

UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK

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NORTHWEST BIOTHERPEUTICS, INC.,	:	
	:	
Plaintiff,	:	22 Civ. 10185 (GHW) (GS)
	:	
- against -	:	<u>REPORT AND</u>
	:	<u>RECOMMENDATION</u>
	:	
CANACCORD GENUITY LLC, CITADEL	:	
SECURITIES LLC, G1 EXECUTION	:	
SERVICES LLC, GTS SECURITIES LLC,	:	
INSTINET LLC, LIME TRADING CORP.,	:	
and VIRTU AMERICAS LLC,	:	
	:	
Defendants.	:	
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GARY STEIN, United States Magistrate Judge:

Plaintiff Northwest Biotherapeutics, Inc., a public biotechnology company trading under the symbol “NWBO,” filed this federal securities action against Defendants Canaccord Genuity, LLC, Citadel Securities LLC, G1 Execution Services LLC, GTS Securities LLC, Instinet LLC, Lime Trading Corporation, and Virtu Americas LLC. Plaintiff alleges that Defendants engaged in illegal market manipulation by repeatedly “spoofing” the market for NWBO’s stock.

Pending before the Court is Defendants’ motion to dismiss Plaintiff’s Amended Complaint in its entirety. For the reasons set forth herein, the Court respectfully recommends that Defendants’ motion be **GRANTED** due to Plaintiff’s failure to adequately plead loss causation, and that Plaintiff be given leave to replead.

BACKGROUND

A. The Complaint's Allegations

The allegations below are taken from Plaintiff's First Amended Complaint ("FAC"), filed on April 10, 2023 (Dkt. No. 95), and are accepted as true for purposes of the motion to dismiss. *See R.M. Bacon LLC v. Saint-Gobain Performance Plastics Corp.*, 959 F.3d 509, 512 (2d Cir. 2002).

1. DCVax®-L

Northwest Biotherapeutics Inc. ("NWBO" or "Plaintiff") "is a clinical stage biotechnology company focused on the development of personalized cancer vaccines designed to treat a broad range of solid tumor cancers more effectively than current cancer treatments, and without the side effects of chemotherapy." (FAC ¶¶ 2, 15). NWBO is a publicly traded company whose shares trade "over-the-counter" on OTC Link LLC ("OTC Link") and the NYSE ARCA Global OTC ("Global OTC"). (*Id.* ¶ 15).

NWBO's "lead product" is the DCVax®-L, a cancer vaccine studied on patients suffering from Glioblastoma Multiforme ("GBM"), a lethal form of brain cancer. (*Id.* ¶¶ 2-3). DCVax®-L is a personalized immune therapy made from a sample of the patient's own tumor. (*Id.* ¶ 43). Plaintiff alleges that DCVax®-L has been recognized internationally for its potential to treat individuals with GBM and other cancers. (*Id.* ¶¶ 2-6).

In 2022, DCVax®-L underwent a 331-patient Phase 3 clinical trial for the treatment of GBM. (*Id.* ¶ 3). Plaintiffs allege that both the survival and safety data

from the trial were “excellent,” and that DCVax®-L is expected to have future value beyond the treatment for which it was tested in 2022. (*Id.* ¶¶ 4, 45). “[P]ositive top-line results” from the trial were presented at a conference in New York on May 10, 2022. (*Id.* ¶ 4). On November 17, 2022, results of the trial were published in an article co-authored by 70 physicians in *JAMA Oncology*. (*Id.* ¶ 5). The results of the trial were described by the *Guardian* as “astonishing,” by the *Telegraph* as “the first major breakthrough for decades,” and by CNBC as “offering fresh hope.” (*Id.* ¶ 50 & n.6-8; citations omitted).

Plaintiff claims, however, that “[d]espite the string of encouraging news about” DCVax®-L, NWBO’s share price “has not followed suit,” but instead has dropped. (*Id.* ¶ 7). Plaintiff blames its poor stock performance on “Defendants’ spoofing.” (*Id.*).

2. Spoofing

Spoofing is a form of market manipulation where a market participant “submi[ts] and cancel[s] [] buy and sell orders without the intention to trade in order to manipulate other traders.” (*Id.* ¶ 59; citation omitted). It is, in essence, “high-speed bluffing.” (*Id.* ¶ 58). A market participant, typically utilizing high-frequency trading algorithms, creates the illusion of excess supply or demand by placing so-called “Baiting Orders” into a Limit Order Book (“LOB”) or an Inter-Dealer Quotation System (“IDQS”)¹ “that are not intended to be executed and have

¹ A LOB “is an electronic list of buy and sell orders for specific securities and other financial instruments that . . . lists the number of shares being bid or offered at each price point.” (FAC ¶ 8

no legitimate economic purpose.” (*Id.* ¶¶ 8-9, 55). The purpose of the Baiting Orders is “to generate a response from other market participants to follow the artificial selling or buying trend that the Baiting Orders created.” (*Id.* ¶ 55).

If the spoofer’s goal is to drive the stock price downward, the spoofer enters Baiting Orders to sell, which are intended to “bait” or “trick” other market participants to enter their own sell orders (to avoid suffering losses in a seemingly downward trending market). (*Id.* ¶ 57; quotation omitted). Once the price of the security has been lowered, the spoofer completes “Executing Purchases,” whereby the spoofer buys at the artificially low price. (*Id.*). Immediately thereafter, the spoofer cancels the Baiting Orders and thus “completes the spoofing cycle.” (*Id.*).

The following illustration from the Seventh Circuit’s decision in *United States v. Coscia*, 866 F.3d 782 (7th Cir. 2017), describes a typical spoofing scheme (albeit in the context of commodities markets rather than equity markets):

[C]onsider an unscrupulous trader who wants to *buy* corn futures at \$3.00 per bushel in a market where the current price is \$3.05 per bushel. Under the basic laws of supply and demand, this trader can drive the price downward by placing *sell* orders for large numbers of corn futures on the market at incrementally decreasing prices (*e.g.*, \$3.04, then \$3.03, etc.), until the market appears to be saturated with individuals wishing to sell, the price decreases, and ultimately, the desired purchase price is reached. In short, the trader shifts the market downward through the

n.2). It reflects the direction in which the market price for a security is moving and “is visible to every trader on the exchange.” (*Id.*). “An IDQS provides ‘bid and ask and quotations of participating brokers or dealers . . . which . . . constitute firm bids or offers for at least such minimum numbers of shares or minimum dollar amounts as the [Securities and Exchange] Commission” or other trading venue requires. (*Id.* ¶ 8 n.3 (quoting 15 U.S.C. § 78q-2(b)(2)(C)). Both an LOB and an IDQS reflect to the market whether the price of a security is increasing or decreasing. (*Id.* ¶ 8 & nn.2-3).

illusion of downward market movement resulting from a surplus of supply. . . . [Then], within milliseconds of achieving the desired downward market effect, [the trader] cancels the large [sell] orders.

Id. at 787.

3. Defendants' Alleged Spoofing

Defendants are seven different registered U.S. broker-dealers, some of whom are market makers and all of whom employ high-speed algorithmic computer systems to route orders and execute trades of NWBO shares. (FAC ¶¶ 16, 18, 19, 21-22, 25, 27-28, 30-31, 33, 35, 37). Plaintiff alleges that, between December 5, 2017 and August 1, 2022 (the “Relevant Period”), Defendants collectively submitted 30,464,591 shares of fictitious Baiting Orders on OTC Link and Global OTC, thereby spoofing the market for NWBO stock thousands of times. (*Id.* ¶¶ 1, 65, 68). Plaintiff does not allege that Defendants acted in concert or knew of one another’s supposed spoofing.

Plaintiff alleges Defendants executed a three-part spoofing scheme to depress the price of NWBO stock and purchase shares at artificially low prices, “resulting in large profits.” (*Id.* ¶¶ 61-65). First, over a brief period (the “Baiting Period”), Defendants supposedly submitted large quantities of Baiting Orders to sell NWBO stock, which were not intended to be executed.² (*Id.* ¶¶ 62, 65). The Baiting Orders

² The FAC does not specify whether the Baiting Orders were entered at, above, or below the prevailing best offer. However, counsel for Defendants represented at oral argument that, in a traditional spoofing scheme, the spoofer enters a sell order “slightly above” the prevailing best offer. (Oral Arg. Tr. at 7:25-8:10). Plaintiff did not object to this explanation of spoofing.

led to a “substantial sell-side imbalance” in Defendants’ order flow and allegedly created artificial selling pressure, inducing “unknowing market participants” to sell their NWBO stock. (*Id.* ¶ 66). Second, Defendants took advantage of the artificially depressed price of NWBO shares by placing Executing Purchases for a total of 19,300,908³ shares below the “prevailing best offer” before entry of the Baiting Orders.⁴ (*Id.* ¶¶ 63, 67). Third, immediately after the Executing Purchases and “within one to two minutes, and at times seconds and even milliseconds” after placing the Baiting Orders, Defendants cancelled the Baiting Orders. (*Id.* ¶¶ 64, 276-77).

Plaintiff further alleges that Defendants hid their spoofing by “parking” fictitious Baiting Orders, which involves “placing [baiting] orders behind [i.e., at a less competitive price than] orders placed by other unsuspecting traders for some period of time.” (*Id.* ¶ 262). Parking sell-orders is a way to exert pressure on the market for a stock, while making it “highly unlikely” those sell orders will ever be executed. (*Id.* ¶¶ 86 & n.18, 263, 265).

For example, Plaintiff claims that on May 10, 2022, GTS Securities LLC (“GTS”) submitted 4,000 Baiting Orders at a price of \$0.5985 per share. (*Id.* ¶ 264). GTS supposedly “parked” these orders behind orders from Celadon Financial Group

³ This number refers to the alleged total number of shares purchased by all Defendants throughout the Relevant Period. (*See* FAC ¶ 65).

⁴ An offer is an order to sell; a bid is an order to buy. *See Coscia*, 866 F.3d at 787. As discussed *infra*, the specific “prevailing best offers” alleged in the FAC refer to the “best offer immediately prior to the Executing Purchase” (FAC Exh. 1 at 1 n.3), not the best offer that existed prior to entry of the Baiting Orders.

LLC (an unrelated market participant) that had placed orders to sell as low as \$0.5650 per share. (*Id.*) GTS' parking supposedly ensured that its orders to sell were unlikely to be executed, while still exerting downward pressure on the market. (*Id.* ¶ 265).

The FAC includes a 208-page exhibit ("Exhibit 1"), broken down by each Defendant, detailing 2,849 instances of purported spoofing ("Spoofing Episodes") during the Relevant Period. (*See id.* ¶ 10; *id.* Exh. 1). For each Spoofing Episode, Exhibit 1 shows, *inter alia*, the volume (by shares) and prices of alleged Baiting Orders, the volume (by shares) and price of an illustrative Executing Purchase, and the alleged price impact of the spoofing, measured by a "peak-to-trough" or "price decline" formula created by Plaintiff. (*Id.* ¶ 75, p. 22 n.12; *id.* Exh. 1 at 1).

The FAC also makes several statistical assertions, including that, during Baiting Periods, Defendants "submitted significantly more sell-side share orders per each Executing Purchase than for 'non-spoofed' executed purchases"—an average of 17,170 sell-side shares per Executing Purchase versus an average of only 1,879 shares for market participants who are not accused of spoofing. (*Id.* ¶ 69). Defendants also allegedly "cancelled significantly more sell-side orders [during Spoofing Episodes] than after non-spoofed executed purchases"—an average of 16,681 sell-side shares out of an average created volume of 17,170 sell-side shares, or 97.15%, versus 767 shares out of an average created volume of 1,879 shares, or 40.82%, for non-spoofing market participants during the same time window (the "Cancellation Period"). (*Id.* ¶ 70).

In other words, Plaintiff alleges, “when spoofing the market, Defendants injected exponentially more artificial sell-side order flow prior to buying shares, as measured by: (1) the volume of sell-side order flow (814% higher); (2) the cancellation of that order flow (2,074% higher); and (3) the greater share of cancelled sell-side order flow (97.15% vs. 40.82%).” (*Id.* ¶ 71).

Defendants supposedly profited from their spoofing by purchasing NWBO shares via the Executing Purchases “at artificially depressed prices,” and then selling the shares at a higher price “in order to . . . convert profits from spoofing into cash.” (*E.g., id.* ¶¶ 89, 103, 117, 131, 145, 185, 192). NWBO also alleges that Defendants profited by collecting “commissions, fees, or other forms of compensation” associated with trading on behalf of clients. (*Id.* ¶ 287).

4. Specific Instances of Spoofing

The FAC details sixteen Spoofing Episodes (“Example Episodes”) that occurred on eleven trading days between October 2020 and May 2022. (*Id.* ¶¶ 75-261). For each of the eleven trading days,⁵ Plaintiff provides totals for the number of Spoofing Episodes that occurred that day, the share volume of Baiting Orders, the share volume of Executing Purchases, and the average price decline, along with metrics regarding the volume of sell-side orders and the cancellation of those orders. (*See, e.g., id.* ¶¶ 76-82). Each Example Episode pertains to a particular Defendant.

⁵ The trading days discussed in the FAC are: October 12, 2020, October 15, 2020, October 20, 2020, October 27, 2020, November 2, 2020, November 18, 2020, December 24, 2020, February 1, 2021, May 17, 2021, May 9, 2022, and May 10, 2022. (*Id.* ¶¶ 75-261).

Plaintiff describes the share volume of Baiting Orders placed by that Defendant within a two-minute interval,⁶ Executing Purchases made at the end of that interval, the cancellation of the Baiting Orders following the Executing Purchases, and subsequent sales of NWBO stock after the Spoofing Episode. (*See, e.g., id.* ¶¶ 83-89).⁷

For example, the FAC alleges that on October 12, 2020, four Defendants engaged in a total of 28 spoofing episodes over the course of the day. (*Id.* ¶ 77). In the aggregate, those Defendants submitted 472,291 shares of Baiting Orders, which Plaintiff alleges drove down the price of NWBO stock by -3.108% on average. (*Id.* ¶ 76). Defendants then “rapidly reversed course” and made Executing Purchases for a total of 110,352 shares below the prevailing best offer prior to entry of the Baiting Orders. (*Id.*). Shortly thereafter, Defendants cancelled all the Baiting Orders. (*Id.*).

⁶ At oral argument, Plaintiff’s counsel clarified that the two-minute Baiting Periods do not necessarily mean that the first Baiting Order was placed at the beginning of that interval and the last Baiting Order placed at the end. Rather, each Example Episode uses a two-minute interval to signify that the Baiting Orders all took place at some (unspecified) point during the interval. (Oral Arg. Tr. at 97:4-19).

⁷ The FAC relies on “detailed trading records” from OTC Link and Global OTC. (FAC ¶ 75). Plaintiff notes that other orders were placed on “OTC Link ETN, an anonymous electronic communication network.” (*Id.* ¶ 75 n.14). These orders are not identified in the FAC and do not impact the allegations therein. (*Id.*).

Furthermore, the way in which Plaintiff identified market participants differs between Global OTC and OTC Link. (*Id.*). Global OTC is deanonymized, meaning that executions are “attributable to market participants.” (*Id.*). Thus, Plaintiff used public order-execution messages displayed on Global OTC to identify Executing Purchases effectuated on that exchange. (*Id.*). By contrast, to identify Executing Purchases made on OTC Link, “Plaintiff matched anonymized transactions from FINRA to changes in displayed OTC Link quotes: if a transaction is followed by a change in a market participant’s bid within five seconds that is equal in volume and price to that of the transaction, the Executing Purchase is attributed to that market participant.” (*Id.*).

During the Baiting Periods on October 12, 2020, the four Defendants submitted new sell-side orders for an average of 22,583 shares per Executing Purchase (versus an average of 6,006 shares per purchase for non-spoofed transactions by market participants). (*Id.* ¶ 78). During the Cancellation Periods, Defendants cancelled an average of 24,537 shares in sell-side orders, or 108.7% of the created volume of 22,583 sell-side shares (versus 18.2% for non-spoofed transactions by market participants). (*Id.* ¶ 79).

Plaintiff also alleges imbalances in the four Defendants' order books during the Spoofing Episodes on October 12, 2020. (*See id.* ¶ 82). According to the FAC, during the Baiting Periods that day, Defendants posted a median of 106% more new sell-side orders than new buy-side orders. (*Id.*). During the Cancellation Periods, Defendants cancelled a median of 97% of their sell-side orders created during the Baiting Periods, yet only cancelled a median of 61% of the buy-side orders. (*Id.*). Plaintiff claims this "asymmetry in order cancellation rates" is "inconsistent with *bona fide* market making," which involves purchases and sales in roughly comparable amounts with the broker-dealer remaining roughly market neutral. (*Id.*).

The Example Episode for October 12, 2020 involves Defendant Citadel Securities LLC ("Citadel"). Plaintiff alleges that during the Baiting Period from 14:18:25 to 14:20:25, Citadel placed 10,850 shares of Baiting Orders at prices ranging from \$1.05 to \$1.03 per share. (*Id.* ¶ 84). Citadel allegedly "parked" its Baiting Orders behind orders placed by other, unsuspecting traders. (*Id.* ¶ 86).

Plaintiff further alleges that from 14:18:25 to 14:20:25, Citadel did not sell any shares of NWBO⁸ (*id.* ¶ 85), and that at 14:20:25 (*i.e.*, at the end of the Spoofing Episode), the best bid and offer for NWBO was a bid to purchase 5,000 shares at a price of \$1.02 per share and an offer to sell 5,100 shares at a price of \$1.04 per share (*id.* ¶ 83).

