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A COMPARISON OF ANTI-MANIPULATION RULES IN U.S. AND EU ELECTRICITY AND NATURAL GAS MARKETS: A PROPOSAL FOR A COMMON STANDARD

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Synopsis: In this paper, we describe the development and current status of anti-manipulation rules as they apply to wholesale electricity and natural gas markets in the United States and the European Union, including the institutions that are responsible for overseeing these rules. We then compare and contrast these jurisdictions to discuss similarities, differences, and potential gaps in coverage within and across their internal markets. We note that while the behavior prohibited by the U.S. and EU statutes is remarkably similar, there is in fact no common standard for defining market manipulation. The absence of a common EU/U.S. framework for examining manipulative behavior introduces uncertainty into compliance efforts by failing to provide safe harbors and by potentially wasting scarce resources through efforts to continually detect and deter behavior that is in fact legitimate. We propose an economic framework to describe manipulation in a manner that could generally harmonize such compliance and enforcement efforts, providing a uniform approach to the detection, analysis and punishment of manipulative behavior within and across both the U.S. and EU jurisdictions.

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I. INTRODUCTION

The last decade has witnessed an unprecedented volume of legislation in the United States and the European Union prohibiting the manipulation of wholesale natural gas and electricity markets. In the United States, the Federal Energy Regulatory Commission (FERC) and Commodity Futures Trading Commission (CFTC) were given new fraud-based anti-manipulation statutes and enhanced power to monitor for, detect, and deter manipulative behavior, evidenced most recently by the FERC’s \$245 million settlement with Constellation Energy

Commodities Group, Inc.¹ The European Union has also made bold steps by revising its key piece of market abuse legislation and for the first time extending market abuse legislation to wholesale energy markets, which were previously covered only by general antitrust law. The new anti-manipulation, information disclosure, and inside information laws that will apply to energy markets represent the largest change to how EU energy markets will function since the beginning of the European Union's liberalization project in 1998 and will be overseen by two new EU level institutions.

Despite significant differences in the institutional processes used to derive their respective anti-manipulation laws and in the maturity and complexity of the physical and financial markets that are to be regulated, the behavior prohibited by the U.S. and EU statutes is strikingly similar. "Fraud-based" behavior is prohibited by all of these anti-manipulations statutes, with actions that create (or attempt to create) an "artificial price" prohibited in the European Union and by the CFTC in the United States. Although this statutory congruity suggests that a uniform approach to analyzing manipulative behavior is in place, the limited case precedent tried on such issues lacks a cohesive logic. The absence of a cogent framework for examining manipulative behavior introduces uncertainty into compliance efforts by failing to provide safe harbors from enforcement scrutiny and could waste scarce regulatory resources through inefficient efforts to continually detect and deter behavior that is poorly understood and inconsistently defined.

In this article, we seek to address these issues by proposing an economic framework that could provide uniformity to the analysis of manipulative behavior across cases, agencies, statutes, and continents. The framework could also reduce the reliance upon subjective judgment in identifying actions that do (and do not) cause manipulation. In Section II, we summarize the evolution of the anti-manipulation laws that are now relevant to wholesale electricity and natural gas markets in the United States and European Union. In Section III, we compare and contrast these enforcement regimes to show the need for the unifying framework we propose herein. Section IV discusses how this framework could harmonize the detection and analysis of manipulative behavior and bring uniformity to enforcement and compliance efforts. Section V concludes our discussion.

II. BACKGROUND OF RELEVANT U.S. AND EU ANTI-MANIPULATION ENFORCEMENT SYSTEMS

In this section, we describe the legislative and regulatory development of anti-manipulation laws relevant to the U.S. and EU wholesale electricity and natural gas markets. Although physical and financial markets in the United States are generally further developed than their European equivalents, the European Union's steps toward the assemblage of regulatory components necessary to comprehensively monitor for, detect, analyze, and bring enforcement actions against manipulative behavior have closed substantially with those in the United States given the relatively quick adoption of REMIT in the European Union and delays in the implementation of Dodd-Frank in the

1. Order Approving Stipulation and Consent Agreement, *Constellation Energy Commodities Group, Inc.*, 138 F.E.R.C. ¶ 61,168 (2012) [hereinafter *Constellation Settlement*].

United States. We begin by discussing the status of U.S. anti-manipulation law, a topic we address relatively briefly given the audience's familiarity with the subject.² We then discuss the evolution of anti-manipulation law in European energy markets, beginning with the growing awareness of the ineffectiveness of antitrust law as applied thereto and moving to the passage of a tailor-made market abuse regime for energy wholesale markets – REMIT. This sets up the ability to compare and contrast the development of these two systems and to discuss their potential future harmonization, a topic we address in Section III.

A. The Evolution of U.S. Anti-Manipulation Rules for Electricity and Natural Gas Markets

Prior to this millennium, the responsibility for preventing market manipulation resided in the Securities Exchange Commission (SEC), with the authority conferred by Rule 10b-5,³ and the CFTC, with the authority granted under the Commodity Exchange Act (CEA).⁴ Whereas the SEC succeeded in prosecuting cases under a variety of fraud-based theories,⁵ the CFTC failed to successfully prosecute a manipulation case under the “artificial price” standard of the CEA until many years later.⁶ This patchwork of laws governing anti-manipulation enforcement left a significant gap in coverage for energy markets, for Rule 10b-5 applied only to securities, not commodities or financial derivatives, while the CFTC’s “artificial price” standard had many holes concerning physical trading, trading in self-regulated markets, and cross-market trading.⁷ The authority of the FERC to prohibit such behavior was limited under the then existing provisions of the Federal Power Act⁸ and Natural Gas Act.⁹

2. Specifically, Volume 31 of the *Energy Law Journal* included several articles that discussed different aspects of this topic from the perspective of U.S. law. See generally Craig Pirrong, *Energy Market Manipulation: Definition, Diagnosis, and Deterrence*, 31 ENERGY L.J. 1 (2010); William Scherman, John Shepherd & Jason Fleischer, *The New FERC Enforcement: Due Process Issues in the Post-EPA Act 2005 Enforcement Cases*, 31 ENERGY L.J. 55 (2010); and William F. Demarest, Jr., “Traditional” NGA Jurisdictional Limits Constrain FERC’s Market Manipulation Authority, 31 ENERGY L.J. 471 (2010).

3. The SEC’s anti-manipulation rule is codified at 17 C.F.R. § 240.10b-5 (2011) (promulgated under the authority granted in 15 U.S.C. § 78j(b) (Supp. 2010)).

4. The CFTC Anti-Manipulation Rule is codified at 7 U.S.C. § 13b (Supp. 2010).

5. See generally, *In re Richard D. Chema*, Exchange Act Release No. ID-71, 60 SEC Docket 121-62 (Aug. 24, 1995) (involving “wash trades” and “marking the close”); *SEC v. Zayed*, No. 1:98-CV-327 (E.D. Tenn., Sept. 24, 1998) (alleged “pump-and-dump” scheme).

6. As lamented by CFTC Commissioner Bart Chilton in remarks made on March 23, 2010 to the Metals Market Investors group in Washington, D.C., “in 35 years, there has been only one successful prosecution for manipulation” under the CEA prior to Dodd-Frank. Bart Chilton, Comm’r, CFTC, Remarks of Commissioner Bart Chilton to Metals Market Investors (Mar. 23, 2010), available at <http://www.cftc.gov/PressRoom/SpeechesTestimony/opachilton-30>. The “one successful prosecution” referred to is *DiPlacido v. CFTC*, 364 F. App’x 657 (2d Cir. 2009), cert. denied, 130 S. Ct. 1883 (2010). See also SHAUN LEDGERWOOD, GARY TAYLOR, ROMKAEW BROEHM & DAN ARTHUR, THE BRATTLE GRP., LOSING MONEY TO INCREASE PROFITS: A PROPOSED FRAMEWORK FOR DEFINING MARKET MANIPULATION 2, n.5 (Mar. 2011), available at http://www.brattle.com/_documents/UploadLibrary/Upload919.pdf.

7. 17 C.F.R. § 240.10b-5; 7 U.S.C. § 13b.

8. The FERC maintains oversight of the wholesale market for electricity pursuant to the Federal Power Act. 16 U.S.C. §§ 791-828c (2006). In 1996, the FERC issued Order 888, opening the wholesale electric market to competition. Order 888, *Promoting Wholesale Competition Through Open Access Non-Discriminatory Transmission Services by Public Utilities*, F.E.R.C. STATS. & REGS. ¶ 31,036, 61 Fed. Reg. 21,540 (1996) (codified at 18 C.F.R. pts 35, 385).

Antitrust law likewise was an awkward fit for addressing such behavior because the exercise of market power is not necessary for executing a market manipulation, as we will discuss in Section III.¹⁰

The explosion of financial derivatives markets in the early 2000s permanently altered the landscape for trading many commodities, including energy.¹¹ Rapid growth in the availability and evolution of financial swaps substantially increased the liquidity of trading wholesale gas and (to a lesser extent) electricity,¹² giving physical players added ability to hedge their positions but also giving would-be manipulators greater ability to assemble price-taking positions that could benefit from directional price movements.¹³ As we discuss in this section, the wake of the Enron crisis at the end of 2001 made it clear that the FERC's then-existing ability to detect and prevent market manipulation was insufficient, leading the Commission to adopt new rulemakings and ultimately to request more comprehensive anti-manipulation authority from Congress. Additional anti-manipulation authority was also sought by and granted to the CFTC following the wake of the 2008 financial crisis, as we will discuss later in Section II.A.2.

1. The FERC's Market Behavior Rule 2, EPCRA 2005, and Rule 1c

On June 26, 2003, the FERC offered for public comment six "Market Behavior Rules" that were designed to address various behaviors deemed inappropriate for electricity providers with market-based rate authority.¹⁴ The FERC issued modified versions of these rules on November 17, 2003, which included "Market Rule 2" concerning manipulation of wholesale electricity

9. The FERC maintains regulatory authority over the wholesale natural gas market pursuant to the Natural Gas Act. 15 U.S.C. §§ 717-717z (2006). In 1992, the FERC issued Order No. 636, opening the wholesale natural gas market to competition. Order No. 636, *Regulation of Natural Gas Pipelines After Wellhead Decontrol*, F.E.R.C. STATS. & REGS. ¶ 30,939, 57 Fed. Reg. 13,267 (1992) (codified at 18 C.F.R. pt. 284).

10. See generally Shaun Ledgerwood & Paul Carpenter, A Framework for Analyzing Market Manipulation (latest revised draft Feb. 3, 2012) (unpublished manuscript in the revision process for publication in the REVIEW OF LAW & ECONOMICS), available at <http://ssrn.com/abstract=1811764>; Pirrong, *supra* note 2, at 3-5.

11. This growth was fueled in part by the Commodity Futures Modernization Act of 2000. Pub. L. No. 106-554 app. E, 114 Stat. 2763A-365 (2000). Most notably, this act specifically removed "exempt commercial markets" (ECMs) and bilaterally traded swaps from the oversight and reporting requirements afforded to products trading on other types of exchanges, such as Derivative Clearing Organizations (DCOs). The closing of this "Enron loophole" is part of what Dodd-Frank is designed to accomplish.

12. Several trading platforms registered as ECMs during this period, including the Intercontinental Exchange (ICE) on December 21, 2001. *Trading Organizations*, CFTC, <http://www.cftc.gov/IndustryOversight/TradingOrganizations/index.htm> (last visited Mar. 5, 2012) [hereinafter *Trading Organizations*].

13. The potential for such positions to be manipulated was considered and viewed with skepticism by early authors in the early 1990s. See, e.g., Daniel R. Fischel & David J. Ross, *Should the Law Prohibit "Manipulation" in Financial Markets?*, 105 HARV. L. REV. 503 (1991); Paveen Kumar & Duane J. Seppi, *Futures Manipulation with "Cash Settlement"*, 47 J. FIN. 1485 (1992). But see Craig Pirrong, *Manipulation of Cash-Settled Futures Contracts*, 74 J. BUS. 221 (2001) (considers the possibility of manipulating futures, albeit through the lens of a market corner).

14. *Investigation of Terms and Conditions of Public Utility Market-Based Rate Authorizations*, 103 F.E.R.C. ¶ 61,349 at PP 3, 6 (2003).

markets.¹⁵ This rule explicitly prohibited a wide variety of behavior, including actions that were “intended to or foreseeably could manipulate market prices, market conditions, or market rules,”¹⁶ wash trades,¹⁷ “transactions predicated on submitting false information,”¹⁸ transactions creating then relieving artificial congestion,¹⁹ and collusion to manipulate.²⁰ This language reflects a morass of provisions borrowed conceptually from the SEC’s Rule 10b-5 (fraud, wash trades), the CEA (the concept of “artificiality”), and antitrust (collusion and allusions to market power). The rule also included several key holes, most notably a broad general exemption for behavior that served a legitimate business purpose, a lack of prohibitions against manipulations performed on the buyer’s side of the market, and no similar provisions for overseeing natural gas markets.²¹

Recognizing the limitations in its authority, the Commission sought greater comprehensive ability to detect and deter market manipulation in the wholesale natural gas and electricity markets. This was granted through the Energy Policy Act of 2005 (EPAAct),²² which gave the FERC a statutory anti-manipulation mandate tied to the same fraud-based statute (and associated lineage of relatively successful case precedent) that underlies the SEC’s Rule 10b-5.²³ The new market manipulation “Rule 1c” was adopted by the Commission on January 19, 2006 in Order 670,²⁴ giving the FERC the ability to prohibit the use of “any device, scheme, or artifice to defraud,” the making of “any untrue statement of a material fact or to omit to state a material fact necessary in order to make the statements made . . . not misleading,” or to “engage in any act, practice, or course of business that operates or would operate as a fraud or deceit upon any [entity].”²⁵ Recognizing in Order 670 that Rule 1c would preempt Market Behavior Rule 2, the FERC rescinded Market Rule 2 on February 16, 2006.²⁶

The EPAAct gave significant anti-manipulation authority to the Commission through its Office of Enforcement, which consists of the Divisions of Analytics and Surveillance, Energy Market Oversight, Audits, and Investigations.²⁷ The Commission has access to injunctive relief²⁸ and the ability to order the

15. *Investigations of Terms and Conditions of Public Utility Market-Based Rate Authorizations*, 105 F.E.R.C. ¶ 61,218 (2003).

16. *Id.* at P 35.

17. *Id.* at P 46.

18. *Id.* at P 59.

19. *Id.* at P 70.

20. *Id.* at P 81.

21. *Id.* at P 24.

22. Energy Policy Act of 2005 (EPAAct 05), Pub. L. No. 109-58, §§ 315, 1283, 119 Stat. 594, 691, 979-80; *see also*, EPAAct 05, sec. 1283, 16 U.S.C. § 824v (2006) and EPAAct 05, sec. 314, 15 U.S.C. § 717c-1 (2006).

23. The authority is based on 15 U.S.C. § 78j (2006).

24. Order No. 670, *Prohibition of Energy Market Manipulation*, F.E.R.C. STATS. & REGS. ¶ 31,202, 71 Fed. Reg. 4,244 (2006) (codified at 18 C.F.R. pt. 1c).

25. *Id.* at P 1.

