

**UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF ILLINOIS
EASTERN DIVISION**

UNITED STATES OF AMERICA

v.

MICHAEL COSCIA,

Defendant.

14 CR 551

Judge Harry D. Leinenweber

SENTENCING MEMORANDUM OF MICHAEL COSCIA

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INTRODUCTION

Michael Coscia is a dedicated family man who has worked diligently as a commodity futures trader to be able to support his extended family. As stated in numerous letters to the court by market professionals, over his nearly thirty year career, Mr. Coscia has striven to make a profit ethically and with integrity. Mr. Coscia used a single trading strategy over a ten-week period in 2011, involving a computer trading algorithm that authorities contended violated exchange rules relating to fair dealing and the just-enacted spoofing provision of Dodd-Frank. When, on October 18, 2011, exchange regulators notified him of their concern, he immediately stopped using the trading strategy. He thereafter cooperated with and settled with the exchanges and government regulatory authorities. He disgorged all profits and paid substantial fines. He served a trading suspension, after which the Exchanges allowed him to trade once again. Mr. Coscia was in the process of putting the entire episode behind him, until he was indicted for violating the same spoofing law based on the same facts as his regulatory settlements.

Mr. Coscia is now the first person ever prosecuted for and convicted of violating the spoofing law. For this offense, the United States Attorney is seeking to incarcerate Mr. Coscia for 70 to 87 months. Such a position ignores (1) Mr. Coscia's otherwise exemplary life; (2) the deterrence already created by the regulatory settlements and the criminal conviction itself; (3) the penalties he has already paid; (4) the fact that this is a case of first impression involving a new law without any interpretative guidance extant in 2011; (5) the fact that the Government introduced no evidence of loss amount¹; and (6) the now demonstrated faulty evidence introduced at trial designed to inaccurately portray Mr. Coscia as an outlier. For all of these reasons and others, all of

¹ As discussed in Section VI.a, the Government offered evidence only potentially demonstrating a loss of \$480, but even that evidence is undermined by other testimony.

which are more fully discussed below, we respectfully suggest to the Court that a sentence of probation is appropriate to impose in this case.

FACTUAL BACKGROUND

In August of 2011, Mr. Coscia began using a new algorithmic trading program in his trading on CME Group, Inc. (“CME”) exchanges located in Chicago and New York, and the London-based Intercontinental Exchange (“ICE”) (collectively, the “Exchanges”). This program implemented common facets of futures trading, including placing large orders, limiting the time orders were left in the market, and using an algorithmic cancellation protocol. Yet because the program allegedly often placed large orders that were cancelled before they reasonably could be executed, the Exchanges raised questions as to whether the program as operated was consistent with exchange rules governing fair trading. When the Exchanges notified Mr. Coscia that his program may violate exchange regulations, he immediately ceased trading (and only started again with the Exchanges’ permission) and cooperated fully with the Exchanges’ investigations. In the midst of those investigations, in October 2012, Hurricane Sandy hit New Jersey and destroyed Mr. Coscia’s home. When the Exchanges, the Commodity Futures Trading Commission (“CFTC”), and the British Financial Conduct Authority (“FCA”) completed their investigations in July 2013, Mr. Coscia entered into settlements with each of them. He paid \$2,787,800 in fines and disgorged \$1,715,376 in profits, and served a one-year suspension from trading.

In September 2014, after he resumed trading on both Exchanges, and was putting his post-suspension, post-Sandy life back together, the United States Attorney advised his counsel that they intended to indict him. On October 1, 2014, based upon the same conduct for which Mr. Coscia was already punished, he was indicted for spoofing and fraud. In spite of the federal indictment, both Exchanges continued to allow Mr. Coscia to trade their markets. In November 2015, a jury convicted Mr. Coscia of spoofing and fraud. Since his conviction, CME has allowed

him to continue trading, but ICE has not. Since Mr. Coscia resumed trading in September 2014, no regulator or exchange has raised any new concerns about his trading activity.

SENTENCING CONSIDERATIONS

I. The § 3553(a) Factors Weigh in Mr. Coscia's Favor

Although sentencing courts take into account the Sentencing Guidelines range, the Guidelines range is not presumed reasonable. *United States v. Booker*, 543 U.S. 220 (2005); *United States v. Gall*, 552 U.S. 38, 50 (2007). The Court must impose an appropriate sentence “without any thumb on the scale favoring a Guideline sentence.” *United States v. Sachsenmaier*, 491 F.3d 680, 685 (7th Cir. 2007). After an “individualized assessment” of Mr. Coscia, as required by *Gall*, and consideration of the factors set forth in 18 U.S.C. § 3553, it is clear that a Guidelines sentence as advocated by the Government would be inappropriate here. *Gall*, 552 U.S. at 50; *Kimbrough v. United States*, 552 U.S. 85, 113 (2007) (Scalia, J., concurring).

Under § 3553(a), the Court’s mandate is to impose “a sentence sufficient, but not greater than necessary, to comply with the purposes” laid out in that statute. The statutory factors set forth in § 3553(a) include, but are not limited to, (1) the nature and circumstances of the offense; (2) the need to avoid unwarranted sentencing disparities; (3) the history and characteristics of the defendant; and (4) the need to provide just punishment for the offense, afford adequate deterrence, and protect the public from further crimes of the defendant. Those factors are evaluated below.

II. The Nature and Circumstances of the Mr. Coscia's Offense Do Not Justify The Sentence Suggested by the Government.

Mr. Coscia was convicted of six counts of spoofing under 7 U.S.C. § 6c(a)(5)(C) and § 13(a)(2), and six counts of commodities fraud under 18 U.S.C. § 1348. The § 1348 charge is based exclusively on the spoofing allegations. Spoofing is a Class C felony, subject to imprisonment for zero to ten years and up to a \$1,000,000 fine. 7 U.S.C. § 13(a)(2); 18 U.S.C.

§ 3559(a)(3). Commodities Fraud is a Class B felony, subject to imprisonment for zero to twenty-five years, and up to a \$250,000 fine. 18 U.S.C. §1348; 18 U.S.C. § 3559(a)(2). The Government suggests that a Guidelines range of 70 to 87 months is applicable, whereas Mr. Coscia suggests that the proper range is 4 to 10 months. *See* Section VI, *infra*.

a. At The Time of The Offense, Legal Guidance Was Non-Existent

Mr. Coscia's settlement with the CFTC was the first regulatory enforcement of the spoofing provision of the Commodity Exchange Act, and this tag-along case marks the first criminal enforcement of the law. The spoofing statute prohibits "any trading, practice, or conduct . . . that . . . is of the character of, or is commonly known to the trade as, 'spoofing' (bidding or offering with the intent to cancel the bid or offer before execution)." 7 U.S.C. § 6c(a)(5)(C). The provision was signed into law as part of the Dodd-Frank Wall Street Reform and Consumer Protection Act with virtually no public comment or discussion. It went into effect in July 2011 just weeks before Mr. Coscia began trading with the programs at issue in this case.

The Court in its pre-trial and post-trial rulings has considered and rejected arguments by defense counsel concerning the constitutional vagueness of the spoofing statute and the absence of any interpretive guidance from the Government prior to the date of the conduct charged. While Mr. Coscia respects those rulings, a brief discussion is warranted here as the very limited guidance available at the time of Mr. Coscia's conduct should be considered when weighing the nature and circumstances of the offense for sentencing purposes.

The text of the spoofing statute did not provide any reasonable guidance for identifying – or avoiding – prohibited conduct. *See, e.g., Grayned v. City of Rockford*, 408 U.S. 104, 108-109 (1972) (reiterating that to be minimally clear, laws must "give the person of ordinary intelligence a reasonable opportunity to know what is prohibited, so that he may act accordingly"); *United States*

v. Nat'l Dairy Prods. Corp., 372 U.S. 29, 36 (1963) (suggesting that statutes without a meaningful referent in business practice or usage implicate vagueness concerns).

