UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK

NORTHWEST BIOTHERAPEUTICS, INC., Plaintiff, - against- CANACCORD GENUITY LLC, CITADEL SECURITIES LLC, G1 EXECUTION SERVICES LLC, GTS SECURITIES LLC, INSTINET LLC, LIME TRADING CORP., and VIRTU AMERICAS LLC, Defendants.	Case No: 1:22-cv-10185-GHW-GS

PLAINTIFF'S RESPONSE TO DEFENDANTS' OBJECTIONS TO
MAGISTRATE JUDGE STEIN'S REPORT AND RECOMMENDATION

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Plaintiff Northwest Biotherapeutics, Inc. ("NWBO" or "Plaintiff") respectfully submits its opposition to Defendants' objections (ECF No. 177) ("Objections") to Magistrate Judge Stein's Report & Recommendation ("R&R") (ECF No. 174).[1]

I. PRELIMINARY STATEMENT

Defendants incorrectly claim that this case's long procedural history has "highlight[ed] the fundamental deficiencies in NWBO's allegations," Obj. at 3, but the opposite is true – Plaintiff's allegations have held up under repeated attack from Defendants and detailed analysis by multiple courts on multiple occasions. In response to Defendants' first motion to dismiss, Magistrate Judge Stein rejected Defendants' challenges to the First Amended Complaint's allegations of manipulative acts, scienter, and reliance in a detailed 85-page Report & Recommendation (ECF No. 137) (the "First R&R"). Defendants objected vigorously to the First R&R's conclusions on these elements. (ECF No. 141.) This Court then rejected each of Defendants' arguments, affirming the First R&R in its entirety, holding that the First Amended Complaint adequately pled all elements of spoofing claims but loss causation. (ECF No. 148) (the "February 14 Order"). However, because it would not be futile to do so, it permitted Plaintiff to amend its complaint to add additional allegations regarding loss causation, and to explain how the prices at which it sold its shares within 1 hour of a Defendant's spoof were "formulaically determined" from closing prices affected by Defendants' spoofing.[2] *Id.* at 3-4. Plaintiff filed a Second Amended Complaint

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[1] Citations to the Report & Recommendation are set forth as "R&R at __" and citations to Defendants' objections are set forth as "Obj. at __." References to "¶ __" are to paragraphs of the Second Amended Complaint (ECF No. 150). Unless otherwise indicated, emphasis is added, quotation marks and citations are omitted, and alterations are adopted.

[2] Specifically, the Court held that Plaintiff sufficiently pled loss causation for those sales within 1 hour of a Defendant's spoof under the temporal proximity theory of *Gamma Traders* if it amended the complaint to simply explain how those sales were "formulaically derived" from the closing prices on those days, but needed to plead further information regarding the remainder of Plaintiff's sales to establish loss causation.

("SAC") that did exactly that, and after additional briefing, Magistrate Stein found that the SAC sufficiently pled how its sales within 1 hour of a Defendant's spoof were "formulaically derived" from the closing prices on those days, and that new loss causation allegations completed the circle of causation and adequately pled loss causation for the remainder of Plaintiff's "same day" sales.

Notably, Defendants do not raise any objection to the R&R's finding that the SAC satisfied the lone pleading deficiency identified by this Court in its February 14 Order regarding Plaintiff's sales within 1 hour of a Defendant's spoof. Nor can they, since the SAC explained in minute detail how its sales were priced. Having exhausted its arguments on that issue, and facing the prospect of imminent discovery, Defendants attempt to use their present Objections to turn back the clock and re-argue (for a fourth time[3]) the pleading sufficiency of the fundamental aspects of the alleged spoofing scheme – allegations which were not amended or changed in any way in the SAC. The Court should reject these arguments for the same reasons it rejected them previously and as law of the case.

In addition to adding detailed information regarding how the prices at which NWBO sold over 22 million shares were "formulaically determined" from closing prices on dates on which Defendants spoofed NWBO within an hour of the close of trading, the SAC pleads: (1) a detailed quantitative analysis of the average price impact of Spoofing Episodes up to 400 minutes following each Spoofing Episode (¶¶ 311-312); (2) a detailed quantitative analysis showing the average change in NWBO's share price from the two minutes prior to Spoofing Episodes up to 60 trading days thereafter (¶¶ 313-315); (3) a detailed econometric analysis of posts about NWBO on a popular message board called InvestorsHub (¶¶ 323-25); and (4) further detail regarding the expert

[3] Defendants unsuccessfully argued against the sufficiency of Plaintiff's manipulative acts, scienter, and reliance elements in their first motion to dismiss (ECF No. 115, 124), their objections to the first R&R (ECF No. 141), and their second motion to dismiss (ECF No. 156).

analysis of Nobel prize winning economist Professor Paul Milgrom regarding the long lasting effects of market manipulation on a company's security (¶¶ 316-17, 326-328) and related additional economic literature on that topic (¶¶ 317-319).