At 14:20:25, Citadel executed Executing Purchases and bought 100 shares of NWBO at a price of \$1.02 per share, “which was below the prevailing best offer of \$1.04 per share.” (*Id.* ¶ 87). Within 2.514 seconds, Citadel then began to cancel its Baiting Orders, all of which were cancelled by 14:22:25 (two minutes after the Baiting Period ended). (*Id.* ¶ 88). After doing so, Citadel’s order book position substantially favored the buy-side, “dramatically reversing” the position it held at the end of the Baiting Period, which favored the sell-side. (*Id.* ¶¶ 84, 88). At 14:32:35, after the Spoofing Period, Citadel sold NWBO shares at a price of \$1.05 per share, representing a return of 2.941% on its Executing Purchases made at \$1.02 per share. (*Id.* ¶ 89).⁹

⁸ Plaintiff alleges in the alternative that “even if [Citadel] sold some NWBO shares during this episode, such sales would be consistent with [Citadel’s] conversion of spoofing profits into cash.” (*Id.*).

⁹ The FAC also calculates Citadel’s return based on a pre-Spoofing Episode sale of NWBO stock by Citadel “if” that sale created a short position closed out by the Executing Purchase. (*Id.*). The same type of hypothetical short-sale allegation is made for many of the other Example Episodes. (*E.g., id.* ¶¶ 117, 131). But the FAC never alleges that Defendants engaged in such short sales, nor does it allege that engaging in short sales in anticipation of a spoofing episode is a feature of spoofing schemes in general or Defendants’ spoofing in particular. Consequently, the Court does not place weight on the FAC’s hypothetical short-selling allegations.

5. Plaintiff's Alleged Damages

NWBO alleges that it suffered damages from Defendants' alleged spoofing because it sold its own shares on hundreds of occasions during the Relevant Period (*id.* ¶¶ 288-96; *id.* Exh. 2) “in reliance on an assumption of an efficient market free of manipulation.” (*Id.* ¶ 301; *see also id.* ¶ 308). NWBO avers that despite its assumption, these transactions took place at “artificially depressed prices” resulting from Defendants' alleged manipulation of NWBO's stock price. (*Id.* ¶¶ 11, 288, 301).

Specifically, the FAC pleads that NWBO sold over 283 million shares of its stock in hundreds of distinct transactions during the Relevant Period. (*Id.* ¶¶ 11, 288-89; *see id.* Exh. 2). Of these, more than 49 million shares allegedly were sold at prices “formulaically derived from the closing price on dates where Spoofing Episodes occurred.” (*Id.* ¶¶ 11, 289). But Plaintiff maintains that all 283 million shares were sold at “artificially depressed” prices (*id.* ¶ 288)—based on the theory that Defendants' spoofing had “both a temporary and long-term adverse effect” on the price of NWBO's stock. (*Id.* ¶ 292; *see also id.* ¶ 60). The impact of the spoofing activity “extended beyond the specific spoofing cycle,” according to Plaintiff, “because the market neither immediately nor fully rebounded from the manipulated prices once each of the Spoofing Episodes was completed.” (*Id.* ¶ 293). Thus, the prices at which NWBO sold its stock throughout the Relevant Period were negatively affected “regardless” of the temporal proximity between the sales and Spoofing Episodes. (*Id.* ¶ 294).

6. Plaintiff's Causes of Action

Based on the foregoing, Plaintiff brings four claims against Defendants. First, Plaintiff alleges that Defendants violated Section 10(b) of the Securities Exchange Act of 1934 (“Exchange Act”) and Rule 10b-5(a) and (c) promulgated thereunder by manipulating the market price of NWBO shares. (*Id.* ¶¶ 299-301). Second, Plaintiff alleges Defendants violated Section 9(a)(2) of the Exchange Act by engaging in a series of manipulative transactions in NWBO securities that depressed the prices of those securities for the purpose of inducing other market participants to sell such securities. (*Id.* ¶¶ 302-05). Third, Plaintiff brings a claim for New York common law fraud. (*Id.* ¶¶ 306-09). Fourth, Plaintiff advances a claim for injunctive relief, seeking to permanently enjoin Defendants from engaging in “spoofing conduct that affects NWBO’s share price.” (*Id.* ¶¶ 310-14).

B. Procedural History

Plaintiff commenced this action by filing the original complaint (“Complaint”) on December 1, 2022. (Dkt. No. 1). Defendants moved to dismiss the Complaint on March 20, 2023. (Dkt. No. 85). On April 10, 2023, while Defendants’ motion was pending, Plaintiff filed the FAC. (Dkt. No. 95). On June 12, 2023, Citadel sought leave to move for Rule 11 sanctions against Plaintiff (Dkt. No. 110), to which Plaintiff replied on June 14, 2023 (Dkt. No. 111). On June 15, 2023, Magistrate Judge Gorenstein, to whom the motion to dismiss was referred, directed Defendants to refrain from filing a Rule 11 motion until the motion to dismiss the FAC (which Defendants indicated was forthcoming) was decided. (Dkt. No. 113).

On July 12, 2023, Defendants filed a motion to dismiss the FAC (Dkt. No. 114) accompanied by a memorandum of law (Dkt. No. 115 (“Def. Br.”)), counsel’s declaration (Dkt. No. 116) and supporting exhibits (Dkt. Nos. 116-1–116-28). Plaintiff opposed the motion on August 25, 2023 (Dkt. No. 123 (“Pl. Br.”)) and Defendants replied on September 27, 2023 (Dkt. No. 124 (“Reply”)).

Plaintiff thereafter submitted a notice of supplemental authority (Dkt. No. 127) alerting the Court to Judge Schofield’s September 28, 2023 decision in *Harrington Global Opportunity Fund, Ltd. v. CIBC World Markets Corp.*, No. 21 Civ. 761 (LGS), 2023 WL 6316252 (S.D.N.Y. Sept. 28, 2023), to which Defendants responded on October 6, 2023 (Dkt. No. 128).

Oral argument was held before the undersigned (to whom the matter was reassigned) on November 14, 2023. In response to a question asked by the Court during argument, the parties submitted letters on November 20 and November 22, 2023 addressing whether the Court should consider certain trading data submitted by Defendants in support of their motion to dismiss. (Dkt. Nos. 133, 136).

LEGAL STANDARDS

A. Motion to Dismiss for Failure to State a Claim

Under Fed. R. Civ. P. 12(b)(6), a complaint may be dismissed for “failure to state a claim upon which relief can be granted.” “To survive a motion to dismiss, a complaint must contain sufficient factual matter, accepted as true, to ‘state a claim that is plausible on its face.’” *Ashcroft v. Iqbal*, 556 U.S. 662, 678 (2009) (quoting *Bell Atlantic Corp. v. Twombly*, 550 U.S. 554, 570 (2007)). A claim is plausible

“when the plaintiff pleads factual content that allows the court to draw the reasonable inference that the defendant is liable for the misconduct alleged.” *Iqbal*, 556 U.S. at 678. The factual allegations “must be enough to raise a right to relief above the speculative level.” *Twombly*, 550 U.S. at 555; *see also Iqbal*, 556 U.S. at 678 (complaint must raise “more than a sheer possibility that a defendant has acted unlawfully”).

In considering a motion to dismiss under Rule 12(b)(6), the Court must “accept[] all factual allegations in the complaint as true” and “draw[] all reasonable inferences in the plaintiff’s favor.” *Palin v. New York Times Co.*, 940 F.3d 804, 809 (2d Cir. 2019) (citation omitted). Courts need not, however, consider “conclusory allegations or legal conclusions couched as factual allegations.” *Dixon v. von Blanckensee*, 94 F.3d 95, 101 (2d Cir. 2021) (citation omitted); *see also Iqbal*, 556 U.S. at 678 (“Threadbare recitals of the elements of a cause of action, supported by mere conclusory statements, do not suffice.”).

Determining whether a plausible claim has been pled is “a context-specific task” that requires the court “to draw on its judicial experience and common sense.” *Iqbal*, 556 U.S. at 679; *Herrera v. Comme des Garçons, Ltd.*, 84 F.4th 110, 113 (2d Cir. 2023). However, “Rule 12(b)(6) does not countenance . . . dismissals based on a judge’s disbelief of a complaint’s factual allegations.” *Twombly*, 550 U.S. at 556. The court’s task “is to assess the legal feasibility of the complaint; it is not to assess the weight of the evidence that might be offered on either side.” *Lynch v. City of N.Y.*, 952 F.3d 67, 75 (2d Cir. 2020).

B. Heightened Pleading Standards for Securities Fraud

Securities fraud complaints alleging market manipulation are subject to heightened pleading requirements, in two respects. *ATSI Commc'ns, Inc. v. Shaar Fund, Ltd.*, 493 F.3d 87, 99 (2d Cir. 2007). First, the complaint must satisfy Federal Rule of Civil Procedure 9(b). *Id.*; see Fed. R. Civ. P. 9(b) (“the circumstances constituting fraud . . . shall be stated with particularity”). “Because a claim for market manipulation is for fraud, it must be pled with particularity under Rule 9(b).” *ATSI*, 493 F.3d at 101.¹⁰ However, because a claim for manipulation “can involve facts solely within the defendant’s knowledge,” the complaint “need not plead manipulation to the same degree of specificity as a plain misrepresentation claim.” *Id.* at 102.

Second, the complaint must satisfy the heightened standard imposed by the Private Securities Litigation Reform Act (“PSLRA”) for pleading scienter: namely, that the complaint “state with particularity facts giving rise to a strong inference that the defendant acted with the required state of mind.” 15 U.S.C. §78u-4(b)(2); see *ATSI*, 493 F.3d at 99. “This pleading requirement is particularly important in

¹⁰ The *ATSI* decision concerned a single claim under the Exchange Act’s antifraud provision, Section 10(b). Here, NWBO also asserts a claim under Section 9(a)(2), the anti-manipulation provision. Courts have applied Rule 9(b) to manipulation claims under Section 9(a)(2) where, as here, the claim rests on the same factual allegations supporting a Section 10(b) claim. See *Baxter v. A.R. Baron & Co.*, No. 94 Civ. 3913 (JGK), 1995 WL 600720, at *8 (S.D.N.Y. Oct. 12, 1995); see also *In re LIBOR-Based Fin. Instruments Antitrust Litig.*, 935 F. Supp. 666, 713-14 (S.D.N.Y. 2013) (applying Rule 9(b) to market manipulation claim under Section 9(a)(2) of the Commodity Exchange Act where claim alleged that defendants’ quotes “misled the market” and thus “sound[ed] in fraud”), *vacated on other grounds by Gelbiom v. Bank of Am. Corp.*, 823 F.3d 759 (2d Cir. 2016). NWBO does not dispute the applicability of Rule 9(b) to its Section 9(a)(2) claim.

manipulation claims because in some cases scienter is the only factor that distinguishes legitimate trading from improper manipulation.” *ATSI*, 493 F.3d at 102. “For an inference of scienter to be strong, ‘a reasonable person [must] deem [it] cogent and *at least as compelling* as any opposing inference one could draw from the facts alleged.” *ATSI*, 493 F.3d at 99 (quoting *Tellabs, Inc. v. Makor Issues & Rts., Ltd.*, 551 U.S. 308, 314 (2007) (emphasis in original)).¹¹

C. Materials Considered on a Motion to Dismiss

“In considering a motion to dismiss for failure to state a claim pursuant to Rule 12(b)(6), a district court may consider the facts alleged in the complaint, documents attached to the complaint as exhibits, and documents incorporated by reference in the complaint.” *DiFolco v. MSNBC Cable LLC*, 622 F.3d 104, 111 (2d Cir. 2010). Further, “[w]here a document is not incorporated by reference, the court may [still] consider it where the complaint ‘relies heavily upon its terms and effect,’ thereby rendering the document ‘integral’ to the complaint.” *Id.* (quoting *Mangiafico v. Blumenthal*, 471 F.3d 391, 398 (2d Cir. 2006)). However, even if a document is integral to the complaint, it must also be clear that “no dispute exists regarding the authenticity or accuracy of the document” and that “there exist no

¹¹ The PSLRA also contains its own heightened standard for pleading misstatements and omissions with particularity. *See* 15 U.S.C. §78u-4(b)(2). This part of the PSLRA, however, does *not* apply to NWBO’s market manipulation claim, which is predicated on an alleged violation of Rule 10b-5(a) and (c) rather than actionable misrepresentations and omissions under Rule 10b-5(b). (FAC at 111). *See Brown v. Cerberus Cap. Mgmt.*, No. 15 Civ. 9022, 2016 WL 7377271, at *6 (S.D.N.Y. Dec. 12, 2016) (“The PSLRA’s pleading requirements regarding misleading statements and omissions do not apply to claims that . . . are based on alleged violations of Rule 10b-5(a) and (c).”) (quoting *In re Parmalat Sec. Litig.*, 376 F. Supp. 2d 472, 492 (S.D.N.Y. 2005)). The parties agree on this point. (Oral Arg. Tr. at 7:1-15).

material disputed issues of fact regarding the relevance of the document.” *Id.* (quoting *Faulkner v. Beer*, 463 F.3d 140, 134 (2d Cir. 2006)). “[T]he requirement that there be no dispute about the authenticity of documents integral to the complaint has been interpreted strictly: even implicit, conclusory, contradictory, or implausible objections to the authenticity or accuracy of a document render consideration impermissible.” *Savides v. United Healthcare Servs., Inc.*, No. 18 Civ. 4621 (LGS), 2019 WL 1173008, at *2 (S.D.N.Y. Mar. 13, 2019) (citation omitted).

It is also proper to consider “matters of which a court may take judicial notice” pursuant to Federal Rule of Evidence 201(b). *Tellabs*, 551 U.S. at 322. For example, when ruling on a motion to dismiss in a federal securities action, courts often take judicial notice of the contents of relevant public disclosure documents filed with the Securities and Exchange Commission (“SEC”). *See, e.g., In re AppHarvest Secs. Litig.*, No. 21 Civ. 7985 (LJL), 2023 WL 4866233, at *17 (S.D.N.Y. July 31, 2023) (citing *Kramer v. Time Warner Inc.*, 937 F.2d 767, 773 (2d Cir. 1991)). “However, “[w]hen a court takes judicial notice of a document on a motion to dismiss, it should generally do so only to determine what statements the documents contain [and] not for the truth of the matters asserted.” *Id.* (quoting *Lateral Recovery, LLC v. Cap. Merch. Servs., LLC*, 632 F. Supp. 3d 402, 436 (S.D.N.Y. 2022)).

Regarding other extraneous materials, the Federal Rules are clear:

[i]f . . . matters outside the pleading are presented to and not excluded by the court, the motion must be treated as one for summary judgment under Rule 56, [and] [a]ll parties must be given a reasonable

opportunity to present all the material that is pertinent to the motion. Fed. R. Civ. P. 12(d). This so-called “conversion rule” is “strictly enforced” and “mandatory.” *Glob. Network Commc’ns, Inc. v. City of N.Y.*, 458 F.3d 150, 155 (2d Cir. 2006).

DISCUSSION

A. Consideration of Defendants’ Exhibits

Defendants attach twenty-eight exhibits to counsel’s declaration that they argue are properly before the Court on their motion to dismiss. (Dkt. Nos. 116-1–116-28). These exhibits are: a statement by a Commissioner of the SEC regarding the structure of U.S. equity markets (Exhibit 1); an article published by *STAT+* about the results of the DCVax®-L Phase 3 trial (Exhibit 2); excerpts from NWBO’s 2019 and 2020 Form 10-Ks and 2016 Form 8-K (Exhibits 3-5); historical stock prices for NWBO at the beginning and end of the Relevant Period (Exhibit 6); materials from the SEC and OTC Markets Group websites concerning over-the-counter markets (Exhibits 7-10); and quote and trade data from OTC Markets Group (“OTC Link Data”)¹² (Exhibits 11-28). As none of these documents are attached to the FAC, the Court must determine, as a threshold matter, which (if any) may be considered in deciding the instant motion.

¹² OTC Markets Group Inc. is the parent company of OTC Link. *OTC Link LLC*, U.S. Sec. & Exch. Comm’n, <https://www.sec.gov/answers/pink.htm> (last visited Dec. 26, 2023).

1. OTC Link Data (Exhibits 11-28)

The Court will begin with Exhibits 11-28, the OTC Link Data.¹³ Exhibits 11-27 show bids and offers displayed by market participants on OTC Link during the Example Episodes described in the FAC, and on one other occasion. Exhibit 28 shows anonymized sales of NWBO stock on one of those dates at a particular time. Defendants represent that this data are publicly available and were pulled directly from OTC Link “as is,” without any modification. (Oral Arg. Tr.¹⁴ at 100:10-17).

Defendants strongly urge that the Court consider the OTC Link Data, which they contend “contradicts,” “refutes,” and “disproves” Plaintiff’s allegations. (Def. Br. at 16¹⁵ n.23, 20-21, 36; Reply at 23-25; Dkt. No. 133). Defendants advance two theories as to how the Court may consider such data: (1) the data are “integral to the complaint;” and (2) the data are subject to judicial notice. (Def. Br. at 36; Dkt. No. 133 at 2-3). The Court finds that neither of these exceptions to the Rule 12(d) conversion rule applies and that the Court therefore cannot consider this material on the motion to dismiss.¹⁶

¹³ Defendants do not provide trading data from Global OTC, nor do they argue that Plaintiff’s conclusions drawn from the Global OTC trading data are refuted by any record extraneous to the FAC.

¹⁴ Citations in this form refer to the transcript of the oral argument held before the undersigned on November 14, 2023.

¹⁵ All page numbers cited herein refer to the original pagination on the parties’ submissions, as opposed to the page numbers assigned by ECF.

¹⁶ Defendants request that, if the Court concludes it cannot consider the trading data “without converting the instant motion to one for summary judgment,” it should “disregard the information and treat the motion as a motion to dismiss.” (Def. Br. 36 n.37). The Court will do just that.

In support of their claim that the data are “integral” to the FAC, Defendants argue that Plaintiff relied heavily on quote and trade data from OTC Link in preparing the FAC. However, Defendants contend, Plaintiff “cherry picked” data that was favorable to it, and the Court should therefore consider all the bid and offer quotes on the dates in question and find that it refutes Plaintiff’s claims. (Def. Br. at 36). Because Defendants’ argument would stretch the “integral-to-the-complaint” doctrine well beyond its proper bounds, it must be rejected.