26. *Investigation of Terms and Conditions of Public Utility Market Rates-Based Rate Authorizations*, 114 F.E.R.C. ¶ 61,165, *reh’g denied*, 115 F.E.R.C. ¶ 61,053 (2006). The remaining Market Behavior Rules now reside in 18 C.F.R. § 35.37 (2011).

27. *Office of Enforcement*, FERC, <http://www.ferc.gov/about/offices/oe/org-oe.asp> (last visited Mar. 5, 2012).

28. Natural Gas Act § 20, 15 U.S.C. § 717s(d) (2006).

disgorgement of profits.²⁹ Because private causes of action are not permitted under Rule 1c,³⁰ the compensation of private parties injured by a manipulation is paid for from disgorged profits, raising the possibility that private injuries caused by a manipulation may be undercompensated.³¹ The Commission also has the ability to assess civil penalties of up to \$1 million per incident, per day.³² In an effort to establish a sense of proportionality similar to the Federal Sentencing Guidelines,³³ the Commission issued Penalty Guidelines in 2010 designed to link the civil penalty calculation to the harm caused by the manipulation.³⁴

The FERC has been active in exercising its authority since Rule 1c came into effect, levying approximately \$300 million in civil penalties, \$151 million in disgorgement, and \$5 million in compulsory compliance plans.³⁵ However, in a prominent case involving the manipulation of natural gas futures on the New York Mercantile Exchange (NYMEX), the FERC's jurisdiction was openly challenged by the CFTC, a sign of the frictions that exist between these two agencies as future anti-manipulation enforcement actions are coordinated post Dodd-Frank.³⁶ In the next section, we discuss the CFTC's past, present, and future role in detecting and deterring manipulation in wholesale electricity and natural gas markets.

2. CFTC Anti-Manipulation Authority over Energy Markets Pre- and Post-Dodd-Frank

In the years between passage of the Commodity Futures Modernization Act of 2000 and EAct 2005, the CFTC pursued enforcement cases against traders accused of the manipulation of electricity and natural gas derivatives markets or indices, generally settling the matters pre-trial.³⁷ The CFTC's jurisdiction over these cases derived from its continuing ability to regulate Derivatives Clearing Organizations (DCOs, such as the NYMEX), Designated Contract Markets

29. *Enforcement of Statutes, Order, Rules, and Regulations*, 132 F.E.R.C. ¶ 61,216 at P 216 (2010).

30. 18 C.F.R. §§ 1c.1(b), 1c.2(b) (2011).

31. The manipulator's profits will offset the losses of counterparties that are the target of the manipulation but will not cover the losses incurred by others induced by fraudulent behavior to trigger the manipulation. For further discussion, see generally Ledgerwood & Carpenter, *supra* note 10, at 55.

32. 16 U.S.C. § 825o-1(b) (2006).

33. U.S. SENTENCING COMM'N, 2011 FEDERAL SENTENCING GUIDELINES MANUAL (Nov. 1, 2011), available at http://www.ussc.gov/guidelines/2011_guidelines/index.cfm.

34. *Enforcement of Statutes, Order, Rules, and Regulations*, 130 F.E.R.C. ¶ 61,220 at P 8, *subsequently suspended*, 131 F.E.R.C. ¶ 61,040, *revised and reissued*, 132 F.E.R.C. ¶ 61,216 (2010) [hereinafter *Penalty Guidelines*].

35. *Civil Penalty Actions*, FERC, <http://www.ferc.gov/enforcement/civil-penalties/civil-penalty-action.asp> (last visited Mar. 5, 2012, adjusted for the penalties discussed *supra* note 1).

36. Amicus Brief of Futures Industry Ass'n et al., *Amaranth Advisors, L.L.C. v. FERC*, No. 07-1491 (D.C. Cir. 2008), 2008 WL 4960210.

37. See, e.g., *In re Avista Energy, Inc.*, CFTC Docket No. 01-21 (Aug. 21, 2001) (electricity futures manipulation); *In re Dynegy Mktg. & Trade*, CFTC Docket No. 03-03 (Dec. 18, 2002) (false reporting re natural gas); *In re WD Energy Servs., Inc.*, CFTC Docket No. 03-20 (July 28, 2003) (false reporting re natural gas); *In re Williams Energy Mktg. & Trading*, CFTC Docket No. 03-21 (July 29, 2003) (false reporting re natural gas); *In re Enserco Energy, Inc.*, CFTC Docket No. 03-22 (July 31, 2003) (false reporting re natural gas); *In re Taylor*, CFTC Docket No. 01-23 (Sept 30, 2003) (electricity futures manipulation); *In re Knauth*, CFTC Docket No. 04-15 (May 10, 2004) (electricity wash trades); *In re Mirant Americas Energy Mktg. LP*, CFTC Docket No. 05-05 (Dec. 3, 2004) (false reporting re natural gas).

(DCMs, such as LCH Clearent),³⁸ and to a lesser extent markets overseen by the National Futures Association.³⁹ However, derivatives trading over-the-counter (OTC) and on exempt exchanges continued to grow rapidly,⁴⁰ allowing market participants to amass large directional derivatives positions outside of the bounds of the CFTC's reporting requirements.

The result of the inevitable convergence of unlikely circumstances and unabated speculation was demonstrated most dramatically by the implosion of Amaranth Advisors, LLC (Amaranth) in September of 2006.⁴¹ The FERC and the CFTC both filed enforcement actions for manipulation based on the firm's behavior prior to its destruction, the CFTC claiming jurisdiction based on the manipulation of futures contracts and the FERC claiming jurisdiction because the trades used to execute the manipulation were used in connection with the establishment of the price of physical gas ultimately delivered under those contracts.⁴² Jurisdictional frictions between the agencies grew during the course of the case as both Commissions separately proceeded with enforcement actions, with the CFTC filing an amicus brief in support of Amaranth Trader Brian Hunter's suit to enjoin the FERC proceeding and asserting its claim to exclusive jurisdiction as to the matter.⁴³ Mr. Hunter was later found guilty of market manipulation by a FERC administrative law judge on January 22, 2010,⁴⁴ with the Commission approving that decision on April 21, 2011.⁴⁵

38. *Trading Organizations*, *supra* note 12.

39. Following the Commodity Futures Modernization Act of 2000, the CFTC also retained limited authority over financial intermediaries including Futures Commission Merchants (FCMs), Introducing Brokers (IBs), Commodity Pool Operators (CPOs), and Commodity Trading Advisors (CTAs). *Compliance*, NAT'L FUTURES ASS'N, <http://www.nfa.futures.org/NFA-compliance/index.HTML> (last visited Mar. 5, 2012).

40. Exempt markets included ECMs and Exempt Boards of Trade (EBOTs, which include markets for the traders of weather swaps, interest rate index swaps, and REITs). *See generally*, *Exempt Markets*, CFTC, <http://www.cftc.gov/IndustryOversight/TradingOrganizations/EBOTs/ebot> (last visited Mar. 5, 2012).

41. Amaranth was an energy hedge fund which established increasingly large speculative positions based on the settlement price of the NYMEX NG contract. Trader Brian Hunter was alleged by the FERC and the CFTC to have manipulated the NYMEX price on three occasions in early 2006. While these acts proved profitable, Mr. Hunter leveraged the profits into a directional play tied to the occurrence of hurricanes in the Gulf of Mexico. When no hurricanes occurred, the fund rapidly lost value, triggering margin calls and eventually liquidation. *See generally* *Amaranth Advisors L.L.C.*, 120 F.E.R.C. ¶ 61,085 (2007). *See also* Ledgerwood & Carpenter, *supra* note 10, at 12-14.

42. 120 F.E.R.C. ¶ 61,085 at P 3; CFTC v. Amaranth Advisors, L.L.C., 554 F. Supp. 2d 523 (S.D.N.Y. 2007).

43. Amicus Brief of Futures Industry Ass'n, *supra* note 36. The CFTC settled its case against all defendants on August 12, 2009, while the FERC settled its case with respect to all defendants except Mr. Hunter on August 31, 2009. Consent Order of Permanent Injunction, Civil Monetary Penalty and Other Relief as to Defendants Amaranth Advisors, L.L.C. and Amaranth Advisors (Calgary) ULC, CFTC v. Amaranth Advisors, L.L.C., No. 07-6682 (S.D.N.Y. Aug. 12, 2009); *Energy Transfer Partners L.P.*, 128 F.E.R.C. ¶ 61,269 at P 9 (2009).

44. Initial Decision, *Brian Hunter*, 130 F.E.R.C. ¶ 63,004 (2010).

45. Order Affirming Initial Decision and Ordering Payment of Civil Penalty, *Brian Hunter*, 135 F.E.R.C. ¶ 61,054 (2011). Note that the FERC did not rule on its ALJ's decision until after Mr. Hunter's lawsuit disputing the Commission's jurisdiction was deemed to be unripe. *Brian Hunter v. FERC*, 403 F. App'x 525, 527 (D.C. Cir. Dec. 22, 2010). Mr. Hunter refiled his petition in the D.C. Circuit on June 20, 2011, raising the issue that the CFTC might again intervene. *Brian Hunter v. FERC*, No. 11-1236 (D.C. Cir. filed Jun. 20, 2011). The court granted the FERC's motion to dismiss on Oct. 14, 2011. *Brian Hunter v. FERC*, No. 11-1236, 2011 U.S. App. LEXIS 20974 (D.C. Cir. Oct. 14, 2011).

Just before the financial crisis of 2008, the CFTC was given limited regulatory authority over specific financial derivatives traded on ECMs and determined to be Significant Price Discovery Contracts (SPDCs).⁴⁶ Immediately following the crisis, political pressure to increase regulatory controls over the trading of swaps increased substantially. The CFTC responded by declaring several energy derivatives as SPDCs, including natural gas and electricity contracts.⁴⁷ Rumors persisted that the CFTC was considering declaring certain FERC jurisdictional instruments to be SPDCs, most notably Financial Transmission Rights (FTRs),⁴⁸ a concern ultimately proven valid following the passage of Dodd-Frank in 2010.⁴⁹ Tensions between the agencies continued in the wake of Dodd-Frank, which greatly expanded the CFTC's regulatory authority by eliminating many exemptions to Commission oversight, including the expansion of entities regulated (swap dealers, major swap participants),⁵⁰ expanded reporting requirements,⁵¹ the requirement that swaps subject to mandatory clearing must be cleared through a DCO after trading on Swap

46. This power was granted by the Food, Conservation, and Energy Act of 2008, Pub. L. No. 110-234, 122 Stat. 923.

47. *See, e.g.*, Final Rule, Order Finding That the Social Border Financial Basis Contract Traded on the IntercontinentalExchange, Inc., Performs a Significant Price Discovery Function, 75 Fed. Reg. 24,648 (2010); Final Orders, Orders Finding That the Mid-C Financial Peak Contract and Mid-C Financial Off-Peak Contract, Offered for Trading on the IntercontinentalExchange, Inc., Perform a Significant Price Discovery Function, 75 Fed. Reg. 38,469 (2010).

48. *See generally* Letter from R. Trabue Bland, Dir. of Regulatory Affairs, IntercontinentalExchange, Inc., to David Stawick, Sec'y, CFTC (Nov. 6, 2009), available at <http://www.cftc.gov/ucm/groups/public/@lrfederalregister/documents/frcomment/09-032c006.pdf> (discussing comments by PJM filed on November 6, 2009 with the CFTC and why FTRs do not constitute SPDCs).

49. After the passage of Dodd-Frank, the CFTC questioned in a Notice of Proposed Rulemaking whether FTRs and other FERC jurisdictional instruments may inherently belong under CFTC jurisdiction, but noted that "the treatment of these products should be considered under the standards and procedures specified in section 722 of the Dodd-Frank Act for a public interest waiver, rather than through this joint rulemaking to define the terms 'swap' and 'security based swap.'" Proposed Rules & Interpretations, Further Definition of "Swap," "Security-Based Swap," and "Security-Based Swap Agreement"; Mixed Swaps; Security-Based Swap Agreement Recordkeeping, 76 Fed. Reg. 29,818, 29,839 (2011) (to be codified 17 C.F.R. pt. 240). A footnote suggests that this statement is not meant to connote jurisdiction, but it is noteworthy that no comments were solicited on this point. *Id.* at n.155 ("This approach, however, should not be taken to suggest any findings by the Commissions as to whether or not FTRs or any other FERC-regulated products are swaps (or futures contracts)."). A filing by the RTOs made February 7, 2012, requested a general public interest exemption from CFTC jurisdiction for all non-real-time RTO transactions, including day-ahead energy, virtual bids and offers, FTRs, ancillary services, and capacity transactions. ISO/RTO Consolidated Request for CFTC Exemption from Regulation at 5-9, CFTC (Feb. 7, 2012), <http://www.cftc.gov/stellent/groups/public/@requestsandactions/documents/ifdocs/iso-rto4capplication.pdf>. However, this filing explicitly *does not* seek an exemption from the CFTC's anti-manipulation authority, leaving the agencies to hash out the issue of enforcement jurisdiction. *Id.* at 3.

50. Proposed Rule & Interpretations, Further Definition of "Swap Dealer," "Security-Based Swap Dealer," "Major Swap Participant," "Major Security-Based Swap Participant" and "Eligible Contract Participant", 75 Fed. Reg. 80,174 (2010) (to be codified at 17 C.F.R. pt. 240).

51. *See generally* Proposed Rule, Swap Data Recordkeeping and Reporting Requirements: Pre-Enactment and Transition Swaps, 76 Fed. Reg. 22,833 (2011) (to be codified at 17 C.F.R. pt. 46); Interim Final Rule, Reporting Certain Post-Enactment Swap Transactions, 75 Fed. Reg. 78,892 (2010) (to be codified at 17 C.F.R. pt. 44); Notice of Proposed Rulemaking, Reporting, Recordkeeping, and Daily Trading Records Requirements for Swap Dealers and Major Swap Participants, 75 Fed. Reg. 76,666 (2010) (to be codified at 17 C.F.R. pt. 23); Proposed Rule, Swap Data Recordkeeping and Reporting Requirements, 75 Fed. Reg. 76,574 (2010) (to be codified at 17 C.F.R. pt. 45).

Execution Facilities (SEFs) or DCMs,⁵² the expansion of mandatory position limits⁵³ with end-user exemptions,⁵⁴ and the phase out of ECMs and EBOTs.⁵⁵ This regulatory friction remains evident, as the Memorandum of Understanding (MOU) between the agencies required by Dodd-Frank as of January 11, 2011 has yet to be agreed to at the time of this writing.⁵⁶

Dodd-Frank also addressed the CFTC's difficulty in meeting the burden of proof required by the "artificial price" standard of the CEA's anti-manipulation provision. Although the CFTC succeeded in obtaining its first successful outcome from litigation in 2009,⁵⁷ the Commission nevertheless sought statutory language similar to that of the SEC's Rule 10b-5 because of the relative success that agency experienced in prosecuting manipulation cases. This was provided by Dodd-Frank through the provision of dual statutory provisions, the first based on the language of 10b-5 and the second based on the existing CEA standard tied to the establishment of artificial price.⁵⁸ This optionality not only eases the CFTC's future burden of proof by eliminating the need to demonstrate an artificial price as a material element of the offense,⁵⁹ but potentially aligns the CFTC's anti-manipulation authority with that of the FERC and other agencies in the United States and European Union which share equivalent enforcement goals.⁶⁰ As we will discuss later in Section III, if a common analytical framework for analyzing manipulation were adopted, a more cooperative position might be forged to bolster future analyses of manipulative behavior.