The R&R correctly held that "the SAC provides an explanation of how the sale prices for [its sales of] 40 million shares were formulaically determined from the closing prices on dates when spoofing occurred" and thereby pled loss causation under the temporal proximity theory. R&R at 5. And the R&R also correctly held that, for the 18 million shares sold within 1 day (but after 1 hour) of a Defendant's spoof, the SAC "pled enough facts to support a plausible inference that the closing prices of NWBO stock were adversely affected by Defendants' same-day spoofing even when there were no Spoofing Episodes during the final hour of trading." R&R at 32, 36-37. These conclusions are supported by the detailed allegations in the SAC, which easily hurdle the liberal pleading standard for loss causation that prevails in this District, which requires only a "short and plain statement in accordance with Rule 8 of the Federal Rules of Civil Procedure." R&R at 10. *See also In re Vale S.A. Sec. Litig.*, No. 15-cv-9539, 2017 WL 1102666, at *26 (S.D.N.Y. Mar. 23, 2017) (Woods, J.) (the burden of pleading loss causation is "not a heavy one" and a complaint "must simply give Defendants some indication of the actual loss suffered and of a plausible causal link between the loss and the alleged misrepresentations") (quoting *Loreley Financing (Jersey) No. 3 Ltd. v. Wells Fargo Sec., LLC*, 797 F.3d 160, 187 (2d Cir. 2015)).

Defendants' objections to the R&R ignore this Court's previous order and both of Magistrate Judge Stein's R&Rs, and improperly attempt once again to advance arguments this Court has rejected multiple times over.

First, Defendants argue that there is an inherent inconsistency between the presumption of an efficient market and persistent negative price impact from spoofing, but they still point to no

spoofing case or economic literature that adopts their manipulation-proof "ultra-robust" market efficiency hypothesis that contradicts the well-pled allegations in the SAC and that Magistrate Stein has rejected from the start. *See* R&R at 50 ("the Court rejects the premise underlying this argument—that there is an irreconcilable contradiction between NWBO's loss causation arguments and the efficient market hypothesis.")

Second, Defendants argue that the SAC has not pled any negative price impact, but they ignore not only the Court's prior order and the first R&R finding price impact sufficiently pled for Plaintiff's sales within the 1 hour of a Defendant's spoof, but also the many factual allegations in the SAC that describe in detail how and why Defendants' Executing Purchases would not "drive the price of NWBO stock up" and the considerable economic literature that supports spoofing's persistent price impact for the remainder of Plaintiff's sales.

Third, Defendants continue to assert, contrary to this Court's holdings, that there is an inconsistency between a persistent price impact and other elements of market manipulation claims – another assertion that no spoofing (or any other type of manipulation) case has adopted. This Court and Magistrate Judge Stein has consistently rejected Defendants' attempt to invent new pleading requirements that no spoofing plaintiff could ever meet, and should do so again here.

Since Defendants offer nothing beyond the arguments this Court and two R&R's have already rejected three times, its objections should be denied and the R&R's conclusion that the SAC adequately pled loss causation for all of Plaintiff's same-day sales should be adopted.[4]

II. LEGAL STANDARD

When reviewing an R&R, the Court has full discretion to "accept, reject, or modify, in

[4] As explained in Plaintiff's Limited Objection to Magistrate Judge Stein's Report and Recommendation (ECF No. 178), this Court should overturn the R&R's conclusion that loss causation was not sufficiently pled for Plaintiff's sales more than 1 day after a Defendant's spoof.

whole or in part, the findings or recommendations made by the magistrate judge." 28 U.S.C. § 636(b)(1). For any dispositive matter, "any part of the magistrate judge's recommendation that has been properly objected to must be reviewed by the district judge *de novo*." *Arista Recs., LLC v. Doe 3*, 604 F.3d 110, 116 (2d Cir. 2010) (citing Fed. R. Civ. P. 72(b)). *See* February 14 Order at 2-3. However, where, like here, "the party makes only frivolous, conclusory, or general objections, *or simply reiterates her original arguments*, the Court reviews the report and recommendation only for clear error." *Catania v. United Federation of Teachers*, No. 21-cv-1257, 2022 WL 767107 at *1 (S.D.N.Y. Mar. 12, 2022) (Woods, J.). *See also Vega v. Artuz*, No. 97-cv-3775, 2002 WL 31174466, at *1-2 (S.D.N.Y. Sept. 30, 2002) ("rehashing" the same arguments would reduce the magistrate's work to a "meaningless dress rehearsal" and require "the district court to duplicate every effort made by the Magistrate Judge.").

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." *Set Capital LLC v. Credit Suisse Group AG,* 996 F.3d 64*,* 75 (2d Cir. 2021) (citation omitted). *See also In re Wells Fargo & Co. Sec. Litig.*, No. 20-cv-4494, 2021 WL 4482102, at *8 (S.D.N.Y. Sept. 30, 2021) (Woods, J.) (same). "Rule 12(b)(6) does not countenance . . . dismissals based on a judge's disbelief of a complaint's factual allegations." *Bell Atlantic Corp. v. Twombly*, 550 U.S. 544 at 556 (2017) (quoting *Neitzke v. Williams*, 490 U.S. 319, 327 (1989)).