The Second Circuit recently revisited this doctrine in *Lynch v. City of New York*, 952 F.3d 67 (2d Cir. 2020). In *Lynch*, the court held that a memo book maintained by a police officer-defendant—which plaintiff clearly relied upon when drafting his complaint—could not be considered in deciding the defendant’s motion to dismiss. *Id.* at 78-79. Rejecting plaintiff’s contention that the factual statements in the memo book were part of, and “integral to,” the complaint, the court ruled that the memo book did not qualify under the doctrine because it was not a “written instrument,” which the court defined as generally referring to “a legal document that defines rights, duties, entitlements, or liabilities, such as a statute, contract, will, promissory note, or share certificate.” *Id.* (quoting *Smith v. Hogan*, 794 F.3d 249, 254 (2d Cir. 2015)). The court found that the memo book was “plainly” not such an instrument, as plaintiff could not rely on it to “defin[e] rights, duties, entitlements, or liabilities.” *Id.* at 79.

In an opinion examining *Lynch* in *Doe v. New York University*, No. 20 Civ. 01343 (GHW), 2021 WL 1226384 (S.D.N.Y. Mar. 31, 2021), Judge Woods held that

Lynch's limitation of the integral-to-the-complaint doctrine to written instruments "was not dicta" but instead was "essential to the court's holding." *Id.* at *11. And in reviewing Second Circuit precedent, Judge Woods could "not identif[y] any published opinion in which the Circuit has embraced as 'integral' a document that cannot reasonably be characterized as a written instrument." *Id.* *11 n.6.

Applying *Lynch*, the *Doe* court declined to consider, on a motion to dismiss, the full evidentiary record of a disciplinary hearing at which the plaintiff had been found to have harassed another student, even though plaintiff "relied heavily" on the record in his complaint. *Id.* at *12-14. The evidentiary record "clearly" was not a "written instrument." *Id.* at *14. Moreover, the defendant was asking the court "to evaluate the evidence presented [in the evidentiary record], to weigh that evidence, and to conclude that the evidence contradicts Plaintiff's allegations." *Id.* at *12. This, Judge Woods found, was "an invitation to error:" such materials were "outside of the pleadings" and may only be evaluated "in the context of a motion for summary judgment." *Id.* (citing *Glob. Network Commc'ns*, 458 F.3d at 156).

The same conclusion is compelled here. Plainly, bid and offer quotes and trade data are not "written instruments" on which Defendants "rely as defining rights, duties, entitlements, or liabilities." *Doe*, 2021 WL 1226384, at *11. Moreover, Defendants are explicit in urging the Court to consider the OTC Link Data for their truth and to find as a factual matter that they contradict Plaintiff's factual allegations. According to Defendants, the data show that the Baiting Orders "were always competitively priced," that there was no "parking" at all, and that the

price of NWBO stock “actually *went up* during many of NWBO’s alleged Spoofing Episodes.” (Def. Br. at 36-38 (emphasis in original); Dkt. No. 133 at 2). In other words, as in *Doe*, Defendants’ purpose in presenting the OTC Link Data “is plain—Defendant[s] ask[] the Court to evaluate the evidence . . . , to weigh that evidence, and to conclude that the evidence contradicts Plaintiff’s allegations.” *Doe*, 2021 WL 1226384, at *12.

As in *Doe*, considering such data would be “an invitation to error” that the Court must decline. *Doe*, 2021 WL 1226384, at *12; *see also Madej v. Yale Univ.*, No. 3:20-CV-133 (JCH), 2021 WL 148888, at *5 (D. Conn. Jan. 15, 2021) (“the incorporation-by-reference exception is not a mechanism for responding to all situations where a plaintiff withholds damaging information from a complaint In many circumstances, the proper recourse for a complaint that withholds other types of information is to move for summary judgment, following discovery”).

In addition, Plaintiff challenges the accuracy, completeness, and relevance of the data submitted by Defendants and whether the data show what Defendants contend they show. (Pl. Br. at 39-40). For example, Plaintiff claims that despite Defendants’ contention that Exhibit 11 shows that the price of NWBO stock went up during the Example Episode on October 12, 2020, in fact the price went down. (Pl. Br. at 40 n.60). For this independent reason, the Court will not consider the OTC Link Data, as it is not “clear on the record that no dispute exists regarding” the accuracy of the trading records and Plaintiff raises “disputed issues of fact”

concerning the relevance of the records. *See DiFolco*, 622 F.3d at 111; *Faulkner*, 463 F.3d at 134; *Savides*, 2019 WL 1173008, at *2.

Defendants cite no case applying the “integral-to-the-complaint” doctrine under circumstances like those present here. To the contrary, the cases upon which Defendants rely (Def. Br. at 36; Reply at 24-25) deal with contracts and similar legal documents. *See Goel v. Bunge, Ltd.*, 820 F.3d 554, 559 (2d Cir. 2016) (“in most instances where th[e] [integral-to-the-complaint] exception is recognized, the incorporated material is a contract or other legal document containing obligations upon which the plaintiff’s complaint stands or falls”) (quoting *Glob. Network Commc’ns*, 458 F.3d at 157); *Cortec Indus., Inc. v. Sum Holding L.P.*, 949 F.2d 42, 46-48 (2d Cir. 1991) (considering warrant to purchase shares, offering memorandum, and stock purchase agreement); *Jurupa Valley Spectrum, LLC v. Nat’l Indem. Co.*, No. 06 Civ. 4023 (DLC), 2007 WL 1862162, at *5 (S.D.N.Y. June 29, 2007) (considering endorsement that amended insurance contracts at issue).

The Court next considers whether it can take judicial notice of the OTC Link Data. “Under Rule 201(b) of the Federal Rules of Evidence, a court may take judicial notice of ‘a fact that is not subject to reasonable dispute because it . . . can be accurately and readily determined from sources whose accuracy cannot reasonably be questioned.’” *Sharette v. Credit Suisse Int’l*, 127 F. Supp. 3d 60, 75 (S.D.N.Y. 2015) (quoting Fed. R. Evid. 201(b)).

Here, however, as noted above, Plaintiff disputes the accuracy and completeness of the quote data submitted by Defendants and vigorously disagrees

with Defendants' interpretation of the data. (Pl. Br. at 37 ("a dispute exists regarding the accuracy and completeness of the [trading] data"); *id.* at 40 n.60 (challenging Defendants' assertion that the data in Exhibit 11 refutes its allegations); Dkt. No. 136 at 3 ("as Plaintiff's Opposition Brief makes clear, the full set of trading data . . . shows the opposite [of what Defendants' contend]"). The data takes the form of spreadsheets comprising thousands of individual bids and offers arrayed over twenty columns whose meaning is unexplained and unclear (and in some cases incomprehensible) to the Court (*e.g.*, "Last Updated Time," "Update MMID," "Reason for Inside"). (*E.g.*, Dkt. No. 116-11). This is not the stuff of which judicial notice is made. *See, e.g., Abdullahi v. Pfizer, Inc.*, 77 F. App'x 48, 52-53 (2d Cir. 2003) ("The plaintiffs' understanding . . . conflicts with the interpretation that [defendant] wishes us to draw from the [documents] and this dispute is impossible for us to resolve based on the record before us. As such, this would be an inappropriate fact for judicial notice.") (citing *Weinstein's Federal Evidence* § 201.13[1][b] ("Courts will not take judicial notice of factual propositions that are subject to reasonable dispute, even if they appear as allegations in pleadings, trial testimony, or findings of fact in judgments.")); *SEC v. Ripple Labs, Inc.*, No. 20 Civ. 10832 (AT) (SN), 2022 WL 748150, at *3 n.3 (S.D.N.Y. Mar. 11, 2022) (declining to take judicial notice of public report where defendant disputed plaintiff's interpretation of its analysis and conclusions); *Oklahoma Firefighters Pension & Ret. Sys. v. Lexmark Int'l, Inc.*, 367 F. Supp. 3d 16, 29 (S.D.N.Y. 2019) ("inappropriate" to take judicial notice of slide decks that accompanied key calls

made by defendant's CEO where "Plaintiffs represent that they disagree with Defendants' factual interpretation of [the slide decks]").

Furthermore, when judicial notice is taken of a document in a federal securities action, the document typically may be considered only for the fact that it exists, not for the truth of its contents. *See In re AppHarvest Secs. Litig.*, 2023 WL 4866233, at *17. But Defendants here ask the Court to consider and analyze the OTC Link Data to establish the truth of key factual assertions made in their motion to dismiss. This is not the province of a court on a motion to dismiss. *See Glob. Network Commc'ns*, 548 F.3d at 157 (district court's analysis of extraneous material to provide basis for court's factual finding on motion to dismiss was "not appropriate under the judicial notice exception to the conversion requirement"); *In re Sanofi-Aventis Sec. Litig.*, 774 F. Supp. 2d 549, 559 (S.D.N.Y. 2011) ("The task of the court in ruling on a motion to dismiss is to assess the legal feasibility of the complaint, not to assay the weight of the evidence which might be offered in support thereof.") (citation omitted).

Here again, Defendants cite to cases which do not support their position. These cases involve courts taking judicial notice of readily ascertainable and understandable *price* data, typically stock prices of publicly traded securities, without objection from the plaintiff. *See Acticon AG v. China N.E. Petrol. Holdings Ltd.*, 692 F. 3d 34, 37 n.1 (2d Cir. 2012) (taking judicial notice of "well publicized stock prices"); *Ganino v. Citizens Utils. Co.*, 228 F.3d 154, 167 & n.1 (2d Cir. 2000) (same); *In re IPO Sec. Litig.*, 383 F. Supp. 2d 566, 583-86 (S.D.N.Y. 2005) (same);

LCM XXII Ltd. v. Serta Simmons Bedding, LLC, No. 21 Civ. 3987 (KPF), 2022 WL 953109, at *1 (S.D.N.Y. Mar. 29, 2022) (loan pricing data from information services provider Markit); *Set Cap. LLC v. Credit Suisse Grp. AG*, No. 18 Civ. No. 2268 (AT) (SN), 2019 WL 3940641, at *7 & n.2 (S.D.N.Y. Aug. 16, 2019) (taking judicial notice of publicly available pricing data for a futures index). The *quote* data offered here, showing hundreds of bids and offers from various different market participants whose meaning is unclear and vigorously disputed by Plaintiff, is not comparable. Thus, the Court will not take judicial notice of Exhibits 11 to 28.

2. Other Documents (Exhibits 1-10)

The Court will, however, consider other exhibits submitted by Defendants in adjudicating the instant motion. The Court will consider Defendants' Exhibit 6, showing NWBO's historic stock prices at the beginning and end of the Relevant Period, which Plaintiff does not contest, and which are regularly considered on a motion to dismiss. *See, e.g., Acticon AG*, 692 F. 3d at 37 n.1. In addition, the Court will consider Defendants' Exhibits 1, 7, 8, 9 and 10, materials relating to the operation of the OTC markets available on the SEC and OTC Markets Group websites. Plaintiff does not contest the Court's consideration of these exhibits.

Likewise, the Court considers Defendants' Exhibit 2, a May 10, 2022 online article published by *STAT+* and authored by Adam Feuerstein regarding the results of the DCVax®-L trial disclosed on that day. The FAC implicitly refers to the Feuerstein article when noting—in discussing NWBO's stock price on May 10, 2022—that “[t]here was at least one news article that appeared that day which, for

reasons unknown at this time, put a negative spin on the trial results . . .” (FAC ¶ 73 n.13). Plaintiff does not contest the Court’s consideration of this article. As such, the Court considers the Feuerstein article, not for the truth of the matters asserted therein, but for the fact that a negative news article appeared that day.

Finally, the Court declines to decide whether judicial notice can be taken of Defendants’ Exhibits 3-5, which are NWBO’s SEC filings, as these documents are immaterial to the Court’s analysis of the instant motion. *See Ganino*, 228 F.3d at 168 n.9 (declining to decide the propriety of taking judicial notice of certain SEC filings where “they would not affect the outcome of [the] case” and were not relied upon in adjudicating the motion).

In sum, the Court will consider Exhibits 1, 2, and 6, 7, 8, 9, and 10. The Court deems immaterial Exhibits 3, 4, and 5 and declines to consider Exhibits 11-28. With the foregoing in mind, the Court now turns to the adequacy of the allegations in the FAC.

B. Elements of Plaintiff’s Market Manipulation Claims

To plead market manipulation under Section 10(b), a plaintiff must allege “(1) manipulative acts; (2) damage; (3) caused by reliance on an assumption of an efficient market free of manipulation; (4) scienter; (5) in connection with the purchase or sale of securities; (6) furthered by the defendant’s use of the mails or any facility of a national securities exchange.” *Set Cap. LLC v. Credit Suisse Grp. AG*, 996 F.3d 64, 76 (2d Cir. 2021) (quoting *ATSI*, 493 F.3d at 101). To plead market manipulation under Section 9(a)(2), a plaintiff must allege “(1) a series of

transactions in a security creating actual or apparent trading in that security or raising or depressing the price of that security, (2) carried out with scienter and (3) for the purpose of inducing the security's sale or purchase by others," *Xu v. Direxion Shares ETF Tr.*, No. 22 Civ. 5090 (VEC), 2023 WL 5509151, at *6 (S.D.N.Y. Aug. 25, 2023) (quoting *Sharette*, 127 F. Supp. 3d at 78), as well as that "the price of the security that is purchased or sold [was] affected by the violation," *id.* (quoting *I.B. Trading, Inc. v. Tripoint Glob. Equities, LLC*, 280 F. Supp. 3d 524, 540 (S.D.N.Y. 2017)).

"The analysis of claims under Section 9(a) [of the Exchange Act] closely parallels the analysis of claims under Section 10(b)." *Stone Family Tr. v. Credit Suisse AG*, 19 Civ. No. 5192 (AT), 2022 WL 954743, at *6 (S.D.N.Y. Mar. 30, 2022). Likewise, the elements of a claim for common law fraud are "essentially the same" as for a claim under Section 10(b). *Meridian Horizon Fund, LP v. Tremont Grp. Holdings, Inc.*, 747 F. Supp. 2d 406, 414 (S.D.N.Y. 2010) (citation omitted). In their briefing, the parties analyze all of Plaintiff's claims under the pleading requirements for a Section 10(b) claim (Def. Br. at 12; Pl. Br. at 16), and the Court will do the same.

Defendants argue that Plaintiff fails to plead a manipulative act, scienter, loss causation, and reliance. The Court will discuss each element in turn.

C. Manipulative Act

Sections 10(b) and 9(a)(2) prohibit "manipulative acts." *Cent. Bank of Denver, N.A. v. First Interstate Bank of Denver, N.A.*, 511 U.S. 164, 177 (1994).

Manipulative acts are “practices . . . that are intended to mislead investors by artificially affecting market activity,” *i.e.*, acts purposefully undertaken to dupe investors into transacting in ways they otherwise would not. *ATSI*, 493 F.3d at 100 (citation omitted); *see Ernst & Ernst v. Hochfelder*, 425 U.S. 185, 199 (1976) (the word “manipulative” connotes “intentional or willful conduct designed to deceive or defraud investors by controlling or artificially affecting the price of securities”).

Second Circuit case law requires “a showing that an alleged manipulator engaged in market activity aimed at deceiving investors as to how other market participants have valued a security.” *ATSI*, 493 F.3d at 100. An act is deceptive “if investors are misled to believe that prices at which they purchase and sell securities are determined by the natural interplay of supply and demand, not rigged by manipulators.” *Id.* (citation omitted). “In identifying activity that is outside ‘the natural interplay of supply and demand,’ courts generally ask whether a transaction sends false pricing signals to the market.” *Id.*; *see also Wilson v. Merrill Lynch & Co.*, 671 F.3d 120, 130 (2d Cir. 2011).

At the motion to dismiss stage, a plaintiff must plead, with particularity and to the extent possible, “what manipulative acts were performed, which defendants performed them, when the manipulative acts were performed, and what effect the scheme had on the market for the securities at issue.” *ATSI*, 493 F.3d at 102; *see In re Longfin Corp. Sec. Class Action Litig.*, No. 18 Civ. 2933 (DLC), 2019 WL 3409684, at *4 (S.D.N.Y. July 29, 2019). As noted above, while Fed. R. Civ. P. 9(b) applies to a market manipulation claim, because such a claim “can involve facts solely within

the defendant’s knowledge,” the plaintiff “need not plead manipulation to the same degree of specificity as a plain misrepresentation claim.” *ATSI*, 493 F.3d at 102.

1. Pattern of Baiting Orders as a Manipulative Act

To plead a cause of action under the securities laws, a plaintiff need not point to a specific written or oral statement; “[c]onduct itself can be deceptive.”

Stoneridge Inv. Partners., LLC v. Scientific-Atlanta, 552 U.S. 148, 159 (2008). Here, Plaintiff alleges that each Defendant engaged in spoofing as a form of market manipulation through a three-step scheme in which Defendants entered Baiting Orders driving the market downward, executed Executing Purchases at the artificially depressed price, and then cancelled the Baiting Orders. (Pl. Br. at 6-7; e.g., FAC ¶¶ 54-59, 63-72).

In recent years, “spoofing” in the securities and commodities markets has been the subject of numerous federal criminal prosecutions and enforcement actions by the SEC and the Commodity Futures Trading Commission (“CFTC”). *See, e.g., United States v. Pacilio*, 85 F.4th 450 (7th Cir. 2023) (affirming fraud convictions for spoofing); *Coscia*, 866 F.3d at 803 (same); *United States v. Trunz*, No. 19 Cr. 375 (WFK), 2023 WL 4238517 (E.D.N.Y. June 28, 2023) (guilty plea to spoofing); *United States v. Flotron*, No. 3:17-cr-00220 (JAM), 2018 WL 1401986, (D. Conn. Mar. 20, 2018) (upholding spoofing indictment); *SEC v. Lek Secs. Corp.*, 276 F. Supp. 3d 49, 60, 62 (S.D.N.Y. 2017) (upholding SEC complaint charging spoofing as violation of Sections 10(b) and 9(a)(2)); *CFTC v. Oystacher*, 203 F. Supp. 3d 934 (N.D. Ill. 2016) (upholding CFTC’s claim under anti-spoofing statute enacted in 2012).