B. Discussion of European Regulation and the REMIT Process

Until late 2011, the key piece of anti-market manipulation legislation in the European Union was the Market Abuse Directive (2003/6/EC) (MAD).⁶¹ MAD,

52. Notice of Proposed Rulemaking, Core Principles and Other Requirements for Swap Execution Facilities, 76 Fed. Reg. 1,214 (2011) (to be codified at 17 C.F.R. pt. 37); Notice of Proposed Rulemaking, Core Principles and Other Requirements for Designated Contract Markets, 75 Fed. Reg. 80,572 (2010) (to be codified at 17 C.F.R. pts. 1, 16, 38); 17 C.F.R. pts. 1, 21, 39, 140 (2011).

53. 17 C.F.R. pts. 1, 150, 151 (2011).

54. Proposed Rule, End-User Exceptions to Mandatory Clearing of Swaps, 75 Fed. Reg. 80,747 (2010) (to be codified at 17 C.F.R. pt. 39).

55. Although Dodd-Frank requires the dissolution of these entities, the Commission has chosen to extend the time period for this phase out. *See generally* Final Orders, Orders Regarding the Treatment of Petitions Seeking Grandfather Relief for Exempt Commercial Markets and Exempt Boards of Trade, 75 Fed. Reg. 56,513 (2010).

56. Kate Winston & Esther Whieldon, *CFTC, FERC Squabble Stalls MOUs: Wellinghoff*, PLATTS: ELECTRIC POWER DAILY (Dec. 20, 2011), available at http://www.a123systems.com/Collateral/Documents/English-US/Platts%20Electric%20Power%20Daily_12-20-2011.pdf. The MOU is required under Dodd-Frank, Pub. L. No. 111-203, title VII, § 720(a)(1)(A), (B), (C), 124 Stat. 1376, 1657 (codified at 15 U.S.C. § 8308 (Supp. 2010)).

57. *DiPlacido v. CFTC*, 364 F. App'x 657 (2d Cir. 2009).

58. Prohibition on the Employment, or Attempted Employment, of Manipulative and Deceptive Devices, 17 C.F.R. § 180.1 (2011); Prohibition on Price Manipulation, 17 C.F.R. § 180.2 (2011).

59. *See generally* LEDGERWOOD ET AL., *supra* note 6, at 6-7.

60. The need for a dual standard for prosecuting "market power manipulations" versus manipulations based on fraud was argued by Pirrong, *supra* note 2, at 5. However, as we will discuss below, the framework we propose works equally well under either standard and can be used to describe manipulations generally.

61. Directive No. 2003/6, of the European Parliament and of the Council of 28 January 2003 on Insider Dealing and Market Manipulation (Market Abuse), 2003 O.J. (L 96) 16 (EC) [hereinafter MAD 2003/6]; Commission Directive No. 2004/72, of 29 April 2004 Implementing Directive 2003/6 of the European

which is currently being updated as the Market Abuse Regulation (MAR),⁶² applies to “financial instruments”⁶³ which are essentially securities, derivatives on commodities, options, swaps, and any other instrument admitted to trading on a regulated market,⁶⁴ a Multi-lateral Trading Facility (MTF),⁶⁵ or an Organised Trading Facility (OTF),⁶⁶ as well as to any related financial instruments traded OTC.⁶⁷ In essence, MAD was a European predecessor to Dodd-Frank,⁶⁸ designed to prohibit abuse in the European Union’s financial markets. However, in contrast to the United States where financial reform followed the creation of seasoned regulatory structures for wholesale physical gas and electric markets, MAD predated the creation of structures for regulating the European Union’s nascent wholesale energy markets.

1. The Features and Foibles of MAD

MAD has essentially two key elements. First, it prohibits market manipulation, examples of which include: making transactions or orders to trade “which give . . . false or misleading signals as to the supply of, demand for or price of financial instruments;”⁶⁹ making transactions or orders to trade which “employ fictitious devices or any other form of deception or contrivance;”⁷⁰ “dissemination of information through the media . . . which gives false or misleading signals” regarding the value of financial instruments;⁷¹ and “conduct . . . to secure a dominant position over the supply of or demand for a financial instrument which has the effect of fixing . . . purchase or sale prices or creating

Parliament and of the Council as Regards Accepted Market Practices, the Definition of Inside Information in Relation to Directives on Commodities, the Drawing up of Lists of Insiders, the Notification of Managers’ Transactions and the Notification of Suspicious Transactions, 2004 O.J. (L 162) 70 (EC).

62. *Commission Proposal for a Regulation of the European Parliament and of the Council on Insider Dealing and Market Manipulation (Market Abuse)*, at 56, COM (2011) 651 final (Oct. 20, 2011).

63. *Commission Proposal for a Directive of the European Parliament and of the Council on Markets in Financial Instruments Repealing Directive 2004/39/EC of the European Parliament and of the Council*, at 168-69, COM (2011) 656 final (Oct. 20, 2011) (defining financial instruments).

64. *Proposal for a Regulation of the European Parliament and of the Council on Markets in Financial Instruments and Amending Regulation [EMIR] on OTC derivatives, Central Counterparties and Trade Repositories*, at art. 2(5), COM (2011) 652 final (Oct. 20, 2011) [hereinafter *Oct. 20, 2011 Proposal*] (defining a regulated market as, “a multilateral system operated and/or managed by a market operator, which brings together or facilitates the bringing together of multiple third-party buying and selling interests in financial instruments – in the system and in accordance with its non-discretionary rules – in a way that results in a contract, in respect of the financial instruments admitted to trading under its rules and/or systems, and which is authorised and functions regularly”). A regulated market is also defined by Article 1(13) of Directive 93/22/EEC. Council Directive 93/22, 1993 O.J. (L 141) 27, 32 (EEC).

65. *Oct. 20, 2011 Proposal, supra* note 64, at art. 2(6) (defining a MTF as “a multilateral system, operated by an investment firm or a market operator, which brings together multiple third-party buying and selling interests in financial instruments – in the system and in accordance with non-discretionary rules”).

66. *Id.* at art. 2(7) (defining an OTF as “any system or facility, which is not a regulated market or MTF, operated by an investment firm or a market operator, in which multiple third-party buying and selling interests in financial instruments are able to interact in the system”).

67. *Id.* at art. 2(1).

68. *See generally* Dodd-Frank Wall Street Reform and Consumer Protection Act, Pub. L. No. 111-203, 124 Stat. 1376 (2010).

69. MAD 2003/6, *supra* note 61, at art. 1(2)(a).

70. *Id.* at art. 1(2)(b).

71. *Id.* at art. 1(2)(c).

other unfair trading conditions.”⁷² Second, MAD prohibits trading on inside information and lays out rules on the disclosure of inside information.⁷³ MAD defines inside information as “information of a precise nature which has not been made public, relating, directly or indirectly, to one or more such derivatives and which users of markets on which such derivatives are traded would expect to receive in accordance with accepted market practices on those markets.”⁷⁴

Crucially, commodity trading, including electricity and gas trading, is generally *not* covered by MAD unless it is considered to be trading in derivatives on commodities. Gas and electricity products traded OTC, including forward gas and electricity products not traded on an exchange, are therefore not defined as financial instruments and MAD does not apply to these products – an issue we discuss in more detail below. Because the majority of gas and electricity volumes in the European Union are traded OTC, MAD therefore does not apply to most gas and electricity transactions. While exact numbers for OTC products are difficult to obtain, the European Commission estimated that in 2009, only 16% of electricity traded by volume was covered by MAD.⁷⁵

A related piece of legislation is the Markets in Financial Instruments Directive (MiFID).⁷⁶ MiFID essentially aims to ensure financial stability and investor protections, though its provisions mainly protect small investors.⁷⁷ As the European Commission noted, the objective of investor protection “seems less relevant for energy since energy derivatives are typically not investment products but are primarily used as hedging instruments for mitigating price risks of energy market participants (*e.g.*, some utilities).”⁷⁸ Moreover, as with MAD, MiFID applies only to financial instruments and, so again, excludes the majority of energy volumes actually traded.

Because the anti-manipulation provisions of MAD run only to derivatives markets, regulators and competition authorities could only prosecute suspected market manipulations of physical energy markets using general antitrust law.⁷⁹ In Europe, this consists of Article 102 of the Treaty on the Functioning of the European Union, which prohibits abuse of a dominant position, and/or Article 101 of the Treaty which prohibits cartels and other agreements that could disrupt free competition in the European Economic Area’s common market.⁸⁰ However, as we explain in more detail later in this article, many cases of market

72. *Id.*

73. *Id.* at art. 2.

74. *Id.* at art. 1(1).

75. *Commission Staff Working Document: Impact Assessment: Accompanying Document to the Proposal for a Regulation of the European Parliament and of the Council on Energy Market Integrity and Transparency*, at 13, SEC (2010) 1510 final (Dec. 8, 2010) [hereinafter *Final Impact Assessment*].

76. *See generally* Council Directive 2004/39, On Markets in Financial Instruments, 2004 O.J. (L 145) 1 (EC).

77. *Id.*

78. *Final Impact Assessment*, *supra* note 75.

79. Some jurisdictions or markets in Europe have specific national market abuse legislation – for example, the Nordic pool electricity market in Scandinavia and the EX market in Germany. But this is the exception rather than the rule. NORDIC ENERGY REGULATORS, THE NORDIC FINANCIAL ELECTRICITY MARKET 50 (2010), https://www.nordicenergyregulators.org/upload/Reports/Nordic_financial_market_NordREG_Report_8_2010.pdf (last visited Mar. 5, 2012).

80. Consolidated Version of the Treaty on the Functioning of the European Union, arts. 101, 102, Mar. 30, 2010, 2010 O.J. (C 83) 47, 88-89.

manipulation do not involve dominance in the sense envisaged by Article 102. The position established by the manipulator can be short-lived and transitory, and the relevant markets difficult to define. Accordingly, the absence of specific legislation to deal with market manipulation and other forms of market abuse has made it extremely difficult to prosecute suspected cases of market abuse in EU gas and electricity markets. As Europe's energy markets have liberalized and grown, the number of markets vulnerable to abuse has increased, and the need for effective legislation has become more urgent.

This issue was recognized as early as 1999 by the energy regulator of Great Britain (GB), Ofgem.⁸¹ The GB electricity and gas markets were the first in Europe to liberalize and were, therefore, also the first to experience abuse of electricity and gas markets.⁸² To address perceived issues with the abuse of market power in the GB electricity "pool" and the absence of any effective legislation with which to prosecute such behavior, Ofgem inserted a so-called "Market Abuse License Condition" (MALC) in the license of every generator active in the GB market.⁸³ The condition prohibited the license holder from abusing market power and prohibited each generator from abusing its position and adversely affecting consumers or distorting competition between companies.⁸⁴ Two generators refused to consent to this modification of their license conditions, and as a result, the Director General of Electricity Supply (DGES) referred the matter to the UK Competition Commission.⁸⁵ In 2000, the Competition Commission agreed with the appeal and annulled the MALC, noting that, among other things, Ofgem's definition of market abuse was so broad as to "cause uncertainty, because of the difficulty of distinguishing between abusive and acceptable conduct, and would risk deterring normal competitive behaviour."⁸⁶ Ofgem's inability to introduce a market abuse license condition illustrates the problems historically faced by many regulators and competition authorities in dealing with abuse in EU energy markets.

2. Toward a Dedicated Market Manipulation Statute for Wholesale Energy Markets

The next significant step towards a market abuse law for energy markets occurred in 2006 and 2007, when the European Commission conducted a wide ranging "sector inquiry" into EU energy and gas markets based on Article 17 of

81. *About Us*, OFGEM, <http://www.ofgem.gov.uk/About%20us/Pages/AboutUsPage.aspx> (last visited Mar. 5, 2012).

82. *A Leading Voice in Europe*, OFGEM, <http://www.ofgem.gov.uk/Europe/Pages/Europe.aspx> (last visited Mar. 5, 2012).

83. Electricity generation is a licensed activity in Great Britain. Generators must hold a license issued by the GB energy regulator. Consultation, Ofgem, Addressing Market Power Concerns in the Electricity Wholesale Sector - Initial Policy Proposals 5 (Mar. 30, 2009) (Ref: 30/09), <http://www.ofgem.gov.uk/Markets/WhlMkts/CompanEff/Documents1/Market%20Power%20Concerns-%20Initial%20Policy%20Proposals.pdf>.

84. *Id.*

85. UK COMPETITION COMM'N, AES & BRITISH ENERGY: A REPORT ON REFERENCES MADE UNDER SECTION 12 OF THE ELECTRICITY ACT 1989, app. 2.1 (2001).

86. *Id.* at ¶ 1.12.

Regulation 1/2003 on the implementation of the Treaty rules on competition.⁸⁷ Among other things, the sector inquiry concluded that:

A monitoring system for trading on wholesale markets (e.g. power exchanges) would increase market participants' confidence in the market and limit the risk of market manipulation. Regulators should be empowered to collect and exchange relevant information in this respect. They should have the power to make recommendations for enforcement action or have the power to carry out such enforcement action themselves.⁸⁸

As a result of this and other related findings, in December 2007, the European Commission requested the Committee of European Securities Regulators (CESR) and European Regulators' Group for Electricity and Gas (ERGEG) for advice on issues concerning record keeping and transparency of transactions in electricity and gas supply contracts and derivatives.⁸⁹ The European Commission also asked for advice on a possible extension of MAD to trading in energy and energy derivatives.⁹⁰

In October 2008, CESR/ERGEG reported their findings.⁹¹ They agreed that MAD did not extend to spot and forward energy products that are not "admitted to trading on a regulated market" and that "the commodity derivative specific definition of insider information in MAD is difficult for securities regulators to apply, in the absence of a clear definition of the information that users of commodity markets can expect to receive in accordance with accepted market practices on those markets."⁹² In essence, actors in commodity markets can claim that since it is not accepted market practice to, for example, announce the unexpected failure of a production plant, they did not have to disclose such information and it was legal to trade on the basis of such privately held information. CESR/ERGEG recommended "[s]ector specific disclosure obligations" that obliged market actors "to disclose information likely to influence physical and/or derivatives markets prices in a timely manner."⁹³ More importantly, CESR/ERGEG recommended a "tailor-made market abuse framework in the energy sector legislation for all electricity and gas products not covered by MAD,"⁹⁴ noting that:

A mere extension of the scope of market abuse regulations (insider trading, market manipulation) in MAD to physical products is not recommended, particularly because it would not reflect the needs of the electricity and gas markets and would bear the risk of leading to an inappropriate application of MAD in other areas.⁹⁵

87. Council Regulation (EC) No 1/2003, On the Implementation of the Rules on Competition Laid Down in Articles 81 and 82 of the Treaty, art. 17, 2002 O.J. (L 1) 1, 13.

88. *DG Competition Report on Energy Sector Inquiry*, at 17, SEC (2006) 1724 (Jan. 10, 2007) (emphasis omitted).