Loss causation "is the causal connection" between the alleged misconduct and plaintiff's economic harm. *Erica P. John Fund, Inc. v. Halliburton Co.*, 563 U.S. 804, 808 (2011). As the R&R correctly noted, under the "prevailing practice" in this District, loss causation need not be plead with particularity.[5] R&R at 10 (citing *Sharette v. Credit Suisse Int'l.,* 127 F. Supp. 3d. 60,

[5] Defendants' suggestion that loss causation is subject to "heightened pleading standards," Obj. at

80, 102-03 & n.12 (S.D.N.Y. 2015)). *See also In re Vale S.A.*, No. 15-cv-9539, 2017 WL 1102666, at *29 (S.D.N.Y. Mar. 23, 2017) (Woods, J.) ("Ordinary pleading rules under Fed. R. Civ. P. 8(a)(2), which apply to loss causation, are not meant to impose a great burden upon a plaintiff."). "A short and plain statement in accordance with Rule 8 of the Federal Rules of Civil Procedure is sufficient." *Sharette,* at 103. *See also Harrington Global Opportunity Fund, Ltd. v. CIBC World Markets Corp.*, 585 F. Supp. 3d 405 at 419 (S.D.N.Y. 2022) ("A plaintiff's burden in alleging loss causation 'is not a heavy one.'") ("*Harrington I"*) (quoting *Loreley Fin. (Jersey) No. 3 Ltd. v. Wells Fargo Sec., LLC*, 797 F.3d 160, 187 (2d Cir. 2015)); *DoubleLine Capital LP v. Construtora Norberto Odebrecht, S.A.*, 413 F. Supp. 3d 187, 212 (S.D.N.Y. 2019) (Woods, J.) (same). The plaintiff "need not demonstrate on a motion to dismiss that the [defendant's conduct] was the *only* possible cause for decline in the stock price." *Carpenters Pension Trust Fund of St. Louis, et al.* v. *Barclays PLC, et al.*, 750 F.3d 227, 233 (2d Cir. 2014). In the Second Circuit, all a plaintiff must do is "simply give Defendants some indication of the actual loss suffered and of a plausible causal link between that loss and the … alleged manipulative acts." (R&R at 11.) This "not heavy burden," particularly in a market manipulation case such as this one where the pleading standards are even more relaxed[6], has been more than met here.

In analyzing the requirement under the Commodity Exchange Act ("CEA") that a plaintiff suffer "actual damages," the Second Circuit in *Gamma Traders* held that there are two

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12, is flatly incorrect and inconsistent with the law in this Circuit.

[6] Because manipulation "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 Commc'ns, Inc. v. The Shaar Fund, Ltd.*, 493 F.3d 87, 102 (2d Cir. 2007). *See also Harrington I*, 585 F. Supp. 3d at 418 (same). Rather, the plaintiff need only "lay out the nature, purpose, *and effect* of the fraudulent conduct and the roles of the defendant without requiring specific instances of the conduct." *Nanopierce Techs., Inc. v. Southridge Cap. Mgmt., LLC*, No. 02-cv-0767-LBS, 2002 WL 31819207 at *5 (S.D.N.Y. Oct. 10, 2002) (italics added).

independently sufficient ways in which *price impact* may be pled in a CEA spoofing case. Under the "temporal proximity" theory, a plaintiff may allege 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. Under the "long-term price impact" theory, a plaintiff may allege 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. *Gamma Traders I – LLC v. Merrill Lynch Commodities, Inc.*, 41 F. 4th 71, 80-81 (2d Cir. 2022).

III. THE PRESUMPTION OF AN EFFICIENT MARKET DOES NOT CONFLICT WITH A LONG-TERM PRICE IMPACT FROM SPOOFING

Defendants argue – once again – that there is an inherent conflict between the presumption of an efficient market for reliance purposes and a persistent price impact from manipulative spoofing. Obj. at 5. Defendants' only support for this claim is a single case from another district that did not deal with spoofing at all, or any other kind of "high frequency trading."[7] There is no conflict for multiple reasons.

First, an efficient market does not mean that a stock's price is accurate – it simply means that it reflects the public information in the market. If there is misinformation in the market (like misinformation about demand due to spoofing) the market price can be both efficient and artificially inflated (or deflated). For this simple reason, the R&R correctly rejected the fundamental premise of Defendants' argument. *See* R&R at 50 ("the Court rejects the premise underlying this argument—that there is an irreconcilable contradiction between NWBO's loss causation arguments and the efficient market hypothesis.") The R&R then went further and

[7] *See Bricklayers & Trowel Trades Int'l Pension Fund v. Credit Suisse First Boston*, 853 F. Supp. 2d 181, 190 (D. Mass. 2012), *aff'd sub nom.*, 752 F.3d 82 (1st Cir. 2014) (holding that an expert report on the timing of the impacts of various corrective disclosures was not reliable).

explained why Defendants' argument is repudiated by a large body of caselaw, including Supreme Court precedent:

> Defendants cite no cases adopting the uber-robust hypothesis of market efficiency they espouse. A considerable body of authority refuses to be constrained by it. The Supreme Court has repeatedly made clear that, in recognizing the 'fraud on the market' presumption of reliance premised on the efficient market hypothesis, it was not endorsing 'any particular theory of how quickly and completely publicly available information is reflected in market price.'[8] R&R at 18 (collecting cases).

