/2021	CCL	23.225	23.2073
11/11/2021	NVDA	300.9699	299.47
11/11/2021	ATVI	66.36	66.625
11/11/2021	PFE	50.11	50.175
11/11/2021	PFE	50.095	50.165
11/11/2021	CVS	94.14	94.085
11/11/2021	GM	60.67	61.2
11/11/2021	ATVI	66.475	66.98
11/11/2021	STX	104.54	105.195
11/11/2021	ATVI	66.62	66.955
11/11/2021	JD	83.71	83.3
11/11/2021	GM	60.81	61.135
11/11/2021	HCA	240.965	242.11
11/11/2021	STX	104.57	105.32
11/11/2021	GM	61.01	61.1329
11/11/2021	STX	104.51	105.2
11/11/2021	FCX	41.0235	41.0284
11/11/2021	BMJ	59.275	59.2
11/11/2021	MU	74.745	74.92
11/11/2021	SNOW	369.815	371.315
11/11/2021	SNOW	369.79	371.25
11/11/2021	WISH	5.535	5.54
11/11/2021	ATVI	66.965	67.12
11/11/2021	ATVI	66.97	67.14
11/11/2021	PLTR	22.785	22.825
11/11/2021	GM	61.1301	61.31
11/11/2021	UBER	42.7301	42.99
11/11/2021	AES	24.72	24.815
11/11/2021	GM	61.275	61.26
11/11/2021	UPH	2.8398	2.94
11/11/2021	AFRM	150.135	148.64
11/11/2021	AFRM	150.1499	148.1
11/11/2021	SNAP	53.595	53.45

Date	Ticker	Buy Price	Sell Price
11/11/2021	UPH	2.925	2.985
11/11/2021	CRC	46.345	45.49
11/11/2021	AAPL	147.825	148.05
11/11/2021	BGFV	41.6501	41.955
11/11/2021	SNAP	53.52	53.2899
11/11/2021	PFE	50.305	50.305
11/11/2021	SNAP	53.485	53.45
11/11/2021	HLT	145.28	145
11/11/2021	NRXP	6.515	6.445
11/11/2021	BMJ	59.245	59.225
11/11/2021	OPEN	22.4999	22.41
11/11/2021	BMJ	59.25	59.225
11/11/2021	FB	329.03	329
11/11/2021	VMEO	24.13	24.025
11/11/2021	GM	61.315	61.695
11/11/2021	GM	61.36	61.755
11/11/2021	UBER	43.295	43.31
11/11/2021	UBER	43.31	43.325
11/11/2021	UBER	43.305	43.355
11/11/2021	PFE	50.285	50.095
11/11/2021	PFE	50.215	50.085
11/11/2021	EZU	50.8699	50.815
11/11/2021	OPEN	22.515	22.205
11/11/2021	FB	329.155	328.68
11/11/2021	PCG	12.41	12.375
11/11/2021	PCG	12.4	12.385
11/11/2021	UBER	43.39	43.06
11/11/2021	AMZN	3483.4004	3477.0901
11/11/2021	SE	333.655	334.665
11/11/2021	GM	61.7	61.865
11/11/2021	WFC	50.77	50.895
11/11/2021	WFC	50.785	50.885
11/11/2021	AAL	21.57	21.4777
11/11/2021	GM	61.8101	61.895
11/11/2021	UBER	43.235	43.1517
11/11/2021	AAL	21.555	21.455
11/11/2021	BMJ	59.205	59.2467
11/11/2021	PINS	45.0586	45.03
11/11/2021	SE	333.89	334.295
11/12/2021	BLNK	39.7	40.0801
11/12/2021	SNDL	0.935	0.8617
11/12/2021	NIO	42.93	42.825
11/12/2021	FTCH	45.31	45.62
11/12/2021	MP	43.68	45.34
11/12/2021	JNJ	167.2	165.915
11/12/2021	MA	360.7525	359.455
11/12/2021	AAPL	147.92	148.165
11/12/2021	WMT	149.07	148.71
11/12/2021	TSLA	1049.99	1045.29
11/12/2021	X	26.4999	26.76
11/12/2021	UBER	43.87	44.45
11/12/2021	NOVA	43.27	43.13
11/12/2021	ATVI	68.15	69.165
11/12/2021	PLUG	42.04	42.865
11/12/2021	VALE	12.7895	12.86
11/12/2021	UBER	44.125	44.266
11/12/2021	RBLX	102.86	103.92
11/12/2021	UBER	44.04	44.275
11/12/2021	UBER	44.045	44.16
11/12/2021	FIVE	207.41	210.195

Date	Ticker	Buy Price	Sell Price
11/12/2021	VALE	12.835	12.735
11/12/2021	TSLA	1044.05	1038.6301
11/12/2021	VALE	12.83	12.735
11/12/2021	AAL	21.21	20.945
11/12/2021	PYPL	203.7	205.5008
11/12/2021	SNAP	53.47	53.07
11/12/2021	PLTR	22.755	22.6
11/12/2021	VALE	12.872	12.775
11/12/2021	FB	333.6	336.76
11/12/2021	VALE	12.87	12.775
11/12/2021	AAL	21.1	20.935
11/12/2021	UBER	44.275	44.16
11/12/2021	PINS	45.72	45.7
11/12/2021	FTCH	45.99	45.795
11/12/2021	FB	335.365	337.7417
11/12/2021	AFRM	143.43	145.98
11/12/2021	FTCH	45.79	45.99
11/12/2021	SNAP	53.065	53
11/12/2021	MQ	24.98	25.67
11/12/2021	TSLA	1037.2	1034.515
11/12/2021	MQ	24.9976	26.005
11/12/2021	VALE	12.7595	12.75
11/12/2021	BAC	46.8701	46.995
11/12/2021	BAC	46.885	46.975
11/12/2021	GM	62.805	63.4
11/12/2021	AMD	146.355	147.62
11/12/2021	GM	62.765	63.385
11/12/2021	AAPL	148.57	150.0218
11/12/2021	GM	62.76	63.395
11/12/2021	AAPL	148.58	150.005
11/12/2021	MQ	25.01	25.62
11/12/2021	AAPL	148.8	149.815
11/12/2021	MSFT	335.255	336.84
11/12/2021	AAPL	148.7865	149.8
11/12/2021	AAPL	148.985	149.915
11/12/2021	AAPL	149.1816	149.85
11/12/2021	TSM	118.2	118.25
11/12/2021	INTC	50.866	50.7349
11/12/2021	TJX	68.9	68.86
11/12/2021	SNN	35.57	35.6
11/12/2021	AMRS	8	8.005
11/12/2021	AAPL	149.88	149.71
11/12/2021	FB	340.34	340.6301
11/12/2021	ATVI	69.7	69.73
11/12/2021	MQ	25.995	26.37
11/12/2021	GOOGL	2959	2968.8899
11/12/2021	TSM	118.245	118.29
11/12/2021	CCL	22.455	22.4299
11/12/2021	PLTR	22.51	22.655
11/12/2021	ATVI	69.745	69.615
11/12/2021	ATVI	69.79	69.64
11/12/2021	MSFT	336.73	336.66
11/12/2021	TSLA	1025.335	1028.96
11/12/2021	TSLA	1026.27	1030.03
11/12/2021	TLRY	12.3088	12.3378
11/12/2021	ACB	8.075	8.1348
11/12/2021	FB	340	338.325
11/12/2021	CCL	22.41	22.18
11/12/2021	UBER	43.92	43.9
11/12/2021	CCL	22.435	22.19

Date	Ticker	Buy Price	Sell Price
11/12/2021	FTCH	46.84	46.37
11/12/2021	CCL	22.41	22.2276
11/12/2021	GGPI	11.36	11.76
11/12/2021	XPEV	48.39	48.2
11/12/2021	MQ	26.54	26.41
11/12/2021	CCL	22.4	22.215
11/12/2021	FTCH	46.8101	46.6287
11/12/2021	GGPI	11.7104	11.7499
11/12/2021	SNOW	381.5	383.43
11/12/2021	AAPL	149.64	149.72
11/12/2021	AAPL	149.59	149.7099
11/12/2021	CCL	22.105	22.19
11/12/2021	AAPL	149.575	149.66
11/12/2021	RBLX	106.81	106.94
11/12/2021	NEE	86.145	86.445
11/12/2021	MQ	26.42	26.29
11/12/2021	MQ	26.44	25.665
11/12/2021	AAPL	149.67	149.9195
11/12/2021	TSLA	1027.875	1026.3199
11/12/2021	MOS	37.2	37.225
11/12/2021	AAPL	149.94	149.795
11/12/2021	MRVL	74.407	73.8
11/12/2021	AAPL	149.914	149.9
11/12/2021	CCL	22.26	22.19
11/12/2021	CCL	22.235	22.155
11/12/2021	MQ	25.85	25.84
11/12/2021	NEE	86.33	86.435
11/12/2021	LI	30.2	30.09
11/12/2021	BMV	59.44	59.475
11/12/2021	XOM	63.7	63.725
11/12/2021	SNAP	53.63	53.73
11/12/2021	FB	339.535	338.8528
11/12/2021	SNAP	53.626	53.72
11/12/2021	AAL	20.3	20.185
11/12/2021	MQ	25.77	24.84
11/12/2021	AAL	20.26	20.205
11/12/2021	FB	339.3446	338.675
11/12/2021	AAPL	149.9035	149.985
11/12/2021	FTCH	46.445	46.615
11/12/2021	AA	52.265	52.199
11/16/2021	HUT	13.67	14.05
11/16/2021	RIVN	162.71	154.67
11/16/2021	INTC	50.31	51.025
11/16/2021	HUT	13.67	13.91
11/16/2021	PLBY	35.82	35.5282
11/16/2021	PROG	4.1186	4.7885
11/16/2021	TTD	107.08	108.5275
11/16/2021	F	19.6997	19.635
11/16/2021	AZN	57.33	57.455
11/16/2021	AMZN	3567.52	3546.3
11/16/2021	PROG	4.175	4.67
11/16/2021	UBER	45.34	45.95
11/16/2021	GM	62.412	62.16
11/16/2021	UBER	45.47	45.875
11/16/2021	INTC	51.06	50.955
11/16/2021	TSLA	1027.3826	1053.01
11/16/2021	HUT	14.22	14.14
11/16/2021	BITF	8.3189	8.37
11/16/2021	TSLA	1025.5195	1051.6801
11/16/2021	GM	62.22	62.36

Date	Ticker	Buy Price	Sell Price
11/16/2021	SNAP	54.23	53.7489
11/16/2021	ATVI	71.62	71.81
11/16/2021	TSLA	1034.5551	1046.7101
11/16/2021	GOEV	9.2299	9.795
11/16/2021	PROG	4.7	5.02
11/16/2021	UBER	45.855	46.015
11/16/2021	MSTR	760.22	765.07
11/16/2021	AMZN	3546.4402	3539.2314
11/16/2021	RBLX	109.7701	112.71
11/16/2021	MRK	84.39	84.56
11/16/2021	PLUG	41.51	42.164
11/16/2021	OXY	31.71	31.69
11/16/2021	AMD	148.1181	150.69
11/16/2021	RIVN	157.4258	158.7911
11/16/2021	EWZ	30.08	29.995
11/16/2021	SNAP	53.91	54.38
11/16/2021	SNAP	53.958	54.326
11/16/2021	NVDA	299.88	303.46
11/16/2021	AAPL	149.6	149.935
11/16/2021	AMD	149.31	151.12
11/16/2021	AMD	149.3299	150.9052
11/16/2021	AMRN	4.55	4.35
11/16/2021	SNAP	54.04	54.58
11/16/2021	LCID	48.8234	49.4
11/16/2021	HLT	141.03	143.22
11/16/2021	SHOP	1685.6801	1708.63
11/16/2021	BITF	8.64	8.8
11/16/2021	PFE	49.01	49.1
11/16/2021	RIVN	159.49	159.46
11/16/2021	PFE	49.03	49.0933
11/16/2021	NVDA	302.189	302.9579
11/16/2021	BEKE	24.31	24.28
11/16/2021	AAPL	149.92	151.11
11/16/2021	BEKE	24.35	24.33
11/16/2021	F	19.665	19.7
11/16/2021	BEKE	24.3	24.25
11/16/2021	AAPL	149.965	151.235
11/16/2021	AAPL	150.075	151.195
11/16/2021	UBER	45.825	45.645
11/16/2021	LCID	49.305	51.11
11/16/2021	UBER	45.89	45.72
11/16/2021	GM	62.435	62.65
11/16/2021	PTON	51.87	54
11/16/2021	ATVI	68.23	66.64
11/16/2021	AAPL	150.87	150.99
11/16/2021	ATVI	68.0038	66.56
11/16/2021	CHGG	29.355	29.3773
11/16/2021	UPST	240	239.42
11/16/2021	AAPL	151.1298	151.17
11/16/2021	UBER	45.655	45.99
11/16/2021	LAZR	20.1	20.25
11/16/2021	LCID	50.61	51.63
11/16/2021	AZN	57.895	58.14
11/16/2021	ATVI	66.92	66.59
11/16/2021	ATVI	66.25	65.84
11/16/2021	RBLX	116.96	119.56
11/16/2021	AAPL	151.2	151.14
11/16/2021	RIVN	159.65	162.42
11/16/2021	AAPL	151.4326	151.1007
11/16/2021	RBLX	119.145	117.63