Despite the fact that the statute makes illegal “trading...commonly known to the trade as ‘spoofing,’” the spoofing statute caused considerable confusion in the trading industry, as traders and regulators tried to distinguish between conduct prohibited by the statute and conduct that was routine and widely-accepted. *See* 75 Fed. Reg. 67, 302 (2010) (request by the CFTC for comments on how it should distinguish spoofing from “legitimate trading activity”). In response to the CFTC’s request for public comment on the spoofing provision, numerous individuals in the industry responded, stating:

- There is “no commonly-accepted definition of ‘spoofing’ throughout the industry” (Comment Letter from John M. Damgard (President of FIA));
- “[T]he term ‘spoofing’ is not one that has been commonly used in the futures and derivatives markets and there is no generally understood or accepted meaning of the term in this context.” (Comment Letter of Stuart J. Kaswell (General Counsel of Managed Funds Association)); and
- “[T]he statute’s definition of ‘spoofing’ ... is too broad and does not differentiate legitimate market conduct from manipulate conduct that should be prohibited.” (Comment Letter of Craig S. Donohue (CEO of CME Group))

Even CFTC Commissioners expressed concerns before the statute was enacted, stating that “the language was too vague” (Commissioner Sommers) and “most commentators . . . called for greater clarity to help them understand how we interpret the concept of disruptive practices” (Dunn). *See* Transcript of Proceedings, CFTC Open Meeting, February 24, 2011, p.7. Mr. Coscia’s trading that is at issue occurred while this debate was going on – and before official guidance of any kind was effective. Thus, there was not a practice “commonly known” to the industry as spoofing at the time of Mr. Coscia’s trading that forms the basis of both his spoofing and commodities fraud convictions. Notably, the CFTC did not issue its “Interpretative Guidance and Policy Statement”

until May 28, 2013, nearly two years after Mr. Coscia's trading in question, and well *after* the CFTC began investigating Mr. Coscia's trading program.

It is reasonable to suggest that if the interpretive guidance did exist, and if his case was not the first case, Mr. Coscia, based on his demonstrated adherence to law and regulation throughout his career would have avoided developing an algorithmic trading program that might be challenged as unacceptable.

b. Mr. Coscia's Professional Background

Mr. Coscia began working as a trader in 1988, after graduating from Brooklyn College and serving two years as a clerk for a brokerage company. He worked on the trading floor at the New York Mercantile Exchange until approximately 2006. Mr. Coscia was well-respected on the trading floor. (*See* Letters from F. Smith, F. Mavronicolas and J. Fischetto, submitted separately to the Court, ECF No. 126.) Shortly after leaving the floor, he opened Panther Energy Trading ("Panther"), and began trading electronically.

At Panther, Mr. Coscia, along with the two or three traders he employed, traded futures contracts. Mr. Coscia used his own funds to trade. At Panther, Mr. Coscia entered his orders in two ways: manually, by entering and executing his trades through "pointing and clicking" with a mouse, and algorithmically, by developing and running computer systems that automatically entered trades according to pre-programmed instructions.

c. The Offense Conduct

In the summer of 2011, with the assistance of his computer programmer, Mr. Coscia developed and implemented the algorithmic trading programs used to generate the futures orders that are the subject of his conviction. He used these programs for approximately ten weeks, from August 8, 2011 through October 18, 2011, to trade futures contracts on CME and ICE. "Mr. Coscia stopped using the algorithms when he was notified of concerns over his trading strategy in the

course of an investigation by ICE[.]” (Exhibit B, Final Notice from FCA to Michael Coscia, July 3, 2013, at ¶ 50.i.)

Though Mr. Coscia’s programs evolved during the ten-week period, the basic elements were as follows: Mr. Coscia would place an order on one side of the market at the best available price. He would then place a set of larger orders on the other side of the market. Those larger orders would be placed at levels approaching the best offer price in the market: the first order would be two levels away, the second order would be one level away, and the third order would be an offer to sell at or equal to the lowest price other sellers of that contract were willing to accept. As Mr. Coscia testified at trial, sequencing trades as such to “approach the market” is a common and useful strategy aimed at getting the best value. *See, e.g.*, Trial Tr. 881-82, 885. If the small order was executed, the program would cancel the remaining orders and reverse.

The Government alleged that this trading strategy was illegal because, according to the Government, Mr. Coscia placed the large orders with the intent to cancel them before they traded and thereby moved the market in a direction favorable to his small orders. The Government argued that Mr. Coscia should be convicted of both spoofing and fraud based on his cancellation of the large orders as part of these programs. *See, e.g., Id.* at 1419-21. The fraud charge was based upon the alleged spoofing. The Government was successful in convincing the jury that, despite an algorithm design that in major respects comported with market conditions and trade and practice, when executed in such a way as to place and cancel large orders at sequential price levels that approached the price level of opposite side small orders, Mr. Coscia violated the law. The Government argued that Mr. Coscia intended to use the large orders not as legitimate orders he wanted to execute but solely for the purpose of driving prices to create favorable executions for his opposite side small orders.

Mr. Coscia's trading algorithms did include cancelation instructions (like all trading algorithms), but only under certain circumstances: (1) if he traded his entire small order, (2) if he traded all or part of his large order, or (3) if the time the orders were pre-programmed to be available expired. Mr. Coscia intended to cancel his orders only under those conditions, and otherwise intended to trade on those orders. *Id.* at 1002, 1028, 1040 (M. Coscia). Mr. Coscia explained at trial his legitimate rationale to cancel his orders under each of those circumstances.

First, he set the large orders to cancel if the entire small order was traded because "the theory" behind his trading was to create a "lopsided" (i.e., imbalanced) market, and once the small order traded, his orders would be one-sided rather than lopsided. *Id.* at 893. As the Government acknowledged, "[t]here's nothing wrong with making an imbalanced market." *Id.* at 179.

Second, he cancelled the orders after a fill on a large order because, based on his experience as a trader, he knew it is better to trade with one counterparty than numerous counterparties. *Id.* at 897. As Mr. Coscia explained, if numerous counterparties are willing to trade, "you kind of feel that there's information out there that you don't know." *Id.*

Third, consistent with industry practice, both the small orders and large orders would cancel after time expired. Time is an important factor for traders to consider – if an order lasts on the market without trading, that is information showing that the order was not placed at a good price to trade. Mr. Coscia's large orders were set to expire more quickly than his small orders because, as Mr. Coscia explained at trial, large orders are "much riskier" than small orders. *Id.* at 890. Given these risks, the large orders were set to cancel after hundreds of milliseconds because

otherwise “[t]oo many variables can happen,” meaning that the market can change too much over time if orders are left out for too long. *Id.* at 891.²

There are no allegations that Mr. Coscia’s trading strategy violated exchange rules governing order size. *Id.* at 677-78, 681 (H. Dermenchyan); *id.* at 747 (J. Shaw). Nor are there allegations that he violated exchange rules governing the messages sent with the exchanges or the ratio of orders to trades. *Id.* at 968 (M. Coscia); *id.* at 1169-71 (A. Warren); *id.* at 1225-29 (M. Evans). Nor did the government allege that Mr. Coscia’s trading strategies created an artificial price detrimental to other traders. *See infra* at VI. And his trading did not violate exchange rules regarding placing imbalanced orders because there are no such rules. *Id.* at 329 (J. Redman).

Furthermore, Mr. Coscia’s large orders were real orders that were available for other market participants to trade against. *Id.* at 234 (A. Vrabel); *id.* at 358 (R. Cobb). And they were in the market for plenty of time to be traded: the large orders were programmed to be available in the market for between 100 and 400 milliseconds, *id.* at 255 (J. Redman); *id.* at 493-96 (J. Park), while computer algorithms, which represent the dominant mode of trading in the markets at issue, were able to execute trades in as little as 1-5 milliseconds.³ *Id.* at 680 (H. Dermenchyan); *id.* at 744 (J. Shaw). In fact, Mr. Coscia had many trades executed against his large orders during the period the programs were running. *See, e.g., id.* at 417 (R. Cobb); Declaration of Alexander Rinaudo, attached as Exhibit A (“Rinaudo Decl.”) ¶ 23 (Mr. Coscia fully filled 458 of his large orders and

² A prudent trader must approach the order book with a good degree of skepticism as to its actual state at any moment given that over 92% of orders by all traders are cancelled before execution. Rinaudo Decl. ¶ 12, Table 1.