Indeed, as courts routinely recognize, an efficient market for purposes of the presumption of reliance simply means that the market is informationally efficient – in other words, that it digests new, material information in a relatively short period of time. *See Waggoner v. Barclays PLC*, 875 F.3d 79, 94 (2d Cir. 2017) ("An efficient market is one in which the prices of the [stock] incorporate most public information rapidly."); *Teamsters Loc. 445 Freight Div. Pension Fund v. Bombardier Inc.*, 546 F.3d 196, 199 n.4 (2d Cir. 2008) (An efficient market is one in which "market professionals generally consider most publicly announced material statements about companies, thereby affecting stock prices.") It does not mean that the market is perfectly accurate or even that it moves in a direction that would be expected. *See Halliburton Co. v. Erica P. John Fund, Inc.*, 573 U.S. 258, 272 (2014) ("That the price of a stock may be inaccurate does not detract from the fact that false statements affect it, and cause loss, which is all that *Basic* requires."); Bouchaud, Farmer, and Lillo, "How Markets Slowly Digest Changes in Supply and Demand." HANDBOOK OF FINANCIAL MARKETS: DYNAMICS AND EVOLUTION, 97 (2008) ("Because the outstanding liquidity of markets is always very small, trading is inherently an incremental process, and prices cannot be instantaneously in equilibrium, and cannot instantaneously reflect all available information."); Kyle, "Continuous Auctions and Insider Trading." ECONOMETRICA,

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[8] R&R at 19 ("The Second Circuit, too, has repeatedly—and recently—declined to adopt a particular test for market efficiency.")

53(6), 1315-1336 (1985) (developed theoretical trading model in which efficient market only partially learns the underlying private information of informed traders). If a market like the market for NWBO shares does not know (or have the correct probabilities) that it is being spoofed, that information has not fully made its way into the price, even in an efficient market.

Second, Defendants' comparison between the market impact of corrective disclosures and that of manipulative conduct is exactly backwards. Obj. at 5-6. While corrective disclosures, by definition, provide the market with new, material information that reveals prior misstatements, in manipulation cases it might take considerable time for the market to learn precisely which trades were manipulative. ¶ 316 ("As Nobel prize winning economist Professor Paul Milgrom explains, this price decline persists because manipulative trades are viewed by market participants as potentially informed, and potentially informed trades can result in permanent price impact….") *See also In re Initial Public Offering Sec. Litig.*, 383 F. Supp. 2d 566, 580 (S.D.N.Y. 2005) ("when market manipulation is the cause of artificial inflation, pinpointing a 'disclosing event' at which point all the artificial inflation leaves the market price of a security is difficult. Because the initial manipulation occurred in secret, artificial inflation can be presumed to dissipate gradually as investors analyze all available information, including the return to normal levels of market activity, and come to realize that the stock is overvalued."). Defendants' arguments are contrary to the well-pled allegations of the SAC that specifically allege why it is highly improbable that market participants would be able to readily identify specific trades as manipulative. *See, e.g.,* ¶60.

Third, the well-pled factual allegations of the SAC, which the Court must accept as true at the pleading stage, explain why the price impact of baiting orders is not fully reversed by a spoofer's subsequent cancellations and Executing Purchases. ¶¶ 317-321. The SAC directly

contradicts Defendants' improper factual assertion that Executing Purchases would have an immediate upwards price impact that exactly negated the negative price impact of Baiting Orders. *Compare* Obj. at. 6 *with* ¶ 320 ("Every Executing Purchase identified in this Complaint consists of a non-marketable buy order executing against a marketable sell order by another market participant, leading to a decline in NWBO's share price."). In support of their factual assertion, Defendants cite only an old out-of-Circuit case that did not address the timing or degree of price impact of Baiting Orders or Executing Purchases, and in fact did not address spoofing or any manipulative conduct at all. *Roots P'ship v. Lands' End, Inc.*, 965 F.2d 1411, 1419 (7th Cir. 1992).[9]

Fourth, Courts consistently recognize that the exact duration of price impact is a fact issue for discovery and expert opinion, not an issue for a motion to dismiss. *Compare* Obj. at 12 (incorrectly suggesting that loss causation is subject to "heightened pleading standards.") *with In re Vale S.A. Sec. Litig.*, No. 15-cv-9539, 2017 WL 1102666, at *26 (S.D.N.Y. Mar. 23, 2017) (Woods, J.) (the burden of pleading loss causation is "not a heavy one" and a complaint "must simply give Defendants some indication of the actual loss suffered and of a plausible causal link between the loss and the alleged misrepresentations") (quoting *Loreley Financing (Jersey) No. 3 Ltd. v. Wells Fargo Sec., LLC*, 797 F.3d 160, 187 (2d Cir. 2015)); *see also* R&R at 21 ("Given the particular characteristics of spoofing, expert testimony might ultimately substantiate Defendants' view that its effects on a stock price last mere seconds. But on this motion to dismiss, the issue is not whether Defendants have articulated a plausible claim that this is so, but whether the Court

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[9] Defendants' only other case citation in support of its "uber-robust" market efficiency hypothesis is *Gruntal & Co. v. San Diego Bancorp*, 901 F. Supp. 607, 617 (S.D.N.Y. 1995), which held only that after manipulation ends, an efficient market will correct share prices at some unspecified point in time "thereafter." Notably, Plaintiff alleges that the manipulation of its stock price is still ongoing, and seeks an injunction as part of the relief sought. *See* ¶¶ 343-348.

should conclude that Plaintiff's competing contention is implausible. NWBO's allegation at the pleading stage that its shares trade in an efficient market does not compel that conclusion.").