By contrast, there is a relative paucity of private civil lawsuits predicated on allegations of spoofing. The courts that have addressed such claims have recognized that spoofing constitutes a form of manipulative conduct that may run afoul of Section 10(b) and/or Section 9(a)(2). *See Harrington Glob. Opp. Fund, Ltd. v. CIBC World Markets Corp.*, 585 F. Supp. 3d 405 (S.D.N.Y. 2022) (“*Harrington I*”) (upholding sufficiency of spoofing allegations and denying motion to dismiss); *Harrington Glob. Opp. Fund, Ltd. v. CIBC World Markets Corp.*, No. 21 Civ. 761 (LGS), 2023 WL 6316252 (S.D.N.Y. Sept. 28, 2023) (“*Harrington II*”) (same, for amended complaint); *Kessev Tov, LLC v. Doe(s)*, No. 20-cv-04947, 2023 WL 4825110 (N.D. Ill. July 27, 2023) (“*Kessev Tov I*”) (same); *CP Stone Fort Holdings, LLC v. Doe(s)*, Case No. 16 C 4991, 2017 WL 1093166 (N.D. Ill. Mar. 22, 2017) (finding spoofing allegations sufficient to plead manipulative act and scienter elements, but granting motion to dismiss for failure to plead loss causation).

“Spoofing is ‘bidding or offering with the intent to cancel the bid or offer before execution.’” *Kessev Tov II*, 2023 WL 4825110, at *4 (quoting *Coscia*, 866 F.3d at 786-87). “[R]apidly placing and cancelling orders, by itself, [does] not amount to market manipulation.” *Id.* at *2; *see Kessev Tov, LLC v. Doe(s)*, No. 20-cv-04947, 2022 WL 2356626, at *9 (N.D. Ill. June 30, 2022) (“*Kessev Tov I*”). “[S]omething more” is required that evinces the defendant’s “intent to cancel” the bid or offer before execution in order to “artificially inflate [or depress] the market.” *Kessev Tov II*, 2023 WL 4825110, at *4.

In distinguishing spoofing from legitimate market activity, courts have looked to various “indicia,” *Harrington I*, 585 F. Supp. 3d at 417, or “hallmarks,” *Kessev Tov I*, 2022 WL 2356626, at *8, of spoofing. These include (1) placing large orders on one side of the market—so-called “baiting orders”—opposite smaller orders on the other side, (2) cancelling the baiting orders after the spoofer’s legitimate smaller orders are filled, (3) a very brief passage of time between the placement and cancellation of the baiting orders (usually milliseconds or seconds), (4) “parking” the baiting orders behind smaller legitimate orders placed by other traders to ensure they will not be filled, and (5) conduct that is contradictory to that of ordinary market making behavior. *Harrington I*, 585 F. Supp. 3d at 417; *Harrington II*, 2023 WL 6316252, at *6; *Kessev Tov II*, 2023 WL 4825110, at *4; *Kessev Tov I*, 2022 WL 2356626, at *8; *CP Stone*, 2017 WL 1093166, at *4; *see also Coscia*, 866 F.3d at 797; *CFTC v. Shak*, Case No. 2:22-cv-01258-GMN-NJK, 2023 WL 5717289, at *7 & n.8 (D. Nev. Sept. 5, 2023).

The FAC contains particularized factual allegations evincing all these indicia of spoofing. First, NWBO alleges that during Spoofing Episodes, Defendants submitted large quantities of sell-side Baiting Orders at levels much higher per each Executing Purchase than for non-spoofed purchases. (FAC ¶¶ 62, 69). Specifically, during the Baiting Periods, Defendants submitted sell-side orders for an average of 17,170 shares for every Executing Purchase. (*Id.* ¶ 69). By contrast, during the same two-minute window prior to non-spoofed purchases, market

participants submitted orders for an average of 1,879 sell-side shares for each purchase (or *nine times less* than those associated with spoofing episodes). (*Id.*).

Second, NWBO alleges that the Baiting Orders were cancelled after the Executing Purchases were made. (*Id.* ¶ 64). Defendants allegedly cancelled sell-side orders at a much higher rate during Spoofing Episodes than after non-spoofed purchases. During the Spoofing Episodes, Defendants purportedly cancelled an average of 16,681 shares in sell-side orders (97.15% of the 17,170 orders entered). During the same two-minute period following legitimate purchases, however, market participants cancelled an average of 767 shares in sell-side orders (or only 40.82% of the orders entered). (*Id.* ¶ 70).

Third, NWBO alleges that the Baiting Orders were cancelled “immediately after the completion of their Executing Purchases.” (*Id.* ¶ 64). “During each Spoofing Episode, Defendants placed and then cancelled the Baiting Orders within one to two minutes, and at times seconds and even milliseconds.” (*Id.* ¶ 276).

Fourth, NWBO further alleges that Defendants frequently “parked” Baiting Orders behind smaller orders placed by legitimate traders to make it “extraordinarily unlikely” such orders would be executed. (*Id.* ¶¶ 262-63). Plaintiff provides numerous examples of “parked” orders. (*E.g., id.* ¶¶ 86, 100, 114, 142, 156, 169, 182, 189, 203, 216, 230, 237, 244, 251, 258, 262).

Fifth, NWBO alleges imbalances in the Defendants’ order books around Spoofing Episodes—heavily tilted to the sell-side when the Baiting Orders were placed, then quickly reversed to favor the buy-side—and much higher cancellation

rates for the sell-side orders than for the buy-side orders. This behavior, Plaintiff alleges, is inconsistent with *bona fide* market making activity. (*Id.* ¶¶ 82, 96, 110, 124, 138, 152, 199, 226, 283-84).

Moreover, Plaintiff alleges a pattern of such activity, occurring on thousands of different occasions, with the aim of sending false pricing signals to the market designed to drive the market price for NWBO stock downward so that Defendants could purchase shares at artificially depressed prices. (*Id.* ¶¶ 62, 72).

Defendants advance an array of arguments in support of their contention that Plaintiff nonetheless fails to adequately plead a manipulative act. (Def. Br. at 12-21). The Court finds these arguments, measured against the FAC's allegations and the standards governing a motion to dismiss, unconvincing.

First, Defendants argue that Plaintiff fails to plead with particularity that any Baiting Order was actually cancelled. (Def. Br. at 13; Reply at 4-5). This is not the case. The FAC is replete with particularized allegations that specific quantities of Baiting Orders were cancelled on specific dates and times. (*E.g.*, FAC ¶¶ 88, 102, 116). For example, Plaintiff alleges that on October 12, 2020, after placing Baiting Orders comprising 5,000 shares, Citadel began cancelling its Baiting Orders at 14:20:25, within 2.514 seconds of placing them, and that by 14:22:25, Citadel "had cancelled all of its Baiting Orders." (*Id.* ¶ 88).

Defendants challenge Plaintiff's definition of "cancellation," which encompasses both the deletion of a supposed Baiting Order from the LOB and a modification of a Baiting Order. (Def. Br. at 13). Defendants reason that because

“a participant on OTC Link can only display one order at a time,” a broker-dealer will update its quote if it receives a better priced client order (which it is generally required to display) and may also update the quote when a display order is filled. (Def. Br. at 13; Reply at 4). Defendants argue that “replacing an order with another order does not mean that the order was cancelled” and that Plaintiff has alleged nothing more than this. (Def. Br. at 13).

Defendants’ argument mischaracterizes the FAC. Plaintiff does not allege that Defendants cancelled Baiting Offers by merely “replacing” or “updating” such offers. Instead, Plaintiff alleges that a “cancellation,” for purposes of the FAC, “refer[s] to a deletion of an order from a Limited Order Book” or “a modification of an order or quote on a Limited Order Book or IDQS *which results in reduction in the volume of shares displayed in that order or quote.*” (FAC ¶ 61 n.10; emphasis added). As Plaintiff’s counsel explained at oral argument: “If you modify an order from a hundred shares to two shares, it has the same effect on the market as if you cancel 98 shares. What matters is what the market is experiencing, what the market thinks is happening . . .” (Oral Arg. Tr at 60:13-24). Further, to construe the FAC as alleging that Baiting Orders were *only* modified, and *never* deleted (as Defendants’ argument posits), is to view Plaintiff’s allegations in the light most favorable to Defendants, rather than to Plaintiff as required. *See City of Omaha Police & Fire Ret. Sys. v. Evoqua Water Techs. Corp.*, 450 F. Supp. 3d 379, 414

(S.D.N.Y. 2020) (“at this stage, the Court must draw all inferences in Plaintiff’s favor”).¹⁷

In questioning the definition of “cancellation” used in the FAC, Defendants “have merely raised a factual dispute inappropriate for resolution at the pleading stage, before the development of a fuller factual record . . . including the opinion of other experts whose testimony may shed better light on these complex economic and industry practice issues.” *Sharette*, 127 F. Supp. 3d at 84. Furthermore, “[r]esolving a disagreement over the interpretation of terminology instrumental to the alleged manipulative scheme . . . would require assay[ing] the weight of the evidence, which is not permitted when adjudicating a motion to dismiss.” *Id.* (citation omitted).

Second, Defendants argue that Plaintiff alleges “multiple” Baiting Orders were placed at once, which is contradicted by a “correct understanding of how OTC Link works.” (Def. Br. at 13-14). Defendants maintain that a “market participant is allowed to show only one order at a time on OTC Link, and a Defendant thus could not have displayed *multiple* orders.” (*Id.*; citation omitted & emphasis in original). Defendants ask the Court to disregard Plaintiff’s “core ‘Baiting Order’

¹⁷ In any event, courts have viewed order modifications as manipulative conduct in spoofing cases. See, e.g., *CTFC v. Edge Fin. Techs. Inc.*, Case No. 1:18-cv-00619, 2020 WL 6381288, at *3 (N.D. Ill. Aug. 13, 2020) (consent order describing how spoofer programmed trading application to “automatically and continuously modify [spoofer’s] order at a particular price level down and then up . . . whenever a certain number of contracts were placed at the same price level after [the spoofer’s] order entered the market”); *CFTC v. Nav. Sarao Futures Ltd. PLC*, Case No. 15-cv-3398, 2016 WL 8257513, at *6 (N.D. Ill. Nov. 14, 2016) (consent order finding defendant’s “Dynamic Layering Program,” which “automatically and simultaneously modified [] large layered sell orders at [] various price levels” as the market price moved, to be a “manipulative/spoofing technique”).

allegations,” on the ground that they are contradicted by Plaintiff’s own evidence. (*Id.*).

The Court declines to do so. Plaintiff does not contend that Defendants displayed multiple Baiting Orders at the same time; to the contrary, it acknowledges that “OTC Link . . . shows one quote at a time.” (FAC ¶ 8 n.4). That does not mean, however, that Defendants could not have placed multiple Baiting Orders during the same Spoofing Episode, in rapid succession, even if only one such Baiting Order was displayed on OTC Link at any given moment. And, even if a particular Baiting Order disappeared from OTC Link shortly after being placed, it still would have been visible to other market participants while it was displayed and capable of sending a false pricing signal to the market.¹⁸

Third, Defendants argue that Plaintiff’s Baiting Orders “may not have been cancelled at all” because Plaintiff alleges that (in some cases) Defendants cancelled identically sized and priced prior orders, as opposed to a specific Baiting Order. (Def. Br. at 14 (citing FAC ¶ 84 n.17)). Plaintiff responds that a Defendant may have entered a “pre-spoofing sell order” and thereafter entered additional sell orders during the Spoofing Episode. (Pl. Br. at 20). Then, Plaintiff claims, Defendant may

¹⁸ In describing how a *generic* spoofing scheme works, the FAC alleges that “after executing the Executing Purchases . . . , the spoofer cancels *all* of the Baiting Orders to sell . . .” (FAC ¶ 57; emphasis added). Concentrating on the word “all” in that allegation, Defendants argue that, because only one offer can be displayed on OTC Link at a time, the Baiting Orders alleged by Plaintiff here could not have “all” been canceled after the Executing Purchases. (Def. Br. at 14). But Plaintiff’s allegations pertaining to the Baiting Orders *in this case* do not make that claim and instead aver that the cancellations took place over time. (*See, e.g.*, FAC ¶ 88 (alleging that Citadel “began to cancel” Baiting Orders within 2.514 seconds)).

have elected to cancel *either* the pre-spoofing sell order *or* an identically sized sell order that occurred during the spoofing cycle. (*Id.*). Plaintiff argues that in both circumstances, Defendants falsely increased the supply of shares for sale during the spoofing episode and then removed that supply once its goal of purchasing shares at artificially depressed prices was achieved. (*Id.*).

The Court agrees. “[C]ourts generally ask whether a transaction sends false pricing signals to the market” when determining whether an act was manipulative. *ATSI*, 493 F.3d at 100. Here, regardless of whether the “newer” or “older” orders were cancelled, Defendants are alleged to have sent false pricing signals to the market through their placement of Baiting Orders. *See CFTC v. Skudder*, No. 22 CV 1925, 2022 WL 17752392, at *8 (N.D. Ill. Dec. 19, 2022) (the fact that “the pattern of trading alleged in this complaint is different than that at issue in other cases isn’t a reason to dismiss” spoofing claims where complaint spelled out how defendant’s spoof orders “sent false market signals”).

Fourth, Defendants argue that Plaintiff “admits” Defendants may have been displaying bids and offers on behalf of their clients, and relatedly, that the FAC fails to allege that Baiting Orders were placed and cancelled by the same client. (Def. Br. at 14; quoting FAC ¶ 38). Defendants contend this is fatal to Plaintiff pleading a manipulative act. Both arguments are predicated on Defendants’ factual assertions that Defendants were trading on behalf of their clients and that the “clients . . . decide[d] whether and when to place an order and at what price.” (*Id.* at 3; *see also id.* at 23).

But that is not what is pled in the FAC. Rather, the FAC alleges that “[t]he spoofing activity . . . may have been executed by Defendants for their own accounts . . . or for client accounts” (FAC ¶ 38) and that, either way, it was Defendants’ algorithms that controlled the trades (*id.* ¶ 267 (“each Defendant specifically designed and implemented algorithmic trading programs to execute their spoofing schemes”)); *see also id.* ¶¶ 18, 19, 24-25, 30, 33, 37, 270-71). Thus, NWBO has not “admit[ted]” that Defendants were merely following their clients’ instructions. Defendants’ argument that their clients “set the terms of those orders” (Def. Br. at 23) is Defendants’ version of the facts and raises a dispute that cannot be resolved on a motion to dismiss. *See, e.g., Locus Techs. v. Honeywell Int’l Inc.*, 632 F. Supp. 3d 341, 355 (S.D.N.Y. 2022) (“this Court cannot accept on a motion to dismiss Defendant’s competing version of the facts, where those facts are premised on matters not pled in the Complaint”).

Accordingly, NWBO need not allege that Baiting Orders were placed and cancelled by clients, let alone the same client, for its theory to survive. Such an allegation is not relevant to Plaintiff’s theory of the case, which focuses on *Defendants’* control over the high-speed trading algorithms and *Defendants’* responsibility to monitor such algorithms. (FAC ¶¶ 267, 270-71). Indeed, in *Harrington I*, the court squarely rejected the same argument made by Defendants here, holding: “That the Complaint mentions that Defendants trade for their own proprietary accounts and the accounts of their customers does not undercut the

Complaint's numerous allegations that Defendants designed and operated the algorithms that spoofed [Plaintiff's] stock." *Harrington I*, 585 F. Supp. 3d at 416.

Fifth, Defendants contend that "the cancellation of an order is an expected and common aspect of trading in modern equity markets" and that, indeed, the vast majority of orders are cancelled. (Def. Br. at 14-15). This argument, too, was rejected in *Harrington I*, in which the court held: "Even if it were permissible to consider that fact [that a high percentage of orders are cancelled in the relevant market] on a motion to dismiss, it does nothing to explain the frequent pattern of spoofing alleged in the Complaint. That 95% of placed orders are canceled in the market does not mean spoofing was absent here." *Harrington I*, 585 F. Supp. 3d at 418; *see also Kessev Tov II*, 2023 WL 4825110, at *5 (finding spoofing allegations to adequately plead manipulative act despite defendants' argument that "cancelling high volumes of previously made orders as prices change on the market is typical market making activity").

For the same reason, the Court does not accept Defendants' assertion that "NWBO fails to allege why the cancellation of an order, on its own, creates an inference that the order was not intended to be executed." (Def. Br. at 15). Plaintiff urges no such inference. Plaintiff alleges that Defendants engaged in a pattern of "spoofing" the market for NWBO stock by entering and then cancelling large Baiting Orders that induced market participants to unload Plaintiff's stock and artificially depressed the market for that stock. (FAC ¶¶ 61-74). Further, Plaintiff alleges that Defendants' rates of cancellation for Baiting Orders were significantly

higher than the cancellation rates for their non-spoofed orders and for legitimate orders placed by other market participants. (*Id.* ¶ 70-71). Plaintiff thus alleges far more than the threadbare assertion that cancelling an order raises an inference that such an order was not intended to be executed.

Sixth, Defendants dispute the adequacy of Plaintiff's "parking" allegations. Defendants claim that the trading data they submitted in support of their motion "disprove[]" the allegations in the FAC that Baiting Offers were "parked" behind other legitimate orders. (Def. Br. at 16 n.23 and 37). But as set forth above, the Court cannot consider Defendants' trading data on this motion to dismiss, and whether Plaintiff can ultimately prove its "parking" allegations is a matter that must await summary judgment or trial.