³ Indeed, in the world of algorithmic trading, orders can be reacted to within mere microseconds. *See, e.g.,* Trial Tr. 513 (J. Park) (“in the computer world, you know, we’re dealing with nanoseconds, microseconds.”); *id.* at 1141-42 (A. Warren) (“High-speed trading is a form of computerized trading where essentially individuals or companies have written computer programs that -- on a -- at this point millisecond or even microsecond by microsecond basis, are evaluating the market using the information in the program and then responding to that, putting in orders to buy and sell contracts on a continuous basis.”).

partially filled 8,384 of his large orders for a total of 8,842). Indeed, Mr. Coscia's large order fill rate was significantly better than the fill rates of other traders entering significant numbers of large orders. *See* pp.12-13, *infra*.

d. The Nature of the Offense Conduct Within and Compared to Other Market Activity

According to the jury instructions issued at trial, the Government in a spoofing case must prove that the Defendant "knowingly" "engaged in any trading, practice, or conduct, on and subject to the rules of CME Group markets, that was 'spoofing,'" i.e., "bidding or offering with the intent to cancel the bid or offer before execution. Jury Instructions (ECF No. 85) at 25. Yet the Government went beyond its assigned task by introducing evidence to portray Mr. Coscia as an outlier in the trading community. Throughout trial, "[t]he Government . . . contrasted [Mr.] Coscia's trading activity with that of other high frequency traders. It introduced evidence, for example, suggesting that [Mr.] Coscia placed many more large quote orders than other traders, and then cancelled them at an unusually high rate . . ." Memo. Order and Opinion (ECF No. 124) at 4-5 (citing Trial Tr. 299-300; Govt. Exs. ICE Summ. Charts 2-3); *see also* Hrg. Tr. at 7, June 15, 2016 (recognizing that arguments regarding Mr. Coscia's position relative to other market participants was "a very strong element" of the Government's case); *id.* at 8 (noting that Govt. Ex. ICE Summary Chart 6 "showed that [Mr. Coscia] was doing something differently than everybody else.").

Perhaps the Government felt in a case involving violations of a new and somewhat technical commodities law, where losses were not ascertainable, and profits had been long repaid, that casting Mr. Coscia as an outlier would strengthen its case. Regardless of the Government's intent, it has become apparent since trial, that proof of Mr. Coscia's outlier status was based on faulty evidence.

Further, the Government's portrayal of Mr. Coscia as a nefarious outlier has continued past trial and into sentencing. *See, e.g.*, Gov't Reply to Def. Version of the Offense at 4, Feb. 8, 2016, attached to Presentence Investigation Report (ECF No. 120) ("These traits are not characteristics of ordinary, high frequency trading."); Hrg. Tr. at 9, June 15, 2016 (drawing a thinly-veiled analogy between Mr. Coscia's trading on the futures markets and the conduct of notorious fraudster Bernard Madoff).

While Mr. Coscia has no interest in re-litigating his conviction at this time, Mr. Coscia must address this evidence in regards to his sentencing, lest the Court be left with the impression from trial that Mr. Coscia was an "outlier" whose trading conduct was "astronomically" different than that of other market participants. Hrg. Tr. at 3, 8, June 15, 2016. In doing so, Mr. Coscia relies on both evidence presented at trial and on analyses of data received from CME following trial.⁴ Based on both the trial record and the new analyses – both of which can and should be considered for sentencing purposes⁵ – it is evident that Mr. Coscia is not the stark outlier among market participants that the Government has portrayed him as.

Use of Trading Algorithm. The use of algorithms to trade futures, as Mr. Coscia did, is ubiquitous. Indeed, over 92% of orders placed on CME are placed by algorithms. *See* Rinaudo Decl. ¶ 15.

Use of Cancellation Protocol. Mr. Coscia included a cancellation logic in his algorithmic trading program. At trial, the Government implied that doing so was wrongful. *See, e.g.*, Trial Tr.

⁴ The analyses discussed in this memorandum focus on trading on CME because CME produced additional data following trial, which allowed for additional analysis. ICE refused to produce similar data, and the Court granted ICE's motion to quash as to much of the data requested from ICE. Further, based on trial testimony, the analyses treat order modifications that change the price or increase the quantity of contracts ordered as cancellations and new orders. *See* Rinaudo Decl. ¶ 9.

⁵ *See* 18 U.S.C. § 3661.

1421 (“There was never an intent to actually fill those orders by the defendant. They were programmed to cancel.”). But programming cancellation protocols into trading algorithms is (1) necessary to address the market risks, as explained above, and (2) typical behavior for an algorithmic trader. Virtually all algorithmic trading programs include pre-programed cancellation protocols. *See, e.g., id.* at 676-77 (H. Dermenchyan) (agreeing that it is “routine” for trading algorithms to “include an automatic cancellation element either via the passage of time or because something else trades in the market or because of other conditions”)⁶; *id.* at 1160 (A. Warren) (“I have never seen [an algorithm] that doesn’t have a cancellation [protocol].”).

Cancellation / Fill Rate. Mr. Coscia did not have an unusually high cancellation rate. Indeed, Mr. Coscia’s cancellation rate (87.0%) was lower than the average cancellation rate for all other CME market participants (92.9%). Rinaudo Decl. ¶ 12, Table 1.

Cancellation / Fill Rate on Large Orders. Further, Mr. Coscia’s cancellation rate on *large orders* was also not unusually high. While the Government emphasized at trial that Mr. Coscia “cancels more than 98 percent of his large orders on both the Chicago market and the London market” (Trial Tr. 1446), high cancellation rates are routine among algorithmic traders (*id.* at 239 (A. Vrabel)). In fact, a 98% cancellation rate for large orders is actually *low* compared to that of other algorithmic traders. *See id.* at 1234-35 (M. Evans); Def. Ex. 524 (showing fill rates for Sept. 25, 2011 to Sept. 30, 2011). In comparison to other traders who are in the top 10 traders by the

⁶ With respect to Mr. Coscia’s cancellation of orders upon the expiration of time limits, the concept of “market conditions” was discussed at the trial. The Government contended that order time is not a market condition, but rather only things like weather are market conditions. Trial Tr. 1569-70. Trading involves both fundamental and technical factors, both of which inform the market and condition how traders react. It is historically true that if there is a drought and crops might be adversely affected, prices will rise because the harvest will be smaller than normal. Also in the current algorithmic trading environment, in which events happen at the microsecond level, if an order is in the market for 100 milliseconds and is not filled, that is pricing information that conditions a trader’s decision whether to cancel or not. *See id.* 676-77 (H. Dermenchyan).

number of large orders *entered*, Mr. Coscia's fill rates are in the middle of the pack. *See* Rinaudo Decl. ¶¶ 18-19, Table 4. In comparison to other traders who *filled* large orders, in 8 markets Mr. Coscia was in the top 10, and in 2 markets, he was the number one trader. Rinaudo Decl. ¶ 21.

Mr. Coscia fully filled 0.092% of his large orders. *Id.* at Table 5.⁷ At trial, the Government portrayed Mr. Coscia's fill rate as a very small percentage that indicated an intent to cancel before the orders traded. *See* Trial Tr. 1458. But three of the other top 10 traders by the number of large orders entered had lower full fill rates than Mr. Coscia. *See* Rinaudo Decl. Table 5. And seven of the other top 10 traders by the number of large orders entered had lower overall fill rates than Mr. Coscia. *See id.*

Duration of Order Before Cancellation. During closing arguments, the Government argued that the duration of Mr. Coscia's large orders (100-300 milliseconds) evidenced his intent to cancel at the time the orders were placed. Trial Tr. 1425. By doing so, the Government left the impression that resting times of that duration are atypical. They are not. During the 10-week period at issue, 504 million orders were placed on CME that were open for less than one half of one second. Rinaudo Decl. ¶ 13.

Indeed, CME specifically allows for fill-and-kill and fill-or-kill orders, which have *no* duration on the order book at all. Such orders are either immediately filled by other orders resting in the market or they are cancelled *immediately*. *See* Rinaudo Decl. ¶ 14. During the period at issue, more than 11 million fill-and-kill or fill-or-kill orders were placed. *See* Rinaudo Decl. ¶ 14. Based on the availability and use of fill-and-kill and fill-or-kill orders, it is evident that traders are routinely concerned with limiting the time their orders are on the market.

⁷ At trial, Mr. Coscia's full-fill rate was presented as 0.08%. That number has increased to 0.092% in the post-trial data analyses, likely because the post-trial analysis was based on data from August 8 to October 18, 2011, Rinaudo Decl. ¶¶ 4, 6, while the data presented at trial was only for August 15 to October 18, 2011, *see* Government Exhibits CME Summary Chart 2.