IV. THE R&R CORRECTLY FOUND THAT SPOOFING HAS AT LEAST A PRICE IMPACT OF A TRADING DAY

Defendants next restate their argument, already rejected by this Court's February 14 Order and by two R&Rs, that spoofing can only have a price impact of "seconds." This Court has already affirmed the First R&R's holding that considered this improper factual argument and found it unavailing. *See also* First R&R at 70, February 14 Order (adopting First R&R in full). Further, as the R&R explains:

> Accordingly, the Court rejects Defendants' argument, at the pleading stage, that the impact of their alleged spoofing on NWBO's stock price could have lasted only for mere seconds, and adheres to the [first] R&R's determination that NWBO has adequately pled loss causation under a temporal proximity theory based on spoofing that occurred within the last hour of trading on a Pricing Date. In so doing, the Court emphasizes that this conclusion is not a matter of "common sense" inference alone. In *Gamma Traders*, the Second Circuit considered temporal proximity solely "as a matter of common sense" because the plaintiff had not pled any facts to support its allegation that it was injured by the spoofing. R&R at 30.

In contrasting the well-pled allegations of the SAC with the allegations in *Gamma Traders*, the R&R held that NWBO makes "factual allegations to support the inference that the effects of" Defendants' spoofing during the final hour of trading "linger[ed] for the remainder of the trading day." The R&R specifically identified certain of these factual allegations: "that NWBO's stock price did not revert back to its pre-spoof price before market close in about half of the last-hour Spoofing Episodes that took place on Pricing Dates; that in many of those instances Defendants themselves did not sell any of the NWBO shares they allegedly acquired at artificially depressed prices until the next trading day; that, in the case of the December 10, 2021 Spoofing Episode, NWBO's stock price fell dramatically during the final hour of trading, coincident with Defendants' spoofing, and closed well below the pre-spoofing price for the vast majority of shares Defendants

acquired during the final hour of trading; and that, in the other last-hour Spoofing Episodes in Exhibit 1, NWBO's stock price closed below its pre-spoofing level roughly half the time, and on dozens of occasions appears to have never reverted to the pre-spoofing level prior to the market close." R&R at 31.

Both in their second motion to dismiss and now again in their Objections, Defendants claim that the R&R's conclusion is inconsistent with *Phunware II*. Defendants misread the loss causation holding of *Phunware II* and the R&R clearly explained why:

> Defendants argue that *Phunware II* "affirms" their contention that the effects of spoofing last for "seconds" only. (Def. Supp. at 2). But *Phunware II* does no such thing. To the contrary, the court explicitly relied on what it referred to as the R&R's "holding" that "the 30 instances of trading *within an hour* of the spoofing activity were temporally proximate enough to justify a common-sense inference that [NWBO's] stock sales occurred at an artificially depressed price." *Phunware II*, 2024 WL 4891891, at *2 (citing *Nw. Biotherapeutics*, 2023 WL 9102400, at *30) (emphasis added); *see* R&R at 70. Moreover, the court did not rule that Phunware could *only* plead loss causation for sales occurring "within seconds" of a spoofing episode. Indeed, it did not find any of Phunware's loss causation allegations in its amended complaint to be deficient. Rather, having found that Phunware sufficiently pled loss causation under the temporal proximity theory as to the sales that took place within seconds of the alleged spoofing, the court found it "unnecessary to determine," in the context of Phunware's motion for leave to file its amended complaint, whether Phunware adequately pled loss causation for its other sales. R&R at 29-30.[10]

The R&R's conclusion that the SAC sufficiently pleads that the negative price impact of Defendants' spoofing lasted for at least one day should be affirmed.

A. <u>The SAC's Quantitative Analysis Supports Persistent Price Impact</u>

Among the new allegations added to the loss causation section of the SAC are a detailed quantitative analysis of the average price impact of Spoofing Episodes up to 400 minutes following each Spoofing Episode (¶¶ 311-312) and a detailed econometric analysis of posts about NWBO

[10] *Phunware II* did not address the issue of long-term price impact. The parties in *Phunware* are currently briefing the defendant's motion to dismiss on that issue.

on a popular message board called InvestorsHub (¶¶ 323-25). The R&R found the SAC's new allegations sufficient to allege loss causation for all of Plaintiff's "same-day" sales.