Date	Ticker	Buy Price	Sell Price
11/16/2021	FSLR	108.21	104.08
11/16/2021	RBLX	119.1601	117.59
11/16/2021	GM	62.625	62.53
11/16/2021	LCID	51.995	54.25
11/16/2021	LCID	52.2295	53.6901
11/16/2021	NTES	111.38	111.365
11/16/2021	BAC	47.135	47.22
11/16/2021	FOUR	71.21	71.24
11/16/2021	OPEN	21.525	21.63
11/16/2021	TRIL	18.415	18.425
11/16/2021	TSLA	1041.64	1052.4301
11/16/2021	NVDA	299.48	298.32
11/16/2021	PFE	49.08	49.72
11/16/2021	HTZ	22.86	23.1184
11/16/2021	PFE	49.111	49.815
11/16/2021	MU	76.45	76.46
11/16/2021	HTZ	22.855	23.175
11/16/2021	TRIL	18.43	18.415
11/16/2021	GM	62.575	62.69
11/16/2021	OTLY	10.1701	10.35
11/16/2021	HTZ	23.125	23.1
11/16/2021	MRNA	236.185	235.21
11/16/2021	NVDA	298.875	299.8958
11/16/2021	LCID	53.465	54.045
11/16/2021	NVDA	299.0339	299.995
11/16/2021	CCL	21.615	21.579
11/16/2021	PFE	49.76	49.86
11/16/2021	CMRX	6.08	6.23
11/16/2021	RKLY	6.87	6.85
11/16/2021	YELP	38.51	39.1
11/16/2021	QCOM	179.41	179.745
11/16/2021	DKNG	39.6	39.52
11/16/2021	AZN	58	57.96
11/16/2021	XOM	65.32	65.21
11/16/2021	PFE	49.96	49.8362
11/16/2021	BAC	47.18	47.2
11/16/2021	BAC	47.165	47.205
11/16/2021	SKIN	28.065	28.13
11/16/2021	MRVL	73.88	73.9
11/16/2021	KZR	11.18	11.26
11/16/2021	GM	62.705	62.715
11/16/2021	TRIL	18.445	18.435
11/16/2021	AMD	151.76	152.56
11/17/2021	PRMW	19.61	19.96
11/17/2021	PROG	5.85	5.7
11/17/2021	AAPL	151.18	151.94
11/17/2021	FB	343.39	340.975
11/17/2021	AAPL	150.9	151.885
11/17/2021	AAPL	150.88	151.885
11/17/2021	LCID	56.14	54.575
11/17/2021	LCID	55.75	54.215
11/17/2021	PLUG	44.565	43.58
11/17/2021	GOEV	11.63	11.92
11/17/2021	PFE	49.9899	50.39
11/17/2021	HLT	139.97	143.085
11/17/2021	HLT	139.9	143.165
11/17/2021	AAPL	151.94	152.755
11/17/2021	RSX	31.295	31.425
11/17/2021	SNAP	54.27	54.115
11/17/2021	STNE	22.415	21.89

Date	Ticker	Buy Price	Sell Price
11/17/2021	NCLH	23.68	23.52
11/17/2021	STNE	22.36	21.925
11/17/2021	TSLA	1085.08	1114.0699
11/17/2021	BA	227.49	226.95
11/17/2021	AVIR	8.91	8.87
11/17/2021	GM	64.31	64.8
11/17/2021	PENN	55.13	55.04
11/17/2021	AAPL	152.4798	154.0482
11/17/2021	AAPL	152.537	154.215
11/17/2021	ROKU	252.205	249.81
11/17/2021	AAPL	152.455	154.145
11/17/2021	AAPL	152.485	154.435
11/17/2021	TSLA	1103.78	1097.4501
11/17/2021	LCID	53.42	51.21
11/17/2021	RBLX	122.93	125.53
11/17/2021	MSFT	340.72	341.93
11/17/2021	AAPL	154.302	154.96
11/17/2021	MSFT	340.75	341.93
11/17/2021	RBLX	123.025	123.58
11/17/2021	PFE	50.415	50.45
11/17/2021	OPEN	21.925	21.57
11/17/2021	TWTR	51.5	51.275
11/17/2021	COIN	343.24	343.68
11/17/2021	ALPP	2.74	2.88
11/17/2021	PFE	50.545	50.21
11/17/2021	GM	64.325	64.085
11/17/2021	MSFT	342.084	340.519
11/17/2021	TAN	97.63	96.655
11/17/2021	XLF	39.625	39.6
11/17/2021	AAPL	154.4	154.465
11/17/2021	VIR	33.2696	33.4
11/17/2021	GM	64.18	64.305
11/17/2021	AFMD	6.89	6.85
11/17/2021	ITOT	107.09	107.1001
11/17/2021	TSLA	1079.11	1075.9365
11/17/2021	PFE	50.305	50.555
11/17/2021	NCLH	23.3	23.295
11/17/2021	UBER	44.295	44.23
11/17/2021	UBER	44.195	44.195
11/17/2021	UBER	44.125	44.135
11/17/2021	PFE	50.32	50.57
11/17/2021	PFE	50.33	50.59
11/17/2021	TJX	75.0683	74.75
11/17/2021	TSLA	1076.9863	1084.0201
11/17/2021	ISRG	364.05	363.23
11/17/2021	SNAP	54.19	54.32
11/17/2021	AFRM	154.15	152.7066
11/17/2021	PINS	48.03	48.03
11/17/2021	GM	64.64	64.735
11/17/2021	NUAN	55.33	55.335
11/17/2021	ATUS	18.095	18.175
11/17/2021	NUAN	55.32	55.33
11/17/2021	CF	65.93	65.41
11/17/2021	SNAP	54.32	54.37
11/17/2021	GM	64.71	64.95
11/17/2021	ABVV	117.26	117.186
11/17/2021	OPEN	21.165	20.995
11/17/2021	TECK	27.22	27.15
11/17/2021	CHWY	74	73.965
11/17/2021	NUAN	55.335	55.335

Date	Ticker	Buy Price	Sell Price
11/17/2021	FTCH	45.96	45.475
11/17/2021	TJX	74.625	74.52
11/17/2021	UBER	44.0849	44.045
11/17/2021	MSFT	339.84	339.72
11/17/2021	GEO	9.39	9.36
11/17/2021	FTCH	45.58	45
11/17/2021	AAPL	153.93	153.915
11/17/2021	RIVN	141.51	146.2635
11/17/2021	NUAN	55.335	55.335
11/17/2021	PAGS	32.17	32.65
11/17/2021	UBER	44.1088	44.07
11/17/2021	PAGS	32.17	32.6268
11/17/2021	CTRA	20.495	20.525
11/18/2021	LQD	132.19	132.435
11/18/2021	CSCO	53.075	52.025
11/18/2021	CSCO	52.88	51.75
11/18/2021	AAPL	153.76	154.135
11/18/2021	M	35.0499	37.45
11/18/2021	ZIM	53.38	53.94
11/18/2021	AAPL	153.8199	154.2335
11/18/2021	M	34.41	36.95
11/18/2021	RIVN	133.3872	130.32
11/18/2021	BBWI	78.655	79.05
11/18/2021	RIVN	134.065	130.8
11/18/2021	ATVI	62.765	61.915
11/18/2021	AMD	158.31	155.81
11/18/2021	T	24.5494	24.4332
11/18/2021	RIVN	130.61	126.8301
11/18/2021	AAL	19.6262	19.1564
11/18/2021	AAL	19.525	19.195
11/18/2021	NVDA	325.6091	320.0899
11/18/2021	NVDA	325.5401	320.0231
11/18/2021	RBLX	137.27	131.19
11/18/2021	DKNG	37.58	37.0999
11/18/2021	STEM	21.7501	21.45
11/18/2021	F	19.95	19.825
11/18/2021	PDD	84.86	85.26
11/18/2021	AAL	19.4171	19.24
11/18/2021	AAPL	154.1299	154.085
11/18/2021	CSCO	51.3	52.03
11/18/2021	AAPL	154.18	154.23
11/18/2021	TSLA	1095.0599	1099.855
11/18/2021	KHC	34.785	35.235
11/18/2021	NIO	38.455	38.27
11/18/2021	WBA	46.87	47.4
11/18/2021	GM	63.345	63.6656
11/18/2021	GM	63.37	63.77
11/18/2021	TMUS	115.46	116.17
11/18/2021	CCL	20.928	20.94
11/18/2021	IONQ	29.9082	31.62
11/18/2021	CCL	20.94	20.925
11/18/2021	AAL	19.47	19.425
11/18/2021	ORCL	94.245	94.5
11/18/2021	NOK	5.69	5.74
11/18/2021	GOLD	20.615	20.62
11/18/2021	TSLA	1100.0001	1105.9999
11/18/2021	PFE	50.755	51.01
11/18/2021	TSLA	1100.42	1105.03
11/18/2021	FB	338.94	340.72
11/18/2021	TJX	73.29	73.08

Date	Ticker	Buy Price	Sell Price
11/18/2021	NVDA	321.0879	321.85
11/18/2021	LIN	329.72	329.895
11/18/2021	PTON	47.47	47.375
11/18/2021	CSCO	51.745	52.0148
11/18/2021	VZ	51.405	51.4227
11/18/2021	UPST	230.99	231.77
11/18/2021	CSCO	52.02	52.365
11/18/2021	UBER	44.91	45.28
11/18/2021	AAPL	154.91	157.1999
11/18/2021	F	20.011	19.77
11/18/2021	AAPL	154.945	157.4599
11/18/2021	F	20.018	19.8026
11/18/2021	M	37.83	37.5265
11/18/2021	F	20.015	19.815
11/18/2021	AAPL	154.93	157.255
11/18/2021	F	20.0047	19.7601
11/18/2021	KHC	35.385	35.2763
11/18/2021	DLTR	132.86	132.38
11/18/2021	AAPL	154.9225	157.43
11/18/2021	DLTR	132.86	132.375
11/18/2021	DLTR	132.86	132.375
11/18/2021	V	202.54	202.83
11/18/2021	CNC	77.36	76.8
11/18/2021	BMJ	58.92	58.79
11/18/2021	RIVN	125.39	121.8864
11/18/2021	RTX	87.22	87.145
11/18/2021	AAPL	156.59	156.86
11/18/2021	CNC	77.35	76.655
11/18/2021	NTR	68.04	68.5
11/18/2021	AAPL	157.575	157.3499
11/18/2021	BABA	145.08	144.94
11/18/2021	CSCO	52.455	52.25
11/18/2021	AAPL	157.4	157.27
11/18/2021	CSCO	52.3	52.27
11/18/2021	AAPL	157	157.5199
11/18/2021	AAPL	157.49	157.365
11/18/2021	PINS	45.575	45.32
11/18/2021	AAL	19.26	19.21
11/18/2021	BILI	66.575	67.965
11/18/2021	PINS	45.585	45.35
11/18/2021	BABA	145.0163	143.97
11/18/2021	UBER	44.7	44.495
11/18/2021	LI	30.34	30.35
11/18/2021	AAL	19.21	19.17
11/18/2021	INVZ	6.7145	6.67
11/18/2021	RIVN	123.28	122.91
11/18/2021	BA	227.2316	227.105
11/18/2021	SIGA	9.31	9.455
11/18/2021	ARVL	10.0101	9.835
11/18/2021	AAPL	157.485	158.074
11/18/2021	CSX	36.18	36.27
11/18/2021	DLTR	133.765	133.94
11/18/2021	RTX	87.17	87.1371
11/18/2021	RIVN	120.6667	123.6552
11/18/2021	GPN	127.4491	127.565
11/18/2021	GM	62.38	62.51
11/18/2021	PAGS	30.89	31.19
11/18/2021	AAPL	157.665	157.72
11/18/2021	RIVN	122.7451	123.755
11/18/2021	AAPL	157.6	157.7001