89. Comm. of Eur. Sec. Regulators [CESR] & Eur. Regulators' Grp. for Elec. & Gas [ERGEG], *Advice to the European Commission in the Context of the Third Energy Package, Response to Question F.20 – Market Abuse*, at 6 and annex I, CESR/08-739, E08-FIS-07-04 (Oct. 2008), available at http://www.esma.europa.eu/system/files/08_739.pdf.

90. *Id.*

91. *Id.*

92. *Id.* at 3-4.

93. *Id.* at 4.

94. *Id.*

95. *Id.* at 5.

3. The Regulation on Energy Market Integrity and Transparency

As a result of CESR/ERGEG's advice, in 2009 and 2010, the European Commission developed proposals for a tailor-made regime for dealing with market abuse in energy markets. On December 8, 2010, the European Commission presented its legislative proposal for a Regulation on Energy Market Integrity and Transparency (REMIT).⁹⁶ REMIT and MAD are intended to complement one another to eliminate the regulatory gaps highlighted above. As such, REMIT encompasses the same two concepts of MAD, a prohibition on the use of inside information and the prohibition of market manipulation. REMIT applies to wholesale energy products, which are defined as "contracts for the supply of natural gas or electricity" with delivery in the European Union;⁹⁷ "derivatives relating to natural gas or electricity" produced, traded or delivered in the European Union;⁹⁸ "contracts relating to the transportation of natural gas or electricity" in the European Union;⁹⁹ and "derivatives relating to the transportation of natural gas or electricity" in the European Union.¹⁰⁰ The definitions apply irrespective of where and how the products are traded, but specifically do not apply to financial instruments covered by MAD.¹⁰¹

Following CESR/ERGEG's advice, the language of REMIT is more specific to the nature of the electricity and gas markets than MAD. For example, REMIT overcomes the defects in MAD's broad definition of inside information as nonpublic information of a precise nature that is made available to market users according to "accepted market practices."¹⁰² REMIT explicitly defines that inside information includes "information relat[ed] to the capacity and use of facilities for production, storage, consumption or transmission of electricity or natural gas or related to the capacity and use of LNG facilities, including planned or unplanned unavailability of these facilities,"¹⁰³ reducing doubt as to the types of information covered. The obligation to disclose inside information falls on all market participants, defined as persons "who enter[] into transactions, including the placing of orders to trade, in one or more wholesale energy markets."¹⁰⁴

The definition of market manipulation within REMIT is essentially the same as MAD, thus including prohibitions against fraud-based manipulations and behavior which gives rise to an artificial price.¹⁰⁵ The recital gives a number of energy-specific examples of market manipulation including

deliberately providing false information to undertakings which provide price assessments or market reports with the effect of misleading market participants

96. *Commission Proposal for a Regulation of the European Parliament and of the Council on Energy Market Integrity and Transparency*, COM (2010) 726 final (Dec. 8, 2010) [hereinafter *REMIT Proposal*].

97. Council Regulation (EU) No 1227/2011, On Wholesale Energy Market Integrity and Transparency, at art. 2(4)(a), 2011 O.J. (L326) 1, 6 [hereinafter *REMIT*].

98. *Id.* at art. 2(4)(b).

99. *Id.* at art. 2(4)(c).

100. *Id.* at art. 2(4)(d); see also *Draft Report of the Comm. on Indus., Research and Energy on the Proposal for REMIT*, at art. 2(4) (July 15, 2011) [hereinafter *Draft Report*], available at http://www.europarl.europa.eu/meetdocs/2009_2014/documents/itre/pr/860/860344/860344en.pdf.

101. *REMIT*, *supra* note 97, at art. 1(2).

102. MAD 2003/6, *supra* note 61, at art. 1(1).

103. *REMIT*, *supra* note 97, at art. 2(1)(b).

104. *Id.* at art. 2(7).

105. *Id.* at art. 2(2).

acting on the basis of those price assessments or market reports; and deliberately making it appear that the availability of electricity generation capacity or . . . gas availability, or the availability of transmission capacity is other than the capacity which is actually technically available where such information affects or is likely to be affecting the price of wholesale energy products.¹⁰⁶

Although illustrative, these examples do not provide a cohesive definition of the behavior that the regulation prohibits as manipulative.

In terms of jurisdictions and responsibilities, the European Union has the advantage of starting with a relatively clean slate as compared to the United States. Accordingly, two new agencies with demarcated responsibilities will oversee REMIT and the to-be-revised MAD legislation. The Agency for Cooperation of Energy Regulators (ACER), which was established under Regulation (EC) No. 713/2009 and formally launched in March 2011, is responsible for overseeing the enforcement of REMIT.¹⁰⁷ The European Securities and Markets Authority (ESMA), which was formed by November 2010 legislation, will take the lead in enforcing MAD.¹⁰⁸ Much like the interactions between the FERC and the CFTC in the United States, how well the inter-agency cooperation works in practice remains to be seen, and there remains scope for jurisdictional conflict and confusion in cases which involve both wholesale energy products and financial instruments.

REMIT improves market transparency by requiring that market participants report all transactions in wholesale energy products, including orders to trade, to the ACER.¹⁰⁹ The precise format and timing of this reporting will be defined in subsequent implementing acts by the European Commission.¹¹⁰ Similarly, market participants are also required to report information to the ACER and National Regulatory Authorities (NRAs) on the capacity and use of production, storage, and transmission facilities – the details will again be determined by implementing acts.¹¹¹ REMIT provides for the ACER to monitor trading in wholesale energy markets using the data it collects.¹¹² This data will also be available to NRAs, who will also be able to monitor activity at the national level.¹¹³ Article 16 of REMIT describes the forms of inter-agency co-operation and accountability, requiring that NRAs cooperate with the ACER for the purpose of enforcing REMIT.¹¹⁴ “[NRAs], competent financial authorities and the national competition authorit[ies] . . . may establish appropriate forms of cooperation . . . to ensure effective and efficient investigation and enforcement.”¹¹⁵

106. *Id.* at recital 13.

107. Council Regulation (EC) No 713/2009, Establishing an Agency for the Cooperation of Energy Regulators, art. 1(1)-(2), 2009 O.J. (L 211) 1, 4.

108. Council Regulation (EU) No 1095/2010, Establishing a European Supervisory Authority (European Securities and Markets Authority), art. 1(1)-(5), 2010 O.J. (L 331) 84, 93-94.

109. REMIT, *supra* note 97, at art. 8.

110. *Id.* at art. 8(2).

111. *Id.* at art. 8(5).

112. *Id.* at art. 7(1).

113. *Id.* at art. 7(2).

114. *Id.* at art. 16.

115. *Id.* at art. 16(1).

NRAs are required to inform the ACER without delay if they suspect that acts which affect wholesale energy markets or the price of wholesale energy products in that Member State are being carried out in their Member State or another Member State.¹¹⁶ The ACER is obliged to “inform ESMA and the [appropriate] competent financial authority” if it suspects market abuse is or has been “carried out on wholesale energy markets and [affects] financial instruments.”¹¹⁷ Where the ACER suspects a breach of REMIT, it has the power to request the NRA to investigate and/or for the NRA to supply relevant information to the ACER.¹¹⁸ The ACER can also form ad hoc groups of NRAs to investigate suspected cross-border market abuse cases.¹¹⁹ The regulation also requires Member States to adopt penalty regimes for infringements of REMIT¹²⁰ and to give NRAs “the investigatory and enforcement powers necessary” to enforce compliance.¹²¹ According to REMIT, the penalties must be “effective, dissuasive and proportionate, reflecting the nature, duration and seriousness of the infringement, the damage caused to consumers and the potential gains from trading on the basis of inside information and market manipulation.”¹²² While Member States are charged with defining their own penalties, the European Commission will take action to ensure that these penalty regimes are consistent.¹²³

The negotiated text of REMIT was adopted by the European Parliament at the first reading on September 14, 2011, and by the Council on October 10, 2011.¹²⁴ REMIT was published in the Official Journal of the European Union on December 8, 2011, and came into force on December 28, 2011.¹²⁵ Industry concerns that the regulation’s broad language could result in the potential misidentification of legitimate trading as manipulative prompted the ACER to issue guidance as to the definitions of manipulation under the act, albeit in the form of reiterating and adding to the examples provided in REMIT’s recitals and the provision of several examples of specific types of behaviour that might be considered suspicious.¹²⁶ It is also worth noting that both MiFID and MAD are currently in the process of being revised, largely with the intention of providing clarity on some definitions and removing previous ‘loopholes’ or exemptions.¹²⁷ The European Commission has also tabled the Energy Market Infrastructure

116. *Id.* at art. 16(2).

117. *Id.* at art. 16(3)(b).

118. *Id.* at art. 16(4)(a)-(b).

119. *Id.* at art. 16(4)(c).

120. *Id.* at art. 18.

121. *Id.* at art. 13.

122. *Id.* at art. 18.

123. *Id.* at 2011 O.J. (L 326) 1, 16.

124. Press Release, Council of the European Union, New Framework for Monitoring of Energy Markets Adopted (Oct. 10, 2011), *available at* http://www.consilium.europa.eu/uedocs/cms_data/docs/pressdata/en/trans/124995.pdf.

125. REMIT, *supra* note 97.

126. Agency for the Cooperation of Energy Regulators [ACER], *Guidance on the Application of the Definitions Set out in Article 2 of Regulation (EU) No 1227/2011 on Wholesale Energy Market Integrity and Transparency*, at 3 (Dec. 20, 2011) [hereinafter *ACER Guidance*].

127. Press Release, European Comm’n, New Rule for More Efficient, Resilient and Transparent Financial Markets in Europe (Oct. 20, 2011), *available at* <http://europa.eu/rapid/pressReleasesAction.do?reference=IP/11/1219&format=HTML&aged=0&language=en&guiLanguage=en> (last visited Mar. 5, 2012).

Regulation (EMIR), which imposes reporting requirements on market participants as well as requiring greater collateral or else clearing of standardized commodity products.

REMIT specifically anticipates that the ACER “may develop contacts and enter into administrative arrangements with supervisory authorities, international organisations and the administrations of third countries in particular with those impacting the [EU] energy wholesale market in order to promote the harmonisation of the regulatory framework.”¹²⁸ The provisions of Dodd-Frank also include specific considerations for trade by foreign entities, thus recognizing that the positions held abroad can be used in stealth as targets for manipulations just as easily as positions that were previously traded OTC or on ECMs.¹²⁹ Because energy will continue to be traded on an increasingly multinational basis, the financial derivatives markets that support those transactions will also evolve. The need for interagency and international cooperation is therefore a prerequisite for the creation of an effective and comprehensive anti-manipulation enforcement system both within and between the United States and European Union. We discuss the factors that may tend to help or hinder such efforts in the next section.

III. THE CHALLENGES TO AND NEED FOR A UNIFIED ENFORCEMENT FRAMEWORK

In this section, we discuss the need for a unified framework for the detection, analysis, proof (or disproof), and deterrence of manipulation in wholesale electric and natural gas markets. We begin by discussing the institutional characteristics of the entities tasked with implementing and coordinating the new anti-manipulation laws and regulations. While we identify many common institutional attributes of the enforcement systems that are to be created in the United States and European Union, we also discuss several differences amongst the relevant entities that may frustrate their abilities to work together effectively. We then discuss the patchy case precedent in the United States and examples provided in REMIT that provide no clear guidance as to the behavior that is considered manipulative, leading to an “I know it when I see it”¹³⁰ market manipulation standard that provides little guidance for regulators seeking to coordinate enforcement efforts and for traders seeking to comply with the law. In this vein, the most recent EU consultations for MAD and MiFID have called for a “single rulebook”¹³¹ to assist the implementation of its new anti-manipulation statutes, a sentiment oft-echoed by CFTC Chairman Gensler in discussing the coordination of efforts between agencies in the United States

128. REMIT, *supra* note 97, at art. 19.

129. *See generally* Notice of Proposed Rule Making, Registration of Foreign Boards of Trade, 75 Fed. Reg. 70,974 (2010) (to be codified at 17 C.F.R. pt. 48); *see also* Dodd-Frank § 738, 7 U.S.C. § 6(b) (Supp. 2010).

130. *Jacobellis v. Ohio*, 378 U.S. 184, 197 (1964) (Stewart, J. concurring).

131. EUROPEAN COMM’N, PUBLIC CONSULTATION ON A REVISION OF THE MARKET ABUSE DIRECTIVE (MAD) 13-16 (June 25, 2010), *available at* http://ec.europa.eu/internal_market/consultations/docs/2010/mad/consultation_paper.pdf [hereinafter MAD CONSULTATION]; EUROPEAN COMM’N, PUBLIC CONSULTATION: REVIEW OF THE MARKETS IN FINANCIAL INSTRUMENTS DIRECTIVE (MiFID) 7 (Dec. 8, 2010), *available at* http://ec.europa.eu/internal_market/consultations/docs/2010/mifid/consultation_paper_en.pdf [hereinafter MiFID CONSULTATION].

and between the United States and European Union.¹³² To further this purpose, we conclude the section by proposing a framework designed to unify the analysis of manipulative behavior across cases, statutes, agencies, nations, and continents.

A. Institutional Commonalities and Clashes for Deterring Manipulative Behavior

Although the paths of the European Union and United States in creating a comprehensive system for overseeing the trade of physical and financial commodities were very different, the regulatory structures that are emerging from various legislative processes are strikingly similar. For example, a comparison of Dodd-Frank, MiFID, MAD, and REMIT shows relative equivalence in the trading platforms to be regulated,¹³³ the types of instruments regulated,¹³⁴ the types of behavior regulated,¹³⁵ and the tools used to bring compliance (injunctions and fines). The basic allocation of supervisory authority and duties across national and state regulators is also very similar, as Table 1 demonstrates.

**Table 1:
Comparison of Entities with Anti-Manipulation Mandates**

<u>Markets Regulated</u>	<u>United States</u>	<u>European Union</u>
Physical Natural Gas	FERC, State Regulators	ACER, National Regulators
Natural Gas Derivatives	CFTC, FIA, SROs	EMSA, Competent Financial Authorities
Physical Electricity	FERC, State Regulators, RTOs, Independent Market Monitors	ACER, National Regulators
Electricity Derivatives	CFTC and/or FERC in RTOs; CFTC otherwise	EMSA, Competent Financial Authorities

132. Gary Gensler, CFTC Chairman, Remarks at the London School of Economics (Oct. 13, 2011), available at <http://www.commodities-now.com/commodities-now-reports/general/8313-gary-gensler-remarks-at-the-london-school-of-economics.html>.

133. For example, Dodd-Frank contemplates the regulation of DCOs, DCMs, SEFs, and FCMs in the United States, which roughly compare to Regulated Markets, MTFs, Systematic Internalisers, and OTFs in the European Union. *Compare, Trading Organizations*, *supra* note 12, with MiFID CONSULTATION, *supra* note 131, § 2.2.