In analyzing Plaintiff's quantitative analysis showing the average price movement of NWBO shares over the 400 minutes following a Spoofing Episode (¶¶ 311-312), the R&R correctly observed that it "depicts the *average* movement of NWBO's stock price following Spoofing Episodes" and "does not suggest that the stock price *never* reverted to its pre-spoofing level after individual Spoofing Episodes, or that, as to any individual Spoofing Episode, the price 'careened' in the manner depicted." R&R at 35. Accordingly, the R&R found that it provides support for the conclusion "that the effects of Defendants' spoofing may have lasted for hours." *Id.*

The R&R similarly analyzed Plaintiff's quantitative analysis, ¶¶ 323-325, showing that Defendants' spoofing often occurred during periods of rising market enthusiasm for NWBO's stock price and that spoofing "cut off" this investor enthusiasm. R&R at 35-36 (finding that this analysis plausibly suggests that Plaintiff could prove "that Defendants' same-day spoofing arrested positive momentum in NWBO stock that would have led to a higher closing price but for the spoofing….").

Defendants argue that, because in some instances NWBO's stock price rebounded above the pre-spoofing Best Offer price prior to close, the R&R was incorrect in concluding that the SAC adequately pled loss causation for all "same-day" sales. Obj. at 10. But the R&R carefully considered this argument and rejected it for multiple reasons. R&R at 22-23 ("Defendants tacitly acknowledge that, in the other half [of last-hour Spoofing Episodes], the stock price did *not* revert back."); *id.* at 24 ("Defendants do not explain how [the SAC's] allegations are consistent with their argument that the spoofing scheme pled by NWBO necessitates that the stock price rebound to the

pre-spoof level prior to the close."); *id.* ("Plaintiff's allegations concerning the spoofing during the final hour of trading on December 10, 2021 are particularly damning to Defendants' argument."); *id.* at 26 ("Defendants offer no convincing explanation as to why the data points that favor them … should be given more weight than the data points that contradict their argument….In the context of a motion to dismiss, it is evidence that they should not be."). Furthermore, Defendants continue to ignore that Plaintiff alleges that their spoofing drove NWBO's share price down below the level it would have attained in the absence of Defendants' spoofing, which can occur during times when the price of NWBO shares is otherwise moving up or down. *See, e.g.,* ¶ 322.

Defendants' attack on the SAC's sentiment analysis fares no better. While the R&R acknowledged that Defendants' criticism of the SAC's methodology for analyzing thousands of individual posts on InvestorHub "may ultimately prove convincing, they raise issues of fact that are not suitable for resolution on a motion to dismiss." R&R at 36. In their Objections, Defendants' only response to the R&R's correct application of this Circuit's liberal pleading standard is a misstatement of that law, suggesting that "heightened pleading standards govern" loss causation allegations. Obj. at 12. And, regardless, even under such a hypothetical standard, the detailed econometric analyses in the SAC would more than suffice. Indeed, loss causation allegations far less detailed than those in the SAC are regularly sustained by this Court and the Second Circuit. *See, e.g., Carpenters Pension Tr. Fund of St. Louis,* 750 F.3d 227 at 233-34 (finding loss causation adequately pled and holding that "[w]e cannot conclude, as a matter of law and without discovery, that any artificial inflation of Barclays's stock price after January 2009 was resolved by an efficient market prior to June 27, 2012. The efficient market hypothesis, premised upon the speed (efficiency) with which new information is incorporated into the price of a stock, does not tell us how long the inflationary effects of an uncorrected misrepresentation remain

reflected in the price of a security."); *In re Shanda Games Ltd. Sec. Litig.*, No. 22-3076, 2025 WL 365767, at *18 (2d Cir. Feb. 3, 2025) (finding plaintiff adequately alleged loss causation by alleging that "Plaintiff and Class members suffered economic loss when they sold their Shanda Securities for less than those securities were worth. . . . Had the holders of Shanda Securities not been induced to sell at deflated prices they could have secured the fair value of their shares through appraisal."); *Harrington Global Opportunity Fund, Limited, v. CIBC World Markets Corp.,* No. 21-cv-761, 2023 WL 6316252, (S.D.N.Y. Sept. 28, 2023) at *8 ("*Harrington II*") (finding loss causation adequately pled for all the plaintiff's sales because the complaint alleged 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."); *Sharette v. Credit Suisse Int'l.*, 127 F. Supp. 3d 60, 103 (S.D.N.Y. 2015) (finding "Plaintiffs have more than adequately pleaded facts giving rise to a plausible inference that the Offerings caused a depression in the price of ECD stock from which ECD never recovered."); *In re Barclays Liquidity Cross & High Frequency Trading Litig.*, 390 F. Supp. 3d 432, 450 (S.D.N.Y. 2019) (finding plaintiffs plausibly alleged "that the Exchanges' alleged misconduct was *a* proximate cause of the economic loss they suffered by trading in the manipulated securities market"); *CP Stone Fort Holdings, LLC v. Doe(s)*, No. 1:16-cv-04991, 2017 WL 11884601, at *1 (N.D. Ill. Oct. 3, 2017) (holding that plaintiff adequately pled loss causation in a spoofing case where it provided defendant with "some indication of the loss.")