Number of Large Orders. The number of large orders that Mr. Coscia entered was also akin to (or less than) that of other traders.⁸ Using data obtained from CME following trial and treating modifications as cancellations as discussed above, it is evident that Mr. Coscia was not actually the #1 trader by number of large orders in any of CME markets on which he was trading. *See* Rinaudo Decl. ¶¶ 18-19, Table 4. This is in stark contrast to Government Exhibit CME Summary Chart 5, which was presented at trial and portrays Mr. Coscia as the #1 trader by number of large orders in 11 of 17 markets. Moreover, the new data and analysis shows that some other traders entered large orders in much greater volume than Mr. Coscia did. *See* Rinaudo Decl. ¶ 19, Table 4.

Interaction with Other Orders. At trial, the Government argued that neither algorithmic traders nor manual traders would trade with Mr. Coscia's large orders. Trial Tr. 1458 ("These large orders are not what computer programs react -- trade. They react to it, but they don't trade them."); *id.* at 1552 ("It's the humans, human beings trying to point and click . . . who try to hit large orders, and that's too fast for them."). But more than 8,800 of Mr. Coscia's large orders were traded against in whole or part. Rinaudo Decl. ¶ 23. The orders were thus clearly available to be traded and were in fact traded. The orders were not merely illusory. Furthermore, the trades against Mr. Coscia's large orders were made by both algorithmic traders and manual traders, with algorithmic traders as counterparties to about three-quarters of the contracts traded through Mr. Coscia's large orders. Rinaudo Decl. ¶ 28, Table 6.

Additionally, firms who traded against Mr. Coscia's small orders were among those who traded against Mr. Coscia's large orders. Of the 200 firms who traded the most contracts through Mr. Coscia's small orders, 195 also traded with his large orders. Rinaudo Decl. ¶ 29. Counterparties that traded with both Mr. Coscia's large orders and his small orders include (1) all

⁸ Both algorithmic traders and manual traders enter large orders. *See* Rinaudo Decl. ¶ 24.

eighteen of the counterparties to Mr. Coscia's small orders in the indictment (ECF No. 1), (Rinaudo Decl. ¶ 30), and (2) Alexander Gerko, (Rinaudo Decl. ¶ 31), who testified at trial that his algorithms would not trade against such large orders. *See* Trial Tr. 722 (A. Gerko).

Cancellation of Large Orders Following Opposing Trade. At trial, the Government presented ICE Summary Chart 6, along with testimony from John Phillip Redman, indicating that Mr. Coscia cancelled large orders following an opposing trade more frequently than other traders. *See* Government Exhibit ICE Summary Chart 6; Trial Tr. 304-08 (J. Redman). This chart was an important trial exhibit, which the Court recalled "vividly" (Hrg. Tr. at 20, June 7, 2016), and which was used to "show[] that he was doing something differently than everybody else" (Hrg. Tr. at 8, June 15, 2016). But ICE Summary Chart 6 – and all other data and analyses originating from ICE – should be ignored or viewed with great skepticism in connection with sentencing. On June 15, 2016, the Court ordered ICE to produce data to support ICE Summary Chart 6. In response, ICE produced a report on June 22, 2016, but the data contained in that report does not support ICE Summary Chart 6, which mischaracterized Mr. Coscia's trading compared to that of other market participants. *See* Letter from Kenneth Kliebard to Jason Manning (ECF No. 150-5); Declaration of David H. McGill (ECF No. 150-1) ¶¶ 9-14. As such, the data and analyses from ICE as presented at trial are unreliable.

Order to Trade Ratio. Also at trial, much was made of Mr. Coscia's purportedly high order-to-trade ratio as portrayed in Government Exhibit ICE Summary Charts 3-4. *See, e.g.*, Trial Tr. 295-99 (J. Redman). While ICE Summary Charts 3-4 do show a higher order-to-trade ratio for Mr. Coscia than for several trading firms, those comparator firms provide a skewed comparison by comparing Mr. Coscia to firms that placed far fewer large orders. *See id.* at 1287, 1326 (M. Evans). This is because average *fill* size is relatively constant across firms while average *order* size varies

more significantly. *See* Rinaudo Decl. ¶ 16. Thus, any firm that has a higher average order size (such as Mr. Coscia's firm), will exhibit a greater disparity between their order size and trade size compared to firms with a lower average order size.

In sum, Mr. Coscia operated within a vast market of numerous other traders implementing numerous strategies. Key metrics show that other traders (both algorithmic and manual) were willing and able to trade with Mr. Coscia's orders, including his large orders and that Mr. Coscia was not the outlier portrayed to the jury by the Government. While demonizing Mr. Coscia may have assisted the Government in obtaining a conviction, such characterizations should be ignored for sentencing purposes.

e. Mr. Coscia Has Already Been Punished For This Conduct

Mr. Coscia's conduct occurred over a period of only ten weeks. After receiving notice from the Exchanges that they were concerned that his trading violated market rules relating to fair trading, he immediately ceased trading and cooperated fully with CME, the CFTC, ICE, and the FCA (on behalf of ICE) in their investigations. As a result, and after thorough investigations, in July 2013, Mr. Coscia settled with the Exchanges the CFTC, and the FCA, without admitting fault and fully disgorged profits and paid substantial fines, as follows:

- Mr. Coscia disgorged \$1.4 million in profits from the trading to CME and CFTC;
- Mr. Coscia paid a \$1.4 million fine to the CFTC;
- Mr. Coscia's company, Panther, paid a \$600,000 fine to CME;
- Mr. Coscia paid a \$200,000 fine to CME;
- Mr. Coscia served a one-year suspension from trading on any CME exchanges; and
- Mr. Coscia paid a \$903,176 fine to FCA, which included disgorging profits.

(*See* Exhibit B; Exhibit C, CFTC Order Instituting Proceedings Pursuant to Sections 6(c) and 6(d) of the Commodity Exchange Act, As Amended, Making Findings and Imposing Remedial Sanctions, July 22, 2013; Exhibit D, Notice of Disciplinary Action Against Panther Energy

Trading, LLC, # CME-11-8561-BC, July 22, 2013; Exhibit E, Notice of Disciplinary Action Against Michael Coscia, # CME-11-8581-BC, July 22, 2013.)

III. Imprisonment Is Not Necessary To Provide A Just Punishment, Afford Adequate Deterrence, or Protect the Public

Mr. Coscia has thus already paid significant consequences as a result of the trading that now forms the basis for his criminal convictions. The purpose of the fines, disgorgement, and suspension imposed on Mr. Coscia was to “promote high standards of regulatory and/or market conduct by deterring persons who have committed breaches from committing further breaches, helping to deter other person from committing similar breaches, and demonstrating generally the benefit of compliant behavior.” (Exhibit B, at ¶ 36.) The Exchanges determined that this punishment was sufficient to penalize Mr. Coscia and deter others from similar behavior. Additionally, Mr. Coscia’s personal and professional reputation has been irreparably harmed. Thus, a sentence of probation provides a just punishment of Mr. Coscia’s offense and will deter both the public and Mr. Coscia from committing similar offenses. *See, e.g., United States v. Warner*, 792 F.3d 847, 860-62 (7th Cir. 2015) (upholding probationary sentence because the payment of penalty to government agency and attendant collateral consequences of conviction, including shame, humiliation, and professional damage, sent a sufficiently strong deterrent message); *United States v. Anderson*, 267 F. Appx. 847, 850 (11th Cir. 2008) (upholding a probationary sentence based in part on the payment of a penalty to the SEC of \$133,999.40); *United States v. Roth*, No. 05 CR 792-5, 2008 WL 686783, at *3 (N.D. Ill. Mar. 11, 2008) (finding that the “publicity regarding [defendant’s] conduct has obviously caused her great embarrassment and humiliation” and the loss of her “law license as a result of this case” militated in favor of probation).