Defendants also make a more limited argument confined to the facts alleged in the FAC itself. Defendants contend that "multiple market makers displaying bids and offers at different prices is a defining feature of OTC markets" and, therefore, Plaintiff's allegations that "a single other market participant" displayed a better price than a Defendant does not establish that the order was "parked." (Def. Br. at 15). Defendants further contend that "many" of the alleged Baiting Orders, according to Plaintiff's allegations, were at *better* prices than the offers they were supposedly parked behind. (*Id.* at 15-16).

But even if "many" Baiting Orders were not parked, that does not defeat Plaintiff's allegations that other Baiting Orders *were* parked. And precisely what it means for an order to be "parked" in the context of an OTC-traded stock such as

NWBO raises a factual dispute that cannot be decided at the pleading phase. *See Sharette*, 127 F. Supp. 3d at 84. In any event, it is not essential for a spoofing complaint to include allegations of “parking” in order to survive a motion to dismiss. *See Kessev Tov II*, 2023 WL 4825110, at *4 (while “parking” orders “may be one way of proving spoofing, there is no case law that holds it is the only way to do so”).

Seventh, Defendants contend that Plaintiff’s spoofing claim must fail because the FAC alleges that Defendants sold shares of NWBO stock during the Spoofing Episodes. (Def. Br. at 16). This argument again seeks to interpret Plaintiff’s allegations in the light most favorable to Defendants. Plaintiff consistently alleges, for each of the sixteen Example Episodes, that based on the publicly accessible data available to Plaintiff, Defendants did *not* sell stock during the alleged spoofing episodes. (*See e.g.*, FAC ¶ 85 (“Between 14:20:25 and 14:22:25 . . . [Citadel] did not sell any shares of NWBO . . .”); ¶ 99 (“Between 9:30:17 and 9:32:17 . . . [Canaccord] did not sell any shares of NWBO . . .”); ¶ 113 (“Between 11:39:44 and 11:41:44 . . . [Instinet] did not sell any shares of NWBO . . .”). In an apparent concession to information provided by defense counsel after the original Complaint was filed, the FAC pleads in the alternative that “*even if* Defendant . . . sold some NWBO shares during” the Spoofing Episodes, such sales would be “consistent with” Defendants’ “conversion of spoofing profits into cash.” (*See, e.g.*, FAC ¶ 85; emphasis added).

Although Plaintiff's argument that the sale of NWBO stock during Baiting Periods would be consistent with spoofing seems tenuous,¹⁹ the Court does not take Plaintiff's alternative allegation as a concession that Defendants in fact sold NWBO shares during the Spoofing Episodes, let alone that they did so with such regularity as to undermine Plaintiff's core spoofing claim. *See Maldonado v. Town of Greenburgh*, 460 F. Supp. 3d 382, 402 (S.D.N.Y. 2020) ("the Federal Rules of Civil Procedure permit pleading in the alternative"); *see* Fed. R. Civ. P. 8(d)(2) ("If a party makes alternative statements, the pleading is sufficient if any one of them is sufficient.").

Eighth, Defendants argue that the FAC fails to allege "the number of so-called Baiting Orders in each time frame or the timing of each order, and often fails to allege the price and volume of each order." (Def. Br. at 16-17). As discussed above, however, the FAC includes sixteen Example Episodes, each of which details, *inter alia*: the date and time of the Spoofing Episode, the timing and price range of the Baiting Orders, the make-up of the Defendant's order book after the Baiting Orders, the timing and price of an Executing Purchase, and the amount of time that elapsed between the Executing Purchase and the cancellation of the Baiting Orders. (FAC at pp. 26-81; *id.* Exh. 1). These allegations are more than sufficient at the

¹⁹ Plaintiff contends that it is consistent with manipulative spoofing that Defendants sold NWBO stock during Spoofing Episodes because it reflects that "illegally-acquired" shares were sold to earn profits. (Pl. Br. at 23). But Defendants stood to *lose profits* if they sold shares during Baiting Periods (when the market was supposedly artificially depressed). Even if the shares being sold were acquired during prior Spoofing Episodes, Defendants would have been better off waiting for the current Spoofing Episode to end and for the price to rebound before selling those shares.

pleading stage. *See, e.g., Harrington II*, 2023 WL 6316252, at *6 (finding that similar allegations of spoofing satisfied “manipulative act” requirement of market-manipulation claim and noting that “[i]t would be both unwieldy and unreasonable to require Plaintiff to proffer detailed descriptions of each alleged episode”).²⁰

Last, Defendants argue that the FAC is insufficient because it alleges that “Defendants placed and then cancelled the Baiting Orders *within one to two minutes*,” rather than the “milliseconds” Defendants suggest is required. (Dkt. No. 128 at 3 (quoting FAC ¶ 276; emphasis added by Defendants)). Here again, Defendants mischaracterize the allegations in the FAC. In fact, the full sentence Defendants purport to quote alleges that “Defendants placed and then cancelled the Baiting Orders within one to two minutes, and at times *seconds and even milliseconds*.” (FAC ¶ 276; emphasis added).

Moreover, for eleven of the sixteen Example Episodes described in the FAC, Plaintiff alleges that Defendants began cancelling the Baiting Orders either milliseconds (*id.* ¶ 102) or less than five seconds after the Executing Purchases (*id.* ¶¶ 88, 116, 130, 144, 171, 184, 205, 218, 232, 239); the time span for the other five Example Episodes ranges from 19.1 to 28.92 seconds (*id.* ¶¶ 158, 191, 246, 253, 260). These specific allegations both refute Defendants’ contention and are consistent with a spoofing scheme. *See Harrington II*, 2023 WL 6316252 at *7

²⁰ Notably, Defendants cite no authority for their contention that “[t]he PSLRA demands far more specificity to plead market manipulation” (Def. Br. at 17)—which is unsurprising since, as Defendants concede, the PSLRA does not apply to the manipulative act element of a market manipulation claim. (Oral Arg. Tr. at 7:1-15).

(finding allegation that “Defendants placed and then cancelled the Baiting Orders within seconds and even milliseconds” sufficient); *Shak*, 2023 WL 5717289, at *7 (median cancellation time of 11.8 seconds sufficient); *United States v. Smith*, No. 1:19-CR-00669-1, 2, 2023 WL 8230811, at *3 (N.D. Ill. Aug. 21, 2023) (“nothing other than spoofing persuasively explains what the Defendants were doing even at the 34-second and 36-second durations” for which spoof orders were open in the market).

2. “Effect on the Market” for NWBO

Defendants argue that “NWBO fails to sufficiently plead that Defendants’ alleged activity ‘depressed’ the price of its shares” and, therefore, that NWBO has not sufficiently pled ‘what effect the scheme had on the market.’” (Def. Br. at 17; quoting *ATSI*, 493 F.3d at 102). Defendants’ argument is unpersuasive. Viewed in the light most favorable to NWBO, the FAC’s allegations amply support the inference that Defendants’ conduct affected the market price for NWBO stock.

As an initial matter, the very purpose of the spoofing behavior alleged by Plaintiff—in which Defendants flooded the market with sell-side orders to induce other market-participants to sell NWBO stock—was to artificially depress NWBO’s share price so that Defendants could then purchase shares at reduced prices and resell them for a profit. (*E.g.*, FAC ¶¶ 8, 61-63, 65). In other words, sufficient allegations of a spoofing scheme necessarily tend to show an effect on the market. *See Coscia*, 866 F.3d at 793 n.40 (“the purpose of spoofing is to artificially skew markets and accordingly make a profit”); *SEC v. Hwang*, No. 22 Civ. 3402 (JPO),

2023 WL 6124041, at *10 (S.D.N.Y. Sept. 19, 2023) (allegations that, *inter alia*, defendant traded “solely for the purpose of artificially pushing the [stock] price upward” with the goal of increasing defendant’s margin on related swap positions were sufficient to establish the manipulative acts element of *ATSI*, including the requisite “effect on the market”).

The FAC also contains specific factual allegations supporting Plaintiff’s contention that the spoofing had its intended effect. For one thing, the FAC sets forth a “price decline” formula which purports to measure the “peak-to-trough percentage change in the price of executed transactions” for NWBO stock during Spoofing Episodes. (FAC Exh. 1 at 1 n.1). NWBO calculates the percentage “average price decline” for each of the eleven days of spoofing in the FAC (for each relevant Defendant), as well as the percentage “price decline” for each of the thousands of spoofing episodes set forth in Exhibit 1 to the FAC. (*Id.* ¶¶ 77, 91, 105, 119, 133, 147, 161, 174, 194, 208, 221; *id.* Exh. 1). In each case, the price impact was negative, which Plaintiff contends shows that Defendants’ spoofing schemes adversely affected the market price for NWBO stock. (Pl. Br. at 27, 34).

Defendants challenge Plaintiff’s price decline formula as jerry-rigged, arguing that it “always yields a negative result, even if stock prices actually increased.” (Def. Br. at 18; Oral Arg. Tr. at 46:16-24). The formula takes the “lowest transaction price over the two minutes preceding the Executing Purchase to the two minutes following the Executing Purchase” (x) and divides it by the “highest transaction price over the two minutes preceding the Executing Purchase” (y), then

subtracts that number by 1 ($(x/y) - 1$). (FAC Exh. 1 at 1 n.1). According to Defendants, because the lowest price (trough) “will definitionally be less than or equal to” the highest price (peak), Plaintiff’s formula always results in a negative number. (Def. Br. at 18).

But this is not the case. As explained by Plaintiff, its price decline formula either will result in a negative value (if the stock price decreased) or will result in a zero (if the stock price increased or remained the same). (Pl. Br. at 27 n.43 (providing example whereby share price increased from \$10 during two minutes before Executing Purchase to \$11 during the two minutes after the Executing Purchase, which would result in “x” and “y” both being \$10 and a zero percent, *i.e.*, non-negative, change); Oral Arg. Tr. at 91:10-16). In the examples in the FAC, the price of NWBO always declines. But Plaintiff avers this was an intentional decision when drafting the FAC, as it only identified as Spoofing Episodes those instances where its stock price fell. (Oral Arg. Tr. at 89:7-17 (“There are lots of other transactions in the market that did not cause [a price decline] and were not unlawful spoofing activity. We did not allege those in the complaint.”)). The Court accordingly disagrees with Defendants’ assertion that Plaintiff’s price decline formula always generates a negative number.

It is fair to say, however, that Plaintiff’s formula may be biased toward generating a negative number. The formula would generate a negative value even where NWBO’s stock price throughout the two-minute period after the Executing Purchase was *higher* than any price during the two-minute period preceding the

Executing Purchase, so long as there were multiple executed transactions at different prices during the two-minute period preceding the Executing Purchase.²¹ Plaintiff nowhere explains why the formula is constructed the way it is as opposed to (say) comparing the *average* prices from before and after the Executing Purchase or using some other metric to calculate the change in price.

Nevertheless, the validity of Plaintiff's price decline formula is best left to expert analysis and should not be resolved by the Court at the motion to dismiss stage. The "Second Circuit and district courts in this circuit routinely rely on . . . statistical analyses contained in pleadings." *In re Platinum & Palladium Antitrust Litig.*, No. 14 Civ. 9391 (GHW), 2017 WL 1169626, at *13 n.9 (S.D.N.Y. Mar. 28, 2017). As with any other factual assertion in a pleading, if a statistical analysis is pled with the requisite specificity, it must be accepted as true on a motion to dismiss. *See, e.g., Dover v. Brit. Airways, PLC (UK)*, No. 12 Civ. 5567 (RJD) (MDG), 2014 WL 317845, at *2 (E.D.N.Y. Jan. 24, 2014) (finding that plaintiff's statistical analysis of prices pled with sufficient specificity "is a factual allegation that the Court must credit"). That is the case here.

As further support for its claim that Defendants' spoofing had the requisite market effect, NWBO alleges, for each of the sixteen Example Episodes, that

²¹ To modify the example used in Plaintiff's brief (*see* Pl. Br. at 27 n.43), if the stock price did not remain at \$10 throughout the two-minute period preceding the Executing Purchase, but instead there was an executed transaction at \$9 and another executed transaction at \$10 during that period, then "x" would be \$9 and "y" would be \$10, generating a negative value—even if the price rose to \$11 during the two-minute period after the Executing Purchase. Plaintiff's formula would, counterintuitively, treat this as a "price decline."

Defendants' Baiting Orders "successfully induced the entry of sell orders from other market participants, driving the price of NWBO shares downward," and that Defendants "took advantage of this artificial downward pressure and executed Executing Purchases to buy" NWBO shares at a price "below the prevailing best offer." (FAC ¶¶ 87, 101, 115, 129, 143, 157, 170, 183, 190, 204, 217, 231, 238, 245, 252, 259). For instance, for the first Example Episode, NWBO alleges that at 14:20:25 on October 12, 2020, Citadel bought 100 shares of NWBO "at a price of \$1.02 per share, which was below the prevailing best offer of \$1.04 per share." (*Id.* ¶ 87).

Defendants challenge the sufficiency of these allegations by noting that Plaintiff does not allege the "best bid and best offer" for NWBO shares "at the *start* of each purported spoofing episode." (Def. Br. at 17-18; emphasis added). Defendants further state that Plaintiff included these starting-point price allegations in its original Complaint but omitted them from the FAC because (according to Defendants) Defendants presented Plaintiff with data showing that the actual prices refuted its claims. (*Id.* at 18). This "glaring omission," Defendants maintain, precludes Plaintiff from alleging an effect on the market for NWBO resulting from the spoofing.

As an initial matter, Defendants are correct that, with respect to all sixteen Example Episodes, the FAC changed the time of the best bid and offer (without

changing the corresponding prices).²² For instance, the Complaint alleges “[o]n October 12, 2020 at 14:18:25, the best bid and offer for NWBO was a bid to purchase 5,000 shares at a price of \$1.02 per share and an offer to sell 5,100 shares at a price of \$1.04 per share.” (Dkt. No. 1 ¶ 74; emphasis added). The Complaint further alleges that, between 14:18:25 and 14:20:25, Citadel placed 10,850 shares of Baiting Orders at prices ranging from \$1.05 to \$1.03 per share. (*Id.* ¶ 75).

The FAC, by contrast, alleges “[o]n October 12, 2020 at 14:20:25, the best bid and offer for NWBO . . . was a bid to purchase 5,000 shares at a price of \$1.02 per share and an offer to sell 5,100 shares at a price of \$1.04 per share.” (FAC ¶ 83; emphasis added). The FAC goes on to allege, as did the original Complaint, that from 14:18:25 to 14:20:25, Citadel placed 10,850 shares of Baiting Orders at prices ranging from \$1.05 to \$1.03 per share. (*Id.* ¶ 84). Put another way, the Complaint provides the best offer at the *start* of the Baiting Period (here, at 14:18:25), whereas the same allegation in the FAC provides the best offer at the *end* of the Baiting Period (here, at 14:20:25).²³

Nevertheless, it does not follow that the FAC fails to adequately allege spoofing. To begin with, Defendants’ argument assumes that the alleged Spoofing Episodes began precisely at the start time of the two-minute Baiting Period—*e.g.*, in

²² At oral argument, Plaintiff’s counsel suggested that the FAC merely fixed “typographical issues” in this regard. (Oral Arg. Tr. at 84:17-21). The systematic change in all sixteen of the relevant paragraphs of the two complaints suggests otherwise.

²³ The corresponding allegations for each of the other fifteen Example Episodes were changed in the same manner. (*Compare* Complaint ¶¶ 87, 100, 113, 126, 139, 151, 163, 169, 182, 194, 207, 213, 219, 225, 231) *with* FAC ¶¶ 97, 111, 125, 139, 153, 166, 179, 186, 200, 213, 227, 234, 241, 248, 255).

the October 12, 2020 example, at 14:18:25. That is not so. The two-minute Baiting Periods signify a range of time *within which* Baiting Orders were placed, not when the first and last Baiting Orders were placed. That is evident from the FAC, which uses a Baiting Period of exactly two minutes for each of the Example Episodes.²⁴ Similarly, although the FAC alleges what the best offer was “at” the end of the alleged Baiting Period (*e.g.*, in the October 12, 2020 example, at 14:20:25), Exhibit 1 makes clear this represents “the calculated best offer immediately *prior to* the Executing Purchase.” (*Id.* Exh. 1 at 1 n.3; emphasis added).

Thus, while the precise chronology is unclear as to when each of the Baiting Orders occurred with respect to the previous best bid and offer, the FAC, fairly read, alleges that Defendants placed Baiting Orders and as a result were able to effectuate Executing Purchases at prices lower than the previously existing prevailing best offer. Thus, even without a specific allegation as to the prevailing best offer at the moment a Spoofing Episode began, Plaintiff’s allegations support the inference that the spoofing drove down the stock price during the Spoofing Episodes and therefore had an effect on the market for NWBO stock.

Taken together, Plaintiff’s allegations are sufficient to establish, at the pleading stage, that Defendants’ spoofing affected the market for NWBO. *See*

²⁴ As Plaintiff’s counsel clarified during oral argument, “when [Plaintiff] allege[d] . . . that from 14:18:25 to 14:20:25 [] Citadel placed 10,850 shares of baiting orders[,] . . . [Plaintiff] did not mean to allege that [Defendants] placed the first baiting order at 14:18:25 and the last one at 14:20:25” but rather “that there were baiting orders within that range.” (Oral Arg. Tr. at 97:20-98:3 (adopting Court’s statement); *id.* at 98:4-7: (“We used the same two-minute window . . . consistently throughout”).

Harrington II, 2023 WL 6316252, at *5-6 (finding that chart in SAC detailing thirty spoofing episodes and specifying, among other things, the price decline in plaintiff's shares attributable to each episode satisfied, *inter alia*, the "effect on the market" prong of *ATSI*).