B. <u>Defendants Took No Action To "Drive The Market" Up</u>

The SAC demonstrates through its detailed econometric analysis (¶¶ 313-315) that the negative price impact of Defendants' spoofing did not fully reverse over time. As the SAC pleads, this is because Baiting Orders drive the price down more than their cancellation drives the price

up, since the market cannot immediately – or sometimes ever – ascertain with certainty that a particular spoofing order was fake and, therefore, a portion of the negative price impact from spoofing episodes does not fully vanish over time. (¶ 317.)

Defendants suggest that their Executing Purchases would "drive the price up" to immediately and completely reverse the negative price impact of their Baiting Orders. Obj. at 8-9. This argument is inconsistent with the well-pled allegations in the SAC and a question of fact. Nowhere in the SAC does NWBO allege that Defendants took any action to "drive the market" higher following the placement of Baiting Orders[11] – nor does it say anywhere that any drive in the opposite direction took place to the exact same degree as the drive downward caused by the spoofing. Nor are such actions an inherent part of spoofing the price of a security *downward* to purchase it at a *lower* price. When Defendants capitalize on the artificially low price induced by their Baiting Orders to purchase NWBO shares at discounted prices, their incentive is to acquire these shares *at the lowest price*. *See* ¶ 63 ("Defendants placed their Executing Purchases on the opposite side of the Limit Order Book or IDQS to purchase NWBO shares at the lower stock prices created by the downward manipulation of their Baiting Orders to sell.") Defendants, therefore, structure their Executing Purchases to *minimize* any upward price impact so that they can acquire a larger number of shares at the artificially low price. The SAC details how Defendants use non-marketable buy orders that execute transactions when other market participants place marketable

[11] The R&R cites to particular paragraphs of the SAC alleging that after cancelling Baiting Orders, Defendants were left with an order book position weighted to the buy-side, and asserts that the SAC thereby alleged that Defendants "sought to push the price up." R&R at 44 (citing ¶¶ 88, 102, 144, 205, 232.) Neither the cited paragraphs, nor any other allegations in the SAC, allege that Defendants took any action to "push the price up." The SAC alleges the opposite – that every Executing Purchase utilized passive, non-marketable buy orders that had the immediate impact of lowering NWBO's share price. ¶¶ 318-321. Defendants were incentivized to structure their Executing Purchases in this manner precisely to avoid pushing the price up so that they could accumulate more shares of NWBO at the artificially low prices their spoofing caused.

sell orders. ¶ 320 ("Every Executing Purchase identified in this Complaint consists of a non-marketable buy order executing against a marketable sell order by another market participant, leading to a decline in NWBO's share price"). Because it is the seller, not Defendants, who "cross the spread" to execute that transaction (*i.e.*, these are aggressively priced sales of shares below the best offer), it has the effect of driving the stock price *lower*. (¶ 320.) In this manner, Defendants profit from their scheme by acquiring a substantial volume of NWBO shares at artificially low prices.

C. <u>The Economic Literature Supports That Price Impact Lasts At Least One Day</u>

Defendants argue that the economic literature is uniform in a conclusion that the effects of all spoofing schemes last at most mere "seconds." Obj. at 13. The R&R squarely and persuasively rejected this argument. R&R at 26 ("Next, Defendants claim that "[a]cademics uniformly conclude that spoofing's price effects are 'very brief'" and that "[i]n modern markets, 'brief' means seconds or less" … Defendants' cited sources, however, do not back up their claim.")

Putting aside that it is inappropriate to rely on articles not referenced or cited to in the SAC, none of the articles the Defendants rely on (Obj. at 13), support their conclusion.

The R&R noted that *The market impact of a limit order* showed that while "the price change induced by limit orders (placed within the bid-ask spread) stops *increasing* after about 13 seconds, it also shows the new price level *continuing* thereafter." R&R at 27. Defendants offer no rejoinder to the R&R's finding that this article in fact supports persistent price impact. They similarly do not address head-on the R&R's observation that *Microstructure-based Manipulation* found that, at a minimum, "spoofing generates extra returns for spoofers 'over the course of approximately 45 minutes.'" R&R at 27. And *Spoofing and Its Regulation*[12] is not economic literature, but instead

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[12] Merritt B. Fox, et al., SPOOFING AND ITS REGULATION, Columbia Business Law Review,

a law-review article that does not perform any econometric analysis and presents its quoted statements that spoofing effects will be "brief" in the context of its assertion that spoofing "will not seriously undermine the role that share prices play in guiding the real economy." (At 39.) But loss causation in a securities case is not concerned with whether Defendants' conduct affects large-scale capital allocation decisions in the real economy, it is concerned with whether it reduces the security's price below the level that would otherwise obtain. equilibrium level.[13]

The R&R's treatment of Defendants' reliance on the declarations of Professor Venkataraman in criminal spoofing cases was even more comprehensive. It observed that these declarations "expressly state that even after a Spoof Order is canceled, it can take time for the market to return to its prior state" and that "the Spoof Orders may have had a lasting impact on market dynamics even after they were cancelled." R&R at 28. In addition, the R&R found Defendants' arguments regarding the Venkataraman declarations to be "misleading" because those declarations "affirmatively stated that there may be additional losses after the orders were cancelled which he was not asked to analyze." R&R at 28 n. 13.[14]

By contrast, Nobel-prize winning economist Dr. Milgrom's analysis regarding how market manipulation, like spoofing, can create long-term price impacts when the "unwinding" of trades is not symmetrical because "when unwinding the trade, [the manipulative] trader will seek to minimize the price impact to avoid losses" (¶ 326), is directly relevant here. Even if the

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[13] This article notes that a limitation of its model is that it excludes many types of market participants, such as market makers, and that it assumes that all market participants "always act in the same way no matter how the market condition changes," and that the model could be improved by incorporating these aspects. (At *10.)