Additionally, the Exchanges themselves serve an important role in policing trading, and are able to protect the public from trading they deem unfit. At the time of the indictment in October 2014, Mr. Coscia had paid his fines, disgorged his profits, served his suspension from the markets, and had resumed trading. Following Mr. Coscia's conviction, ICE reinstated its ban on trading by Mr. Coscia, while CME continues to allow Mr. Coscia to trade. The Exchanges have thus each made decisions about whether continued "protection" for the public from Mr. Coscia is necessary, and implemented protections as they saw fit. Moreover, as demonstrated by the fact that Mr. Coscia has resumed trading without incident since September 2014, no further protection for the public is necessary or appropriate.

IV. History and Characteristics of the Defendant

In fashioning an appropriate sentence, the Court must consider Mr. Coscia's history and characteristics. 18 U.S.C. § 3553(a)(1). Mr. Coscia's professional reputation, family obligations, and commitment to his community warrant a minimal or probationary sentence.

a. Mr. Coscia's Career and Professional Reputation

Mr. Coscia aspired to become a trader even as a young man. He worked alongside his mother at flea markets, gaining his first exposure to business. Later, when he was a teenager, his father won money on a horse race and used it to invest in stocks. Mr. Coscia developed an early interest in the financial markets by watching his father research and select stocks and by learning to do it alongside him.

Mr. Coscia began his career in the financial industry as a clerk on the trading floor at the New York Mercantile Exchange, shortly after his college graduation. Gordon Rutledge of Tafaro Brokerage, Mr. Coscia's first employer, recalls that he was an excellent clerk who was determined to advance in his career. After two years, he "expressed his gratitude for the opportunity we had given him, but thought that he could maximize his skills as an independent floor trader. I still

respect the confidence it took to forgo the steady guaranteed salary for the talent-based risk/reward of speculation.” In 1988, Mr. Coscia began working as a trader, and he has been a trader ever since.

Mr. Coscia worked on the trading floor at the New York Mercantile Exchange – or what is known as “the pit” – for nearly 20 years, or until approximately 2006. During that time, he developed a reputation as “gifted” (F. Smith⁹), “brilliant” (F. Mavronicolas) and “diligent” (J. Fischetto) trader. His reputation as a skilled trader was matched only by his reputation as an honorable and generous colleague and friend. Mr. Coscia’s colleagues on the trading floor recount that he was a “stand-up” (J. Fischetto) trader, who was “respected for his intelligence and honesty” (A. Insinga). On the trading floor, he distinguished himself from others in his genuine desire to see his colleagues – and competitors – achieve success alongside him. One trader recalls that,

At the beginning of my career, Michael was one of only a handful of former colleagues who, with the sole intent of fostering my career, was willing to offer me personal help, advice and support. In the zero sum game that options trading can be . . . where one trader’s success is often determined by another’s downfall, selfless acts of mentoring and support of the kind Michael provided to me are indeed rare things.

(M. Azzariti.)

In 2007, Mr. Coscia opened his own independent firm, Panther, located in Red Bank, New Jersey. Although much was different about electronic trading, one thing that stayed the same was Mr. Coscia’s scrupulous honesty. His computer programmer (and a witness called by the Government at trial), Jeremiah Park, recalls that,

I felt like he always tried to do what was right in the business. I would never have knowingly worked for someone who I felt was dishonest or even questionable. I never got the sense that he tried to do anything ‘in the grey area’ in the business.

⁹ Names in parentheses in this section refer to letters submitted on behalf of Mr. Coscia, and which were provided to the Court by the Probation Office, ECF No. 126.

The many individuals with whom Mr. Coscia did business echo this sentiment. For example, Robert Haworth, the CEO of Born Capital, Panther's clearing firm, writes that,

Michael has always been a gentleman of honor. In every instance where we disagreed, he and I were able to reach a mutually acceptable compromise. There was never a single occurrence where I felt he was trying to take advantage or shirk his responsibility. . . . Although written contracts are an essential part of good business, Michael was one of the very few people with whom our business relationship was verbal and a handshake.

Mr. Coscia built a very successful career as a trader, one that allowed him to provide for his family and friends while doing something he loved.

b. Mr. Coscia's Devotion to His Family

For Mr. Coscia, family has always come first. From the very beginning of his career, he worked hard to succeed because he wanted to provide and care for his family. He realized his dream of being able to provide for his parents financially, and has worked equally hard to provide them with his love, time, and emotional support as well. His mother, who is 87, suffers from Stage 4 ovarian cancer, and Mr. Coscia is fully responsible for her treatment and care. He takes her to chemotherapy weekly, ensures she gets and takes her medication, visits her regularly and makes sure she has everything she needs. Mr. Coscia's maternal-half-brother states that he is "responsible almost exclusively for my mother Elizabeth's health, welfare, and decision making." (T. Gallo) When she was diagnosed eight years ago, Mr. Coscia's mother was given only months to live. His maternal-half-sister, Nancy, attributes their mother's miraculous survival to the "wonderful" care he has given her. (N. Gallo) Without Mr. Coscia, his mother would be unable to acquire the treatment and care she needs.

Mr. Coscia is equally devoted to his father, who is a metastatic lung cancer survivor. (R. Shallis) He visits him in Florida regularly, and has done everything he can to obtain the best

treatment possible for him. (N. Gallo) When his father needed surgery, Mr. Coscia brought him to New York so that he and his wife could care for him in their home. (N. Gallo)

Mr. Coscia's role as primary caretaker for his parents warrants a reduced sentence. His incarceration would have a substantial and direct impact on their wellbeing. *See* U.S.S.G. § 5H1.6 cmt. n.1(B)(i) (authorizing departures when the defendant's sentence "will cause a substantial, direct, and specific loss of essential caretaking"); *United States v. Schroeder*, 536 F.3d 746, 755 (7th Cir. 2008) ("[A] defendant's extraordinary family circumstances can constitute a legitimate basis for imposing a below-Guidelines sentence.").

Mr. Coscia's devotion to his parents is matched only by his commitment to his wife and son. In 1990, he married Robin Shallis, to whom he is a "compassionate, caring, loving husband" (R. Shallis) Robin's sister could see "as a husband . . . how much he cared and put his all into everything he did." (C. Shallis) Her brother describes him as the "best example I know" of what a husband and father should be. (L. Shallis) Mr. Coscia's son describes his father's complete "dedication" to his wife, recalling how, when Robin underwent emergency surgery "my father did not leave her side for the entire month she was in the hospital." (J.M. Coscia) Their son feels that "the relationship my father shares with my mother is one that I hope to one day have with my wife." (J.M. Coscia) Mr. Coscia has been deeply involved in every aspect of his son's life since he was an infant. His son writes of the man he calls his "father and best friend" that

Growing up, I heard many of my friends talk about how little time they spent with their fathers and how they wished their fathers gave them more attention. This was never the case for me. Whether it was going to baseball games, boy scout retreats, tennis matches or school plays, he was always one of the first parents to arrive and never missed anything, no matter what.

Mr. Coscia's family is "his number one priority and he has always put them ahead of his career." (e.g., W. Sharples; P. Arbeeny)

This is evident in his relationship with his large extended family as well. Mr. Coscia is the “guardian of his family.” (L. Hartman) His brother-in-law writes that “I was employed by Mike and that was for seventeen years. . . . There is not a person in this family who has had a hardship that can say that Mike didn’t take the time to help.” (S. Funaro Sr.) His nephews and nieces describe him as a “mentor” (C. Funaro) and “role model” (S. Funaro Jr.) who “took care of his extended and immediate family without asking for anything in return.” (V. Funaro) As with his own son, Mr. Coscia encouraged and enabled the younger generation of his family to pursue their education. His nephew writes that,

When it came to education, my Uncle Michael would always stress the importance of doing my best, so that I can succeed in the future. During my high school and college years, my uncle insisted that he pay for my education, because he felt that education is the best gift he could ever offer. This particular act of generosity has helped shape me into the man I am today.

(S. Funaro Jr.) His brother-in-law, John Kelleher, recalls that,

When Hurricane Sandy hit the New Jersey area where Michael and many of his family members live, at the height of the storm around 9 pm during a complete blackout he drove to my home to make sure my family was ok, knowing full well his own home was being destroyed. He then rode out the rest of the storm with his mother at her home.