134. These include futures, options, and swaps. The CFTC regulates futures and associated options through its original jurisdiction under the CEA, whereas comprehensive regulation of swaps is provided by Dodd-Frank. *See generally, Commodity Exchange Act*, CFTC, <http://www.cftc.gov/LawRegulation/CommodityExchangeAct/index.htm> (last visited Mar. 5, 2012) (regarding futures and options contracts); *Dodd-Frank Act*, CFTC, <http://www.cftc.gov/LawRegulation/DoddFrankAct/index.htm> regarding swaps (last visited Mar. 5, 2012); MiFID CONSULTATION, *supra* note 131, § 2.2.3; and MAD CONSULTATION, *supra* note 131.

135. This includes trading on inside information (or “material nonpublic information” as per Dodd-Frank) and market manipulation caused by fraud or through the creation of an artificial price. Final Rule, Prohibition on the Employment, or Attempted Employment, of Manipulative and Deceptive Devices and Prohibition on Price Manipulation, 76 Fed. Reg. 41,398, 41,410 (2011) (to be codified at 17 C.F.R. pt. 180); MAD CONSULTATION, *supra* note 131, §§ 1-2; and REMIT, *supra* note 97, at arts. 4, 5.

Notwithstanding these structural similarities, the fact remains that very different evolutionary processes spawned the development of the many agencies and entities that will need to cooperate to effectively execute this anti-manipulation mandate. In the United States, resolving jurisdictional friction between the FERC and CFTC may be easy compared to aligning the philosophical differences of the agencies as to what behavior constitutes manipulative activity.¹³⁶ Coordination of federal and state regulators with each other and with private entities such as SROs or Independent Market Monitors will likewise be challenging, especially because the anti-manipulation mandate is less (or not) binding on said entities. Indeed, it is possible that unperceived overlaps and gaps in enforcement could emerge, as might arise if antitrust liability were attached to behavior that is also considered manipulative.¹³⁷ Even greater discord is possible within the European Union given that energy markets differ significantly in size and complexity across the various member nations' systems. Differences across the associated National Regulators and Competent Financial Authorities will likewise emerge in their abilities and willingness to contribute to REMIT's pan-European goals. Finally, because the physical and financial trading of energy is an increasingly global activity, the coordination of international efforts to monitor for manipulative activity will be a challenge, especially if nations with significant trading venues do not join the effort.

Central to the resolution and ultimate success of any coordinated enforcement efforts will be the effective collection, compilation, and analysis of tremendous amounts of data.¹³⁸ Differences across systems will need to be addressed, with compromises made while non-compliant systems are upgraded to adhere to minimal requirements.¹³⁹ The data must be stored in a medium that

136. Specifically, the FERC's mission is to provide "Reliable, Efficient and Sustainable Energy for Customers [and to] assist consumers in obtaining reliable, efficient and sustainable energy services at a reasonable cost through appropriate regulatory and market means." *About FERC*, FERC, <http://www.ferc.gov/about/about.asp> (emphasis omitted) (last visited Mar. 5, 2012). By comparison, "[t]he CFTC's mission is to protect market users and the public from fraud, manipulation, abusive practices and systemic risk related to derivatives that are subject to the Commodity Exchange Act, and to foster open, competitive, and financially sound markets." *Mission & Responsibilities*, CFTC, <http://www.cftc.gov/About/MissionResponsibilities/index.htm> (emphasis omitted) (last visited Mar. 5, 2012). Thus, behavior perceived by one agency as potentially manipulative could be deemed by the other to be of no consequence.

137. For example, an act of economic withholding by an electric generator to benefit the price paid to the remainder of its generation fleet could simultaneously be perceived as an antitrust violation and a market manipulation. *See generally* *United States v. KeySpan Corp.*, 763 F. Supp. 2d 633 (2011). This is clarified later herein.

138. For example, three of the CFTC's thirty-two Dodd-Frank rulemaking areas concern the accumulation of data. *See generally, Rulemaking Areas*, CFTC, <http://www.cftc.gov/LawRegulation/DoddFrankAct/Rulemakings/index.htm> (last visited Mar. 5, 2012) (these rulemaking areas may be accessed by selecting Titles XXVI-XXXVIII).

139. As an intuitive example, differences as simple as units of measurement in metric versus English standards can wreak havoc on analyses on otherwise comparable data. More technically, great care must be used to assure that comparable instruments traded on different venues are in fact similar. For example, the NYMEX Henry Hub look-alike swap traded on the CME Group web site is for 2,500 MMBtu delivered over the course of a contract month, whereas the Henry Hub look-alike swap traded on ICE is for 2,500 MMBtu delivered *each day* over the course of a contract month, meaning that it varies between being 28 and 31 times larger than the CME Group equivalent. *Compare, Henry Financial LD1 Fixed Price*, ICE, <https://www.theice>.

is cost effective and accessible to competent authorities, yet secure enough to ensure the protection of proprietary data and other sensitive information such as that concerning critical infrastructure. Analysis of the accumulated data will likewise tend to be uneven, depending upon the resources available to each entity with surveillance responsibilities. Analyses must first be developed and coordinated internally by each agency, then coordinated across agencies as resources allow. In short, the creation of a comprehensive system for the detection and analysis of manipulation will require a monumental initial effort, with substantial continuing investments required to maintain the system as markets evolve over time.

In conjunction with the development of a market monitoring function, resources must also be devoted to the enforcement of the anti-manipulation rules. It is at this point where the need for a consistent analytical framework for analyzing manipulation becomes essential, for variances across jurisdictions will allow for regulatory arbitrage and the ability to hide illegal activity by exploiting the gaps and inconsistencies across markets.¹⁴⁰ As we discuss next, the paradigm of enforcement currently relied upon in U.S. manipulation law is a patchwork of legal cases tried by the SEC, CFTC, and FERC that tended to label behavior rather than create a comprehensive economic theory as to the cause and effect of manipulative behavior generally. Indeed, the recital of REMIT also relies upon a hodgepodge of examples to define manipulative behavior, as does the ACER's guidance concerning the issue.¹⁴¹ While these efforts are certainly useful, they do not provide a standardized approach to manipulation consistent with the single rulebook concept, which we believe is warranted and would benefit market participants and enforcement authorities alike through greater certainty as to the behavior that is prohibited across all jurisdictions.¹⁴²

B. Current Legal Precedent Fails to Provide a "Single Rulebook" Concerning Manipulation

Outside of cases brought by the SEC, there has been only one successful and fully litigated case brought under U.S. anti-manipulation laws.¹⁴³ The relative success of the SEC in bringing such cases is often attributed to its fraud-based manipulation Rule 10b-5, which does not require proof of the creation of

com/productguide/ProductDetails.shtml?specId=693 (last visited Mar. 5, 2012), with *Henry Hub Natural Gas Last Day Financial Futures*, CME GROUP, http://www.cmegroup.com/trading/energy/natural-gas/henry-hub-natural-gas-swap-futures-financial_contract_specifications.html (last visited Mar. 5, 2012).

140. See generally LEDGERWOOD ET AL., *supra* note 6, at 8.

141. See generally *ACER Guidance*, *supra* note 126.

142. The authors introduced the framework in the context of REMIT earlier this year. SHAUN LEDGERWOOD, DAN HARRIS, BIN ZHOU & PINAR BAGCI, THE BRATTLE GRP., *DEFINING MARKET MANIPULATION IN A POST-REMIT WORLD* (2011), available at http://www.brattle.com/_documents/UploadLibrary/Upload960.pdf. This paper became the impetus for a seminar hosted by *The Brattle Group* and delivered in London on October 20, 2011. Conference Schedule, *The Brattle Group: Perspectives on the Implementation and Enforcement of REMIT: A Seminar on Manipulation Concerns in European Energy Markets* (Oct. 20, 2011), available at http://www.wilmerhale.com/files/upload/REMIT_SeminarProgram.pdf.

143. *DiPlacido v. CFTC*, 364 Fed. App'x 657 (2nd Cir. 2009). The FERC's case against Amaranth trader Brian Hunter is under appeal following the Commission's denial of rehearing on November 11, 2011. Order Denying Rehearing, *Brian Hunter*, 137 F.E.R.C. ¶ 61,146 (2011) [hereinafter *Hunter Rehearing*]. See also *Brian Hunter v. FERC*, No. 11-1477 (D.C. Cir. filed Dec. 12, 2011).

an artificial price.¹⁴⁴ However, the economic logic that underlies SEC case precedent under Rule 10b-5 is somewhat discordant and reflects a mixture of example-driven findings based on specific types of behavior that do not readily provide a cogent manipulation theory. Examples of such cases include the prosecution of “wash trades,”¹⁴⁵ trading on insider information,¹⁴⁶ “marking the close,”¹⁴⁷ “painting the tape,”¹⁴⁸ “pump-and-dump” schemes,¹⁴⁹ and other acts where “inaccurate information is being injected into the marketplace.”¹⁵⁰ Taken to an extreme, this “I know it when I see it” approach to manipulation suggests that any erroneous or errant statements by a trader could later be taken out of context and bring unwarranted liability. This is especially concerning in energy markets, where highly complex and interrelated markets could erroneously find manipulative intent from legitimate trading behavior.¹⁵¹

The examples provided in the recitals in the REMIT Parliamentary Report¹⁵² demonstrate a similar reliance upon examples to define manipulation rather than a cohesive economic theory:

[P]lacing and withdrawal of false orders; spreading of false or misleading information or rumours through the media, including the internet, or by any other means; deliberately providing false information to undertakings which provide price assessments or market reports with the effect of misleading market participants acting on the basis of those price assessments or market reports;

144. 17 C.F.R. § 240.10b5-1 (2011); *Hunter Rehearing*, *supra* note 143, at PP 5-11.

145. Wash trades are executed to create churn without necessarily creating any perceptible market price effect and are specifically prohibited under Section 9a-1 of the Securities Exchange Act of 1934. 15 U.S.C. § 78i(a)(1).

146. Such cases are treated as a misappropriation of information in breach of a fiduciary duty, falling under the broad definition of a market manipulation. This “misappropriation theory” derived from *United States v. O’Hagan*, 521 U.S. 642, 652 (1997). Like wash trades, there is no perceptible market price effect that needs to be shown for such cases to be brought successfully. Insider trading is prohibited under Section 10b5-1 of the Securities Exchange Act of 1934. 17 C.F.R. § 240.10b5-1.

147. This occurs when a trader concentrates its activity at the end of the trading day to move the closing price to its benefit. *SEC v. Masri*, 523 F. Supp. 2d 361, 372-372 (S.D.N.Y. 2007); *Markowski v. SEC*, 274 F.3d 525, 529 (D.C. Cir. 2001) (stating that “‘manipulation’ can be illegal solely because of the actor’s purpose”).

148. “Painting the tape signifies creating an appearance of trading activity without an actual change in beneficial ownership.” *Marsi*, 523 F. Supp. 2d at 367 n.10 (quoting *Nanopierce Techs., Inc. v. Southridge Capital Mgmt. LLC*, No. 02 Civ. 767, 2002 U.S. Dist. LEXIS 24049, at *5 n.8 (S.D.N.Y. 2002)).

149. These schemes involve buying a stock at a low price, then putting false information into the market to cause a rally such that the stock can be sold at a higher price. *See, e.g., SEC v. Whittemore*, 659 F.3d 1, 10 (D.C. Cir. 2011).

150. *GFL Advantage Fund, Ltd. v. Colkitt*, 272 F.3d 189, 205 (2001) (stating that intentional dissemination of false information is specifically prohibited by Sections 9a-2 through 9a-4 of the Exchange Act). *See also* the complaint filed in *SEC v. Dynkowski*, Case No. 09-361 (D. Del. May 20, 2009), available at <http://www.sec.gov/litigation/complaints/2009/comp21053.pdf>.

151. All U.S. agencies with anti-manipulation authority now have a “fraud-based” statute based upon the SEC’s Rule 10b-5. 17 C.F.R. § 240.10b-5 (2011) (arising under the authority granted in 15 U.S.C. § 78j(b) (Supp. 2010))(SEC); 18 C.F.R. pt. 1c (2011) (FERC); 16 C.F.R. pt. 317 (2011) (arising under the authority granted in 42 U.S.C. §§ 17301-17305 as amended by Section 811 of Subtitle B of Title VIII of the Energy Independence and Security Act of 2007, Pub. L. No. 110-140, 121 Stat. 1723) (FTC); 7 U.S.C. § 6(a)(1) (Supp. 2010) (CFTC). The CFTC has also retained its original anti-manipulation statute based upon a finding of artificial price, now codified by Dodd-Frank as 7 U.S.C. § 6(a)(3) (Supp. 2010). The European Union’s REMIT Proposal also includes language for both a fraud-based and an artificial price standard. REMIT, *supra* note 97, at art. 1(2).

152. *Draft Report*, *supra* note 100.

deliberately making it appear that the availability of electricity generation capacity or gas availability, or the availability of transmission capacity is other than the capacity which is actually technically available where such information affects or is likely to be affecting the price of wholesale energy products. . . . conduct by a person or persons acting in collaboration, to secure a decisive position over the supply of or demand for a wholesale energy product which has, or could have, the effect of fixing, directly or indirectly, prices or creating other unfair trading conditions; the offering, buying or selling of wholesale energy products with the purpose, intention or effect of misleading market participants acting on the basis of reference prices.¹⁵³

The use of examples as the basis for laying the foundation of future enforcement and compliance efforts is less than ideal and is made worse by the fact that the examples draw from historical behavior that was evaluated under two different legal standards.¹⁵⁴

REMIT includes both fraud-based anti-manipulation language and language prohibiting the creation of an artificial price,¹⁵⁵ the latter often assumed to be the result of a successful exercise of market power. The perceived need for dual anti-manipulation language was articulated in this Journal by Dr. Craig Pirrong, who reasoned that:

Market power manipulations and fraud-based manipulations are quite distinct. A large trader can corner a market without making any false or misleading statements. Moreover, a trader can spread a false rumor that moves prices even if his position is not large enough to permit him to exercise market power. Further, market power manipulations and fraud-based manipulations can have different effects on prices and quantities in a market.¹⁵⁶

While it is certainly true that the exercise of market power can be conceptually distinguished from outright fraud, actual manipulative behavior is rarely so clear-cut. Specifically, as we will discuss in detail in the next section, many types of “market power manipulation” (including corners) arise from uneconomic trading,¹⁵⁷ which could simultaneously be viewed as intentionally misrepresenting the value of the asset traded (a fraud) and assisting the creation of an artificial price. The promotion of a “single rulebook” calls for an approach to the analysis of manipulative behavior that can conceptually accommodate all such behavior under either legal standard.

While the legal concept of “fraud” is easy to understand in theory, applying the concept to trading activity forensically and without an economic foundation for why the behavior causes harm introduces uncertainty to the markets, causing compliance officers to avoid legitimate trades due to excessive caution and forcing regulators with anti-manipulation authority to expend resources searching for behavior that is neither well defined nor completely understood. This is only made worse as efforts are made to coordinate monitoring and enforcement activities across entities and jurisdictions, as the potential for incongruities then increase exponentially. The lack of a “single rulebook” therefore harms market efficiency through the unwarranted addition of costs to the regulators and regulated alike. More importantly, the removal of liquidity

153. *Id.* at 8-9 (emphasis omitted).

154. *ACER Guidance*, *supra* note 126.

155. *REMIT*, *supra* note 97, at art. 2(2)(a)(ii).