D. Scienter

The required state of mind in a securities fraud action is "an intent to deceive, manipulate, or defraud." *Kalnit v. Eichler*, 264 F.3d 131, 138 (2d Cir. 2001) (citation omitted). To satisfy the PSLRA's scienter requirement in a market manipulation case, the plaintiff must "plead with particularity facts giving rise to a strong inference that the defendant intended to deceive investors by artificially affecting the market price of securities." *ATSI*, 493 F.3d at 102; *see Tanzanian Royalty Expl. Corp. v. Crede CG III, Ltd.*, No 18 Civ. 4201 (LGS), 2019 WL 1368570, at *10 (S.D.N.Y. Mar. 26, 2019). In determining whether the inference of scienter is strong—*i.e.*, cogent and at least as compelling as any opposing inference—the court must evaluate the complaint's allegations "'holistically,' considering 'all of the facts alleged, taken collectively,' rather than any 'individual allegation, scrutinized in isolation.'" *Set Cap.*, 996 F.3d at 78 (quoting *Tellabs*, 551 U.S. at 323, 326).

Plaintiff may satisfy the scienter requirement "by alleging facts (1) showing that the defendants had both motive and opportunity to commit the fraud or (2) constituting strong circumstantial evidence of conscious misbehavior or recklessness." *ATSI*, 493 F.3d at 99; *see Set Cap.*, 996 F.3d at 78. Defendants argue that the FAC fails to plead scienter under either prong. (Def. Br. at 21-30; Reply at

12-20). NWBO contends it has properly pled scienter under both prongs. (Pl. Br. at 27-31).

1. Motive and Opportunity

To plead a “motive and opportunity” theory of scienter, plaintiff must allege “a concrete and personal benefit . . . resulting from the fraud.” *Kalnit*, 264 F.3d at 139. Plaintiff pleads that “profits” were a “strong motive” for Defendants, and that Defendants also were motivated to obtain commissions and fees and gain or retain the trading business of their clients by engaging in spoofing. (FAC ¶¶ 286-87).

Defendants argue “it is black letter law” that a “generic profit motive allegation is insufficient to plead scienter.” And that is so. *Bermudez v. Colgate-Palmolive Co.*, 21 Civ. No. 10988 (JLR), 2023 WL 2751044, at *12 (S.D.N.Y. Mar. 31, 2023) (“[I]t is well-settled that pointing to a company’s general profit motive is insufficient to plead scienter.”); *Schwab v. E*TRADE Fin. Corp.*, 258 F. Supp. 3d 418, 435 (S.D.N.Y. 2017) (“generic profit motive” insufficient to establish scienter for purposes of securities fraud claim). But Plaintiff alleges more than a mere “generic profit motive” here. Plaintiff alleges that Defendants engaged in a form of illegal market manipulation, spoofing, for the specific purpose of generating profits by purchasing NWBO stock at artificially depressed prices and, once the market rebounded, selling it at a higher price. (FAC ¶ 286).

Such a scheme—“a scheme to take advantage of depressed prices”—suffices to plead scienter under a motive-and-opportunity theory. *Tanzanian Royalty*, 2019 WL 1368570, at *10 (quoting *Steginsky v. Xcelera Inc.*, 741 F.3d 365, 369 (2d Cir.

2014)); *see id.* at *10-11 (allegations that defendant “engaged in large volume sales to depress the stock price temporarily, acquire the shares at a cheap price under the Warrants, and sell them after the price rebounds” adequately pled scienter) (emphasis omitted); *EMA Fin., LLC v. Vystar Corp.*, No. 19 Civ. 1545 (ALC) (GWG), 2021 WL 1177801, at *5 (S.D.N.Y. Mar. 29, 2021) (allegations that counterclaim defendant engaged in “scheme to take advantage of depressed common stock prices” by “dump[ing] [counterclaim plaintiff’s] stock to drive down its price and increase the number of shares it could obtain” sufficiently pled scienter) (cleaned up); *In re Platinum & Palladium*, 2017 WL 1169626, at *33 (allegations in commodities manipulation complaint that defendants manipulated prices for platinum and palladium “because doing so provided them with arbitrage opportunities” were “sufficient to establish motive because they entail concrete benefits that could be realized by Defendants’ price manipulation”) (cleaned up).

Defendants also argue that Plaintiff fails to allege a true profit motive to spoof NWBO stock because, according to the FAC, Defendants stood to gain only *de minimis* profits. Defendants assert that in the Example Episodes, the difference between the price of the Executing Purchase and the prevailing best offer “is often fractions of a cent” and that this “does not yield a reasonable inference of reasonable intent.” (Def. Br. at 26). Further, Defendants assert in their Reply²⁵ that

²⁵ Although the Court is not required to consider matters raised for the first time in a reply brief, *e.g.*, *Solomon v. Spring Corp.*, No. 19 Civ. 5272 (MKV), 2022 WL 889897, at *4 n.2 (S.D.N.Y. Mar. 25, 2022), the Court does so here.

“[c]omparing the difference between each ‘Executing Purchase’ and alleged ‘prevailing best offer’ for every spoofing episode”—that is to say, all the thousands of Spoofing Episodes in Exhibit 1—“yields a ‘discount’ of \$94,485.68, total between the seven Defendants, over a five year period.” (Reply at 16; emphasis in original). Defendants point out that this translates, on average, to less than \$3,000 per year for each of the seven Defendants over the nearly five-year life of the alleged spoofing. (*Id.*).

This argument is not without force; after all, “it would be difficult to prove intent to deceive if Defendants did not make money off their alleged spoofing.” *Kessev Tov II*, 2023 WL 4825110, at *5. Nevertheless, the Court finds it unpersuasive at this stage of the litigation, for several reasons. Individual spoofing transactions typically exploit very small price fluctuations over very brief periods. Indeed, the very nature of high frequency trading—the type of trading Defendants are alleged to have used here—“allow[s] traders to move in and out of positions opportunistically in seconds or less, shaving off fractions of a cent in profit each time.” *Lim v. Charles Schwab & Co.*, No. 15-CV-02074-RS, 2015 WL 7996475, at *2 (N.D. Cal. Dec. 7, 2015), *aff’d sub nom. Fleming v. Charles Schwab Corp.*, 878 F.3d 1146 (9th Cir. 2017). While profits from any single episode may be miniscule, spoofers can generate substantial returns by repeating the scheme thousands of times across the same and different issuers’ securities. *See Bao Linh Do & Talis J. Putniņš, Detecting Layering and Spoofing in Markets*, at 5 (July 26, 2023), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4525036 (“[A] single instance of

spoofing may yield only a small profit. . . . Yet if that small profit can be earned hundreds or thousands of times in a day, then the strategy can become highly profitable.”).²⁶

Beyond this, Defendants’ metrics understate the potential profitability of the alleged spoofing in several ways. First, the Executing Purchases listed in Exhibit 1, which Defendants used to generate their \$98,485.68, figure, tell only part of the story. As the FAC explains, Exhibit 1 shows “just one of the Executing Purchases which were executed at depressed prices per Spoofing Episode;” “Defendants often purchased multiple times at artificially depressed prices per Spoofing Episode.” (FAC ¶ 68 & n.12). In fact, while the Executing Purchases listed in Exhibit 1 account for 7,491,425 shares (*id.* ¶ 68 (table)), NWBO alleges that Defendants placed Executing Purchases for “a total of 19,300,908 shares” below the prevailing best offer. (*Id.* ¶ 67).

Second, while Defendants calculate the annual discount per Defendant over the entire 56-month Relevant Period, 98% of the alleged Spoofing Episodes took place during the 21-month period between September 2020 and June 2022. (*See* FAC Exh. 1). Thus, at its height, the alleged schemes were generating gains at a substantially higher rate than Defendants’ calculation of less than \$3,000 per year per Defendant suggests.

²⁶ In *Harrington*, for example, the alleged individual spoofing trades generated similarly small price variations and profits as those alleged here. *E.g.*, *Harrington*, No. 21 Civ. 761 (LGS), Dkt. No. 133 ¶ 88 (defendants purchased 100 shares of Concordia at the artificially depressed price of \$30.65, which was below the best prevailing offer of \$30.69, resulting in a “discount” to defendants of \$4.00).

Third, it is not at all clear that comparing the price of Executing Purchases with the “best offer immediately prior to the Executing Purchase” (*see* Reply at 16; FAC Exh. 1 n.3) is the true measure of the profitability of the alleged spoofing schemes. Defendants themselves criticize Plaintiff for not using the best offer at the start of the Spoofing Episodes. (*See, e.g.*, Reply at 20). Moreover, the actual profit Defendants earned from a particular Executing Purchase is measured by the price at which those shares were subsequently *sold*. The FAC alleges, for each of the Example Episodes, one example of a sale of shares acquired by the Defendant via an Executing Purchase. In the vast majority of instances (twelve of the sixteen), the difference between the Executing Purchase price and the subsequent sale price exceeds—frequently by several multiples—the difference between the Executing Purchase price and the prevailing best offer. These trades, according to the FAC, generated returns ranging from 1.765% to as high as 9.211% within the same day.²⁷

Defendants further contend that “NWBO’s admission that Defendants traded on clients’ behalf eliminates any argument that Defendants acted with scienter.” (Def. Br. at 21). Defendants claim they “had no motive to profit” and, indeed, “*could not profit*” from spoofing because they “frequently traded on behalf of clients” and, in the case of two Defendants (Instinet and Lime), only allowed clients to trade on

²⁷ *See* FAC ¶¶ 87-89, 101-03 (Executing Purchase price of \$1.20, best offer of \$1.21, sale price of \$1.27), 115-17, 143-45, 157-59, 170-72, 204-06 (Executing Purchase price of \$1.85, best offer of \$1.86, sale price of \$1.94), 231-33, 238-40, 245-47 (Executing Purchase price of \$1.43, best offer of \$1.44, sale price of \$1.47), 252-54 (Executing Purchase price of \$0.76, prevailing best offer of \$0.7601, sale price of \$0.83), 259-61.

their platforms. (*Id.* at 23-24; emphasis in original). As explained above, however, the FAC contains no such “admission,” and Defendants’ factual assertions that they were merely following their clients’ instructions cannot properly be credited on a motion to dismiss. As in *Harrington*, the possibility that Defendants may have traded for clients does not “undercut the [FAC’s] numerous allegations that Defendants designed and operated the algorithms that spoofed [Plaintiff’s] stock.” *Harrington I*, 585 F. Supp. 3d at 416; *see also Harrington II*, 2023 WL 6316252, at *8 (allegations of trading profits and commissions and fees earned on client trades sufficient to plead economic rationale for spoofing).

Thus, Plaintiff has adequately alleged that Defendants had an economic motivation, as well as the opportunity as market makers and sophisticated trading firms, to engage in the alleged spoofing. As the *Harrington II* court concluded: “Whether Defendants’ alleged misconduct was ultimately economically rational is a matter to be explored at summary judgment or trial.” 2023 WL 6316252, at *8.

2. Conscious Misbehavior or Recklessness

The Court finds that NWBO also has met the standard for pleading a theory of scienter based on conscious behavior or recklessness. “Scienter based on conscious misbehavior requires a showing of deliberate illegal behavior, a standard met when it is clear that a scheme, viewed broadly, is necessarily going to injure.” *New England Carpenters Guaranteed Annuity & Pension Funds v. DeCarlo*, 80 F.4th 158, 178 (2d Cir. 2023) (cleaned up). By contrast, “[r]ecklessness . . . entails an extreme or obvious departure from the standards of ordinary care . . . to the

extent that the danger was either known to the defendant or so obvious that the defendant must have been aware of it.” *Id.* (citation omitted).

In a market manipulation case, the scienter and manipulative acts inquiries overlap. *See, e.g., Hwang*, 2023 WL 6124041, at *11 (a “manipulative act” refers to practices “that are intended to mislead investors by artificially affecting market activity”); *CP Stone Fort Holdings*, 2017 WL 1093166, at *3 (“Manipulative intent can be inferred from the [manipulative] conduct itself.”). Accordingly, in determining whether scienter has been properly pled, courts have looked to the same “indicia” or “hallmarks” of spoofing analyzed above in relation to the manipulative act element. *Harrington II*, 2023 WL 6316252, at *6-7 (finding scienter properly pled based on complaint’s “particularized facts constituting circumstantial evidence of conscious misbehavior fitting the indicia identified above”); *Kessev Tov II*, 2023 WL 4825110, at *6 (finding allegations of “traditional hallmarks of spoofing” sufficient to support inference of conscious misbehavior); *CP Stone Fort Holdings*, 2017 WL 1093166, at *4 (finding scienter properly pled through allegations of “a consistent pattern of placing thousands of [Baiting] Orders, cancelling those orders, and then flashing and reversing position”).

As in these cases, NWBO relies on, *inter alia*, these indicia of spoofing in support of its allegation of scienter. (FAC ¶¶ 274-85). NWBO further alleges that, as registered broker-dealers, Defendants knew that spoofing was unlawful (*id.* ¶ 269) and were required to, and affirmed that they did, have policies and procedures to detect and prevent manipulative or fraudulent trading that originated

from algorithmic high-speed trading programs (*id.* ¶ 270-71). Indeed, spoofing a stock to buy it at an artificially depressed price is, by its nature, the type of scheme that “is necessarily going to injure” another person, *New England Carpenters*, 80 F.4th at 178—namely, the person on the other side of the trade who sells at the artificially depressed price.

In response to Plaintiff’s allegations of circumstantial evidence of scienter, Defendants rehash many of the arguments they raise in opposition to Plaintiff’s allegations of manipulative acts, *e.g.*, that Plaintiff did not cancel the Baiting Orders, that most orders in the equity markets are cancelled, and that Plaintiff’s allegations are contradicted by the “nature of trading on OTC Link.” (Def. Br. at 27). For the reasons stated above, however, Defendants’ arguments misconstrue the allegations in the FAC, depend on extraneous information that cannot be considered on a motion to dismiss, or introduce disputed issues of fact appropriately resolved at summary judgment or trial.

Defendants do, however, advance several arguments not raised with regard to the manipulative act analysis. First, Defendants argue that, because orders on OTC Link are not anonymous, other market participants would have become aware of Defendants’ spoofing during the Relevant Period (which lasted nearly five years) and, therefore, would not have been induced to enter sell orders during the Baiting Periods. (Def. Br. at 28). Accepting the FAC’s allegations as true, the Court finds the inference that market participants (many or most of whom lack the same degree of sophistication as Defendants) were unaware that Defendants were engaging in

spoofing at least as cogent as the inference that market participants caught on to Defendants' alleged manipulation. *See* Basil Williams & Andrzej Skrzypacz, *Spoofing in Equilibrium*, at 3 (Feb. 2021), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3742327 (disagreeing that spoofing is “an out-of-equilibrium phenomenon that can be completely neutralized by sophisticated traders once understood by all market participants”).

Defendants also argue that Plaintiff offers no support for its allegation that Defendants lacked the intent to fill the Baiting Orders. (Def. Br. at 28-29). To the contrary, Plaintiff pleads that Baiting Orders (as opposed to non-spoofed orders entered by Defendants) led to a “substantial” sell-side imbalance in Defendants' order flow. (FAC ¶ 66). Defendants proceeded to cancel these sell-side orders at a rate of 97.15% on average, substantially in excess of the 40.82% cancellation rate for sell-side orders by other market participants during the same time. (*Id.* ¶ 70). In the median Spoofing Episode, NWBO alleges, Defendants had a 100% cancellation rate and executed zero sell-side orders. (*Id.* ¶ 279).

These and other allegations in the FAC raise a reasonable inference that Defendants did not intend to fill the Baiting Orders. *See Harrington I*, 585 F. Supp. 3d at 418 (allegations that defendants placed and then cancelled “large baiting orders on one side of the market and executed much smaller orders on the other side of the market” evidenced scienter); *Coscia*, 866 F.3d at 797 (algorithmic trading program, which was designed to, *inter alia*, cancel orders following the partial filling of large orders, “suggests, strongly, fraudulent intent”).

Next, Defendants argue that NWBO's claims are defective because the FAC "does not specify what [algorithmic trading] programs [Defendants] used to execute their schemes, who ran the programs, or how those programs were used," nor does it allege "what trading practices were approved, when, or by which officials." (Def. Br. at 29-30). These same arguments were rejected in *Harrington I*, and properly so. *See Harrington I*, 585 F. Supp. 3d at 418 (rejecting as "unfounded" defendants' arguments that complaint "need[ed] to plead additional facts regarding Defendants' algorithmic trading programs and the corporate officials who designed or oversaw those programs"). It is hard to imagine how any spoofing case would survive the motion to dismiss stage if such details—"facts solely within the defendant's knowledge," *id.* (quoting *ATSI*, 493 F.3d at 102)—were required to be set forth in the complaint.

Finally, Defendants make much of the fact that NWBO does not allege that they acted in coordination with one another, describing as "fanciful" the notion that seven different broker-dealers all *separately* decided to spoof NWBO's stock around the same time. (Def. Br. at 1; *see id.* at 8; Reply at 2, 13-14). The Court does not agree. "Spoofing is a very real problem identified by [the] SEC as a cause for concern." *CP Stone Fort Holdings*, 2017 WL 1093166, at *4; *see Do & Putniņš, supra*, at 35 (noting "proliferation of spoofing" in recent years). It is not implausible that multiple sophisticated broker-dealers, all operating algorithmic trading programs, could independently spoof the same issuer's stock. This is especially true of NWBO, which has at least some of the characteristics that make it a more likely

target for spoofing. (See FAC ¶ 59 (citing SEC’s “Staff Report on Algorithmic Trading in U.S. Capital Markets,” dated Aug. 5, 2020, as noting that “the stocks targeted for spoofing had higher return volatility, lower market capitalization, lower price level, and lower managerial transparency”).²⁸

Even when applying the PSLRA’s heightened pleading standard for scienter, courts must “[a]ccept[] the facts alleged in the complaint as true, and draw[] all reasonable inferences in [the plaintiff’s] favor.” *Set Cap.*, 996 F.3d at 78; *see also In re Signet Jewelers Ltd. Sec. Litig.*, No. 16 Civ. 6728 (CM), 2018 WL 6167889, at *10 (S.D.N.Y. Nov. 26, 2018) (“[e]ven under the [PLSRA], . . . the usual rules for determining motions to dismiss pertain”). Applying those principles, the Court concludes that the circumstantial evidence of a conscious spoofing scheme, when viewed holistically and together with the allegations of motive and opportunity, establishes the requisite strong inference of an intent to manipulate the market—one that is cogent and at least as compelling as the inference that Defendants were simply engaged in legitimate trading activity.