Mr. Coscia’s home was destroyed in Hurricane Sandy, in the midst of the CFTC investigation into his trading program, but his focus – as it always is – was on making sure that his loved ones were cared for and were safe.

c. Mr. Coscia’s Devotion to His Community

Further, in the midst of Hurricane Sandy, his commitment to his community was particularly evident. Mr. Coscia “physically assisted neighbors in securing their own properties. At a time when others were hiring help, Michael was the help; in the trenches, securing boats that wouldn’t break free and cause damage or turning off gas lines that could prove dangerous . . . [and] providing a hand to the clean up crews in the neighborhood, be it in the form of a meal or warm

coffee or hand warmers.” (A. Hajek) Put simply: “He is vital to our community. He is irreplaceable.” (C.A. Tasca)

Similarly, when Mr. Coscia’s son, Jon-Michael, was in the fourth grade, he began coming home from school feeling ill, as did other children in his class. Mr. Coscia “contacted the other parents in the class” to investigate the issue; when it became clear that environmental exposure issues were making the children sick, he hired an environmental consultant to investigate and assess the problem. (W. Southern) Despite the fact that Mr. Coscia pulled his own son out of the school, and thus was no longer affected by hazards in the school building, he still took off several months of work and “remained committed to ensuring that no other children would suffer from the same problems.” *Id.* He took a leadership role on the committee for the school’s environment and relentlessly pursued a solution. “Michael never gave up the fight until the children and staff in the school were safe. We were all very grateful to Michael for personally fighting for the health of our children and community.” (C.A. Tasca)

Mr. Coscia’s background and characteristics warrant a minimal or probationary sentence. He is a dedicated family man, and is the primary care-giver for his elderly parents. Moreover, his professional pursuits are gainful, and his employment history shows he is a hard-working and diligent provider. *See United States v. Roque*, 536 F. Supp. 2d 987, 990-91 (E.D. Wis. 2008) (sentencing defendant, whose Guidelines recommendation was 87 to 108 months, to probation because defendant had a “minimal prior record” and was “working a good job and supporting his family”); *see also United States v. Munoz-Nava*, 524 F.3d 1137, 1142, 1148 (10th Cir. 2008) (consistent work history, community support, lack of a felony record, responsibility, work ethic, unlikely to re-offend, as evidenced by letters to court, part of justification for below-Guidelines sentence). Finally, his dedication to his community throughout his career further warrant a more

lenient sentence. *See United States v. Warner*, 792 F.3d 847, 854 (7th Cir. 2015) (affirming probationary sentence of defendant convicted of tax evasion, based in large part on the defendant’s “private acts of kindness, generosity and benevolence,” “many of them [taking] place long before” the conduct in question).

V. A Below Guidelines Sentence Will Not Create Sentencing Disparities

Sentencing Mr. Coscia to probation will not result in unwarranted disparities because there are no other spoofing sentences for comparison. As this Court is aware, this case presented the first spoofing indictment, the first conviction, and now the first sentencing.

a. In Other Fraud Cases, Probation or Reduced Prison Sentences were Deemed Appropriate for Similarly Situated Defendants

Courts have regularly imposed sentences of probation on defendants charged with fraud offenses. Indeed, in 2015, approximately 25% of defendants sentenced for fraud-based offenses in this Circuit received a sentence that included probation. *See United States Sentencing Commission, Statistical Information Packet, Seventh Circuit (2015)*, at Table 5, *available at* <http://www.ussc.gov/sites/default/files/pdf/research-and-publications/federal-sentencing-statistics/state-district-circuit/2015/7c15.pdf> (last visited June 28, 2016). While all sentencing is necessarily individual, several cases are instructive in showing that probation here would not create any disparity.

In *United States v. Roth*, the in-house counsel for a medical company, was convicted of mail fraud, wire fraud, and false statements for her participation in a scheme to defraud a hospital. Although her Guidelines range was 63 to 78 months imprisonment, the court sentenced Ms. Roth to four years’ probation in part because she had no criminal history, letters to the court demonstrated that the offense was an aberration, and she lost her law license as a result of her conviction. *Roth*, 2008 WL 686783, at *1-3.

Similarly, in *United States v. Siegel*, the defendant was convicted of commodities fraud and tax fraud at a jury trial for “wash trades” – conduct barred under the same deceptive trading practices statute as spoofing. The court sentenced him to three years’ probation, a \$500,000 fine, and a one-year trade ban. No. 78 CR 606, 1985 WL 902 (N.D. Ill. April 1, 1985) (prior to sentencing Guidelines).

In *United States v. Groover*, a commodities futures trader was sentenced to six months in jail after pleading guilty to violating the Commodity Exchange Act. He was previously fined \$100,000 and suspended for trading for eighteen months by the CFTC. The prosecutor sought jail time and a fine, but the court determined that the CFTC fine was sufficient. Another trader in Groover’s illegal commodity trading scheme, Robert Meyer, also pled guilty and was sentenced to probation, fined \$10,000, and agreed to sell his seat on the Board of Trade. Jay Branegan, *Trader gets 6 months*, CHICAGO TRIBUNE, November 22, 1978,

<http://archives.chicagotribune.com/1978/11/22/page/59/article/trader-gets-6-months>.¹⁰

b. Together with a Sentence of Probation, the Punishment Already Imposed on Mr. Coscia is Sufficient

As outlined above, Mr. Coscia has already paid more than \$4.5 million in fines and disgorgement, and served a one year suspension from trading. Mr. Coscia’s prior punishment is “sufficient, but not greater than necessary” to achieve the goals of sentencing.¹¹ 18 U.S.C. § 3553(a). Thus, this Court should not impose a sentence of imprisonment, and doing so will not

¹⁰ In other commodities fraud cases involving exchange trading, defendants received similar sentences of limited incarceration or probation. *See United States v. Graziano*, No. 1:12-cr-00834, ECF No. 48, (N.D. Ill. July 18, 2014) (8 months imprisonment and \$212,000 in restitution following bench trial); *United States v. Haveman*, 1:11-cr-00549, ECF No. 20 (N.D. Ill. Feb. 2, 2012) (three months imprisonment and nine months home confinement).

¹¹ The PSR also suggested that as a discretionary condition of supervised release, the Court require Mr. Coscia to refrain from trading on the Exchanges. The Exchanges self-police conduct, and therefore there is no need to impose a trading ban as criminal punishment.

create any sentencing disparities. *See United States v. Stewart*, 686 F.3d 156, 179 (2d Cir. 2012) (parsimony clause mandates that if “two sentences equally served the statutory purpose” of sentencing, the district court cannot “impose the higher”).

VI. The Sentencing Guidelines Range Suggested by the Presentence Investigation Report is Incorrect¹²

The Sentencing Guidelines are no longer mandatory. *Booker*, 543 U.S. 220. It is the Court’s duty to “make its own reasonable application of the § 3553(a) factors, and to reject (after due consideration) the advice of the Guidelines” if the suggested result is not appropriate. *Kimbrough*, 552 U.S. at 113 (Scalia, J., concurring). At the Government’s behest, the Presentence Investigation Report (ECF No. 120) (the “PSR”) asserts that Mr. Coscia’s total offense level is 27, and his advisory sentencing Guidelines range is 70-87 months. This offense level is based largely on the application of three sentencing enhancements – for causing a loss greater than \$550,000, U.S.S.G. § 2B1.1(b)(1)(H); for use of a sophisticated means, U.S.S.G. § 2B1.1(b)(10); and for obstruction of justice, U.S.S.G. § 3C1.1. None of these enhancements are correctly applied in this case. Properly calculated, Mr. Coscia’s total offense level is 9 and his advisory sentencing Guidelines range is 4-10 months.

a. The Loss Enhancement Does Not Apply Because The Government Has Not Established The Loss Amount

The PSR recommends, and the Government contends, that Mr. Coscia’s offense level should be increased by 14 levels based on his purported gains of \$1.4 million, based on \$1.3 million in profits from trading on CME markets and \$120,000 in profits from trading on ICE markets. *See* PSR ¶¶ 11, 21, 23; Gov’t Version of Offense at 5, Dec. 17, 2015, attached to

¹² There are numerous other inaccuracies in the PSR, which are not material to the Guidelines calculations or any issues of relevant conduct, as outlined in Steven Peikin’s April 11, 2016 letter to Naomi Stalbaum, attached as Exhibit F. Mr. Coscia incorporates those objections by reference.

Pre-Sentence Investigation Report (ECF No. 120). However, this enhancement may not be applied to Mr. Coscia's sentence because the Government has failed to establish that the trading strategies at issue proximately caused any loss or that \$1.4 million is a reasonable estimate of any loss amount.