156. Pirrong, *supra* note 2, at 5.

157. *See generally*, *Constellation Settlement*, *supra* note 1, at PP 9, 15.

from the market out of fear of unwarranted prosecution introduces inefficiencies that make the probability of successful manipulation that much more likely. A potential solution to this conundrum would be to provide a straightforward and unifying analytical structure for the analysis of all forms of market manipulation that would apply across cases, agencies, statutes, and nations. This “single rulebook” could simultaneously promote efficiency and coordination of monitoring and enforcement across entities with anti-manipulation mandates and give certainty as to behavior that is prohibited such that market participants can effectively comply. In the next section, we propose such a structure, which we refer to as “the framework.”

C. A Proposed Framework to Unify the Analysis of Market Manipulation

Consider the following example: a natural gas producer wishes to sell gas at a major trading hub for next month’s delivery. Fearing a possible drop in natural gas prices, the producer buys a series of put options that tie to the next month’s natural gas futures contract, thus hedging the financial risk of lower future prices associated with its physical position. Next, assume that the price of the next month’s natural gas contract begins to fall precipitously. The producer reacts by first liquidating its physical position, then selling its put option contracts that are now more valuable at the lower market price. On its face, there is nothing in this example that necessarily indicates manipulation; the producer hedged its financial exposure to a drop in natural gas prices, sold out of its physical position to minimize losses once those prices actually started to fall, and captured the value of its hedge to offset its losses. If viewed individually or in combination, these steps could be shown to serve a legitimate business purpose and, furthermore, exemplify why physical markets can greatly benefit from the liquidity provided from robust financial markets. However, these same actions could provide the mechanism for a market manipulation. This is because the value of the producer’s put options hedge ties to the futures price of the next month’s natural gas contract, which the producer may have intentionally influenced through the liquidation of its physical position.

The notion that the producer’s actions might be construed as manipulative in the example above may offend conventional thought. Some of our clients and associates in the United States and Europe voiced legitimate concerns that defining manipulation so broadly could chill legitimate trading behavior (such as hedging) to the detriment of market efficiency. While this logic is reasonable, some advocates of limited regulation would combine it with a slippery slope fallacy to propagate fears that all future trading will be subject to ex post reviews for legitimacy, ultimately causing market participants to stop trading entirely to avoid the massive and uncertain liability associated with private and agency enforcement actions brought under the various anti-manipulation laws.¹⁵⁸ Such arguments, though disingenuous, must be addressed.

It is clear that an overzealous and unwarranted application of anti-manipulation regulations could chill legitimate trading, thus reducing market liquidity and introducing inefficiency and uncertainty to the market. However, a lack of sufficient anti-manipulation enforcement will also cause inefficiency as legitimate traders will avoid markets wherein prices consistently appear to

158. See generally Ledgerwood & Carpenter, *supra* note 10, at 51.

deviate from fair value. In either event, market participants are forced to pay higher costs for compliance and will face higher transaction costs for legitimate trading (including hedging). Regulators likewise lose through the waste of scarce regulatory resources expended in pursuit of false positives or in the inefficient prosecution of legitimate cases brought under uncertain or poorly defined anti-manipulation rules. Such issues must be proactively addressed, as there is no longer a question as to whether anti-manipulation laws will be implemented, but only as to how these rules will be applied and enforced on a go-forward basis. It is for these reasons that we propose the use of the analytical framework described below.

1. An Analytical Framework of a Market Manipulation

A market manipulation has three components:

- The *Trigger*: An intentional act performed to produce a directional price movement;
- The *Target*: One or more positions that stand to benefit from the price movement; and
- The *Nexus*: The causal “linkage between the trigger and target.”¹⁵⁹

As an example of how these apply, consider the merits of an enforcement action brought against the natural gas producer discussed above. The accuser would need to prove:

- That the producer intentionally liquidated its physical position in a manner designed to exacerbate (and thus trigger) the lower price of the next month’s natural gas contract;
- That the producer used its put options position as the manipulation’s target, benefitting from the lower price of the next month’s natural gas contract caused by the trigger; and
- That a sufficiently causal nexus exists between the trigger and target, such that the price movement produced by the trigger will predictably increase the value of the target.¹⁶⁰

Breaking the manipulation into these components allows for the targeted analysis of questions that lay at the heart of all manipulation cases. How is legitimate trading behavior (*e.g.*, loss minimization by liquidating a losing position) distinguished from that designed to intentionally trigger a manipulation (*e.g.*, purposeful selling designed to exacerbate low prices)? What aspects of the producer’s put options position demonstrate that it is the target of the manipulation and not simply a legitimate hedge? Is the pricing mechanism that is manipulated by the alleged trigger sufficiently causal to the value of the target such that a nexus is known and exploited? It is these questions that the framework is designed to address and which we explore further below.

159. *Id.* at 4; *Hunter Rehearing*, *supra* note 143, at PP 27-31.

160. Shaun D. Ledgerwood, *Screens for the Detection of Manipulative Intent* 41 (Dec. 19, 2010) (unpublished manuscript), available at <http://ssrn.com/abstract=1728473>.

The benefits of using this framework can inure to market participants and regulators alike.¹⁶¹ Because it allows for identification of the market qualities that enhance the likelihood of a successful manipulation, the framework allows agencies to focus their scarce regulatory resources into markets at greatest risk for manipulative behavior.¹⁶² Separate analysis of the behavior comprising the manipulation's trigger also allows for the specific identification of the acts that regulators see as potentiating a manipulation versus those which are legitimate, providing much needed clarity to market participants as to prohibited behavior and "safe harbors" such that compliance and liquidity can be maximized.¹⁶³ Additionally, the separation of the trigger from the target informs surveillance and oversight efforts such that market screens can focus upon trading designed to potentiate directional price movements, again allowing for scarce regulatory resources to be optimized within and across agencies that have an anti-manipulation enforcement mandate. Each of these benefits is described in more detail in this section and the section that follows.

2. Market Characteristics That Accentuate the Likelihood of Successful Manipulation

As discussed and mathematically proven in other academic pieces we have written on this topic, the likelihood of a manipulation's success increases (1) as the cost of the manipulation trigger decreases, (2) as market supply and demand become more inelastic, and (3) as the amount of leverage held in the target increases relative to the size of the trigger.¹⁶⁴ These three elements coincide with the three components of the framework, as couched in a cost/benefit analysis. Specifically, the manipulator will evaluate the cost of the manipulation trigger (if any) relative to the leveraged benefit it receives from the targeted positions, with the nexus between the trigger and target strengthened as demand or supply becomes less elastic.¹⁶⁵ The logic of the framework is therefore based on a simple foundation that underlies all basic economic decision making.

This simplicity does not impinge the value of the framework for informing regulators, market participants, lawmakers, and academicians as to the direction of market design, surveillance, and enforcement. Because cheap triggers better enable manipulations, improvements in the certainty of detection and increases in the penalties for proven non-compliance will decrease the number of manipulations attempted.¹⁶⁶ In addition, since the inelasticity of supply and demand increase the ability of a manipulator to exploit a nexus between triggers and targets, the articulation of certainty with respect to the types of behavior that are deemed to be manipulative will increase the liquidity of trading where possible and inform regulators as to the markets that are most in need of continual oversight and surveillance.¹⁶⁷ Because the accumulation of large price-taking positions provides an incentive for manipulation, continued oversight of

161. See generally LEDGERWOOD ET AL., *supra* note 142, at 7.

162. *Id.*

163. *Id.*

164. Ledgerwood, *supra* note 160, at 13-18; see also Ledgerwood & Carpenter, *supra* note 10, at 36-42.

165. See generally Ledgerwood & Carpenter, *supra* note 10, at 36-42.

166. *Id.* at 49-52.

167. *Id.* at 49.

firms with large physical holdings, as well as greater transparency and regulation concerning financial positions, will reduce the ability of those with manipulative intent to accumulate such positions.¹⁶⁸

3. Types of Behavior That Can Trigger a Manipulation

Any actions that intentionally cause an anomalous directional movement in one or more market prices could theoretically potentiate a market manipulation. However, there are three types of behavior that are of clear interest: uneconomic trading, outright fraud, and the exercise of market power. We discuss these separately below.

a. Uneconomic Trading

Uneconomic trades include bids made significantly above or offers made significantly below prevailing market prices, such that the trader loses money relative to its *opportunity costs* – that is, the trade may make an accounting profit, but the trader could have made more money by following another course of action.¹⁶⁹ Such trades are economically counterintuitive, as they injure their proponent on a stand-alone basis.¹⁷⁰ However, it is the manipulator's willingness to intentionally accrue such losses that enables its ability to trigger a manipulation.¹⁷¹ For example, consider the hypothetical natural gas producer discussed above. The producer's willingness to sell gas into a competitive, declining market suggests that it has no market power in the traditional sense (*i.e.*, no ability to withhold its gas to raise its price above market). In contrast, the producer can avoid competition entirely if it is willing to offer its gas at a price *significantly below market*, thus guaranteeing the execution of its trades if demand is sufficient to absorb its offered quantity. The producer then willingly incurs opportunity-based losses in exchange for successfully executing trades that lower the market price. Importantly, this demonstrates that a manipulation can be triggered by uneconomic trades executed by market participants *who possess no market power* in any traditional sense.¹⁷²

The use of opportunity costs as the barometer against which uneconomic trading is evaluated will raise legitimate concerns. Indeed, a rational and unbiased forensic deconstruction of almost any historical trading decision will show that the trader could have made more money elsewhere if only he or she had looked hard enough. Such dispassionate analysis might fail to consider the difficult decisions made in the heat of a trading day, wrongfully interpreting erroneous decisions as the malevolent vehicle of manipulative intent. To be mindful of such concerns, the threshold for applying opportunity costs as a yardstick must focus less upon the fact that losses are accrued – indeed, about half of all trades should lose money in a fair market – than upon the pattern and size of losses, measured on an opportunity cost basis, accrued over time.¹⁷³ Traders who regularly (or massively) lose money relative to their opportunity

168. *Id.* at 49-50.

169. *Id.* at 4, n.4.

170. *Id.* at 2-3.

171. *Id.*

172. *Id.* at 17.

173. *Id.* at 30.

costs are leaving money on the table, an oversight unlikely to be sustainable under the eyes of prudent management in the highly competitive world of trading. The tolerance of such losses could therefore suggest that the trading behavior is designed not to make money on a stand-alone basis but to directionally move a price to the benefit of some other position.¹⁷⁴ We acknowledge that the identification of losses based on opportunity costs requires careful analysis and that subjective judgments are required. Nevertheless, evaluating uneconomic losses with an opportunity cost standard will reduce the scope for subjective judgment relative to the current manipulation standards.

The market characteristics that accentuate the likelihood of successful manipulation are of particular relevance to loss-based manipulations. For example, as the size of the loss required to trigger the manipulation declines, the likelihood of success increases. Thus, manipulations are most likely to occur in markets where there is little liquidity in the price-making mechanism or where the manipulator can create momentum to incite others to move the price in the direction it seeks, as the costs of the trades used to trigger the manipulation then decrease. Likewise, the ability of a manipulator to build leverage in positions that derive their value from the price set by the trigger (such as financial derivatives) increases the benefits derived from the manipulation, thereby making it more likely to occur.¹⁷⁵ Finally, fixities in supply and/or demand tend to increase the reactivity of prices to smaller orders, strengthening the nexus between the triggering trades and the targeted positions.¹⁷⁶ The decision to manipulate a market through uneconomic trading is thus a rational, profit seeking strategy derived from comparing the expected costs of the trigger to the expected benefits derived from the target.¹⁷⁷

Interestingly, the framework is equally applicable irrespective of the timing of when the loss of the manipulation occurs relative to the gain. Consider three examples:

- *A pool hustle*, where the hustler intentionally loses money on small bets up front (the trigger) to induce a large wager for a greater subsequent gain (the target).¹⁷⁸
- *A derivatives manipulation*, where intentional losses on the trades that set prices (the trigger) simultaneously increase the value of price-taking positions (the target).¹⁷⁹
- *A market corner*, where the manipulator causes a price increase by buying a commodity in excess of deliverable volumes, attracting short sellers who are ultimately squeezed by the manipulator's continued price-making purchases (the trigger); once the price is high enough, the manipulator will sell as a price-taker to the covering shorts (the target)

174. See generally, *Constellation Settlement*, *supra* note 1, at PP 9, 15.

175. LEDGERWOOD ET AL., *supra* note 142, at 1.

176. LEDGERWOOD ET AL., *supra* note 6, at 5.

177. *Id.*

178. *Id.* at 4.

179. *Id.* at 5.

until the price collapses, causing it to lose money on whatever quantity of the commodity it still holds at the end of the manipulation.¹⁸⁰

While the risk profiles of these three examples are quite different, all are explainable as examples of a loss-based manipulation as defined within the framework. This also explains why corners can be executed by market participants with relatively low market shares.¹⁸¹

Because the execution of trades at a loss requires no market power in any traditional sense, loss-based manipulations can be executed by any entity that holds sufficient financial leverage such that the losses it intentionally takes on its price setting trades are more than offset by the resulting gains made in its targeted positions.¹⁸² This is especially concerning in energy markets, wherein the likelihood of a successful manipulation is enhanced by frequent episodes of inelastic demand and supply,¹⁸³ heavy reliance on price indices as the price-making mechanism,¹⁸⁴ and the use of price-making transactions by market participants that simultaneously hold large physical and financial price-taking positions.¹⁸⁵ This is evidenced by recent enforcement actions by the FERC against Amaranth Advisors,¹⁸⁶ Energy Transfer Partners,¹⁸⁷ and Constellation Energy Commodities Group,¹⁸⁸ and by the CFTC in proceedings against trader Anthony DiPlacido¹⁸⁹ and more recently Paron Energy et al.¹⁹⁰

These observations demonstrate the immediate need for a clear anti-manipulation standard as proposed by our framework. Certainty with respect to the behavior prohibited maximizes market liquidity,¹⁹¹ muting the effect of uneconomic trades designed to trigger a manipulation.¹⁹² Additional liquidity will also tend to reduce the inelasticity of supply and demand, decreasing the

180. *Id.* See generally Craig Pirrong, *Commodity Market Manipulation Law: A (Very) Critical Analysis of the Existing Doctrine and a Proposed Alternative*, 51 WASH. & LEE L. REV. 945, 954 (1994). Dr. Pirrong has contributed much insight in the academic literature with respect to this particular type of market manipulation, beginning with the aforementioned seminal work; see Pirrong, *supra* note 2. However, we again note that corners and many other forms of “market power manipulation” are not the result of the exercise of market power as typically described under antitrust law, since the party undertaking the action does not have a dominant position in a defined market. Rather, the action involves the execution of uneconomic trades into illiquid markets.

181. See, e.g., Sheryl WuDunn, *Ex-Trader in Sumitomo Scandal Admits Guilt on Fraud Charges*, N.Y. TIMES, Feb. 17, 1997, <http://www.nytimes.com/1997/02/17/business/ex-trader-in-sumitomo-scandal-admits-guilt-on-fraud-charges.html> (Sumitomo trader Yasuo Hamanaka plead guilty to cornering the world copper market with a market share of only 5%).

182. *Id.*; LEDGERWOOD ET AL., *supra* note 6, at 3. Special thanks to Matthew L. Hunter for his significant insight on this point.