Date	Ticker	Buy Price	Sell Price
11/18/2021	PFE	51.23	51.4695
11/18/2021	DISH	34.55	34.34
11/18/2021	M	37.355	37.445
11/18/2021	PFE	51.41	51.565
11/18/2021	BSX	41.255	41.195
11/18/2021	TSLA	1089.0699	1096.0006
11/18/2021	TSLA	1089.39	1094.6321
11/23/2021	LCID	52.155	52.5
11/23/2021	AAL	20.03	19.8623
11/23/2021	T	24.775	24.7799
11/23/2021	BAC	46.97	46.9499
11/23/2021	NIO	41.6788	42.1801
11/23/2021	GOOG	2945.3201	2916.1599
11/23/2021	XRX	19.92	20.16
11/23/2021	SBUX	112.89	113.295
11/23/2021	FTCH	34.38	35.215
11/23/2021	AAL	19.94	19.9181
11/23/2021	NIO	43.0304	42.395
11/23/2021	SPOT	247.35	243.22
11/23/2021	NIO	42.921	42.4001
11/23/2021	MRK	82.84	82.8631
11/23/2021	STNE	17.55	17.5
11/23/2021	CSCO	54.875	54.965
11/23/2021	GIG	9.99	9.9893
11/23/2021	VCSH	81.41	81.41
11/23/2021	AZN	56.55	56.69
11/23/2021	AZN	56.53	56.68
11/23/2021	AAPL	159.47	160.36
11/23/2021	AZN	56.53	56.65
11/23/2021	NIO	42.22	41.53
11/23/2021	AAPL	159.6404	159.8515
11/23/2021	ABBV	118.61	118.79
11/23/2021	MRK	82.954	83.3
11/23/2021	UNP	246.18	246.735
11/23/2021	CSCO	55.04	55.37
11/23/2021	BAC	47.335	47.355
11/23/2021	GIG	10	10
11/23/2021	TEVA	8.875	8.8
11/23/2021	F	20.279	20.095
11/23/2021	F	20.3	20.0462
11/23/2021	PBR	9.975	9.995
11/23/2021	GM	63.0575	62.4999
11/23/2021	CSIQ	39.22	39.075
11/23/2021	AMZN	3557.0801	3554.042
11/23/2021	AMZN	3558.3601	3555.3899
11/23/2021	ORCL	92.77	93.13
11/23/2021	AAPL	159.9	160.46
11/23/2021	JPM	167.07	167.06
11/23/2021	XOM	62.61	62.69
11/23/2021	CVS	93.925	94.214
11/23/2021	TWLO	266.45	270.5
11/23/2021	PYPL	185.35	186.19
11/23/2021	MRK	83.28	83.43
11/23/2021	PLUG	41.525	41.71
11/23/2021	GM	62.64	62.46
11/23/2021	BILI	68.2866	68.73
11/23/2021	BAC	47.37	47.2449
11/23/2021	DT	61.59	63.26
11/23/2021	GOOGL	2894.0649	2892.0901
11/23/2021	DT	62.235	63.57

Date	Ticker	Buy Price	Sell Price
11/23/2021	GM	62.49	62.59
11/23/2021	BLMN	19.42	19.55
11/23/2021	GM	62.5	62.6
11/23/2021	CSIQ	39.055	39.5
11/23/2021	SNOW	342.14	343.675
11/23/2021	LCID	51.8	50.8792
11/23/2021	MU	85.535	84.9958
11/23/2021	LCID	51.56	50.46
11/23/2021	LCID	51.215	50.78
11/23/2021	EFA	79.565	79.475
11/23/2021	OXY	31.915	31.86
11/23/2021	SNAP	49.9998	50.17
11/23/2021	ATVI	62.24	62.38
11/23/2021	EBAY	71.5	71.055
11/23/2021	EBAY	71.49	71.07
11/23/2021	GM	62.555	62.525
11/23/2021	CVX	116.27	116.22
11/23/2021	MU	85.88	84.93
11/23/2021	PFE	51.29	51.07
11/23/2021	IBN	19.47	19.37
11/23/2021	IBN	19.47	19.4
11/23/2021	AUPH	19.22	19.23
11/23/2021	BAC	47.385	47.38
11/23/2021	CSCO	54.985	54.96
11/23/2021	TSLA	1124.8101	1118.6
11/23/2021	FDX	245.25	246.33
11/23/2021	DBX	24.065	24.18
11/23/2021	MRK	82.77	82.88
11/23/2021	EBAY	71.12	71.41
11/23/2021	VALE	12.425	12.41
11/23/2021	NIO	41.635	41.6199
11/23/2021	AAPL	160.31	159.775
11/23/2021	MU	84.81	84.89
11/23/2021	CSCO	55	55.2
11/23/2021	FTCH	35.1915	34.995
11/23/2021	WBA	47.695	46.825
11/23/2021	NVDA	309.82	310.3608
11/23/2021	ATVI	61.75	61.845
11/23/2021	FCX	38.575	38.65
11/23/2021	XPEV	49.26	49.93
11/23/2021	NIO	40.66	40.7973
11/23/2021	SLB	31.465	31.4
11/23/2021	AAPL	159.36	159.9801
11/23/2021	ZI	66.865	66.91
11/23/2021	AMZN	3546	3550.5
11/23/2021	INTC	49.2	48.95
11/23/2021	FTCH	35.04	34.54
11/23/2021	INTC	49.17	48.96
11/23/2021	AAPL	160.07	159.975
11/23/2021	DRNA	37.98	37.98
11/23/2021	UBER	42.25	42.465
11/23/2021	DRNA	37.985	37.99
11/23/2021	AAPL	159.94	160.2732
11/23/2021	DRNA	37.985	37.985
11/23/2021	DT	62.025	62.95
11/23/2021	EQT	21.15	21.175
11/23/2021	MRK	83.265	83.29
11/23/2021	F	20.2115	20.23
11/23/2021	PBR	10.25	10.22
11/23/2021	F	20.235	20.215

Date	Ticker	Buy Price	Sell Price
11/23/2021	CLF	22.56	22.685
11/23/2021	AAPL	160.38	160.81
11/23/2021	AAPL	160.61	160.81
11/23/2021	HTZ	21.84	21.97
11/23/2021	TD	75.06	74.89
11/23/2021	BSX	40.115	40.225
11/23/2021	AAPL	160.55	160.91
11/23/2021	ADBE	659.0921	661.98
11/23/2021	DRNA	37.985	37.975
11/23/2021	DLTR	148.175	144.4916
11/23/2021	NVDA	317.28	316.0001
11/23/2021	FB	340.47	339.9952
11/23/2021	GOOGL	2914.4299	2916.1699
11/29/2021	INTC	49.15	48.97
11/29/2021	TXN	190.18	191.26
11/29/2021	INTC	49.15	49
11/29/2021	TWTR	47.54	48.94
11/29/2021	LQD	132.12	132.2
11/29/2021	AAPL	159.5363	160.19
11/29/2021	TWTR	52.122	48.6799
11/29/2021	BABA	131.845	132.2109
11/29/2021	GM	61.03	59.73
11/29/2021	TWTR	50.018	48.6799
11/29/2021	ZM	212.67	210.38
11/29/2021	FB	337.03	338.2499
11/29/2021	ZM	211.785	210.2701
11/29/2021	CAR	311	316.06
11/29/2021	RBLX	122.79	123.9169
11/29/2021	LMND	51.07	50.49
11/29/2021	TSLA	1129	1128.025
11/29/2021	AAPL	160.26	159.725
11/29/2021	GGPI	13.8517	13.95
11/29/2021	ABNB	179.4	178.7215
11/29/2021	LCID	52.7021	52.34
11/29/2021	CSCO	55.15	55.255
11/29/2021	BP	26.22	26.24
11/29/2021	SNAP	49.3376	48.89
11/29/2021	YCBD	1.72	1.9181
11/29/2021	MRK	75.9	75.635
11/29/2021	NIO	39.7092	39.92
11/29/2021	TWTR	48.6799	49.29
11/29/2021	TWTR	48.6799	49.225
11/29/2021	CNDT	5.12	5.19
11/29/2021	TSLA	1129.48	1136.9
11/29/2021	ET	8.615	8.625
11/29/2021	RIO	62.48	62.56
11/29/2021	DIS	144.73	144.7698
11/29/2021	RIO	62.51	62.58
11/29/2021	RIO	62.46	62.63
11/29/2021	AAPL	159.655	160.37
11/29/2021	SNY	48.36	48.12
11/29/2021	SNY	48.32	48.12
11/29/2021	NVDA	328.05	330.417
11/29/2021	CSCO	55.46	55.9055
11/29/2021	BKKT	15.055	15.72
11/29/2021	CSCO	55.425	55.87
11/29/2021	MTTR	31.905	32.01
11/29/2021	DOCS	66.39	66.9499
11/29/2021	CSCO	55.625	55.945
11/29/2021	DASH	180.01	182.32

Date	Ticker	Buy Price	Sell Price
11/29/2021	CSCO	55.63	55.955
11/29/2021	TWTR	46.985	46.71
11/29/2021	OPEN	16.215	16.3
11/29/2021	DIS	145.43	146.75
11/29/2021	AAPL	160.48	160.8619
11/29/2021	ZM	214.4	215.06
11/29/2021	AAPL	160.6	160.63
11/29/2021	LI	34.535	34.62
11/29/2021	SNAP	48.7956	48.883
11/29/2021	PENN	52.96	52.58
11/29/2021	DIS	146.93	147.59
11/29/2021	ITUB	4.035	4.025
11/29/2021	UAL	43.07	42.92
11/29/2021	MRK	74.59	74.04
11/29/2021	UAL	43.0309	42.945
11/29/2021	AMAT	149.1	149.74
11/29/2021	HUT	12.795	13.02
11/29/2021	CSCO	55.95	56.14
11/29/2021	TSLA	1127.3531	1126.09
11/29/2021	DIS	147.71	148.1675
11/29/2021	ASO	47.08	46.65
11/29/2021	ASO	47.0916	46.6005
11/29/2021	ASO	47.03	46.59
11/29/2021	TDOC	105.285	104.86
11/29/2021	NRG	36.655	36.67
11/29/2021	DIS	147.835	147.91
11/29/2021	FCX	37.777	37.9
11/29/2021	V	198.145	197.9
11/29/2021	JNJ	159.89	160.0352
11/30/2021	TSM	118.41	119.54
11/30/2021	TSLA	1140.8101	1160.7697
11/30/2021	AAPL	159.86	162.22
11/30/2021	LYV	106	106.3
11/30/2021	AAPL	159.815	161.92
11/30/2021	LYV	106	106.644
11/30/2021	BAC	44.74	45.04
11/30/2021	FB	334.91	335.19
11/30/2021	INTC	49.58	49.83
11/30/2021	AAPL	160.1	162.7701
11/30/2021	AAL	17.5	17.22
11/30/2021	INTC	49.64	49.82
11/30/2021	PLAN	44.55	44.825
11/30/2021	DAL	35.72	35.65
11/30/2021	XPEV	52.86	53.872
11/30/2021	AMD	161.78	163.8411
11/30/2021	AAPL	160.6	163.1501
11/30/2021	IGSB	54.1782	54.195
11/30/2021	AAPL	160.99	163.78
11/30/2021	TSLA	1159.3999	1163.8101
11/30/2021	WFC	48.2	48.115
11/30/2021	CP	71.42	70.96
11/30/2021	PYPL	188.39	186.08
11/30/2021	LYFT	41.195	40.96
11/30/2021	SPYG	72.125	71.88
11/30/2021	AAPL	163.22	164.34
11/30/2021	TWTR	45.005	44.42
11/30/2021	AMD	163.46	161.1299
11/30/2021	TWTR	44.965	44.255
11/30/2021	XPEV	54.43	53.75
11/30/2021	EXPE	161.65	160.58

Date	Ticker	Buy Price	Sell Price
11/30/2021	AAPL	164.09	161.94
11/30/2021	RBLX	135.89	130.13
11/30/2021	TDOC	103.35	100.88
11/30/2021	UBER	38.7045	38.16
11/30/2021	WDC	57.61	57.58
11/30/2021	NFLX	659.74	659.69
11/30/2021	NFLX	659.58	659.69
11/30/2021	UBER	37.9825	37.865
11/30/2021	BABA	126.485	126.9201
11/30/2021	CHGG	26.75	26.695
11/30/2021	BABA	126.315	127.03
11/30/2021	AAPL	161.94	163.025
11/30/2021	BABA	126.17	126.9
11/30/2021	BABA	126.2799	126.74
11/30/2021	BP	25.99	25.8905
11/30/2021	DAL	35.8	35.57
11/30/2021	NOK	5.54	5.495
11/30/2021	AZN	55.18	54.94
11/30/2021	AZN	55.19	54.95
11/30/2021	ASO	44.11	44.04
11/30/2021	CCL	17.395	17.1699
11/30/2021	UBER	37.7901	37.35
11/30/2021	PTON	43.23	42.63
11/30/2021	TSLA	1123.48	1123.98
11/30/2021	CP	70.58	70.49
11/30/2021	WFC	47.435	47.5
11/30/2021	PTON	43.01	43.1
11/30/2021	WFC	47.44	47.5
11/30/2021	SEAS	56.94	58.94
11/30/2021	CLF	19.815	20.06
11/30/2021	VNET	9.73	9.9299
11/30/2021	AAPL	162.8	163.92
11/30/2021	VZ	50.69	50.4342
11/30/2021	CP	70.44	70.265
11/30/2021	KHC	33.765	33.72
11/30/2021	BABA	126.8924	127.19
11/30/2021	BBIO	38.7	39.46
11/30/2021	ASO	44.05	44.21
11/30/2021	CZR	88.53	88.72
11/30/2021	PSTG	30.77	30.73
11/30/2021	PSTG	30.76	30.615
11/30/2021	CP	70.21	70.565
11/30/2021	AAPL	163.5	163.8798
11/30/2021	UBER	37.5602	38.05
11/30/2021	CGC	10.45	10.49
11/30/2021	AG	11.725	11.9101
11/30/2021	MO	42.79	42.8876
11/30/2021	PYPL	184.02	184.53
11/30/2021	PINS	39.88	40.09
11/30/2021	AAPL	163.86	164.71
11/30/2021	WFC	47.88	47.86
11/30/2021	BABA	127.19	127.7
11/30/2021	WFC	47.91	47.86
11/30/2021	MS	94.84	94.9766
11/30/2021	DKNG	34.36	34.16
11/30/2021	ROKU	226.59	225.925
11/30/2021	ORCL	92.59	91.79
11/30/2021	XPEV	54.66	54.98
11/30/2021	XPEV	54.57	54.9001
11/30/2021	XPEV	54.775	55.24