“It is the government's burden to prove the loss amount by a preponderance of the evidence.” *United States v. Johns*, 686 F.3d 438, 454 (7th Cir. 2012). Additionally, “[t]he loss must be ‘reasonably foreseeable,’ which requires some causation analysis.” *United States v. Domnenko*, 763 F.3d 768, 777 (7th Cir. 2014) (citing *United States v. Whiting*, 471 F.3d 792, 802 (7th Cir. 2006) (noting there must be ‘but for’ and legal causation for the enhancement to apply)). Where the Government fails to make such showings, the Court cannot apply a loss enhancement. *See, e.g., Johns*, 686 F.3d at 456-57 (holding that no loss enhancement applied where fraud “victims” agreed to an offer because it was the best option available and were not proven to have suffered a loss); *United States v. Schneider*, 930 F.2d 555, 556-59 (7th Cir. 1991) (holding that no loss enhancement applied where fraud “victim” did not suffer a loss).

Neither of the crimes for which Mr. Coscia was convicted – spoofing, 7 U.S.C. §§ 6c(a)(5)(C) and 13(a)(2), and commodities fraud, 18 U.S.C. § 1348 – require proof of loss. *See* Jury Instructions (ECF No. 85) at 20-26. This explains why the Government did not prove loss at trial. Indeed, even for sentencing, the Government has not established that Mr. Coscia's subject trading strategies are the cause-in-fact of any loss, let alone a loss amount of \$1.4 million. The Government has not tied that amount to any specific trades or offered any price analysis to demonstrate that Mr. Coscia's trading strategies created an artificial price detrimental to other traders. Further, the Government has not proven that Mr. Coscia's large orders, which were characterized as spoofing and fraudulent, were the “but for” cause of any trades with Mr. Coscia's

small orders, which the Government contends is where Mr. Coscia profited on his trading program.¹³ *See, e.g.*, Trial Tr. 1419-21.

In its attempt to prove that Mr. Coscia's subject trading put other market participants in a worse financial position, the Government and PSR merely point to three inconclusive, unreliable, and anecdotal pieces of trial testimony. *See* PSR ¶¶ 21, 23.

- Anand Twells testified that Citadel lost money from trading with Mr. Coscia because the firm sold 24 contracts to Mr. Coscia and then bought 24 contracts from Mr. Coscia at a higher price, if those two trades are considered in isolation. Trial Tr. 634-35. But those trades did not occur in isolation. Indeed, the trading data shows that Citadel's sale and purchase of those contracts were made by two different traders or trading algorithms at Citadel. Rinaudo Decl. ¶ 32. Both traders or algorithms could have earned money on their transaction with Mr. Coscia: the trader or algorithm that sold 24 contracts to Mr. Coscia could have done so at a higher price than it bought the contracts for, and the trader or algorithm that bought 24 contracts from Mr. Coscia could have later sold them at a profit. Mr. Twells' testimony thus did not establish that Citadel suffered a loss as a result of these two transactions. Also Mr. Twells also testified that Mr. Coscia's orders were only one of many factors that influenced Citadel's trading algorithm and that he could not tell with certainty what caused Citadel to buy or sell the 24 contracts. Trial Tr. 636-37.
- Hovannes Dermenchyan's testimony does not provide any loss amount and is unreliable. Mr. Dermenchyan testified that he observed Mr. Coscia's trading pattern repeat "4,000 times" in "six hours" on a day he purportedly lost money. Trial Tr. 651. But Mr. Coscia entered only 1,836 orders in total and only 583 large orders that day. Def.'s Mot. for Judgment of Acquittal 31. Mr. Dermenchyan's testimony is therefore either factually inaccurate, or he was observing and reacting to the activity of other traders. The Government has not established that any losses Mr. Dermenchyan suffered were attributable to Mr. Coscia's trading.
- And, while Alexander Gerko testified that GSA Capital sustained a significant trading loss, he also testified that he did not know who the counterparties to those trades were or

¹³ Teasing out the "but for" causation of various trades would be difficult, if not impossible. The order book, including Mr. Coscia's orders, is only one factor of many that impact traders' decisions as to the timing and pricing of their orders. Trial Tr. 636-37, 641-42 (A. Twells) (testifying that the order book is only factor that Citadel L.L.C. uses in determining the fair value of contracts). Isolating the effect of the order book as a causal factor of any trade "would be difficult." *Id.* at 642. Further isolating Mr. Coscia's orders from the entire order book as the causal factor of any trade would be even more difficult.

whether Mr. Coscia had anything to do with that loss. *Id.* at 710-11. He also did not testify to any specific loss amount.

Such inconclusive, unreliable, and anecdotal evidence does not establish that the subject trading caused a loss, let alone a loss in the amount of \$1.4 million, and cannot justify a 14-point sentencing enhancement.

In the absence of any proven loss, the Court may not simply instead impose a “gain” enhancement. *See* U.S.S.G. § 2B1.1, cmt. n.3(B) (“The court shall use the gain that resulted from the offense as an alternative measure of loss *only if there is a loss* but it reasonably cannot be determined.”) (emphasis added). The Court also may not substitute gain for loss because Mr. Coscia’s gains do not provide a “reasonable estimate” of any loss caused by his trading. U.S.S.G. § 2B1.1 cmt. n.3(C); *see also United States v. Andersen*, 45 F.3d 217, 222 (7th Cir. 1995) (“If gain to the defendant does not correspond to any actual, intended, or probable loss, the defendant’s gain is not a reasonable estimate of loss.”). Gain may sometimes be used as an proxy for loss because, “[a]s a matter of economic theory at least, assuming a fixed amount of product to be distributed to a given set of customers, one competitor’s gain ought to equal the others’ loss.” *Andersen*, 45 F.3d at 221. But this is not always so. Mr. Coscia’s case presents exactly the “unusual situation where the relationship between the defendants’ gain and any loss suffered by [counterparty traders] is, at best, extremely tenuous.” *Id.* For example, a trader who bought futures contracts from Mr. Coscia at a given price will earn, not lose, money if (i) the trader had previously sold contracts short at a higher price, or (ii) the market value of those contracts subsequently increases and the trader is able to sell them for a profit. These gains occur irrespective of whether Mr. Coscia also earned money

on those transactions. Thus, Mr. Coscia's gain does not provide a reasonable estimate of any losses incurred by his counterparties and Mr. Coscia's gain may not be used as a proxy for loss.¹⁴

Given the evidentiary deficiencies, the Government attempts to bolster the notion that Mr. Coscia profited from the subject trading strategies by contending, without support, that Mr. Coscia earned about \$150,000 per month from trading prior to implementing the subject strategies. Gov't Version of Offense at 5; *see also* PSR ¶ 11. However, that unsupported factoid is a result of a selective bias. Traders' profits and losses vary significantly over time. For example, in the week before beginning to use the subject trading strategies, Mr. Coscia made \$799,903 in profit. Rinaudo Decl. ¶ 33. There is no proof as to what Mr. Coscia's gains would have been but for the trading strategies at issue; without those strategies he might have made far more or far less than \$1.4 million. The Government simply has not offered any proof on that point. Accordingly, there should be no loss enhancement under U.S.S.G. § 2B1.1.

b. The Sophisticated Means Enhancement Was Wrongly Applied

Section 2B1.1(b)(10) of the Sentencing Guidelines provides for a 2-level enhancement if “the offense otherwise involved sophisticated means and the defendant intentionally engaged in or caused the conduct constituting sophisticated means.” Application of the sophisticated means adjustment is appropriate where the offense conduct “displays a greater level of planning or concealment *than a typical fraud of that kind.*” *United States v. Wayland*, 549 F.3d 526, 528 (7th

¹⁴ Additionally, for a court to use gain as an alternative measure of loss, the loss must be one that “reasonably cannot be determined.” U.S.S.G. § 2B1.1, cmt. n.3(B); *see also* United States Sentencing Commission Primer on Loss Calculations Under § 2B1.1(b)(1), at 11 (June 2015) (“Sentencing judges are cautioned against abandoning a loss calculation in favor of a gain amount where a reasonable estimate of the victims’ loss . . . is feasible.”) (internal quotation marks omitted); *United States v. Lagunes*, 2013 WL 5498257, at *4 n.5 (N.D. Ind. Oct. 2, 2013) (“[T]he gain to the defendants would not be a proper measure of loss if (as appears to be the government’s argument) it is possible to reasonably determine the loss to the victims.”). The Government contends, and the PSR accepts, that loss could be calculated using market data, although doing so “would require a huge amount of time to review extremely large amounts of data.” PSR ¶ 13. To the extent loss can be calculated, doing so is the Government’s burden.