183. LEDGERWOOD ET AL., *supra* note 142, at 3.

184. *Id.*

185. Ledgerwood, *supra* note 160, at 18; see generally Ledgerwood & Carpenter, *supra* note 10, at 39-42.

186. *Amaranth Advisors L.L.C.*, 120 F.E.R.C. ¶ 61,085 (2007); Initial Decision, *Brian Hunter*, 130 F.E.R.C. ¶ 63,004 (2010); Order Affirming Initial Decision and Ordering Payment of Civil Penalty, *Brian Hunter*, 135 F.E.R.C. ¶ 61,054 (2011).

187. *Energy Transfer Partners*, 120 F.E.R.C. ¶ 61,086 (2007).

188. *Constellation Settlement*, *supra* note 1.

189. *DiPlacido v. CFTC*, 364 F. App'x 657, 657 (2d Cir. 2009).

190. *CTFC v. Paron Energy, Inc.*, No. 11-CV-3543, 2011 WL 1998680 (S.D.N.Y. filed May 24, 2011).

191. LEDGERWOOD ET AL., *supra* note 6, at 1.

192. *Id.* at 7.

ability to significantly move prices to exploit a nexus between triggers and targets. Finally, certainty as to the types of behavior considered manipulative under the laws will promote effective deterrence through increasing the likelihood of detection and punishment. Well-defined anti-manipulation rules therefore reduce the likelihood of a manipulation by simultaneously reducing its potential benefits while increasing its associated costs, thus altering the decision making calculus to favor compliance in place of rationally manipulative behavior.

b. Outright Fraud

Like uneconomic trading, outright fraud can be used to trigger a directional change in market prices to misrepresent the price (or some other key aspect central to the trade) of the underlying asset, such that other market participants unwittingly execute trades that increase the value of the manipulator's targeted positions.¹⁹³ From the perspective of the framework, the only difference in using outright fraud as a trigger as compared to the execution of uneconomic trades is who bears the associated loss on the price-making trades.¹⁹⁴ In the former case, the manipulator dupes other traders into executing all of the losing transactions that directionally move the price, whereas in the latter the manipulator bears some loss due to its own uneconomic trades. Unsurprisingly, the characteristics that increase the likelihood of a successful manipulation using loss-based trading will also assist the ability to use outright fraud for such purposes. Indeed, few triggers are as "cheap" to a manipulator as those that push all losses of uneconomic trading to someone else.

c. The Exercise of Market Power

While unnecessary to the execution of a market manipulation using uneconomic transactions or outright fraud, traditional market power can be used intentionally to cause directional changes in price at the will of its holder.¹⁹⁵ Should that holder also own positions that tie to the price over which it has influence, it can use the market power to trigger a manipulation.¹⁹⁶ Market power can also strengthen the nexus between trigger and target by reducing the elasticity of market supply and demand, a market characteristic that can be exploited by the manipulator irrespective of the type of trigger used. This may seem to cloud the distinction between the anti-manipulation rules and antitrust law, for the same price change that drives the profitability of the anticompetitive act under antitrust also triggers the manipulation. The distinction is that while market power is not *necessary* for the execution of a manipulation, holding market power can *assist* a manipulation by maximizing the price effect that provides the nexus between the manipulation's trigger and target.¹⁹⁷

The components of the framework can also provide guidance to explain the potential overlap in antitrust and anti-manipulation law. Consider the case of a multi-plant electric generator that withholds output from one power plant to

193. See generally *id.* at 3.

194. Ledgerwood & Carpenter, *supra* note 10, at 50.

195. See generally LEDGERWOOD ET AL., *supra* note 142, at 3.

196. *Id.*; Ledgerwood & Carpenter, *supra* note 10, at 15-17.

197. LEDGERWOOD ET AL., *supra* note 142, at 3.

increase the profitability of its remaining units, such that the withholding is profitable overall. This scheme could reasonably be thought of as either an antitrust violation (economic withholding) or a stand-alone market manipulation, the latter view characterizing the withholding as an uneconomic act (the trigger) intended to cause a price increase (the nexus) in benefit to the generator's fleet of units that remain online (the target).¹⁹⁸ However, as we discuss next, the manipulation claim could include other positions owned by the generator that tie to the affected price, a factor not generally considered in antitrust actions.

4. Positions That Could Be Targeted by a Manipulation

Any position that derives its value from a market price affected by the manipulation's trigger could serve as a target. As we discussed in depth concerning the passage of Dodd-Frank in the United States and REMIT, MAD, and MiFID in the European Union, financial derivatives tied to commodity prices are of particular concern in this regard because would-be manipulators can accumulate leverage in such positions in a manner that is currently unobservable absent legal discovery. The creation of tracking systems designed to monitor the accumulation of major derivatives positions may assist the detection of manipulations. For example, knowledge of the size of the put options position held by the hypothetical natural gas producer discussed earlier in this section could inform a preliminary determination of whether the position was leveraged above a size needed to hedge the producer's physical position. However, in the absence of complete information across multiple trading platforms and products, any attempt to conclusively determine a market participant's net exposure to specific market prices may be incomplete and potentially spurious.

The case of economic withholding by the electric generator demonstrates that price-taking quantities of the underlying commodity may also be a potential manipulation target. Specifically, the higher electricity price triggered by the withholding increases the value of the electricity sold by the generator's other units, thus benefitting the value of the underlying physical commodity. Such concerns of commodity price manipulation are particularly relevant to U.S. natural gas markets, in which a significant portion of the physical commodity is traded "at index" with a reference price set by the weighted average of a relatively small number of trades. Firms holding large index positions can leverage the profits derived therefrom against losses accrued from the transactions used to trigger the manipulation. In fact, indexed volumes can even be used to execute trades that set the index price¹⁹⁹ and could ultimately be used to manipulate the value of production assets to the extent that forward prices are affected. Such manipulations of physical index positions are also possible in those EU energy markets where indexed physical energy is traded and will become increasingly likely as these markets continue to integrate and mature.

198. See generally Ledgerwood & Carpenter, *supra* note 10, at 20-21 (discussing *United States v. KeySpan Corp.*, 763 F. Supp. 2d 633 (2011)).

199. For example, in its case against Energy Transfer Partners, the FERC alleged that the company purchased large quantities of gas that was priced "at index" to the Houston Ship Channel, then sold some of this gas at uneconomically low prices in a manner that set this index price. *Energy Transfer Partners, L.P.*, 120 F.E.R.C. ¶ 61,086 at PP 1, 3 (2007).

For a multinational entity that trades energy as a subset of a broad portfolio of commodities and products exchanged internally and externally among multiple subsidiaries and affiliates, the real-time tracking of all positions that could collaterally tie to a particular energy price is likely impossible. That said, the framework demonstrates that the accumulation of leveraged positions that could benefit from directional price-making trades is a necessary condition for manipulation to occur. It is therefore desirable for regulators to begin to assemble and integrate the means and methods needed to monitor the accumulation of such positions to the extent possible, recognizing that only a patchwork of such positions will be discernible. By comparison, greater immediate focus should be placed on the monitoring of price-making trades, as they are fully transparent and can provide immediate indicia of trading which could involve manipulative intent.

5. The Importance of the Nexus

In hypothetical manipulation examples, the causative “nexus between the trigger and target is almost an afterthought because it refers to the same price,”²⁰⁰ *i.e.*, the price set by the price-making trades used to trigger the manipulation is the same price that sets the value of the targeted price-taking positions. However, reality is rarely so clean, as the price that triggers the manipulation may “tie to many other prices and price-taking positions that extend across products, geography and time.”²⁰¹ The establishment of “a causative nexus is therefore essential to prove manipulation,” as it “simultaneously demonstrates the intent and ability to manipulate,” the causal link between trigger and target, and “the linkage that enables the manipulative scheme to succeed.”²⁰²

For a party seeking to prove the manipulation of a particular targeted position by a given trigger, a statistical analysis will often be needed to demonstrate the direction, strength and reliability of the nexus asserted as causative. Practically speaking, this will foreclose from consideration many positions that were likely impacted by the manipulation, but for which insufficient proof of causation is shown. Likewise, a manipulation defense wishing to introduce evidence that incidental positions should be used to evaluate the net exposure of its portfolio to a directional price movement must also be prepared to demonstrate the strength and relevance of any causative nexuses.²⁰³

To limit the analysis of market nexuses to contexts *ex post* suspected manipulations would ignore the market characteristics that accentuate the likelihood of successful manipulation as identified by the framework.

Tighter cross-market linkages [typically will strengthen causative relationships] between price-making trades and price-taking positions, as is often magnified at times such as settlement when fixities in supply and demand emerge. *Ex ante* [analyses of] such phenomena therefore provide[] critical information as to the markets most in need of monitoring and surveillance and the times, instruments and trading behaviors of greatest concern. This can assist the allocation of regulatory resources to serve their most efficient use and may direct the coordination of reporting requirements within and across regulatory authorities. Knowledge of such efforts will deter manipulative behavior at the times most critical to price

200. Ledgerwood & Carpenter, *supra* note 10, at 48.

201. *Id.*

202. *Id.*

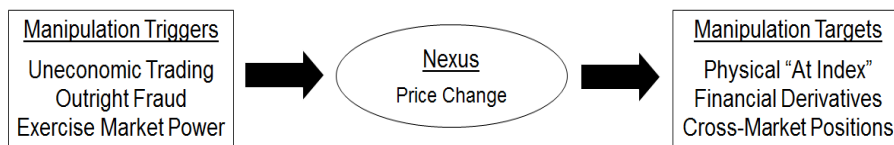
203. *Id.* at 48-49.

formation, [thus] benefitting compliant market participants in the long run through the increased market efficiency derived from better . . . liquidity[, improved transparency] and reduced bid-ask spreads.²⁰⁴

IV. THE FRAMEWORK OFFERS A SINGLE RULEBOOK FOR THE DETECTION, ANALYSIS, AND PROOF (OR DISPROOF) OF MANIPULATIVE BEHAVIOR

Breaking a manipulation into the three components identified by the framework can unravel the sometimes counterintuitive logic that has complicated past conversations on this topic.

**Figure 1:
The Components of a Market Manipulation as Described By the Framework**



As an organizational tool, the framework provides a stable and consistent structure to establish and implement energy market monitoring and surveillance programs, compliance programs, and enforcement. In this section, we discuss how uniformity of the approach used for detecting and analyzing market manipulation will provide consistency across cases and allow for better coordination across agencies within and between the United States and European Union. Such cooperation and unity of approach will be essential to the future detection, analysis, and enforcement of manipulation cases brought against multinational firms that may use global markets as the triggers and targets of opportunity. The use of a single rulebook will also benefit market participants through better certainty as to the legitimacy of their trades, with the requirements of compliance being consistent and known across jurisdictions and as behavioral “safe harbors” are established. As we will discuss, these benefits are available immediately, as the analytical approach of the framework is equally applicable to the various manipulation laws currently in place in the European Union and United States.

A. Using the Framework to Assist Market Monitoring and Surveillance

The main benefit to market monitoring and surveillance efforts of breaking the analysis of a manipulation into components is that resources can focus on manageable issues on a step-by-step basis, with later iterations of the process feeding the development of better techniques over time. Pragmatically, the starting point for all such analyses is the nexus, for an understanding of the behavior to be monitored first requires the identification and understanding of the various market linkages through which a manipulation can occur. Once these are identified, the nexus is again useful for identifying the times, locations and trading instruments that are of the greatest concern to regulators such that scarce resources can focus on issues with the highest prioritization.²⁰⁵ The nexus

204. *Id.* at 49.

205. *Id.*

can also identify the type of behavior that is most likely to be used to trigger a manipulation under different scenarios. For example, in electricity markets, market power might be of concern during peak periods of a day, whereas uneconomic transactions might be of greater concern off-peak. The nexus will also assist the identification of the price-taking positions most likely to be the manipulation's targets such that reporting of these positions might be required.²⁰⁶

Continual monitoring of the trades that could trigger a manipulation is an achievable goal. Assuming the enforcement agencies already possess regulatory authority over the transactions that set prices within their jurisdictional markets, they have the ability to continually analyze this data for evidence of manipulative behavior, *i.e.*, the use of market power or the placement of uneconomic trades.²⁰⁷ Ideally, this process would rely upon automated screens designed to detect indicia of manipulative behavior, with human input required when suspicious activity is detected and when calibration of the screens is needed over time.²⁰⁸ The market monitor must always be mindful that *every* screen can generate false positives and false negatives, and natural variances in the market will necessitate the development of multiple screens and intuitive interpretations to distinguish legitimate trading from suspect behavior.²⁰⁹ The detection of outright fraud is also well suited to these agencies, for market participants are likely to raise concerns of their competitors' inappropriate behavior to regulators as a matter of practice.²¹⁰

As discussed above, the number, size, scale, and scope of price-taking positions held by traders is unknowable absent the investment of substantial search costs. For example, a global energy provider may simultaneously hold physical positions in natural gas, electricity, oil, and LNG on multiple continents, hedged against each other and with financial derivatives traded on multiple exchanges around the world, interlaced with countless speculative plays held by multiple subsidiaries and legged across markets, currencies, and time. Dodd-Frank and the REMIT Proposal will provide a glimpse into some of the positions that may serve as the target of manipulation attempts but cannot possibly track and interconnect them all continuously. The cross-agency cooperation required to continually match manipulative triggers against targeted positions likewise may not be present.²¹¹ This is not meant to discourage the

206. *Id.*

207. *Id.* at 51.

208. *See generally* Ledgerwood, *supra* note 160, at 41-56.

209. Ledgerwood & Carpenter, *supra* note 10, at 45-52. Every screen should be structured in a manner designed to test the hypothesis that the trading behavior in question is legitimate, which gives the trader the benefit of a presumption of innocence. Failing a screen will occur if this hypothesis is rejected, suggesting the need for further analysis and corroboration as provided by other screens and market intelligence.

210. For example, the FERC has established an "Enforcement Hotline" designed to provide market participants with an outlet for reporting fraudulent behavior on an anonymous basis. For further information, *see generally*, *Enforcement Hotline*, FERC, <http://www.ferc.gov/enforcement/staff-guid/enforce-hot.asp>. (last viewed Mar. 5, 2012).

211. As discussed previously, the CFTC disputed the FERC's jurisdiction in *Amaranth*. Amicus Brief of Futures Industry Ass'n et al., *Amaranth Advisors, L.L.C. v. FERC*, No. 07-1491 (D.C. Cir. 2008), 2008 WL 4960210. The FERC did not rule on its ALJ's decision until after this appeal was deemed to be unripe. *Brian Hunter v. FERC*, 403 F. App'x 525, 527 (D.C. Cir. Dec. 22, 2010). More recently, the CFTC has suggested that some historically FERC jurisdictional instruments (such as financial transmission rights) may require public interest exemptions to avoid CFTC jurisdiction. Proposed Rules & Interpretations, Further Definition of

collection of data that relate to such positions, especially those that could provide a would-be manipulator with a large, leveraged target. However, enforcement authorities must be judicious enough to avoid hasty and fallacious determinations that the ownership of such positions equates to manipulative intent, for such visible positions could well be only a tip of an iceberg, the full extent of which is knowable only through protracted and expensive discovery.