Date	Ticker	Buy Price	Sell Price
11/30/2021	WBA	45.2169	45.305
11/30/2021	BAC	44.655	44.51
11/30/2021	CP	70.43	70.46
11/30/2021	ROKU	226.85	226.78
11/30/2021	PDD	66.61	66.82
11/30/2021	LVS	35.56	35.745
11/30/2021	PTON	43.47	43.795
12/1/2021	VMBS	53.04	52.9058
12/1/2021	AAPL	167.5	167.22
12/1/2021	AAPL	167.64	167.1499
12/1/2021	PYPL	190.28	189.07
12/1/2021	VTNR	5.4	5.51
12/1/2021	CLF	20.79	20.9999
12/1/2021	CLF	20.79	20.99
12/1/2021	AAPL	167.1004	167.75
12/1/2021	AAPL	166.8283	168.3382
12/1/2021	AAPL	166.895	168.07
12/1/2021	CLF	20.765	21.235
12/1/2021	AAPL	166.2	168.2401
12/1/2021	CLF	20.67	21.0543
12/1/2021	ADM	63.58	63.96
12/1/2021	XOM	61.01	61.39
12/1/2021	BSX	38.99	38.995
12/1/2021	PFE	53.18	53.25
12/1/2021	ARDX	1.37	1.4977
12/1/2021	MU	86.72	88.7809
12/1/2021	FCX	37.97	38.1204
12/1/2021	AAPL	167.36	167.5
12/1/2021	BABA	127.62	127.59
12/1/2021	TWTR	45.775	45.96
12/1/2021	BABA	127.82	128.12
12/1/2021	PFE	52.99	53.6787
12/1/2021	VIAC	31.14	31.635
12/1/2021	GIG	9.9948	9.97
12/1/2021	MU	88.501	88.185
12/1/2021	CHGG	28.695	28.8
12/1/2021	AAPL	168.04	169
12/1/2021	AAPL	167.39	169.3601
12/1/2021	TWTR	45.97	45.76
12/1/2021	ON	65.14	65.1
12/1/2021	F	20.25	20.37
12/1/2021	MS	98.07	98.42
12/1/2021	SNAP	50.485	50.92
12/1/2021	LCID	55.18	55.29
12/1/2021	UAL	42.35	41.41
12/1/2021	BABA	126.835	125.8399
12/1/2021	C	64.12	64.105
12/1/2021	FCX	37.35	36.96
12/1/2021	FB	316.98	317.7911
12/1/2021	HPQ	37.065	37.14
12/1/2021	C	63.39	63.59
12/1/2021	FB	313.23	312.42
12/8/2021	FTCH	36.04	36.03
12/8/2021	AMZN	3532.7649	3524.3401
12/8/2021	TSLA	1063.5801	1064.632
12/8/2021	RBLX	124.905	124.02
12/8/2021	SNAP	54.24	54.04
12/8/2021	ROKU	256.03	257.81
12/8/2021	AAPL	175.165	174.545
12/8/2021	TSLA	1063.3127	1070.7501

Date	Ticker	Buy Price	Sell Price
12/9/2021	AAPL	174.03	175.8962
12/9/2021	UAL	44.59	44.19
12/9/2021	AAPL	174.41	175.7301
12/9/2021	T	22.885	22.905
12/9/2021	UAL	44.22	44.29
12/9/2021	ZIM	54.37	54.785
12/9/2021	ZIM	54.34	54.84
12/9/2021	ZIM	54.29	54.81
12/9/2021	SOFI	16.3	16.265
12/9/2021	CPNG	28.17	28.15
12/9/2021	F	19.57	19.6397
12/9/2021	AMZN	3508	3509.9299
12/9/2021	DKS	113.82	113.6
12/9/2021	BTI	35.445	35.36
12/9/2021	QS	25.37	25.09
12/9/2021	HRTX	9.44	9.88
12/9/2021	FTCH	34.98	35.075
12/9/2021	TSLA	1031.54	1026.74
12/9/2021	BAC	44.635	44.5777
12/9/2021	QS	24.9509	24.815
12/9/2021	F	19.7609	19.6847
12/9/2021	CPNG	27.775	27.82
12/9/2021	KR	43.6902	43.685
12/9/2021	AAL	18.1333	18.2155
12/9/2021	ATVI	58.7065	58.64
12/9/2021	W	221.31	220.74
12/9/2021	LH	284.298	282.555
12/14/2021	NRG	39.851	39.87
12/14/2021	PFE	55.5101	55.23
12/14/2021	PFE	55.525	55.32
12/14/2021	PFE	55.325	55.177
12/14/2021	PFE	55.3099	55.11
12/14/2021	FB	333.49	335.4625
12/14/2021	ABBV	127.455	127.595
12/14/2021	FB	334.91	335.54
12/14/2021	MSFT	341.35	341.74
12/14/2021	AAPL	178.083	178.5528
12/14/2021	MSFT	341.42	341.59
12/14/2021	INTC	50.17	50.17
12/15/2021	FB	326.54	328.86
12/15/2021	AAPL	172.9546	173.42
12/15/2021	AAPL	172.865	173.192
12/15/2021	FB	327.9701	330.76
12/15/2021	PYPL	184.67	185.22
12/15/2021	NCLH	19.535	19.61
12/15/2021	PFE	57.865	57.9303
12/15/2021	AAPL	173.4601	173.4
12/15/2021	GOOGL	2847.98	2853.1382
12/15/2021	C	60.275	60.255
12/15/2021	C	60.275	60.265
12/15/2021	UBER	36.5732	37.0199
12/15/2021	AAPL	173.76	173.14
12/15/2021	LUV	39.7925	40.3
12/15/2021	AAPL	173.4876	175.0699
12/15/2021	PFE	57.805	57.7563
12/15/2021	GOOG	2869.8899	2899.8601
12/15/2021	PFE	57.74	57.9367
12/15/2021	GOOGL	2856.95	2865.1165
12/15/2021	AAPL	176.2201	177.85
12/15/2021	AAPL	175.9	177.765

Date	Ticker	Buy Price	Sell Price
12/15/2021	MSFT	327.53	328.67
12/15/2021	ORCL	102.54	102.43
12/15/2021	FE	39.88	39.89
12/15/2021	VZ	50.73	50.65
12/15/2021	GOOG	2897.175	2908.76
12/15/2021	TTE	49.74	49.595
12/15/2021	GOOG	2893.645	2917.21
12/15/2021	KO	57.995	58.06
12/15/2021	OCGN	5.12	5.4692
12/15/2021	AAPL	178.08	178.88
12/15/2021	KO	58.0324	58.105
12/15/2021	AAPL	178.27	178.69
12/15/2021	NIO	29.99	30.8913
12/15/2021	XOM	60.96	61.36
12/15/2021	GOOGL	2885	2916.26
12/20/2021	NCLH	20.4717	20.4617
12/20/2021	NVDA	277.31	274.7
12/20/2021	NVDA	276.71	274.58
12/20/2021	BP	25.455	25.55
12/20/2021	AMD	135.39	134.68
12/20/2021	BP	25.46	25.57
12/20/2021	MRNA	290.86	287.1904
12/20/2021	FUTU	38.08	38.46
12/20/2021	GM	53.35	53.415
12/20/2021	RH	531.8601	530.83
12/20/2021	AMZN	3319.1399	3321.5901
12/20/2021	WYNN	81.08	81.26
12/20/2021	AAPL	169.33	169.61
12/20/2021	VIAC	28.4299	28.4001
12/20/2021	DIS	145.49	145.23
12/20/2021	XOM	58.715	58.79
12/20/2021	MET	57.745	57.71
12/20/2021	PFE	61.111	61.17
12/20/2021	AAPL	169.315	169.9205
12/21/2021	JD	73.525	73.1533
12/21/2021	GM	55.66	55.905
12/21/2021	C	59.79	59.7821
12/21/2021	SQ	167.2099	167.78
12/21/2021	INTC	50.56	50.805
12/21/2021	OXY	28.77	28.96
12/21/2021	OXY	28.8678	28.95
12/21/2021	MSFT	331	330.574
12/21/2021	MSFT	330.47	331.005
12/21/2021	NVDA	292.47	294.1899
12/21/2021	PG	158.9	159.13
12/21/2021	MSFT	331.09	330.88
12/21/2021	AA	59.08	59.639
12/21/2021	UAA	20.14	20.415
12/21/2021	MSFT	330.955	331.52
12/21/2021	SU	24.27	24.425
12/21/2021	PFE	59	60.0699
12/21/2021	UBER	42.6099	42.83
12/21/2021	UBER	42.48	42.935
12/21/2021	AMZN	3431.9199	3418.3999
12/21/2021	AMZN	3432.72	3419.25
12/21/2021	TSLA	1005.3519	998.93
12/21/2021	CPNG	29.69	29.325
12/21/2021	INTC	50.795	50.875
12/21/2021	MSFT	330.98	331.145
12/21/2021	F	20.225	20.205

Date	Ticker	Buy Price	Sell Price
12/21/2021	TWTR	44.035	43.9599
12/21/2021	TSM	120.98	120.58
12/21/2021	TWTR	43.9783	43.85
12/21/2021	BAC	44.26	44.255
12/21/2021	NVDA	292.7987	290.1899
12/21/2021	UBER	43.005	42.7841
12/21/2021	FB	329.9515	328.85
12/21/2021	UBER	43.005	42.7542
12/21/2021	UBER	42.96	42.745
12/21/2021	SOFI	15.075	14.85
12/21/2021	MO	46.765	46.775
12/21/2021	TSLA	995.98	992.1764
12/21/2021	BX	128.97	129.5039
12/21/2021	GM	56.11	56.09
12/21/2021	DIS	151.8	151.64
12/21/2021	XOM	61.19	61.0412
12/21/2021	FTCH	31.36	31.71
12/21/2021	DIS	151.61	151.625
12/21/2021	ADBE	562.75	563.09
12/21/2021	MSFT	331.01	331.34
12/21/2021	BX	129.65	130.445
12/21/2021	VYMI	66.205	66.22
12/21/2021	BB	9.335	9.4708
12/21/2021	NVDA	292.1641	293.3101
12/21/2021	NVDA	292.64	291.78
12/21/2021	NOVA	26.2	26.175
12/21/2021	UBER	42.98	43.0525
12/21/2021	C	59.555	59.57
12/21/2021	F	20.1099	20.09
12/21/2021	SNAP	46.74	46.6
12/21/2021	RBLX	102.3715	102.3
12/21/2021	JD	73.65	73.6699
12/21/2021	AAPL	174.475	174.89
12/21/2021	AAPL	174.4	174.99
12/21/2021	AAPL	174.515	175.075
12/21/2021	FDX	249.57	250.33
12/21/2021	CF	71.14	71.8
12/21/2021	FTCH	31.78	31.9
12/21/2021	CTVA	45.68	45.93
12/21/2021	PLTR	18.8422	18.88
12/28/2021	LCID	36.985	37.0299
12/28/2021	CPNG	29.53	29.72
12/28/2021	SOFI	14.86	14.8972
12/28/2021	UBER	42.775	42.845
12/28/2021	NVDA	301.26	301.4401
12/28/2021	UBER	42.77	42.89
12/28/2021	EMLC	28.755	28.73
12/28/2021	MRNA	241.11	240.82
12/28/2021	MRNA	241.09	241.2102
12/28/2021	AMZN	3416.71	3413.6399
12/28/2021	MTCH	133.65	133.62
12/28/2021	SOFI	14.8499	14.8143
12/28/2021	NCLH	22.085	22.1
12/28/2021	FB	347.081	346.3201
12/28/2021	UBER	42.75	42.68
12/28/2021	PLUG	28.1275	28.33
12/28/2021	UBER	42.675	42.82
12/28/2021	UBER	42.81	42.625
12/28/2021	SOFI	14.76	14.85
12/28/2021	ATVI	66.51	66.515