[14] Defendants' "presumption" as to the criminal prosecution strategy of the government in that case is speculative and irrelevant. Obj. at 14.

"unwinding" is Defendants' Executing Purchases, the SAC alleges that Defendants minimized the price impact of that unwinding by placing passively priced buy limit orders (¶¶ 318-321). (*See supra* pgs. 15-16.) The other economic literature cited in the SAC similarly supports that manipulative spoofing has a long-term price impact. *Price Discovery without Trading: Evidence from Limit Orders* (¶ 317 n.68) did not mention spoofing specifically, but its analysis of the price impact of order placement relative to order cancellation is directly relevant to spoofing schemes, which have at their core the placement and cancellation of fake orders. As explained in the SAC, this supports the long-term price impact of spoofing because "the impact of Baiting Orders is not likely to dissipate merely because these orders were subsequently cancelled." ¶ 317. The SAC also cites to *Spoofing in Equilibrium*, which contradicts Defendants' price impact argument that the price effects of spoofing "can be completely neutralized by sophisticated traders once understood by all market participants." (¶ 316 n.67.)

At most, the R&R's treatment of the economic literature cited in the SAC, and its own (improper) citation to sources outside of the SAC, may suggest some level of disagreement on the precise duration of the negative price impacts of spoofing. *Cf.* R&R at 28 (stating with regard to temporal proximity that "the studies cited by the parties are inconclusive as to how long these effects [of spoofing] may endure.") But at the motion to dismiss stage, all factual inferences must be drawn in favor of the plaintiff. *Saskatchewan Healthcare Empl.'s Pension Plan*, 718 F. Supp. 3d 344, 374 (S.D.N.Y. 2024) (Woods, J.). Arguments about the extent and timing of the negative price impacts of Defendants' conduct will be the subject of extensive expert discovery in this case like all spoofing cases.[15]

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[15] *See* R&R at 21 ("Given the particular characteristics of spoofing, expert testimony might ultimately substantiate Defendants' view that its effects on a stock price last only seconds. But on this motion to dismiss, the issue is not whether Defendants have articulated a plausible claim that

V. THE SECOND AMENDED COMPLAINT'S LOSS CAUSATION ALLEGATIONS ARE NOT INCONSISTENT WITH MARKET MANIPULATION

In apparent acknowledgement that the SAC adequately addresses the lone pleading deficiency identified by this Court, Defendants resort to re-arguing for a fourth time that the SAC fails to plead other aspects of manipulation claims. The R&R rejected this effort directly: "As an initial matter, Defendants' arguments that NWBO fails to plead the elements of a market manipulation claim other than loss causation—including a manipulative act, scienter, and reliance—were addressed and rejected in connection with their first motion to dismiss." R&R at 48; *see also id.* at 48-49 ("[t]he SAC amended NWBO's loss causation allegations only….The SAC does not present an opportunity for Defendants to relitigate the adequacy of Plaintiff's (unchanged) pleading with respect to other elements.") Those findings are now law of the case. *See* February 14 Order (adopting First R&R in full).

And, "[i]n any event, Defendants' arguments are without merit." R&R at 49. As discussed *supra*, there is no inherent contradiction between loss causation and reliance on the presumption of an efficient market. R&R at 50 ("[t]he Court rejects the premise underlying this argument—that there is an irreconcilable contradiction between NWBO's loss causation arguments and the efficient market hypothesis.") Neither is there an inherent contradiction between loss causation and scienter. R&R at 25 ("Nor would the absence of a realized profit to the spoofer mean that there was no loss to someone who sold the stock at a time when the price remained artificially depressed due to the spoofing."); *id.* at 50-51 ("This is simply untrue….Defendants' ability to earn such profits is not necessarily inconsistent with Plaintiff's theory that spoofing had a persistent, long-term price impact.") And finally, there is no requirement in the law (and Defendants point

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this is so, but whether the Court should conclude that Plaintiff's competing contention is implausible.")

to none) that a plaintiff plead every element of a manipulation claim for every one of Defendants' thousands of manipulative spoofs. R&R at 49-50 ("The Court treated the Example Episodes as just that—examples, which could be used as a benchmark to evaluate NWBO's pleading as a whole, without requiring NWBO to plead each of the 2,849 Spoofing Episodes with the same level of granularity.")

VI. CONCLUSION

The R&R's conclusion that the SAC adequately pled loss causation for all of Plaintiff's "same-day" sales should be affirmed.

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New York, New York

Respectfully submitted,

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