B. Interaction of Market Monitoring with Compliance Programs

The thought of enforcement authorities screening every price-making trade for some indicia of manipulation may seem harrowing for market participants. For example, suppose it is known that a market monitor is screening for indicia of uneconomic trading, presumptively indicated by sales made below market or purchases made above the market price. However, any economics text will verify that every sale tends to lower market prices and every purchase tends to raise them, suggesting that every price-making could be a candidate for manipulation. Alternatively, the monitor might screen for evidence of losses accrued intentionally; however, in a fair market, about half of all of a trader's trades will lose money irrespective the trader's intent. While they will undoubtedly not wish to reveal their exact screening methodologies and thresholds, market monitoring authorities must communicate that their screens are attuned to find market anomalies, as adjusted over time based on lessons learned, best practices, the availability of data, and the ability to coordinate with other agencies.²¹² Compliance programs then can focus on the proactive function of maximizing legitimate trading without fear of future reprisals, rather than a constant reactive posture drawn from inconsistent and opaque outcomes of enforcement actions over time.

If the framework's logic is adopted and used consistently by the anti-manipulation authorities in the United States and European Union, the compliance departments of the various market participants which trade energy stand to benefit greatly. There is at present little guidance concerning the behavior that constitutes a market manipulation and no guidance as to potential "safe harbors" defining the bounds of legitimate trading. The consistent application of the framework could add certainty to both sides of this calculus, such that specific behavior considered to be prohibited is clearly distinguished and distanced from that which is legitimate. The resulting consistency in enforcement would add certainty to the market through the encouragement of legitimate trading, ultimately maximizing liquidity over time and reducing compliance costs as concerns of unwarranted enforcement actions abate. Likewise, certainty that manipulative behavior will be detected and punished will provide greater trust in indices and other reference prices as indicative of true value, ultimately improving the efficiency of the market through increased participation and reduced bid-ask spreads.²¹³

"Swap," "Security-Based Swap," and "Security-Based Swap Agreement"; Mixed Swaps; Security-Based Swap Agreement Recordkeeping, 76 Fed. Reg. 29,818, 29,839 (2011) (to be codified at 17 C.F.R. pt. 240).

212. ACER has provided examples of behavior it may consider suspicious, presumptively suggesting that market screens will be attuned thereto. *See generally* Section 4.4.2-Possible signals of market manipulation, *ACER Guidance*, *supra* note 126, at 21-22.

213. Ledgerwood & Carpenter, *supra* note 10, at 49.

C. *Consistency in Enforcement*

If the analysis of the trigger provides sufficient evidence of a manipulated price to warrant the opening of an investigation or the initiation of a lawsuit, the investigator must ascertain the totality of the suspected manipulator's positions that tie to that price. Data availability across agencies is imperative to this function, making possible preliminary investigations without the need to subpoena records from the suspect or even to alert the suspect that it is under investigation. If a formal investigation commences, these data can be used to audit the responses of the suspect and to identify holes in records kept across the various agencies, as will occur with the evolution of physical and financial markets and instruments over time. If it is proven that the suspect used the trigger in benefit to its net targeted positions and a nexus between the two likewise is proven, then the trier of fact must determine whether the behavior demonstrates sufficient intent to find that a manipulation occurred. Thus, while the fact issue of intent should vary from one case to the next, proof of the mechanical characteristics that define a manipulation should not.

A systemic approach to analyzing the interactions between manipulation triggers and targets will ultimately optimize scarce regulatory resources within and across enforcement agencies with an anti-manipulation mandate.²¹⁴ Cross-agency cooperation is essential to this process, such that a uniform and systemic approach to compliance and enforcement emerges to the benefit of the agencies and the traders they regulate.²¹⁵ As new financial instruments develop and new linkages across products emerge, a loop of continual learning should develop and help the agencies keep pace with the evolution of the industries they regulate. This ultimately will allow for better understanding of the pricing nexuses that simultaneously provide liquidity to the market and potentiate manipulative behavior.²¹⁶ Consistency in enforcement will also inform the compliance functionalities of market participants as to the behavior prohibited, thus reducing uncertainty as to compliance, promoting legitimate trading, increasing market liquidity, and thereby mitigating the market characteristics that make manipulation possible.²¹⁷

D. *Consistency of the Framework Across Different Market Manipulation Standards*

The framework is structured to satisfy the specific elements required to meet the burden of proof for manipulation claims brought under either a fraud-based statute (which includes statutes that prohibit either outright fraud or the use of a fraudulent device, scheme, or contrivance) or a statute based on artificial price.²¹⁸ Functionally equivalent statutes are now in place in the U.S. and EU, as is summarized below in Table 2.

214. LEDGERWOOD ET AL., *supra* note 142, at 7.

215. *Id.*

216. *Id.*

217. *Id.*

218. For further discussion, *see generally* LEDGERWOOD ET AL., *supra* note 6, at 3-4.

Table 2:
U.S. and EU Manipulation Statutes Relevant to Gas and Electricity Markets

Prohibitions Against Outright Fraud:

- EU: REMIT - Art. 2, Sections (2)(a)(i), (2)(b), (3)(a)(i), and (3)(b)
MAD - Article 1, Sections (a) and (c)
- U.S.: FERC - 15 U.S.C. § 717c-1 and 16 U.S.C. § 824v;
CFTC - 7 U.S.C. § 6(c)(1)

Prohibitions Against Fraudulent Devices, Schemes, and Contrivances:

- EU: REMIT - Article 2, Sections (2)(a)(iii) and (3)(a)(iii);
MAD - Article 1, Section (b)
- U.S.: FERC - 15 U.S.C. § 717c-1 and 16 U.S.C. § 824v;
CFTC - 7 U.S.C. § 6(c)(1)

Prohibitions Against Artificial Price:

- EU: REMIT - Article 2, Section (2)(a)(ii) and (3)(a)(ii);
MAD - Article 1, Section (a)
- U.S.: FERC - No direct parallel, but see Penalty Guidelines;²¹⁹
CFTC - 7 U.S.C. § 6(c)(3)

Under fraud-based statutes, the proof of a market manipulation requires showing that (1) a jurisdictional transaction (2) was used to execute a fraudulent device, scheme, or artifice (3) with the requisite scienter.²²⁰ Analysis of the manipulation's trigger demonstrates that jurisdictional transactions were used intentionally in an attempt to move a price through uneconomic trades, outright fraud, or the exertion of market power. Analysis of the manipulation's target provides evidence that the manipulator intended to assemble a manipulative device, scheme, or artifice and had the ability to make it work. Finally, demonstration of a nexus between the trigger and target proves the linkage mechanically needed to perpetrate the manipulation. Proof of an effect from the manipulation is necessary for obtaining disgorgement of profits in regulatory actions or for the proof of damages in private lawsuits. However, a fraud-based statute does not require the proof of a manipulation's success, allowing regulators to obtain fines and/or civil penalties through enforcement actions brought for *attempted* manipulation. The ability to levy penalties on market participants for behavior that is poorly defined and that has been enforced under a patchwork of cases is unconscionable in the absence of a clear demonstration of manipulative cause and effect. The framework provides a vehicle for evaluating such cases in a manner that is internally consistent in its logic across cases, statutes, and agencies.

219. *Penalty Guidelines*, *supra* note 34.

220. *See, e.g.*, Ledgerwood, *supra* note 160, at 8-11.

The framework also satisfies three of the four elements for meeting the burden of proof under artificial price statutes. For example, proof under the CFTC's statute requires showing that the manipulator had (1) the ability (2) and intent (3) to create an artificial price (4) and caused that price to occur. Analysis of the trigger demonstrates intent through the showing of uneconomic trades, outright fraud, or the exertion of market power. Analysis of the manipulation's target demonstrates that the actor intended to assemble a manipulative scheme and had the ability to make it work. Proof of the nexus demonstrates the linkage needed to show causation. All that remains is showing a measurable price effect, which is equivalent to the requirement needed to prove disgorgement or damages under a fraud-based statute. The framework's ability to unify the analysis of market manipulation across statutes therefore serves as a further vehicle for enforcement agencies to align their methodologies such that a common approach to the analysis of market manipulation results. This would extend to the European Union's energy markets under REMIT and MAD, both of which include fraud-based and artificial price provisions.

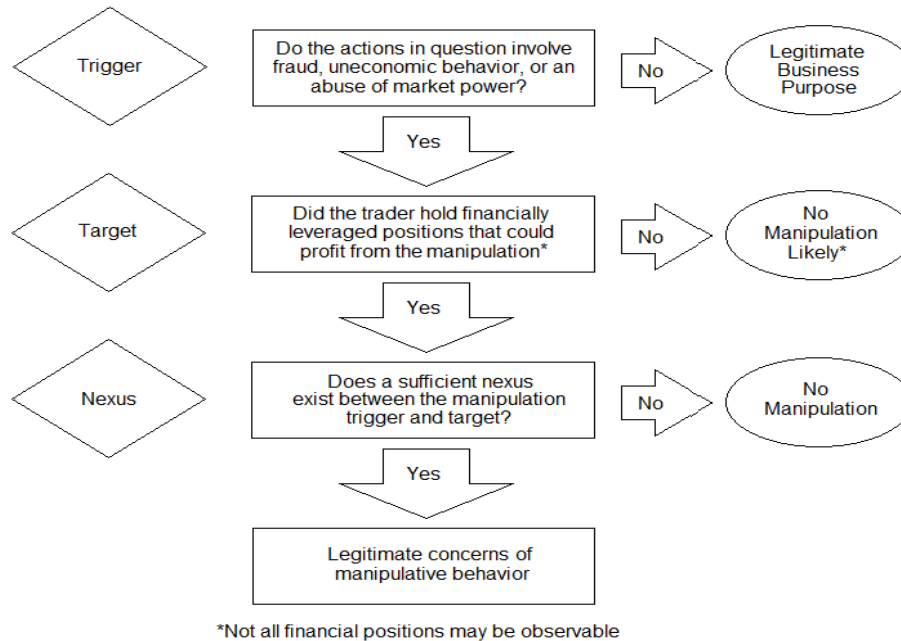
V. CONCLUSION: AN IMPROVEMENT IN THE CLARITY PROVIDED TO THE DEFINITION OF MANIPULATIVE BEHAVIOR

The historical precedent set by manipulation cases tried in the United States represents an inconsistent set of categorical determinations of specific behaviors as illegal, with no functional linkage to common economic contexts across the cases tried by each agency, much less across agencies.²²¹ This "I know it when I see it" approach provides little clear guidance to traders as to the types of behavior that each Commission perceives as manipulative, leading them to either avoid legitimate trades to prevent suspicion under uncertain and shifting enforcement standards or pay no attention at all to the standard, given knowledge of the agencies' historical difficulty in bringing successful cases.²²² As the United States and European Union implement broad anti-manipulation rules, a more consistent and logical approach to the detection and analysis of manipulation is warranted. To this purpose, the framework we propose would clarify what does and does not constitute manipulation for market participants and enforcement agencies. The framework does not prescribe a single algorithm for detecting and proving (or disproving) manipulation, but rather reduces the scope for subjectivity in evaluating the issue of manipulative intent by providing an analytical structure that is uniform across circumstances. We summarize this below in Figure 2.

221. LEDGERWOOD ET AL., *supra* note 6, at 1-4.

222. *Id.*

Figure 2:
A Hypothetical Analysis of a Market Manipulation Using the Framework



The framework also assists the measurement of harm from the manipulation by separating damages incurred in the trigger, target, and other markets collaterally affected.²²³ Harm from the trigger accrues to those duped into trading at a loss based on the misinformation injected by the manipulator.²²⁴ Harm in the targeted positions accrues to the counterparties of the manipulator's price-taking positions.²²⁵ Finally, to the extent the effects of the manipulation may spill into other markets or disrupt asset values over time, other parties may be damaged.²²⁶ In theory, the "harm" caused by a manipulation in one market could reverberate infinitely into other markets, opening a suspected manipulator to potentially limitless damages.²²⁷ The framework we propose provides a solution to this concern through the nexus, as furnishing proof of a strong causal linkage between the trigger and target must be established before any discussions of potential liability attach.²²⁸

223. See generally, *Constellation Settlement*, *supra* note 1, at PP 22, 27.

224. Uneconomic trades misrepresent value and may induce other market participants on the same side as the triggering transactions to buy/sell at a loss, whereas outright fraud induces the entirety of the loss to be taken by other traders. The damages caused by an abuse of market power are an antitrust injury. Ledgerwood & Carpenter, *supra* note 10, at 44-45.

225. *Id.* at 45.

226. *Id.*

227. *Id.*

228. *Id.*

Some of our prior publications concerning the framework focused on the use of uneconomic trading as a manipulation trigger.²²⁹ These works are important, as this type of manipulation is understudied, previously unexplained, and of great concern because it may not be easily distinguishable from aggressive legitimate trading.²³⁰ However, other types of behavior can trigger a manipulation and its associated harms, including outright fraud and the exercise of market power.²³¹ As we have discussed herein, the framework we propose is equally applicable under all such circumstances, as the logic of the trigger, target, and nexus is consistent across all such cases.

229. See generally Ledgerwood, *supra* note 160, at 1; see also, e.g., LEDGERWOOD ET AL., *supra* note 6, at 1.

230. Three of our colleagues from *The Brattle Group* filed comments in the CFTC's rulemaking proceeding concerning its new anti-manipulation rules, attaching Dr. Ledgerwood's paper *Screens for the Detection of Manipulative Intent* (*supra* note 160) thereto. See also Comments of Daniel Arthur, Romkaew Broehm, & Gerald Taylor to the CFTC on Notice of Proposed Rulemaking Prohibition of Market Manipulation (Jan. 3, 2011), available at <http://comments.cftc.gov/PublicComments/ViewComment.aspx?id=26909&SearchText=26909DanielArthur.pdf>. During its July 7, 2011 open meeting, the CFTC considered these comments, narrowly, as proposing uneconomic trading as the only potential trigger for manipulative behavior. *Open Meeting on Five Final Rule Proposals Under the Dodd-Frank Act*, CFTC, at timestamps 58:37 and 59:05 (July 7, 2011), available at <http://www.capitolconnection.net/capcon/cftc/webcastarchive.htm#>. Our discussion herein is designed to demonstrate that the framework is applicable to a much broader set of behavioral triggers than uneconomic trading alone.

231. This article has focused on actions that use price as the mechanism for triggering a manipulation. However, other types of nexuses could be exploited to manipulate markets, including market output. Shaun D. Ledgerwood & Wesley J. Heath, *Rummaging Through the Bottom of Pandora's Box: Funding Predatory Pricing Through Contemporaneous Recoupment*, VA. L. & BUS. REV. (forthcoming 2012), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1906062 (last revision Dec. 11, 2011). Indeed, institutional or informational processes could be used to trigger a manipulative outcome, including (but not limited to) the use of inside information obtained through political processes or by other means to trigger a manipulation. *60 Minutes: Congress: Trading Stock on Inside Information?* (CBS television broadcast Nov. 13, 2011), available at http://www.cbsnews.com/8301-18560_162-57323527/congress-trading-stock-on-inside-information/?tag=contentMain;cbsCarousel. The framework is sufficiently dynamic so as to provide a foundation for discussing and analyzing such behavior.