Date	Ticker	Buy Price	Sell Price
12/28/2021	SPY	476.81	476.72
12/28/2021	IAA	51.165	51.24
12/28/2021	MSFT	341.425	341.65
12/28/2021	INTC	51.885	51.8453
12/28/2021	AAPL	179.525	179.5517
12/31/2021	QQQ	398.73	398.415
12/31/2021	SOFI	15.975	15.95
12/31/2021	IUSG	116.06	115.98
12/31/2021	AAPL	177.545	177.53
12/31/2021	SOFI	15.955	16.105
12/31/2021	AAPL	177.5	177.5299
12/31/2021	C	60.475	60.51
12/31/2021	AAPL	177.685	177.67
12/31/2021	SLB	29.76	29.9
12/31/2021	UAA	21.1	21.17
1/3/2022	AAPL	181.425	181.455
1/3/2022	PHDG	38.089	38.08
1/3/2022	MU	94.96	95.08
1/3/2022	LCID	40.2804	40.53
1/3/2022	LCID	40.27	40.5002
1/3/2022	AAPL	181.6104	181.725
1/3/2022	LCID	40.385	40.49
1/3/2022	LCID	40.52	40.445
1/3/2022	RIDE	3.7499	3.8179
1/3/2022	TSM	128.75	128.55
1/3/2022	TSM	128.45	128.42
1/3/2022	TSLA	1170.6656	1176.33
1/3/2022	MU	95.195	95.265
1/3/2022	IWM	224.12	223.83
1/3/2022	MSFT	332.12	332.84
1/3/2022	PLW	36.19	36.15
1/3/2022	BAC	46.39	46.4
1/3/2022	SQ	161.75	162.4207
1/3/2022	DT	58.59	59.01
1/3/2022	DIS	156.06	156.215
1/3/2022	MRNA	233.08	233.66
1/3/2022	LCID	41.1999	41.1647
1/3/2022	C	63.475	63.5
1/3/2022	LCID	41.281	41.47
1/3/2022	TSM	128.42	128.58
1/3/2022	WFC	50.6401	50.5
1/3/2022	C	63.495	63.435
1/3/2022	ANGL	32.855	32.86
1/3/2022	SBUX	116.03	116.29
1/3/2022	QQQ	400.95	401.69
1/3/2022	BMY	61.72	61.78
1/3/2022	TSLA	1191.3099	1197.5
1/3/2022	TSLA	1197.98	1197.61
1/3/2022	FB	339.43	339.7669
1/4/2022	INTC	53.295	53.325
1/4/2022	CVX	121.8086	121.8686
1/4/2022	AFRM	81.605	81.31
1/4/2022	CVX	121.86	121.883
1/4/2022	WFC	53.12	52.8
1/4/2022	BAC	48.36	48.265
1/4/2022	BAC	48.355	48.3
1/4/2022	MPC	67.75	67.65
1/4/2022	UBER	43.375	43.505
1/4/2022	PFE	54.76	54.6999
1/4/2022	UBER	43.355	43.385

Date	Ticker	Buy Price	Sell Price
1/4/2022	GOOG	2886.3	2879.6799
1/4/2022	FB	335.68	334.28
1/4/2022	DIS	157.41	157.16
1/4/2022	NFLX	586.245	584.51
1/4/2022	VALE	13.58	13.56
1/4/2022	BAC	48.14	48.1275
1/4/2022	INTC	53.41	53.52
1/4/2022	HAL	25.405	25.46
1/4/2022	VZ	53.215	53.375
1/4/2022	NKE	166.52	166.25
1/4/2022	PDD	49.555	49.26
1/4/2022	F	24.24	24.095
1/4/2022	F	24.2363	24.117
1/4/2022	INTU	606.9	607.8
1/4/2022	NKE	166.44	166.515
1/4/2022	XOM	65.6173	65.705
1/4/2022	UBER	43.675	43.88
1/4/2022	VALE	13.56	13.575
1/4/2022	NKE	166.6349	166.405
1/4/2022	F	24.305	24.335
1/4/2022	GM	65.71	65.725
1/4/2022	VALE	13.595	13.585
1/4/2022	BAC	48.1696	48.11
1/4/2022	WMT	142.022	142.0679
1/4/2022	AFRM	80.27	84.1701
1/4/2022	WMT	141.99	142.08
1/4/2022	BMY	62.19	62.27
1/4/2022	AMD	142.58	142.13
1/4/2022	BAC	48.1142	48.175
1/4/2022	VALE	13.595	13.6
1/4/2022	XOM	66.07	65.97
1/4/2022	XOM	66.09	65.995
1/4/2022	WMT	142	142.175
1/4/2022	PFE	55.035	54.89
1/4/2022	F	24.2158	24.23
1/4/2022	F	24.165	24.215
1/4/2022	WFC	52.8	52.775
1/4/2022	XOM	65.99	65.915
1/4/2022	TSLA	1149.905	1148.1257
1/4/2022	UBER	44.235	44.35
1/4/2022	DVN	47.6	47.56
1/4/2022	F	24.205	24.215
1/4/2022	WMT	142.31	142.62
1/5/2022	WFC	52.74	52.465
1/5/2022	TROW	196.155	195.3
1/5/2022	TSLA	1154.2	1156.585
1/5/2022	SONY	131.5	131.385
1/5/2022	GM	65.93	66.3
1/5/2022	GOOGL	2828.97	2831.29
1/5/2022	KWEB	34.68	34.575
1/5/2022	FB	331.7832	334.31
1/5/2022	SPOT	236.615	237.31
1/5/2022	UBER	44.75	44.315
1/5/2022	T	26.655	26.64
1/5/2022	IBM	140.07	140.55
1/5/2022	NRG	41.58	41.625
1/5/2022	SNAP	43.365	43.082
1/5/2022	AAPL	178.92	178.94
1/5/2022	AAPL	178.94	178.905
1/5/2022	BABA	125.74	125.95

Date	Ticker	Buy Price	Sell Price
1/5/2022	TMUS	117.3099	117.66
1/5/2022	HPQ	39.475	39.4898
1/5/2022	CRM	235.855	235.5563
1/5/2022	HPQ	39.48	39.475
1/5/2022	AAPL	178.81	178.92
1/5/2022	F	24.5318	24.735
1/5/2022	AAPL	178.76	178.9316
1/5/2022	T	26.565	26.685
1/5/2022	DVN	48	48.27
1/5/2022	BABA	125.81	124.99
1/5/2022	TSLA	1138.3195	1138.4136
1/24/2022	AMD	110.75	112.1352
1/24/2022	TTWO	158.67	159.64
1/24/2022	AAL	15.84	15.9219
1/24/2022	UAL	39.8	39.9708
1/24/2022	CHWY	38.374	38.38
1/24/2022	HAL	27.17	26.8775
1/24/2022	DUK	102.05	102.52
1/24/2022	AMD	108.15	108.65
1/24/2022	BTI	42.905	42.895
1/24/2022	KSS	61.22	61.78
1/24/2022	AMZN	2732.6499	2748.8501
1/24/2022	HYG	85.11	85.25
1/24/2022	ACWI	97.215	98.01
1/24/2022	ON	53.3934	54.11
1/24/2022	PINS	30.405	30.69
1/24/2022	TSLA	884.5223	887.81
1/25/2022	ATVI	79.82	80.34
1/25/2022	UL	52.965	52.938
1/25/2022	UL	52.96	52.95
1/25/2022	UL	52.95	52.9
1/25/2022	UL	52.84	53.03
1/25/2022	CSCO	55.2	55.59
1/25/2022	PTRA	7.045	7.1008
1/25/2022	QCOM	164.92	167.0461
1/25/2022	CHWY	42.97	42.84
1/25/2022	PFE	51.555	51.5821
1/25/2022	T	25.98	26.05
1/25/2022	QQQ	345.03	346.54
1/25/2022	INKM	34.7534	34.68
1/25/2022	UL	53.17	53.03
1/25/2022	AAXJ	81.27	81.11
1/25/2022	MCHI	62.3	62.29
1/25/2022	AA	60.01	59.525
1/25/2022	ZI	48.53	48.18
1/25/2022	PFE	51.585	51.685
1/25/2022	C	62.555	62.74
1/25/2022	PFE	51.64	51.6101
1/25/2022	MRK	78.15	77.825
1/25/2022	T	26.015	25.895
1/25/2022	NOK	5.5204	5.54
1/25/2022	NOK	5.53	5.545
1/25/2022	NOK	5.525	5.5499
1/25/2022	NOK	5.525	5.5501
1/25/2022	AJRD	37.51	37
1/25/2022	RIG	3.23	3.27
1/25/2022	C	62.79	63.12
1/25/2022	T	25.9	26.15
1/25/2022	NKE	145.79	145.63
1/25/2022	UL	53.08	52.89

Date	Ticker	Buy Price	Sell Price
1/25/2022	PFE	51.77	51.87
1/25/2022	OXY	35.41	35.5341
1/25/2022	PFE	52.05	52.3
1/25/2022	CHWY	42.74	43.2061
1/25/2022	PFE	52.23	52.465
1/25/2022	DVN	49.91	49.6246
1/25/2022	DVN	49.8502	49.63
1/25/2022	FOUR	45.7	45.79
1/25/2022	IBM	131.64	131.96
1/25/2022	BZ	27.69	28.025
1/25/2022	WFC	53.185	53.21
1/25/2022	HON	200.39	201.395
1/25/2022	FB	303.02	304.37
1/25/2022	NEE	76.1	76.21
1/25/2022	DDOG	127.895	128.02
1/25/2022	CZR	76.8693	77.39
1/25/2022	NOVA	20.9	20.805
1/25/2022	NEE	76.01	76.56
1/25/2022	BAC	45.3271	45.455
1/25/2022	NET	84.555	85.5353
1/25/2022	DIS	136.41	136.87
1/25/2022	SDC	2.4166	2.425
1/25/2022	JPM	145.23	145.43
1/25/2022	JPM	145.12	145.45
1/25/2022	F	20.1	20.2134
1/25/2022	BAC	45.37	45.415
1/25/2022	AMZN	2819.9399	2829.1101
1/25/2022	FISV	101.93	102.09
1/25/2022	FB	304.37	305.73
1/25/2022	CCJ	20.005	20.135
1/25/2022	NEE	76.13	76.47
1/25/2022	GOOG	2576.8049	2586.26
1/25/2022	Z	51.44	51.15
1/25/2022	YETI	68.58	68.39
1/25/2022	DG	214.27	214.52
1/25/2022	YETI	68.39	68.375
1/25/2022	RUN	26.6	26.535
1/25/2022	NOV	16.4	16.605
1/26/2022	WFC	54.695	54.13
1/26/2022	F	20.52	20.28
1/26/2022	MSFT	302.1399	299.04
1/26/2022	C	65.505	65.565
1/26/2022	FTCH	20.95	21.05
1/26/2022	WFC	54.315	54.01
1/26/2022	FTCH	20.97	21.05
1/26/2022	PBR	13.515	13.5
1/26/2022	BP	31.95	31.8
1/26/2022	C	64.87	64.88
1/26/2022	LUMN	12.07	12.065
1/26/2022	BBIG	3.18	3.13
1/26/2022	WFC	53.84	54.01
1/26/2022	DVN	51.9127	52.38
1/26/2022	SPLK	117.75	118.585
1/26/2022	HST	17.515	17.44
1/26/2022	HST	17.51	17.43
1/26/2022	LCID	35.06	35.4856
1/26/2022	MSFT	303.22	304.101
1/26/2022	TSLA	953.14	959.37
1/26/2022	ENPH	126.405	130.41
1/26/2022	AAPL	163.155	163.23

Date	Ticker	Buy Price	Sell Price
1/26/2022	FLEX	16.25	16.175
1/26/2022	AFRM	59.446	59.33
1/26/2022	FB	304	303.15
1/26/2022	INTC	52.3	52.27
1/26/2022	NIO	23.7801	24.265
1/26/2022	PLTR	13.5	13.7
1/26/2022	ORCL	80.9	80.69
1/26/2022	DT	51.46	50.65
1/26/2022	QQQ	352.3	347.58
1/26/2022	VGLT	85.29	85.3
1/28/2022	FB	299.9328	300.6
1/28/2022	FB	300.43	300.68
1/28/2022	KO	60.855	60.775
1/28/2022	NFLX	387.42	386
1/28/2022	NCLH	20.248	19.99
1/28/2022	LCID	29.8916	29.6846
1/28/2022	PBR	13.652	13.5899
1/28/2022	WFC	52.91	53.225
1/28/2022	WFC	52.85	53.24
1/28/2022	NVDA	213.62	217.715
1/28/2022	WFC	53.32	53.175
1/28/2022	KO	59.58	59.7
1/28/2022	PFE	53.74	53.845
1/28/2022	TGTX	8.85	9.09
1/28/2022	AAPL	165.45	166.56
1/28/2022	SLB	39.75	39.5
1/28/2022	WFC	53.275	53.4
1/28/2022	WFC	53.48	53.43
1/28/2022	AAPL	167.88	167.78
1/28/2022	SNAP	30.21	30.145
1/28/2022	NUE	99.99	99.74
1/28/2022	V	222.9	223.55
1/28/2022	IEMG	57.4698	57.53
1/28/2022	CARR	46.15	46.05
1/28/2022	CNX	15	14.94
1/28/2022	HD	363.47	362.29
1/28/2022	BHP	63.52	63.345
1/28/2022	CVS	108.16	107.37
1/28/2022	BHP	63.53	63.31
1/28/2022	CARR	45.75	45.78
1/28/2022	MS	100.37	99.75
1/28/2022	NCLH	19.212	19.275
1/28/2022	U	94.03	94
1/28/2022	CARR	45.86	45.87
1/28/2022	C	64.78	64.78
1/31/2022	SNAP	31.54	32.075
1/31/2022	PCG	12.69	12.65
1/31/2022	TSLA	889.3557	896.7
1/31/2022	MSFT	312.1599	311.95
1/31/2022	AAPL	172.93	173.16
1/31/2022	SHOP	926.25	940.73
1/31/2022	XOM	75.37	75.505
1/31/2022	SHOP	934.2599	942.1914
1/31/2022	XOM	75.355	75.485
1/31/2022	FCX	36.5183	36.71
1/31/2022	CHWY	45.88	45.605
1/31/2022	PLTR	13.61	13.5
1/31/2022	LUV	44.23	44.48
1/31/2022	FUTU	42.9	43.03
1/31/2022	PDD	59.245	59.58