²⁸ The financial literature suggests another reason why Defendants did not need to coordinate a spoofing scheme: their algorithmic trading programs can do it for them. A recent study found that algorithms can “learn to coordinate their spoofing when they learn together,” even without human intervention. This is known as “algorithmic collusion.” *See* Alvaro Cartea, Patrick Chang & Gabriel Garcia-Arenas, *Spoofing and Manipulating Order Books with Learning Algorithms*, at 6-7 & n.8 (posted Dec. 1, 2023), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4639959; *see also id.* at 5 (“if both market makers train their algorithms online, then their algorithms learn to coordinate by either riding the manipulative sequences of each other or by allowing one market maker to ride the other market maker’s manipulative sequences to avoid any mis-coordination”). The Court need not and does not, however, rely on the prospect of algorithmic collusion (which is not pled in the FAC) in finding scienter adequately alleged here.

E. Loss Causation

Loss causation “is the proximate causal link between the alleged misconduct and plaintiff’s economic harm.” *ATSI*, 493 F.3d at 106. Under the “prevailing practice” in this District, loss causation need not be plead with particularity. *Sharette*, 127 F. Supp. 3d at 80, 102-03 & n.12. “A short and plain statement in accordance with Rule 8 of the Federal Rules of Civil Procedure is sufficient.” *Id.* at 103; *see also Wilamowsky v. Take-Two Interactive Software, Inc.*, 818 F. Supp. 2d 744, 753 & n.7 (S.D.N.Y. 2011) (“The question of whether Rule 9(b) applies to loss causation has not yet been definitively addressed by the Second Circuit, but the vast majority of courts in this district have required that loss causation only meet the notice requirements of Rule 8.”); *Harrington I*, 585 F. Supp. 3d at 419 (“A plaintiff’s burden in alleging loss causation ‘is not a heavy one.’”) (quoting *Loreley Fin. (Jersey) No. 3 Ltd. v. Wells Fargo Sec., LLC*, 797 F.3d 160, 187 (2d Cir. 2015)).

As a threshold matter, Defendants argue that NWBO’s claims cannot survive because Plaintiff fails to adequately allege that Defendants’ purported spoofing caused a decline in the price of its stock. (Def. Br. at 31). Defendants specifically argue that NWBO’s “omi[ssion] from the FAC [of] allegations regarding its stock price prior to each alleged spoofing ‘episode’” prevents NWBO from pleading loss causation “with the required specificity.” (*Id.*). As explained above, however, the allegations in the FAC sufficiently plead that Defendants’ spoofing schemes drove down the price for NWBO and enabled Defendants to effectuate Executing Purchases at lower prices than they would have absent the spoofing.

In *Gamma Traders – I LLC v. Merrill Lynch Commodities, Inc.*, 41 F. 4th 71 (2d Cir. 2022), the Second Circuit discussed two ways in which loss causation may be pled in a spoofing case. Plaintiff may allege (1) that it traded “so close in time to Defendants’ spoofing” as to permit the court to “infer as a matter of common sense that the market prices were artificial” when plaintiff traded, or (2) a factual basis indicating that the effects of the spoof lasted for a protracted period so as to “justify an inference that the market price was still artificial” when plaintiff traded. *Id.* at 80-81. Defendants argue that, as in *Gamma Traders*, NWBO’s allegations fail to plead loss causation under either theory. (Def. Br. at 32-33). Plaintiff argues that the FAC pleads loss causation under both theories. (Pl. Br. at 35 & n.56; Oral Arg. Tr. at 77:2-78:17). The Court considers each in turn.

1. Temporal Proximity

NWBO primarily argues that it meets *Gamma Trader’s* first theory because it traded in “close proximity” to Defendants’ spoofing. (Pl. Br. at 35 (quoting *Gamma Traders*, 41 F.4th at 81)). It relies on Paragraph 289 of the FAC, which alleges that “of Plaintiff’s 283 million shares of stock sold during the Relevant Period, more than 49 million shares were sold by Plaintiff where the sale price was formulaically derived from the closing price on dates where Spoofing Episodes occurred, such that a decline in the price on that day caused a decline in the price at which Plaintiff sold shares of NWBO stock.” (FAC ¶ 289). Paragraph 289 then displays a chart detailing NWBO’s sales of those 49 million shares, showing the date, number of shares sold, and sale price, along with the “Pricing Date,” *i.e.*, the

date (or dates) when alleged Spoofing Episodes occurred and ended with a closing price from which the NWBO sale price was purportedly “formulaically derived.” The chart lists 97 sales transactions spanning 32 different days. (*Id.*).

Neither in the FAC nor its opposition brief does Plaintiff explain what it means when it says that the “sale price was formulaically derived from the closing price.” In many instances in Plaintiff’s loss causation chart, the “Pricing Date” is several days or even weeks—as many as four weeks—prior to the date on which NWBO sold its shares. In other instances, there is a “Pricing Date” days or weeks *after* the date on which NWBO sold its shares. And the chart frequently shows *multiple* dates under the “Pricing Date” column. It is possible that a formulaic connection exists between NWBO’s stock sales and the closing price(s) on these temporally distant “Pricing Date(s)” because (for example) the sale price was based on an average of NWBO’s closing stock price on various dates. But in the absence of an explanation in the FAC, it is impossible to tell.

Even assuming such a connection exists, it does not follow that Plaintiff has adequately pled that all 49 million shares listed in its loss causation chart were sold “in close proximity” to Spoofing Episodes. In *Gamma Traders*, the Second Circuit held that courts “cannot reasonably infer that spoofing’s effects last throughout the day” in the absence of factual allegations justifying an inference that the effects of the spoof linger for that long. 41 F.4th at 80. Thus, absent such allegations, “[e]ven pleading same-day, post-spoof trades does not justify an inference of injury.” *Id.* Accordingly, pleading that one or more Spoofing Episodes took place on a day whose

closing price factored into the determination of NWBO's sale of its shares does not, by itself, establish loss causation with respect to that sale.

Tacitly recognizing as much, NWBO emphasizes that the chart also “details 30 instances in which Defendants spoofed *within an hour*, and in some instances, just seconds before a NWBO sale.” (Pl. Br. at 35; emphasis in original). Those 30 instances are denoted by an asterisk in the chart signifying that “there were Spoofing Episodes in the final hour of trading.” (FAC at 108). The 30 instances comprise a total of approximately 10.9 million of the more than 49 million in shares encompassed by the loss causation chart in Paragraph 289. To be sure, NWBO's statement that, in these instances, Defendants spoofed “within an hour” of a NWBO sale cannot be taken literally; the chart shows that most of the 30 instances involve sales that took place days or weeks after (or, in some cases, *before*) the Spoofing Episodes in question. But to the extent NWBO represents that the sale price was determined based on the closing price on a day when there were Spoofing Episodes within an hour of the market's close at 4:00 p.m., the effect would be the same.

At oral argument, Plaintiff's counsel provided further color, representing that NWBO alleges “the sale of 2.6 million shares within ten minutes of defendants' spoofing, and in fact, we even allege the sale of 303,000 shares within 85 seconds of defendants' spoofing.” (Oral Arg. Tr. at 76:8-12). These figures appear nowhere in the FAC, nor did Plaintiff's counsel explain their origin. However, the Court's review of Exhibit 1 reveals an alleged Spoofing Episode on February 25, 2021 that involved an Executing Purchase at 3:58:35—*i.e.*, 85 seconds before the 4:00 p.m.

market close. This Spoofing Episode, moreover, is associated in Plaintiff's loss causation chart with NWBO stock sales aggregating 302,588 shares on March 2, 2021. (FAC Exh. 2 at 10). The Court will therefore assume the accuracy of counsel's representations for present purposes.

Among the 30 asterisked instances in Plaintiff's loss causation chart are stock sales by NWBO on December 12, 2021. Plaintiff alleges that on December 10, 2021—a Friday—five Spoofing Episodes occurred in the final hour of trading and ended “minutes prior of the close of trading.”²⁹ (*Id.* ¶ 291). On Sunday, December 12, 2021, NWBO sold just over 1.9 million shares of its stock (in three separate transactions) at a price equal to the closing price of NWBO on December 10, 2021. (*Id.* ¶ 290). NWBO further alleges that its stock price declined by 18.9% on December 10, 2021, and that most of this decline (12%) occurred during the last hour of trading, coincident with the five Spoofing Episodes. (*Id.* ¶¶ 290-91). According to NWBO, “[t]here was no negative news issued that day regarding NWBO,” and the OTCQB index, where NWBO is listed, fell by only 0.5% on December 10, 2021, making the decline in NWBO's stock price “unusual and extraordinary in magnitude” and explainable only by reference to Defendants' “unlawful spoofing activity.” (*Id.* ¶ 290).

²⁹ As described in Exhibit 1, these Spoofing Episodes involved Executing Purchases that took place at 3:00:05 p.m., 3:05:29 p.m., 3:07:41 p.m., 3:29:31 p.m., and 3:52:49 p.m., respectively. (FAC Exh. 1 at 6, 49, 74).

Viewed in the light most favorable to Plaintiff—and assuming a properly pled “formulaic” connection between the referenced Pricing Dates and the sales price—Plaintiff’s allegations regarding the 30 instances in its chart in which Spoofing Episodes occurred within an hour of the market’s close are sufficient to plead loss causation under the temporal proximity theory outlined in *Gamma Traders*. These allegations are far more specific than those in *Gamma Traders*, where plaintiff failed to plead *when* it traded its stock, leaving it unclear how much time elapsed between the spoofing and the plaintiff’s trades. 41 F.4th at 80.

Defendants argue that NWBO has failed to plead loss causation as to any of its sales, even those relating to the 30 instances in which spoofing allegedly occurred within an hour of the close. According to Defendants, the sale must have occurred within, “at most, one to two minutes” of the Spoofing Episode for the requisite causal connection to exist. (Def. Br. at 32 (citation omitted); see Reply at 22 (arguing that spoofing within an hour of sale would be insufficient)). But *Gamma Traders* does not go that far, nor do Defendants cite to any authority supporting their proposed bright-line rule. Indeed, the court in *Gamma Traders* recognized that ordinarily “the effects of spoofing pose questions of fact.” 41 F.4th at 80.

Plaintiff has alleged enough facts to support a common-sense inference that, with respect to the 10.9 million shares sold in the 30 asterisked instances, NWBO’s stock price remained artificially depressed at the close of trading on the Pricing Dates in question. However, in order to proceed on a temporal proximity theory as

to these 30 instances, Plaintiff must complete the circle of causation by pleading in an amended complaint a sufficient explanation as to *how* the various stock sale prices were “formulaically derived” from the closing prices on the days when Spoofing Episodes took place.

With the exception of those 30 instances (which relate to 27 separate stock sales), the other NWBO sales are too remote in time from alleged Spoofing Episodes to plead “close proximity” under *Gamma Traders*. This includes the 70 other stock sales in Plaintiff’s loss causation chart. (See FAC ¶ 289). By Plaintiff’s own definition (as indicated by the fact that Plaintiff did not designate any of these entries on its chart with an asterisk), the alleged Spoofing Episodes connected to these sales did not take place in the final hour of trading. For most of these stock sales, the Spoofing Episodes took place in the morning, from four to more than six hours before the end of the trading day.³⁰ This is too far removed from the corresponding sale to be considered “close.” See *Gamma Traders*, 41 F.4th at 80 (“we cannot reasonably infer that spoofing’s effects last throughout the day”).

Accordingly, the Court finds that NWBO has sufficiently alleged loss causation based on the temporal proximity between the spoofing and stock sales in the case of the 30 asterisked transactions in the chart in Paragraph 289, provided it submits an amended complaint adequately explaining how the sales prices were

³⁰ For example, 41 of the 70 other stock sales took place on the same day, Monday, October 12, 2020. The only Spoofing Episode that Plaintiff connects to those 41 sales is an episode that involved an Executing Purchase at 9:30:34 a.m. on Friday, October 9, 2020, the beginning of the trading day. (*Id.* ¶ 289; *id.* Exh. 1 at 68).

“formulaically derived” from the relevant closing prices, but that NWBO has not otherwise adequately pled loss causation under this theory.

2. Long-Term Price Impact

NWBO also argues, in a footnote in its opposition brief, that Defendants’ repeated and persistent spoofing “negatively impacted NWBO’s share price long term” and that NWBO therefore has adequately pled loss causation as to all 293 million shares it sold during the Relevant Period. (Pl. Br. at 35 n.56 (citing FAC ¶¶ 293-95)). NWBO claims that it, unlike the plaintiff in *Gamma Traders*, has advanced sufficient “facts to support its theory about the length of time that spoofing affect[ed] the market” for NWBO stock. (*Id.* at 35; quoting *Gamma Traders*, 41 F.4th at 81-82). The Court disagrees.

The cited paragraphs in the FAC allege, *inter alia*, that the impact of Defendants’ spoofing activity “extended beyond the specific spoofing cycle” because “the market neither immediately nor fully rebounded from the manipulated prices once each of the Spoofing Episodes was completed” and that, therefore, “the prices at which Plaintiff sold its stock throughout the Relevant Period were negatively affected by Defendants’ spoofing that occurred prior to Plaintiff’s sales, regardless of whether those Spoofing Episodes occurred on a Pricing Date.” (FAC ¶¶ 293-94).

These allegations do not plead “facts” sufficient to justify an inference that the impact of Defendants’ spoofing extended to sales by NWBO not in close proximity to the spoofing. In *Gamma Traders*, the plaintiff similarly alleged that “Defendants’ manipulation of the markets for precious metals futures contracts

caused prices to be artificial throughout the Class Period.” 41 F.4th at 80. The court found this to be a “merely conclusory” allegation that “we need not credit, even on a motion to dismiss.” *Id.* (cleaned up); see also *In re London Silver Fixing Ltd. Antitrust Litig.*, No. 14 MD 2573, 2023 WL 3582198, at *10-11 (S.D.N.Y. May 22, 2023) (complaint’s vague allegation “that prices never fully recovered” failed to plausibly plead “endurance of artificial prices caused by manipulation” as required by *Gamma Traders*) (cleaned up). NWBO’s allegations quoted above, while more expansive rhetorically, are no less conclusory in substance.

The FAC quotes an expert report by Professor Paul Milgrom in *Alaska Electrical Pension Fund v. Bank of America*, No. 14 Civ. 7126 (JMF) (S.D.N.Y. Jan. 22, 2018), as stating: “Because manipulative trades are viewed by market participants as potentially informed, and potentially informed trades can result in permanent price impact, manipulative trades can lead to permanent price impact.” (FAC ¶ 60; emphasis omitted). NWBO alleges that, because Defendants are among the largest participants in OTC Link and Global OTC, other market participants would have had “good reason to treat [Defendants’] trades as well informed” and Defendants’ manipulative acts would have had the type of “permanent price impact” described by Professor Milgrom. (*Id.*).

However, nothing in the FAC suggests that the Milgrom report concerned spoofing.³¹ *Alaska Electrical Pension Fund* was neither a spoofing case nor a

³¹ Because Plaintiff did not attach the Milgrom report to the FAC, and it is not available on the docket for the *Alaska Electrical Pension Fund* case, the Court is unable to review it for itself.

securities case; it was an antitrust action alleging that some of the world's largest banks conspired to manipulate the U.S. Dollar ISDAfix, a benchmark interest rate. *See Alaska Elec. Pension Fund v. Bank of Am. Corp.*, 175 F. Supp. 3d 44, 49 (S.D.N.Y. 2016). The banks were accused of manipulating daily ISDAfix rates to benefit their trading positions in interest-rate swaps whose settlement value was determined by the ISDAfix. *See id.* at 50-51. Thus, the profitability of the scheme did not depend on subsequent trading or a subsequent movement of the manipulated price in the opposite direction.

Spoofing is a different form of market manipulation. As alleged in the FAC, spoofing involves a cycle of trading activity that includes, in addition to the placement of manipulative Baiting Orders driving the price in one direction, the virtually immediate cancellation of those orders and the execution of trades that push the price in the other direction. (*See* FAC ¶¶ 56-58). As the district court's decision in *Gamma Traders* recognized, "manipulative trading strategies like 'spoofing' . . . depend for their profitability on *a reversion of prices to the market-level*, meaning that the period of artificiality may be brief." *In re Merrill, Bofa, & Morgan Stanley Spoofing Litig.*, 19 Civ. 6002 (LJL), 2021 WL 827190, at *13 (S.D.N.Y. Mar. 4, 2021) (quoting *In re London Silver Fixing Ltd., Antitrust Litig.*, 332 F. Supp. 3d 885, 923 (S.D.N.Y. 2018) (emphasis added)). Given this, the fact that *some* forms of market manipulation, such as ISDAfix manipulation, may have a "permanent price impact" does not justify a reasonable inference that *spoofing* has such an impact or, more specifically, that spoofed Baiting Orders continue to emit a

false pricing signal to the market after they have been cancelled and the spoofer has purchased and resold the stock.³²

At oral argument, Plaintiff’s counsel argued that unlike a “typical[]” spoofing case, in which the stock price “is being spoofed up and down . . . , [h]ere, all of the spoofing is in one direction, and it[']s down.” (Oral Arg. Tr. at 77:23-78:1).

Plaintiff’s counsel posited that “thousands of baiting orders pushing the price only in one direction over a sustained period of time . . . has an impact on the stock price over time[.] [W]hen [the stock price] is only moving in one direction[,] the market tends to believe that the price will continue moving in that direction even beyond the specific spoofing episode.” (*Id.* at 78:4-10).