Cir. 2008) (emphasis added) (internal quotations omitted). In other words, the adjustment “is proper when the offense conduct, viewed as a whole, was notably more intricate than that of the garden-variety [offense].” *United States v. Knox*, 624 F.3d 865, 871 (7th Cir. 2010). Here, however, Mr. Coscia’s offense did not involve sophisticated means.

Under the Government’s view, any fraud in the commodities market committed through the use of a trading algorithm would involve “sophisticated means” – and since algorithmic trading is common in the modern-day futures markets, this provides no basis to distinguish between “garden-variety” commodities fraud offenses and offenses warranting a sentencing level enhancement. The “sophisticated means” identified by the Government and accepted by the PSR amounts to nothing more than the creation and use of a trading algorithm. *See* Gov’t Version of Offense at 9 (Mr. Coscia “use[d] ping orders, trade orders, quote orders, and two computer algorithmic programs;” he “hired a computer programmer to create an algorithm;” and he “executed [the strategy] hundreds of times a day for over two months, with each trade cycle lasting approximately 2/3s of a second”). Each of these trading mechanisms are commonly used in algorithmic trading. *See* Trial Tr. 1156 (A. Warren) (“[E]xchanges allow ping orders, correct? A: Yes.”); *Id.* at 668 (H. Dermenchyan) (“Q: So 95 percent of the market uses algorithms at the present time? A: I think so.”). Comparing Mr. Coscia’s trading algorithm to other algorithms in the marketplace reveals that Mr. Coscia’s algorithm was rudimentary. *See id.* at 745 (J. Shaw) (stating that HTG Capital’s algorithm took into account “many factors” not just the order book); *id.* at 514-15 (J. Park) (testifying that other high-frequency traders used faster systems than Panther and agreeing that Panther’s systems were “not state-of-the-art”); *id.* at 1095 (M. Coscia). Even the Government pointed out as much at trial, stating in closing, “The scheme, make no mistake, in this case is straightforward and simple.” Trial Tr. 1420.

Nor can Mr. Coscia's use of a trading algorithm be said to indicate more "concealment" than the typical offense. Mr. Coscia's trading was done in the public marketplace for anyone to see, as the Government's own witnesses testified. *Id.* at 651-52 (H. Dermenchyan) (describing the trading he observed as "noticeable"). And all of the trading at issue in this case was done under User IDs registered to Mr. Coscia and Panther. *Id.* at 371 (R. Cobb) (describing trading activity done under "Tag 50 identifiers" associated with Panther).

The "sophisticated means" identified by the Government bears no resemblance to the sorts of schemes to which courts have applied the enhancement. *See, e.g., United States v. Smith*, 526 F. App'x 256, 258-60 (4th Cir. 2013) (affirming application of the sophisticated means enhancement where defendants used a corporation with no apparent legitimate business and a non-existent employee at a virtual office to create the appearance of impartial oversight and auditing by accountants, and concealed the fraud with faked wire transfers, fraudulently obtained Fed Ex tracking numbers, and forged documents); *United States v. Brennan*, 562 F. App'x 914, 916-17 (11th Cir. 2014) (upholding application of sophisticated means adjustment where defendant used timed press release, issuance of kickback shares to a third party, and match trading); *United States v. Marsh*, 820 F. Supp. 2d 320, 339 (E.D.N.Y. 2011) (applying sophisticated means adjustment where defendants' scheme "included a fake trading desk and hedge fund, an extensive false company history, and phony employees with their own fake histories").

c. The Obstruction of Justice Enhancement Should Not Apply

The jury verdict is an insufficient basis for application of the obstruction of justice enhancement. *See United States v. Seward*, 272 F.3d 831, 838 (7th Cir. 2001) ("The obstruction enhancement is not warranted merely because the defendant took the stand and the jury did not believe his testimony."). Instead, this Court may only apply this enhancement if it independently finds that Mr. Coscia's testimony was false by the preponderance of evidence standard. *Id.* ("[T]he

district court must make a finding of obstruction of justice that encompasses all of the factual predicates for a finding of perjury (false testimony, materiality, and willful intent”) (citing *United States v. Dunnigan*, 507 U.S. 87, 95 (1993) (“[A] district court must review the evidence and make independent findings”)(emphasis added)); see also *United States v. Ruggiero*, 100 F.3d 284, 294 (2nd Cir. 1996) (district court did not have a “firm conviction” that obstruction of justice enhancement should apply, despite thinking it “more likely than not” should apply).

The Government has the burden to prove that Mr. Coscia’s purportedly false testimony was willful. *United States v. Shearer*, 479 F.3d 478, 484 (7th Cir. 2007). The Government has not shown that Mr. Coscia “knowingly and deliberately lie[d] during [his] testimony,” and, for that additional reason, the obstruction enhancement should not apply. *United States v. Jackson*, 787 F.3d 1153, 1160 (7th Cir. 2015) (district court erred in applying enhancement in light of finding that defendant did not deliberately or knowingly lie at trial). Mr. Coscia testified extensively about the logic of his programs and the limited circumstances under which the programs would cancel his orders. With regard to his large orders, Mr. Coscia’s testimony was that he intended to execute them “under [his] conditions.” See, e.g., Trial Tr. 1002, 1028, 1040 (M. Coscia). The jury did not have to believe that this testimony was false in order to convict Mr. Coscia. At the Government’s urging, the Court declined to instruct the jury that, to carry its burden on the spoofing charges, the Government was required to prove that Mr. Coscia intended to cancel his orders under all circumstances and conditions. See Def.’s Proposed Instructions (ECF No. 59) at 14-16. Instead, the Court instructed the jury that it was required to find that “at the time Mr. Coscia entered the bid or offer . . . he intended to cancel the entire bid or offer before it was executed . . .” Trial Tr. 1584. The jury could have believed that Mr. Coscia intended to execute his order under some conditions

and still have found that his intent to cancel it under other conditions was a sufficient basis to convict.

Furthermore, additional analyses conducted post-trial have revealed that the testimony the Government relied on to undermine Mr. Coscia's testimony on these issues was clearly inaccurate, further weakening its foundation for the obstruction of justice enhancement. *See* Section II.d, *supra* (discussing new analyses highlighting inaccuracies and misimpressions left by the Government's argument and evidence at trial). At a minimum, these inaccuracies may have tainted the jury's perception of Mr. Coscia's credibility, and thus weigh against imposing the obstruction of justice enhancement.

d. The Proper Guidelines Range is 4 to 10 months

Although the Sentencing Guidelines are no longer mandatory, as discussed above, the correct Guidelines range is four to ten months, based on an offense level of 9. The proper Guidelines sentence range should be calculated as follows:

- The base offense level is 7 (U.S.S.G. § 2B1.1(a)(1));
- The special skill enhancement adds 2 (U.S.S.G. § 3B1.3); and
- Mr. Coscia's Criminal History Category is 1.

Thus, according to the 2015 Sentencing Guidelines Table, Mr. Coscia's recommended sentence is between four and ten months. Mr. Coscia respectfully requests this Court to consider this the proper Guidelines sentence. This range, combined with the numerous mitigating factors identified above, warrants a sentence of probation, or, at most, very minimal incarceration.

CONCLUSION AND SENTENCING RECOMMENDATION

A sentence of probation is just and adequate given Mr. Coscia's exemplary character and the nature of his offense. Probation is an available for Class C felonies, such as spoofing. 18 U.S.C. § 3561(a). Mr. Coscia's sentence should not be enhanced beyond the just adequate sentence of

probation merely because Mr. Coscia was also convicted of commodities fraud (a Class B felony) where precisely the same conduct underlies both convictions.

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Respectfully submitted,

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CERTIFICATE OF SERVICE

I hereby certify that on June 29, 2016, the foregoing was filed electronically with the Clerk of Court to be served by operation of the Court's electronic filing system upon all attorneys of record:

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