Date	Ticker	Buy Price	Sell Price
1/31/2022	AAPL	172.7017	172.88
1/31/2022	VCSH	80.285	80.29
1/31/2022	VMBS	52.035	52.045
1/31/2022	NVAX	88.2494	89.61
1/31/2022	SKLZ	4.7201	4.76
1/31/2022	ADI	161.68	161.43
1/31/2022	LUV	44.645	44.585
1/31/2022	GS	353.1193	353.44
1/31/2022	AAPL	173.3399	173.2499
2/1/2022	XOM	79.265	80
2/1/2022	C	65.77	66.13
2/1/2022	EQNR	27.685	27.94
2/1/2022	CCJ	19.855	20.11
2/1/2022	C	66.255	66.205
2/1/2022	SIRI	6.59	6.6
2/1/2022	CPNG	21.03	20.995
2/1/2022	FCX	38.41	38.27
2/1/2022	TSLA	940.88	934.88
2/1/2022	HUT	6.4811	6.65
2/1/2022	RBLX	67.3037	68.225
2/1/2022	RPRX	40.2425	40.34
2/1/2022	OPEN	10.775	10.8393
2/1/2022	RPRX	40.335	40.355
2/1/2022	V	231.53	231.07
2/1/2022	JD	74.99	74.9
2/1/2022	C	66.15	66.055
2/1/2022	VZ	52.5	52.34
2/1/2022	JD	74.83	74.59
2/1/2022	BABA	126.65	125.7
2/1/2022	XOM	80.135	80.07
2/1/2022	XOM	80.22	80.09
2/1/2022	XOM	80.02	80.04
2/1/2022	COMT	33.4557	33.43
2/1/2022	XLU	67.995	67.94
2/1/2022	NKE	147.684	147.37
2/1/2022	BMJ	64.785	64.815
2/1/2022	DWAC	76.461	76.2756
2/1/2022	CCL	20.8937	20.93
2/1/2022	CCJ	20.255	20.22
2/1/2022	CCL	20.88	20.935
2/1/2022	XOM	79.92	80.05
2/1/2022	AVTR	37.82	37.765
2/1/2022	AR	20.015	20.03
2/1/2022	RBLX	66.1301	65.63
2/1/2022	RTX	90.4	90.355
2/1/2022	F	20.505	20.41
2/1/2022	SLB	39.5999	39.67
2/1/2022	HAL	31.455	31.5
2/1/2022	RPRX	40.23	40.17
2/1/2022	F	20.465	20.395
2/1/2022	CGC	8.3192	8.37
2/1/2022	LI	26.91	27.07
2/1/2022	WFC	55.57	55.55
2/1/2022	VCSH	80.2235	80.24
2/1/2022	RTX	90.43	90.565
2/1/2022	BABA	126.53	127.08
2/1/2022	OPEN	10.82	10.825
2/1/2022	OKTA	197.36	198.54
2/1/2022	VZ	53.125	53.19
2/1/2022	AAPL	173.8901	174.07

Date	Ticker	Buy Price	Sell Price
2/1/2022	VZ	53.175	53.245
2/1/2022	RPRX	40.45	40.355
2/1/2022	F	20.5	20.5399
2/1/2022	SIRI	6.795	6.735
2/1/2022	SIRI	6.785	6.74
2/1/2022	SPYG	66.48	66.58
2/1/2022	SPAB	28.975	28.9799
2/1/2022	FNCL	56.2499	56.36
2/2/2022	SE	148.17	147.16
2/2/2022	BBWI	58.31	58
2/2/2022	FCX	39.77	39.8099
2/2/2022	ZM	147.83	149.81
2/2/2022	AMAT	138.22	138.86
2/2/2022	FIXD	52.251	52.23
2/2/2022	ON	59.87	60.18
2/2/2022	KGC	5.565	5.56
2/2/2022	BSX	41.83	41.9199
2/2/2022	BBWI	58.36	58.46
2/2/2022	BSX	41.85	41.84
2/2/2022	BSX	41.85	41.8
2/2/2022	OPEN	10.58	10.52
2/2/2022	BSX	41.87	41.83
2/2/2022	PYPL	130.4971	130.53
2/2/2022	INTC	49.1376	49.11
2/2/2022	KO	60.9101	60.955
2/2/2022	F	20.43	20.53
2/2/2022	MS	103.59	103.63
2/2/2022	BBWI	58.675	58.55
2/2/2022	MS	103.71	103.7187
2/2/2022	MS	103.6959	103.72
2/2/2022	MA	398.43	399.28
2/2/2022	LVS	44.86	45.13
2/2/2022	BBWI	58.645	58.655
2/2/2022	GM	52.985	53.06
2/2/2022	WYNN	87.14	86.93
2/2/2022	MAR	161	161.04
2/2/2022	IBM	136.889	137.05
2/2/2022	BA	207.85	207.95
2/2/2022	PENN	45.8	45.845
2/2/2022	PENN	45.819	45.84
2/2/2022	AAPL	175.165	175.48
2/8/2022	MSFT	309.06	310.4912
2/8/2022	MSFT	309.175	310.44
2/8/2022	MSFT	309.155	310.52
2/8/2022	FB	239.76	240.99
2/8/2022	TSLA	898.47	898.9
2/8/2022	FB	243.36	245.14
2/8/2022	F	20.48	20.325
2/8/2022	FB	246.42	246.22
2/8/2022	FCX	38.765	38.89
2/8/2022	HAL	30.87	30.88
2/8/2022	FB	246.02	245.93
2/8/2022	FB	245.9106	245.99
2/8/2022	AMZN	2827.95	2805.8435
2/8/2022	TSLA	928.25	935.74
2/8/2022	CCL	20.67	20.77
2/8/2022	UBER	35.59	35.8
2/8/2022	ABBV	140.64	141.11
2/8/2022	F	20.51	20.405
2/8/2022	WFC	55.775	55.58

Date	Ticker	Buy Price	Sell Price
2/8/2022	CCL	20.745	20.83
2/8/2022	UBER	35.725	35.58
2/8/2022	UBER	35.775	35.455
2/8/2022	GOOGL	2944.22	2936.1001
2/8/2022	FB	243.8	241.15
2/8/2022	HAL	30.885	30.77
2/8/2022	ELY	23.81	23.82
2/8/2022	JCI	69.76	69.535
2/8/2022	VZ	53.9141	53.915
2/8/2022	PBR	13.1199	13.195
2/8/2022	MSFT	305.3901	304.5
2/8/2022	GILD	63.4785	63.49
2/8/2022	HL	5.085	5.135
2/8/2022	FB	230.58	228.79
2/8/2022	AAL	17.2458	17.13
2/8/2022	MQ	10.425	10.26
2/8/2022	HST	17.87	17.83
2/8/2022	UBER	37.885	37.72
2/8/2022	AZN	56.685	56.73
2/8/2022	AZN	56.57	56.52
2/8/2022	UBER	37.59	37.8
2/8/2022	NVDA	246.1791	247.47
2/8/2022	PINS	26.93	26.99
2/8/2022	EOG	109.82	110.75
2/8/2022	AMD	122.675	123.71
2/8/2022	AMZN	3121.3301	3126.7
2/8/2022	AMD	123.21	123.615
2/8/2022	C	67.76	67.755
2/8/2022	GLW	42.61	42.585
2/8/2022	AMD	123.645	123.395
2/8/2022	AAL	17.655	17.6755
2/8/2022	BAC	49.61	49.575
2/8/2022	VALE	17.225	17.25
2/8/2022	VALE	17.26	17.2801
2/8/2022	NCLH	22.35	22.5299
2/8/2022	NCLH	22.37	22.495
2/8/2022	AMD	123.4599	125.1262
2/8/2022	CFVI	16.37	16.1055
2/8/2022	AMZN	3153	3169.8999
2/8/2022	NVDA	245.15	246.7008
2/8/2022	V	225.885	226.71
2/8/2022	XOM	80.41	80.18
2/8/2022	DAL	41.945	41.86
2/8/2022	QQQ	359.49	358.89
2/8/2022	HYG	83.83	83.8
2/8/2022	EEM	48.985	48.94
2/8/2022	CNQ	50.99	51.01
2/8/2022	HOOD	13.305	13.255
2/8/2022	FLRN	30.615	30.62
2/8/2022	SHM	48.33	48.32
2/8/2022	STIP	104.0659	104.07
2/8/2022	MBB	104.84	104.8569
2/8/2022	COTY	9.2495	9.235
2/8/2022	MRVL	75.7	75.3
2/8/2022	ZNGA	9.125	9.125
2/8/2022	REZ	91.16	91
2/8/2022	PBR	13.225	13.21
2/8/2022	SPY	450.6518	450.62
2/8/2022	VEA	49.6	49.59
2/8/2022	SOLN	52.48	52.48

Date	Ticker	Buy Price	Sell Price
2/8/2022	EYEN	2.96	3.16
2/8/2022	SOLN	52.48	52.48
2/8/2022	ASHR	36.5	36.49
2/8/2022	PBR	13.225	13.2165
2/8/2022	GBT	29.08	29.2195
2/8/2022	MNA	31.675	31.65
2/8/2022	OPEN	9.82	9.735
2/8/2022	PFE	51.31	51.265
2/8/2022	CSCO	55.25	55.225
2/8/2022	COTY	9.305	9.29
2/8/2022	HAL	31.855	31.82
2/8/2022	SPHQ	51.46	51.44
2/8/2022	LQD	125.5738	125.6227
2/8/2022	BKLN	22.015	22.02
2/8/2022	C	67.13	67.185
2/8/2022	HYG	83.775	83.7801
2/8/2022	VRP	24.965	24.955
2/8/2022	HST	18.13	18.17
2/8/2022	PFE	51.249	51.39
2/8/2022	JMBS	51.55	51.55
2/8/2022	CNQ	50.72	50.69
2/8/2022	UAL	46.285	46.4
2/8/2022	IGSB	52.9859	52.985
2/8/2022	EWZ	31.95	32
2/8/2022	BAC	49.366	49.4499
2/8/2022	BRKR	68.67	68.75
2/8/2022	DRIV	28.17	28.27
2/8/2022	CXSE	47.5385	47.49
2/8/2022	SNAP	37.0303	37.28
2/8/2022	USO	63.75	63.7101
2/8/2022	MCHI	62.45	62.58
2/8/2022	EWZ	31.975	31.99
2/8/2022	SLQD	50.3126	50.315
2/8/2022	EWBC	90.49	90.62
2/8/2022	IGSB	52.985	52.99
2/8/2022	BHP	68.81	68.805
2/8/2022	GNMA	48.695	48.68
2/8/2022	CNQ	50.72	50.64
2/8/2022	XLE	68.46	68.41
2/8/2022	UAL	46.4	46.41
2/8/2022	CNQ	50.72	50.7
2/8/2022	SHY	84.655	84.66
2/8/2022	EFV	52.8499	52.85
2/8/2022	TJX	70.295	70.23
2/8/2022	TLT	138.515	138.36
2/8/2022	HYG	83.805	83.76
2/8/2022	SLQD	50.3196	50.31
2/8/2022	TLT	138.55	138.32
2/8/2022	CMCSA	49.375	49.235
2/8/2022	EWZ	32	31.99
2/8/2022	LQD	125.555	125.505
2/8/2022	IGSB	52.99	52.98
2/8/2022	YUMC	46.31	46.18
2/8/2022	SLQD	50.3126	50.31
2/8/2022	SPY	450.43	448.9623
2/8/2022	DGRO	54.17	54.03
2/8/2022	CRM	216.23	216.01
2/8/2022	FTGC	25.2185	25.23
2/8/2022	SRLN	45.4474	45.43
2/8/2022	EAF	9.695	9.64

Date	Ticker	Buy Price	Sell Price
2/8/2022	QQQ	358.015	357.375
2/8/2022	VALE	17.335	17.375
2/8/2022	SCHO	50.315	50.31
2/8/2022	DLO	31.52	31.45
2/8/2022	QQQ	357.36	356.775
2/8/2022	TOTL	46.175	46.16
2/8/2022	LYFT	40.98	40.75
2/8/2022	SCHR	54.6601	54.67
2/8/2022	FBND	51.36	51.36
2/8/2022	TLK	29.36	29.34
2/8/2022	SCHO	50.315	50.31
2/8/2022	LQD	125.515	125.47
2/8/2022	JEPI	60.6508	60.5681
2/8/2022	AMD	126.4001	126.89
2/8/2022	GOVT	25.67	25.675
2/8/2022	SPY	449.1998	448.18
2/8/2022	XLRE	46.3799	46.22
2/8/2022	XLF	40.69	40.5643
2/8/2022	TLT	138.44	138.4
2/8/2022	SDS	39.13	39.07
2/8/2022	IGIB	57.015	57
2/8/2022	SPSB	30.635	30.63
2/8/2022	CHPT	12.82	12.75
2/8/2022	SPIB	35.185	35.18
2/8/2022	IVLU	26.88	26.9
2/8/2022	SPY	448.61	448.98
2/8/2022	BSV	79.595	79.59
2/8/2022	SHY	84.655	84.645
2/8/2022	SPMB	24.6969	24.695
2/8/2022	BOND	105.9653	105.92
2/8/2022	ES	87.915	87.86
2/8/2022	QQQ	357.04	356.85
2/8/2022	SCHO	50.3102	50.31
2/8/2022	H	98.41	98.15
2/8/2022	FB	217.4292	217.23
2/8/2022	H	98.4	98.5734
2/8/2022	HYG	83.64	83.665
2/8/2022	APR	37.27	37.25
2/8/2022	IXUS	69.25	69.435
2/8/2022	DOCU	120.82	121.29
2/8/2022	SNAP	37.4544	37.6
2/8/2022	EZU	47.54	47.68
2/10/2022	BP	33.57	33.56
2/10/2022	UBER	39.055	39.49
2/10/2022	DOCU	123.51	124.78
2/10/2022	SPDW	35.865	35.92
2/10/2022	AGG	110.53	110.5298
2/10/2022	FB	226.179	226.78
2/10/2022	UAL	48.1761	48.32
2/10/2022	DAL	43.62	43.76
2/10/2022	AMZN	3238	3236.76
2/10/2022	AMC	18.25	18.41
2/10/2022	BMV	67.05	67.045
2/10/2022	NUAN	55.445	55.445
2/10/2022	MU	86.1899	86.6
2/10/2022	KSS	62.29	62.42
2/10/2022	BLMN	22.13	22.19
2/10/2022	FTCH	20.72	20.73
2/10/2022	VALE	17.79	17.785
2/10/2022	PBR	13.83	13.815