But the FAC itself contradicts counsel’s assertion that NWBO’s stock price was “only moving in one direction.” Instead, the FAC repeatedly alleges—as it must in order to plead a *bona fide* spoofing scheme—that after placing and cancelling the

³² Moreover, the term “permanent price impact” in the relevant finance literature appears to mean something very different from what Plaintiff suggests. Market microstructure studies often differentiate between the “temporary price impact”—which relates to the bid-ask spread—and the “permanent price impact” of a trade (or marketable order), which “attempts to measure price adjustment from an instant before the arrival of the marketable order to a time in which we assume prices have finished their adjustment to the information content of the order.” Juhani T. Linnainmaa & Gideon Saar, *Lack of Anonymity and the Inference from Order Flow*, 25 Rev. Fin. Stud. 1414, 1432 & n.20 (2012). Such studies “often use the midquote *five minutes after a transaction* as a posttrade benchmark price” in determining the “permanent” price impact. *Id.* at 1432 (emphasis added); see also Maurizio Murgia, et al., *The Impact of Large Orders in Electronic Markets*, 59 Int’l Rev. Econ. & Fin. 174, 184 (2019) (study defining “permanent” price impact as “a change from the pre-trade price to the post-trade price” measured in as short an interval as five minutes before and after the trade). In other words, the microstructure literature treats even price changes occurring within a very brief period of time after the trade as “permanent.” That a temporary price decline triggered by a spoofing episode might be viewed as a “permanent price impact” under this definition says nothing about whether the impact continues to be felt after the spoofer has purchased the stock and the price has rebounded.

Baiting Orders, Defendants “dramatically revers[ed]” direction and placed lopsided *buy* orders, effectuated Executing *Purchases* (totaling more than 19 million shares over the Relevant Period), and succeeded in selling those shares for a profit after prices *rose*. (E.g., FAC ¶¶ 87-89). This is the very crux of a spoofing scheme: buy low (at an artificially depressed price), sell high (after the price has reverted to its market level).

The FAC itself alleges the same “reversion of prices to the market-level,” *Merrill*, 2021 WL 827190, at *13, that typifies spoofing schemes. As noted above, each of the sixteen Example Episodes includes a subsequent sale by the Defendant, at a profit, of shares acquired via an Executing Purchase once the price increased. Notably, NWBO alleges that the vast majority of these sales were at prices at or, more frequently, *above* the previously existing best offer and took place on the same day (and typically within an hour of) the Executing Purchase.³³ The reversion of the stock price in a brief period of time, as alleged in the FAC, undermines Plaintiff’s speculative hypothesis that the spoofing had a long-term or persistent price impact. *See London Silver*, 332 F. Supp. 3d at 899 (allegation of manipulative trading tactics “dependent on a reversion in prices” post-manipulation is “inconsistent with a conspiracy to persistently depress prices”); Merritt B. Fox, Lawrence R. Glosten & Sue S. Guan, *Spoofing and Its Regulation*, 2021 Colum. Bus.

³³ See FAC ¶¶ 87-89, 101-03, 115-17, 129-31, 143-45, 157-59, 170-72, 204-06, 217-19, 231-33, 238-40, 245-47, 252-54, 259-61. In two instances, the FAC alleges a subsequent sale that was at a price below the prevailing best offer and that took place more than an hour or two hours after the Executing Purchase. (FAC ¶¶ 183-85, 190-92).

L. Rev. 1244, 1288 (2021) (stating that “reduced price accuracy is not an important direct consequence of spoofing” and that spoofing “will only directly affect prices for a very brief period of time”).³⁴

Moreover, despite Plaintiff’s allegation that “Defendants’ relentless and repetitive spoofing activities throughout the Relevant Period caused a sustained decline in the market price of NWBO shares” (FAC ¶ 75), as Defendants note, NWBO’s share price more than doubled over the Relevant Period, from \$0.26 per share to \$0.70 per share. (Def. Br. at 33-34; Dkt. No. 116-6). Exhibit 1 to the FAC defies Plaintiff’s depiction of a “sustained decline,” showing Executing Purchases at generally escalating prices between December 2017 and late-October 2020, followed by prices fluctuating above and below \$1 per share and, at times, \$2 per share until May 2022. (FAC Exh. 1). And although NWBO alleges that its stock price dropped because of Defendants’ spoofing even on days when positive news was released about its lead product (*id.* ¶ 6), it points to only three days on which positive news was released, two of which were in November 2022 and March 2023, well after the Relevant Period. (*Id.* ¶¶ 46, 48).³⁵

³⁴ Nor does Plaintiff’s hypothesis gain factual plausibility through its allegation that Spoofing Episodes occurred on “395 of the 1,171 trading days” during the Relevant Period. (FAC ¶ 293). That spoofing occurred on many days does not show that its impact on NWBO’s stock price extended beyond any particular day.

³⁵ The other day is May 10, 2022, when NWBO alleges that its stock price declined by 78% despite supposedly “positive news” about the DCVax®-L clinical trials. (*Id.* ¶¶ 73-74). But as the FAC acknowledges, at least one news article that day “put a negative spin on the trial results”—the Adam Feuerstein article, which reported that NWBO’s drug “perform[ed] worse than a placebo.” (*Id.* ¶ 73 n.13; Dkt. No. 116-2). Moreover, NWBO does not allege that it sold any of its shares until nearly two months later, on July 1, 2022, and does not allege that the price for these sales was derived in any

Plaintiff relies on *Harrington* to support its long-term theory of loss causation. (Pl. Br. at 33 n.54; Dkt. No. 127 at 6-7). The court in that case credited on a motion to dismiss plaintiff's allegation that "[when] spoofing events occur continuously throughout the day and continue without interruption for a protracted period of time, the price of a spoofed security will generally not fully recover to the price that existed prior to the spoofing events." *Harrington II*, 2023 WL 6316252, at *8; see *Harrington I*, 585 F. Supp. 3d at 419-20. Crucially, however, the *Harrington* court did not analyze loss causation under the *Gamma Traders* framework, as *Gamma Traders* had not been decided at the time of *Harrington I* and was not cited in the parties' briefs in *Harrington II* on the loss causation issue. See *Harrington*, No. 21 Civ. 761 (LGS), Dkt. Nos. 136 at 17; 141 at 24-25. The issue of spoofing's long-term effects warranted little attention, because plaintiff alleged it sold the vast majority of its shares on days that spoofing episodes took place. (See *Harrington*, Dkt. No. 133 ¶¶ 104, 144). Moreover, in *Harrington*, the price of the supposedly spoofed stock plummeted from \$28.03 to \$3.13 over the ten-month relevant period (*id.* ¶ 103), whereas here, as noted, NWBO's share price more than doubled over the Relevant Period.

Even when viewed in the light most favorable to Plaintiff, the FAC's allegations do not plausibly plead a "factual basis that would justify an inference" that NWBO's stock price was "still artificial" when NWBO sold shares days, weeks,

way from the closing price on May 10, 2022. (FAC Exh. 2 at 11). The alleged decline in NWBO's stock price on May 10, 2022 thus does not help Plaintiff plead loss causation.

or months after the Spoofing Episodes. *See Gamma Traders*, 41 F.4th at 80. At most, Plaintiff's allegations suggest a theoretical possibility of a long-term price impact from spoofing. That is not enough. Plaintiff must allege sufficient facts to "nudge[] their claims across the line from conceivable to plausible." *Twombly*, 550 U.S. at 550. The FAC fails to do so. *See Merrill*, 2021 WL 827190, at *13 (rejecting loss causation allegations in *Gamma Traders* spoofing case that were "based on rank speculation prohibited by the Supreme Court's decision in *Twombly* and *Iqbal*"); *Alaska Laborer Emps. Retirement Fund v. Scholastic Corp.*, No. 07 Civ. 7402, 2010 WL 3910211, at *6 (S.D.N.Y. Sept. 30, 2010) (loss causation allegations in securities case "must at least rise to [] more than a speculative level under the oft-cited *Iqbal* standard").

F. Reliance

In securities fraud actions, reliance is often shown through the "fraud on the market" doctrine, which creates a rebuttable presumption of reliance when the security in question is traded in an efficient market. *Dodona I, LLC v. Goldman, Sachs & Co.*, 847 F. Supp. 2d 624, 651 (S.D.N.Y. 2012). Although generally discussed in the context of misrepresentation claims, the doctrine's reasoning "applies equally to instances of alleged market manipulation." *In re Parmalat Sec. Litig.*, 375 F. Supp. 2d 278, 303 (S.D.N.Y. 2005). To plead reliance under the fraud-on-the-market doctrine in a market manipulation case, the plaintiff must plausibly allege that it "reli[ed] on an assumption of an efficient market free of manipulation." *Set Cap.*, 996 F.3d at 76 (quoting *ATSI*, 493 F.3d at 101).

The FAC alleges just that (FAC ¶ 301), but Defendants contend that Plaintiff fails to allege facts sufficient to plead that OTC Link and Global OTC are efficient markets. Specifically, Defendants argue that pleading reliance is an “uphill battle in the OTC context, as OTC markets are typically illiquid,” and that courts routinely hold that OTC markets are inefficient without factual allegations demonstrating efficiency. (Def. Br. at 34). Plaintiff argues that courts routinely find that OTC markets are efficient, and that it has alleged sufficient facts demonstrating that the market for NWBO was efficient. (Pl. Br. at 37).

1. OTC Markets as Efficient

Unlike national exchanges like the NYSE and NASDAQ, “the OTC markets are not presumed to be efficient.” *Handal v. Tenet Fintech Grp. Inc.*, 21-CV-6461 (PKC) (RER), 2023 WL 6214109, at *18 (E.D.N.Y. Sept. 25, 2023); *see also In re Teva Sec. Litig.*, No. 3:17-cv-558 (SRU), 2021 WL 872156, at *18 (D. Conn. Mar. 9, 2021) (“a security’s trading over the counter does not confer a presumption of market efficiency in the way that a security’s trading on the NYSE does”); *Alki Partners, L.P. v. Vatas Holding GmbH*, 769 F. Supp. 2d 478, 493 (S.D.N.Y. 2011) (“while ‘the NASDAQ is recognized as maintaining an efficient market . . . the Court is unaware of any court holding that the OTCBB . . . meet[s] this same standard’”) (quoting *Burke v. China Aviation Oil (Singapore) Corp.*, 421 F. Sup. 2d 649, 653 (S.D.N.Y. 2005)).

At the same time, the fact that a stock is traded over the counter “does not indicate that the market for the security was inefficient.” *Teva*, 2021 WL 872156, at

*18. “Most courts have held that where a stock is traded—in an over-the-counter market . . . versus on a national exchange—is not dispositive as to whether the market for that stock is efficient.” *Petrie v. Elec. Game Card, Inc.*, 308 F.R.D. 336, 349 (C.D. Cal. 2015); *see Cammer v. Bloom*, 711 F. Supp. 1264, 1281 (D.N.J. 1989) (“While some over-the-counter stocks no doubt trade in a less developed market than some New York Stock Exchange issues, the inquiry in an individual case remains the development of the market for that stock, and not the location where the stock trades.”) (cleaned up).

Indeed, “[a]fter considering other indicia of market efficiency, many courts have held that stocks and bonds that traded over the counter were traded in efficient markets.” *Teva*, 2021 WL 872156, at *18 (citing cases); *see, e.g., In re Parmalat Sec. Litig.*, No. 04 MD 3895539 (LAK), at *9-10 (S.D.N.Y. Aug. 21, 2008) (finding, in context of class certification motion, that evidence sufficiently demonstrated that OTC stock traded in efficient market); *In re Laser Arms Corp. Sec. Litig.*, 794 F. Supp. 475, 490 (S.D.N.Y. 1989) (complaint adequately alleged that OTC stock traded in an efficient market).

Thus, the fact that NWBO stock was traded in the OTC market does not preclude a showing of market efficiency. Rather, whether reliance has been pled turns on the sufficiency of the FAC’s factual allegations. *See, e.g., Salvani v. ADVFN PLC*, 50 F. Supp. 3d 459, 472-73 & n.9 (S.D.N.Y. 2014) (rejecting defendant’s argument that “the OTCBB cannot meet the standard for an efficient

market as a matter of law,” but finding that plaintiff failed to sufficiently allege that the OTCBB market for security in question was open and efficient).

2. The FAC’s Allegations of Market Efficiency

In evaluating whether a particular security trades in an efficient market, courts regularly consider the so-called “*Cammer* factors.” *Waggoner v. Barclays PLC*, 875 F.3d 79, 94 (2d Cir. 2017) (citing *Cammer*, 711 F. Supp. at 1286-87). The *Cammer* factors are: (1) the average weekly trading volume of the stock, (2) the number of securities analysts following it, (3) the extent to which market makers traded in the stock, (4) the issuer’s eligibility to file an SEC registration Form S-3 registration statement, and (5) the demonstration of a cause-and-effect relationship between unexpected, material disclosures and changes in the stock price. *Id.*; see *In re Shanda Ltd. Sec. Litig.*, No. 18 Civ. 2463 (ALC), 2022 WL 992794, at *4-5 (S.D.N.Y. Mar. 31, 2022) (analyzing adequacy of complaint with reference to the *Cammer* factors); *Parmalat*, 375 F. Supp. 2d at 303-04 & n.162 (same).

Here, Plaintiff has alleged most but not all of the *Cammer* factors, albeit in largely conclusory fashion. The FAC pleads that: NWBO filed periodic public reports with the SEC; NWBO shares traded at “high” weekly volumes; NWBO was eligible to file registration statements with the SEC on Form S-3; the market “reacted promptly to public information disseminated by NWBO;” NWBO “regularly communicated with public investors via established market communication mechanisms” such as press releases; NWBO was regularly covered throughout the Relevant Period by “the financial news;” and “as a result of the foregoing, the

market for NWBO's shares promptly digested current information regarding NWBO from all publicly available sources and reflected such information in the price of NWBO's shares." (FAC ¶¶ 297-98).

While not included as part of these allegations, the FAC also pleads that market makers—namely, several of the Defendants—actively traded in NWBO stock. (*See, e.g., id.* ¶ 283). In addition, although likewise not in the section of the FAC addressing reliance, Plaintiff pleads that NWBO had a market capitalization of approximately \$650 million (*id.* ¶ 15), as well as information showing, on numerous different dates and times, the bid/ask spread (*e.g., id.* ¶¶ 83, 97, 111), two other factors often considered by courts in the market efficiency analysis. *See Waggoner*, 875 F.3d at 94-95 (citing *Krogman v. Sterritt*, 202 F.R.D. 467, 474 (N.D. Tex. 2001)).

On the other hand, the FAC pleads nothing about analyst coverage of NWBO. Nor does it plead any specifics about NWBO's average weekly volume, other than that it was "high." (FAC ¶ 297).

While NWBO plainly could have done a better job of pleading market efficiency (as Plaintiff's counsel acknowledged at oral argument, *see Oral Arg. Tr.* 67:21-25), it has pled enough to satisfy its burden under Rule 8. NWBO's failure to specifically allege coverage by securities analysts "is not fatal at the pleading stage." *Hull v. Glob. Digit. Sols., Inc.*, Civil Action No. 16-5153 (FLW), 2018 WL 4380999, at *9 (D.N.J. Sept. 14, 2018). Nor is its failure to plead average weekly trading volume. *See Parmalat*, 375 F. Supp. 2d at 304 (finding complaint sufficient even

though it “[did] not indicate the volume” of trading). The *Cammer* factors “are not a rigid checklist” and not “every factor [needs to] be established.” *McIntire v. China MediaExpress Holdings, Inc.*, 38 F. Supp. 3d 415, 432 (S.D.N.Y. 2014).

Accordingly, NWBO has “alleged sufficient facts to invoke the presumption of reliance at this stage. . . . Whether [it] later will succeed in proving the applicability of the fraud-on-the-market theory must abide that event.” *Parmalat*, 375 F. Supp. 2d at 304; *see also In re Merrill Lynch Auction Rate Sec. Litig.*, 704 F. Supp. 2d 378, 395 (S.D.N.Y. 2010) (whether a market is efficient “normally should not be decided on a motion to dismiss”); *Laser Arms*, 794 F. Supp. at 490 (“[w]hether in fact Laser Arms traded in an efficient market is a question of fact,” the resolution of which “must await further presentation of proof”).

CONCLUSION

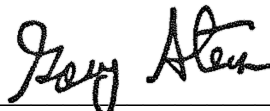
For the reasons stated above, the Court concludes and respectfully recommends that Defendants’ motion to dismiss be **GRANTED**. Since the Court does not believe that an amendment would be futile, the Court further recommends that Plaintiff be given leave to file a further amended complaint attempting to cure the deficiencies in the FAC’s loss causation allegations.

NOTICE OF PROCEDURE FOR FILING OBJECTIONS TO THIS REPORT AND RECOMMENDATION

Pursuant to 28 U.S.C. § 636(b)(1) and Fed. R. Civ. P. 72(b), the parties shall have fourteen calendar days, inclusive of weekends and holidays, from the date of this Report and Recommendation to file written objections thereto. *See*

also Fed. R. Civ. P. 6(a), (b), and (d). Any such objections shall be filed with the Clerk of Court. The Parties shall deliver courtesy copies to chambers of the Hon. Gregory H. Woods at 500 Pearl Street, New York, New York 10007, and in accordance with Rules 3.B and 3.H of his Individual Rules of Practice in Civil Cases. Any request for an extension of time to file objections must be directed to Judge Woods. A failure to file timely objections will preclude appellate review. *See Thomas v. Arn*, 474 U.S. 140 (1985); *Wagner v. Wagner, LLP v. Atkinson, Haskins, Nellis, Brittingham, Gladd & Carwile, P.C.*, 596 F.3d 84, 92 (2d Cir. 2010).

DATED: New York, New York
December 29, 2023



GARY STEIN
United States Magistrate Judge