Date	Ticker	Buy Price	Sell Price
2/10/2022	CLSK	9.31	9.5882
2/10/2022	NCLH	23.315	23.485
2/10/2022	RIVN	64.28	66.9
2/10/2022	PCG	11.945	11.905
2/10/2022	SCHW	95.275	94.86
2/10/2022	FCX	44.5987	45.17
2/10/2022	FCX	44.73	45.0864
2/10/2022	VALE	17.84	17.8619
2/10/2022	NVS	86.94	86.78
2/10/2022	AAPL	174.375	174.1
2/10/2022	AAPL	174.225	174.33
2/10/2022	MGM	48.12	47.8
2/10/2022	NVS	86.68	86.69
2/10/2022	BAC	49.86	49.99
2/10/2022	ATVI	81.73	81.8179
2/10/2022	LULU	340.86	342.69
2/10/2022	FB	232.43	231.655
2/10/2022	FB	232.5799	232.1191
2/10/2022	BABA	125.89	126.037
2/10/2022	PCG	11.765	11.535
2/10/2022	VALE	17.9829	18.035
2/10/2022	VALE	17.9112	18.006
2/10/2022	AMD	129.46	129.3453
2/10/2022	SCHW	94	93.585
2/10/2022	AAPL	174.36	173.42
2/10/2022	AMD	129.865	127.8316
2/10/2022	VALE	18.11	18.075
2/10/2022	SCHW	93.96	93.75
2/10/2022	UBER	38.36	38.26
2/10/2022	CFLT	76.965	75.825
2/10/2022	AMD	127.64	127.8343
2/10/2022	VALE	18.085	17.985
2/10/2022	PCG	11.585	11.535
2/10/2022	LQD	124.4	124.445
2/10/2022	SPIB	35.02	35.0217
2/10/2022	PM	104.23	104.08
2/10/2022	LVS	46.32	46.58
2/10/2022	DDOG	176.355	178.215
2/10/2022	BAC	49.2658	49.18
2/11/2022	Z	54.19	53.7499
2/11/2022	PINS	26.905	27.06
2/11/2022	C	67.87	68.36
2/11/2022	C	68.165	68.34
2/11/2022	EXPE	205.97	206.4
2/11/2022	JD	75.88	75.43
2/11/2022	UAL	49.82	49.98
2/11/2022	FCX	43.605	43.555
2/11/2022	IWM	205.5729	205.01
2/11/2022	NVS	86.07	86.09
2/11/2022	LYFT	41.905	42.05
2/11/2022	LYFT	41.88	42.05
2/11/2022	NVS	86.13	86.0652
2/11/2022	EXPE	203.06	201.4
2/11/2022	SOFI	13.0219	12.9079
2/11/2022	ELY	24.23	23.98
2/11/2022	AMD	119.71	118.9292
2/11/2022	NOK	5.67	5.65
2/11/2022	NVS	86.08	86.05
2/11/2022	NVS	86.07	86.04
2/11/2022	BP	33.891	33.915

Date	Ticker	Buy Price	Sell Price
2/11/2022	ABB	34.95	35.01
2/11/2022	BP	33.8591	33.935
2/11/2022	FCX	43.485	43.73
2/11/2022	FCX	43.64	43.87
2/11/2022	AAPL	171.57	171.98
2/11/2022	AMD	118.21	118.27
2/11/2022	AJRD	39.05	39.175
2/11/2022	VALE	17.859	17.82
2/11/2022	AJRD	39.21	39.2575
2/11/2022	AMD	117.39	117.62
2/11/2022	LAZR	16.05	16.0523
2/11/2022	SPYC	31.92	31.9
2/11/2022	AAPL	171.56	171.58
2/11/2022	AMD	117.7799	117.7601
2/11/2022	CPNG	22.81	22.86
2/11/2022	CPNG	22.84	22.76
2/11/2022	XOM	78.99	79.43
2/11/2022	DIS	149.86	149.24
2/11/2022	PYPL	116.5	116.02
2/11/2022	T	24.09	24.0815
2/11/2022	T	24.12	24.135
2/11/2022	MSFT	297.56	297.0001
2/11/2022	DIS	149.27	149.66
2/11/2022	EQNR	31.805	31.835
2/11/2022	ELAN	25.43	25.52
2/14/2022	SLB	39.905	39.79
2/14/2022	GS	359.4	359.18
2/14/2022	TSLA	869.53	873.61
2/14/2022	FTCH	19.3	19.33
2/14/2022	GOLD	21.025	21.0801
2/14/2022	FTCH	19.22	19.22
2/14/2022	NEAR	49.785	49.79
2/14/2022	GOOGL	2704.72	2706.4299
2/14/2022	PBR	13.8601	13.805
2/14/2022	BHG	2.9896	3.03
2/14/2022	BTU	17.15	17.55
2/14/2022	HOOD	13.615	13.68
2/14/2022	NVS	85.57	85.45
2/14/2022	PBR	13.825	13.91
2/14/2022	C	66.2992	66.5
2/14/2022	MET	69.96	70
2/14/2022	F	17.59	17.56
2/14/2022	UBER	35.525	35.525
2/14/2022	FE	40.36	40.39
2/14/2022	AMZN	3156.3201	3155.5583
2/14/2022	UBER	35.55	35.535
2/14/2022	MDT	102.89	103.02
2/14/2022	Z	60.58	60.18
2/14/2022	NOK	5.455	5.45
2/14/2022	DIS	152.565	152.6699
2/14/2022	GM	48.8899	49.035
2/14/2022	MAT	24.42	24.35
2/14/2022	UBER	35.05	34.995
2/14/2022	Z	59.84	60.5
2/14/2022	Z	60.1086	60.54
2/14/2022	Z	60.0489	60.1684
2/14/2022	Z	60.08	60.06
2/14/2022	BAC	47.28	47.28
2/14/2022	HD	350.71	350.84
2/15/2022	NCLH	21.82	22.08

Date	Ticker	Buy Price	Sell Price
2/15/2022	AAPL	170.98	171.235
2/15/2022	MGI	10.565	10.555
2/15/2022	MGI	10.51	10.5367
2/15/2022	JOBY	5.45	5.72
2/15/2022	FMAC	9.94	9.95
2/15/2022	TAL	3.67	3.72
2/15/2022	NWL	25.8	25.645
2/15/2022	VALE	16.94	17.02
2/15/2022	TSEM	46.9781	47.03
2/15/2022	AZN	59.8	59.905
2/15/2022	C	66.92	67.09
2/15/2022	INTC	47.915	48.0871
2/15/2022	BABA	125.2501	125.41
2/15/2022	MU	94.05	94.845
2/15/2022	UBER	36	36.255
2/15/2022	AAPL	171.24	171.35
2/15/2022	NOK	5.57	5.585
2/15/2022	MGI	10.595	10.615
2/15/2022	MGI	10.605	10.615
2/15/2022	AMC	18.25	18.41
2/15/2022	TSEM	47.05	47.005
2/15/2022	TSEM	47.035	46.94
2/15/2022	MGI	10.64	10.68
2/15/2022	AMD	118.96	119.1867
2/15/2022	GOOGL	2739.585	2735.3101
2/15/2022	TSEM	46.99	47.01
2/15/2022	UBER	36.45	36.24
2/17/2022	HIMX	11.32	11.29
2/17/2022	BAC	47.16	47.095
2/17/2022	MTTR	6.68	6.906
2/17/2022	XOM	78.71	78.9871
2/17/2022	MTTR	6.5767	6.945
2/17/2022	TSLA	914.805	906.81
2/17/2022	BABA	128.16	127.99
2/17/2022	LCID	29.4535	29.5899
2/17/2022	AAPL	171.0644	171.7
2/17/2022	TSLA	907.89	904.833
2/17/2022	HZNP	96.4	95.98
2/17/2022	IBM	126.5	126.15
2/17/2022	PFE	49.09	49.2114
2/17/2022	LCID	29.88	29.8896
2/17/2022	GILD	61.285	61.5
2/17/2022	ZNGA	8.865	8.84
2/17/2022	KO	60.825	60.9031
2/17/2022	GOLD	22.985	23.005
2/17/2022	LYV	117.7192	118.46
2/17/2022	GOLD	22.97	22.935
2/17/2022	MRVL	68.61	69.525
2/17/2022	CS	9.015	9.035
2/17/2022	GM	49.245	49.265
2/17/2022	KO	61.025	60.92
2/17/2022	KO	60.905	61.075
2/17/2022	VZIO	13.3	13.4099
2/17/2022	T	23.7638	23.795
2/17/2022	ZI	54.31	53.78
2/17/2022	TWTR	35.9529	36.03
2/17/2022	UBER	36.05	36.26
2/17/2022	MAR	181.3405	181.66
2/17/2022	PARA	29.7981	29.985
2/17/2022	RIVN	66.845	67.11

Date	Ticker	Buy Price	Sell Price
2/17/2022	GILD	61.415	61.545
2/17/2022	KHC	37.58	37.45
2/17/2022	GILD	61.55	61.5
2/17/2022	KHC	37.59	37.47
2/17/2022	PARA	29.9886	30.235
2/17/2022	KO	61.26	61.29
2/17/2022	AMZN	3146.3901	3143.395
2/17/2022	GILD	61.47	61.445
2/17/2022	KO	61.325	61.29
2/17/2022	INTC	47.77	47.8515
2/17/2022	GOLD	23.175	23.15
2/17/2022	AMZN	3146.75	3143.01
2/17/2022	DVN	56.0099	55.83
2/17/2022	KHC	37.3483	37.5
2/17/2022	WFC	56.815	56.755
2/17/2022	UAL	49.16	48.905
2/17/2022	VZ	53.425	53.515
2/17/2022	BP	32.315	32.33
2/17/2022	NRGV	10.63	12.4447
2/17/2022	CCL	22.6	22.535
2/17/2022	AUY	4.799	4.8
2/17/2022	KHC	37.565	37.52
2/17/2022	UBER	35.64	35.82
2/17/2022	JPM	151.985	151.89
2/17/2022	DASH	104.7836	106.21
2/17/2022	AMZN	3130.6399	3125
2/17/2022	AMZN	3129.74	3127.21
2/17/2022	AMZN	3128.4299	3126.655
2/17/2022	RF	24.215	24.135
2/17/2022	LTHM	22.365	22.53
2/17/2022	HZNP	95.32	95.02
2/17/2022	LTHM	22.34	22.395
2/17/2022	KHC	37.4845	37.57
2/17/2022	JPM	151.51	151.64
2/17/2022	BAC	46.205	46.195
2/17/2022	BP	32.289	32.25
2/17/2022	RF	24	23.845
2/17/2022	GOOG	2671.6499	2661.3
2/25/2022	NEM	67.65	67.93
2/25/2022	COST	511.555	511.6845
2/25/2022	FB	203.6895	206.8325
2/25/2022	UBER	34.4503	34.93
2/25/2022	AAPL	163.85	165.7399
2/25/2022	AAPL	164.465	165.71
2/25/2022	GOOG	2601.3025	2620.8799
2/25/2022	BAC	45.715	45.75
2/25/2022	OKTA	170.56	172.32
2/25/2022	AMZN	3031.875	3048.325
2/25/2022	AMZN	3038.345	3047.3999
2/25/2022	CVX	133.6	133.86
2/25/2022	XOM	77.66	77.815
2/25/2022	CVX	134.49	134.345
2/25/2022	PHG	33.855	34.01
2/25/2022	CPNG	21.845	21.705
2/25/2022	MU	93.01	91.85
2/25/2022	BP	31.49	31.53
2/25/2022	SKIN	16.5302	16.77
2/25/2022	AFRM	36.21	36.55
2/25/2022	ZNGA	8.8	8.815
2/25/2022	CRM	195.59	195.13

Date	Ticker	Buy Price	Sell Price
2/25/2022	PARA	27.97	28.0197
2/25/2022	ADBE	441.34	439.885
2/25/2022	TPX	31.24	31.45
2/25/2022	GOLD	22.965	23.02
2/25/2022	AFRM	35.88	36.34
2/25/2022	SHOP	644.22	649.65
2/25/2022	FB	202.8686	203.75
2/25/2022	HD	313.45	312.76
2/25/2022	DISCK	27.15	27.19
2/25/2022	HAL	31.22	31.445
2/25/2022	HTZ	18.45	18.88
2/25/2022	LMT	388.945	389.565
2/25/2022	WFC	51.445	51.365
2/25/2022	DT	42.895	42.94
2/25/2022	SCHW	86.13	85.96
2/25/2022	GOOGL	2692	2671.1599
2/25/2022	TGNA	22.595	22.595
2/25/2022	AMD	119.0168	120.4
2/25/2022	SLB	39.365	39.55
2/25/2022	BAC	45.14	45.13
2/25/2022	BAC	45.175	45.09
2/25/2022	AAPL	164.749	164.87
2/25/2022	AMZN	3055.78	3060.96
2/28/2022	DAL	39.55	39.435
2/28/2022	FCX	46.35	46.21
2/28/2022	AA	79.46	79.75
2/28/2022	APA	34.61	34.56
2/28/2022	APA	34.68	34.45
2/28/2022	AEG	4.91	4.92
2/28/2022	GOOGL	2662.9451	2667.72
2/28/2022	NAT	2.3	2.3583
2/28/2022	COP	92.13	92.58
2/28/2022	LMT	428.9361	427.385
2/28/2022	AAPL	164.46	164.74
2/28/2022	BABA	105.7	106.01
2/28/2022	APA	34.875	35.27
2/28/2022	COIN	184.68	187.705
2/28/2022	ET	10.1	10.1
2/28/2022	ON	62.67	62.6
2/28/2022	BABA	106.01	106.31
2/28/2022	CCJ	24.235	24.18
2/28/2022	ET	10.095	10.09
2/28/2022	PARA	30.56	30.655
2/28/2022	PYPL	113.0587	112.65
2/28/2022	UBER	36.185	35.945
2/28/2022	CHPT	14.58	14.492
2/28/2022	VALE	18.415	18.4
2/28/2022	UBER	35.865	35.61
2/28/2022	MRVL	67.52	67.08
2/28/2022	SQ	127.2605	125.29
2/28/2022	NEE	77.24	77.48
2/28/2022	PDD	50.95	51.24
2/28/2022	MRVL	67.415	67.29
2/28/2022	UPST	154.15	155.412
2/28/2022	MSFT	295.9799	294.98
2/28/2022	AMZN	3045.595	3039.05
2/28/2022	CRWD	191.865	193.9401
2/28/2022	PBR	14.0034	14.03
2/28/2022	KOS	4.805	4.79
2/28/2022	HTA	30.09	29.795

Date	Ticker	Buy Price	Sell Price
2/28/2022	TPX	32.56	32.795

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Aguilar, Luis A. “Shedding Light on Dark Pools.” *US Securities and Exchange Commission*, 18 Nov. 2015, <https://www.sec.gov/news/statement/shedding-light-on-dark-pools.html>.

This statement by the SEC details the history of alternative trading systems and the role they play in our markets. Specifically, it discusses the history, advantages, and disadvantages of alternative trading systems and historical SEC interventions on them. Additionally, the statement details the possible future of these systems from a regulatory point of view.

Black Box Stocks. (n.d.). Black Box Stocks. blackbox. Retrieved March 25, 2022, from <https://www.blackboxstocks.com/>

This is the subscription platform where live dark pool trades can be viewed.

CFA Institute. “High-Frequency Trading.” *CFA Institute*, 2021, <https://www.cfainstitute.org/en/advocacy/issues/high-frequency-trading#sort=%40pubbrowsedate%20descending>.

This article is the CFA Institute's definition of high-frequency trading which is algorithmic trading that is done at high speeds and turnover rates. The article discusses the background of high-frequency trading along with some regulations in the past decade on the topic.

CFI. “Dark Pool.” *Corporate Finance Institute*, CFI, 2021, <https://corporatefinanceinstitute.com/resources/knowledge/trading-investing/dark-pool/>.

This article is the Corporate Finance Institute's definition of Dark Pools and explains how they work. It goes further in-depth on what block trades are and the uses of dark pools. In addition, it lists some advantages and disadvantages of dark pool trading.

CFI. "Front Running." *Corporate Finance Institute*, CFI, 29 Sept. 2021,

<https://corporatefinanceinstitute.com/resources/knowledge/trading-investing/front-running/>.

This article is the Corporate Finance Institute's definition of front running which is the illegal practice of purchasing securities based on advanced non-public information regarding an expected large transaction. It is considered a form of market manipulation. The CFI provides some examples of front running as well.

Chen, James. "Algorithmic Trading Definition." *Investopedia*, Investopedia, 26 Oct. 2021,

<https://www.investopedia.com/terms/a/algorithmictrading.asp>.

This article discusses the background of algorithmic trading and what algorithmic trading is. It provides some context of the origins of modern-day algorithmic trading and how it is used along with its advantages and disadvantages. The author discusses some emerging trends in the space such as artificial intelligence and machine learning.

Chen, J. (2020, July 6). Options price reporting authority (OPRA) definition. Investopedia.

Retrieved March 25, 2022, from

<https://www.investopedia.com/terms/o/opra.asp#:~:text=Servicing%20as%20a%20national%20market,bids%20and%20offers%20for%20options>

This article discusses what the Options Price Reporting Authority (OPRA) is and discusses its function.

Chen, J. (2021, March 16). Retracement definition. Investopedia. Retrieved March 25, 2022,

from

<https://www.investopedia.com/terms/r/retracement.asp#:~:text=A%20retracement%20is%20a%20technical,shift%20in%20the%20larger%20trend>

This article discusses what a retracement is in finance. It goes in-depth into how a retracement looks and how it compares to a reversal in the market.

CME Group. "Block Trades." *CME Group - CME Group*, 2021,

<https://www.cmegroup.com/clearing/operations-and-deliveries/accepted-trade-types/block-data.html#tradeDate=2021-12-08>.

This is simply the CME Group's dictionary of financial topics, and this specific site is the CME Group's definition of block trades and process to submit one.

Hayes, Adam. "Regulation NMS." *Investopedia*, Investopedia, 27 Dec. 2020,

<https://www.investopedia.com/terms/r/regulation-nms.asp>.

This article discusses the background of the Regulation National Market System (NMS), and the rules associated with its passing in 2005. It covers the four main components of the Regulation NMS along with its benefits and criticisms. One topic covered is how Regulation NMS is believed to have fueled the growth of dark pool use.

Hayes, A. (2021, May 10). Slippage definition. Investopedia. Retrieved March 25, 2022, from

<https://www.investopedia.com/terms/s/slippage.asp>

This article discusses market slippage in a stock. It covers how slippage works and provides examples.

Mordor Intelligence. “Algorithmic Trading Market: 2021 - 26: Industry Share, Size, Growth - Mordor Intelligence.” *Algorithmic Trading Market | 2021 - 26 | Industry Share, Size, Growth - Mordor Intelligence*, 2020, <https://www.mordorintelligence.com/industry-reports/algorithmic-trading-market>.

This industry report details the overall algorithmic trading market. It analyzed the period from 2018 to 2026 through the base year of 2020, providing estimated growth and current market statistics associated with algorithmic trading. The report covers an overview along with market trends, geographical breakdowns, and the competitive landscape.

Murphy, Elizabeth M. “United States of America before the Securities and ...” *Securities and Exchange Commission*, Securities and Exchange Commission, 24 Oct. 2011, <https://www.sec.gov/litigation/admin/2011/33-9271.pdf>.

This is the filing by the SEC in the matter of a dark pool provider falsely claiming they had no proprietary trading in their dark pool. In addition, the SEC found that the provider was using the information flow of their subscribers to front-run their trades.

Peterson, Jill M. “United States of America Securities and Exchange ...” *Securities and Exchange Commission*, Securities and Exchange Commission, 25 July 2014, <https://www.sec.gov/litigation/admin/2014/34-72673.pdf>.

This filing is by the SEC against LavaFlow, a dark pool provider which violated SEC rules and failed to establish adequate safeguards and procedures to protect LavaFlow subscribers' confidential trading information. The details of the violations and case are within the filing.

Picardo, Elvis. "An Introduction to Dark Pools." *Investopedia*, Investopedia, 8 Dec. 2021, <https://www.investopedia.com/articles/markets/050614/introduction-dark-pools.asp>.

This Investopedia site explains what dark pools are and how they work. It also discusses the rationale for using dark pools to trade and who is able to access them. Additionally, Investopedia breaks down different types of dark pools along with the advantages and disadvantages of using them.

Selenium. (2022, March 3). Install browser drivers. Selenium. Retrieved March 25, 2022, from https://www.selenium.dev/documentation/webdriver/getting_started/install_drivers/

This site is the documentation of the Selenium package. It discusses how the package works and how to use it in Python to navigate HTML scripts.

Shorter, Gary, and Rena S. Miller. "Dark Pools in Equity Trading: Policy Concerns and Recent ..." *Congressional Research Service - Informing the Legislative Debate Since 1914*, Congressional Research Service , 26 Sept. 2014, <https://sgp.fas.org/crs/misc/R43739.pdf>.

This paper goes into extensive detail about what dark pools are and their history. In addition, it discusses the reasons why they are used and the specific functions of using them. The paper also analyzes the factors that led to the rise of dark pools, potential benefits and costs of trading on them along with regulatory developments.

Smigel, Leo. "History of Algorithmic Trading." *Analyzing Alpha*, Analyzing Alpha, 12 Oct. 2021, <https://analyzingalpha.com/algorithmic-trading-history>.

This article discusses when trading algorithms were first introduced, starting from the very basics up to the modern-day. It shows the evolution of steps and advances of our market system and algorithmic trading along with it. It discusses the use of alternative trading systems being introduced along with important first entrants into different areas of automated and algorithmic trading.

ACADEMIC VITA

JAMES QU

EDUCATION

The Pennsylvania State University*Schreyer Honors College | Smeal College of Business*

Bachelor of Science in Finance | Minors in Information Systems Management & Mathematics

University Park, PA*Class of May 2022***North Allegheny High School***Class of 2018***Wexford, PA**

RELEVANT EXPERIENCE

Financial Technology Partners*Investment Banking Summer Analyst***San Francisco, CA***Jun 2021 – Aug 2021*

- Worked on ongoing sell-side transactions and projects with both public and private companies in the financial technology industry
- Led new Private Capital Markets outreach initiative to increase firm connectivity between investors and clients; return offer received

Nittany Lion Fund, LLC*Fund Manager | Senior Mentor***University Park, PA***Dec 2018 – Present*

- Managed ~\$1.10 MM of capital within the Communication Services Sector of the Nittany Lion Fund, a student-run value-oriented investment fund with ~\$13.00 MM in private investor capital, by developing investment theses with goal of outperforming S&P 500
- Conduct all new fund manager training in weekly educations of topics such as valuations, accounting, and risk analysis
- Tracked the performance and individual holdings of the Nittany Lion Fund using a combination of Excel, FactSet, and Bloomberg

Penn State Investment Association*Senior Mentor***University Park, PA***Aug 2018 – Present*

- Help lead weekly break-out meetings to educate students on investing within various sectors such as Communication Services
- Mentor students interested in joining the Nittany Lion Fund by teaching basic financial concepts and giving mock interviews

FactSet*Student Ambassador***University Park, PA***Feb 2021 – May 2021*

- Served as the sole Penn State FactSet student ambassador and main on-campus contact for Penn State's FactSet subscriptions
- Implemented various successful outreach and instructional programs to increase student awareness and usage of FactSet's platform

Chatham Financial*Summer Analyst***Kennett Square, PA***Jun 2020 – Aug 2020*

- Work on the firm's corporate risk advisory services in debt, derivatives, FX, and hedge accounting throughout the internship
- Shadow senior team members to learn all aspects of the firm's products and services to aid the corporate relationship management team

Wall Street Boot Camp*Graduate***University Park, PA***Jan 2019 – May 2019*

- Selected as one of 40 students in the Smeal College of Business out of 400+ applicants for an intensive semester training program including weekly information sessions taught by current and former Wall Street professionals
- Learned about different Wall Street career paths including sales & trading, investment banking, equity research, and asset management

LEADERSHIP EXPERIENCE

Schreyer GLOBE Special Living Option*President***University Park, PA***Aug 2018 – Mar 2020*

- Ran monthly floor meetings while coordinating annual Humphrey Fellows event where students met with international scholars and entrepreneurs to discuss political, economic, and social issues around the world

Scholar Ambassadors*Ambassador***University Park, PA***Apr 2019 – Mar 2020*

- Selected as one of ~45 scholars who serve as ambassadors for the Schreyer Honors College, representing Schreyer at special events
- Gave tours of campus and honors housing to prospective Schreyer students and meet with Penn State alumni and donors

Schreyer Honors College Mentor*SHO-TIME Mentor***University Park, PA***May 2019 – Aug 2019*

- Mentored 12 incoming first-year students in Schreyer Honors College to create a smooth transition to college by answering questions, helping with scheduling, offering advice in extracurricular activities, and welcoming them to the Penn State community

HONORS | INTERESTS

Honors: Dean's List, Beta Gamma Sigma, NSDA Presidential Award, National Honors Society, AP Scholar, Academic Excellence**Interests:** Poker Strategy, Cooking, Inline Hockey, Traveling, Rock Climbing, Ice Skating, Social Deduction Board Games, *Marvel*