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Manipulation in Political Prediction Markets

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MANIPULATION IN POLITICAL PREDICTION MARKETS

ALEXANDRA LEE NEWMAN*

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I. INTRODUCTION

Political prediction markets captured the public’s imagination during the 2008 U.S. presidential election cycle.¹ Political prediction markets are a relatively

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¹ Public interest in political prediction markets during the 2008 presidential election cycle was reflected, for example, by two online “blogs”—Freakonomics and Economix—which both kept frequent track of developments in these markets leading up to the November 4, 2008 election. Prediction Markets—Freakonomics Blog, <http://freakonomics.blogs.nytimes.com/tag/prediction-markets/> (last visited Nov. 22, 2008); Prediction Markets—Economix Blog, <http://economix.blogs>.

new market mechanism in which members of the public can trade political event contracts,² which are financial agreements that yield payments based on the outcome of uncertain events such as the nomination or election of a particular candidate.³ Popular interest and optimism about the potential of political prediction markets reached a pinnacle with the success of these markets in predicting milestones during the 2008 U.S. presidential election.⁴ One of these markets predicted the exact final Electoral College vote counts for each presidential candidate.⁵ Another market predicted from the start of the presidential race that the Democratic nominee would win the 2008 popular vote.⁶ Moreover, political prediction markets predicted the 2008 presidential election results more accurately than conventional forecasting methods such as polling and expert opinion analysis.⁷

The excitement surrounding political prediction markets has been tempered, however, with concerns about manipulation or attempted manipulation in these markets.⁸ Fear of manipulation may constitute the greatest concern that observers have about political prediction markets.⁹ Currently, no laws in the United States clearly regulate political prediction markets.¹⁰

The only explicitly legal political prediction markets in the United States are hosted through the Iowa Electronic Market (“IEM”).¹¹ The IEM is a non-profit

nytimes.com/tag/prediction-markets/ (last visited Nov. 22, 2008).

² This Article uses the term “prediction market” because this appears to be the preferred term in the growing literature. Georgios Tziralis & Ilias Tatsiopoulos, *Prediction Markets: An Extended Literature Review*, 1 J. PREDICTION MARKETS 75, 75 (2007) available at http://gtziralis.googlepages.com/PredictionMarkets_AnExtendedLiteratureReview_TziralisTatsiopoulos.pdf.

³ See generally Kenneth J. Arrow et al., *The Promise of Prediction Markets*, 320 SCI. MAG. 877, 877 (2008) (defining “event contract”), available at <http://www.sciencemag.org/cgi/content/full/320/5878/877>; see discussion *infra* Part II.

⁴ See Joshua Zumbrun, *Can Intrade Win After the Election?*, FORBES.COM, Nov. 3, 2008, http://www.forbes.com/2008/11/03/intrade-prediction-markets-biz-beltway-cx_jz_1103intrade.html.

⁵ Intrade Exchange News, *Visual Presentation of Election 2008 Historical Data*, Nov. 14, 2008, http://www.intrade.com/news/news_318.html.

⁶ Press Release, Henry B. Tippie Coll. of Bus., Univ. of Iowa, Democratic Contract Never Trailed on IEM’s Winner Take All Prediction Market, Nov. 5, 2008, <http://tippie.uiowa.edu/news/story.cfm?id=2047>.

⁷ For example, whereas the Iowa Electronic Market predicted the final vote count in the 2008 presidential election to within a half percentage point, the average absolute error by public opinion polls was 1.2%. Press Release, Henry B. Tippie Coll. of Bus., Univ. of Iowa, IEM Within Less Than Half Percentage Point in Presidential Race Prediction, Nov. 24, 2008, <http://tippie.uiowa.edu/news/story.cfm?id=2058>.

⁸ See discussion *infra* Part III.

⁹ See CASS R. SUNSTEIN, INFOPTOPIA: HOW MANY MINDS PRODUCE KNOWLEDGE 137 (2006); see generally Note, *Prediction Markets and Law: A Skeptical Account*, 122 HARV. L. REV. 1217, 1223–24 (2009) (identifying the vulnerability of political prediction markets to manipulation in the context of discussing failures of these markets).

¹⁰ Ricky McRoskey, *Regulation Looms for Prediction Markets*, BUS. WK., July 7, 2008, available at http://www.businessweek.com/bwdaily/dnflash/content/jul2008/db2008073_533950.htm?chan=top+news_top+news+index_news+%2B+analysis; see generally Miriam A. Cherry & Robert L. Rogers, *Prediction Markets and the First Amendment*, 2008 U. ILL. L. REV. 833, 835, 841 (2008) (arguing that legal uncertainty is an impediment to the development of public prediction markets generally).

¹¹ Robert Hahn & Paul Tetlock, Op-Ed., *Short Odds for Ignorance*, N.Y. TIMES, Oct. 9, 2006, at A1.

prediction market exchange that permits limited real-money trading.¹² Event contract trading on the IEM is permitted by virtue of two no-action letters issued by the Commodity Futures Trading Commission (“CFTC”).¹³ Intrade, which is one of the most well-known for-profit, real-money political prediction market exchanges, is incorporated in Ireland.¹⁴ The absence of a legal framework has suppressed the development of these markets in the United States,¹⁵ and has arguably reduced the opportunities that these markets have to encourage broader participation, aggregate information, and improve decision-making.¹⁶ Numerous participants in the prediction market industry have pleaded for regulatory clarity.¹⁷

In the spring of 2008, the CFTC sought public commentary in the form of a Concept Release on the appropriate regulatory treatment of event contracts traded on prediction markets generally.¹⁸ The CFTC issued this call for public comment in response to a “substantial number of requests for guidance on the propriety of trading various event contracts under the regulatory rubric of the Commodity Exchange Act (“CEA” or “Act”).”¹⁹ Leaders in the prediction market industry are hopeful that legal clarity from the CFTC will improve public confidence in these markets and increase market liquidity through a significantly higher volume of trading.²⁰

As part of its review, the CFTC is currently examining whether political event contracts should be prohibited, or deserve special treatment, under the CEA, “due to the nature and importance of their outcomes.”²¹ The CFTC is also analyzing whether any types of market participants or trading practices exist on prediction markets generally that should be prohibited or closely monitored by regulators.²² The agency was expected to issue a response to questions posed in the Concept Release during 2009 in the form of an interpretive statement, a proposed rulemaking, or an exemptive order, but as of early 2010 the agency has issued no response at all.²³

¹² Frequently Asked Questions—Iowa Electronic Markets—The University of Iowa, <http://www.biz.uiowa.edu/iem/faq.html> (last visited Oct. 26, 2008).

¹³ *Id.* A no-action letter is a discretionary written statement issued to a specific futures exchange by the staff of a Division of the CFTC or the Office of the General Counsel, stating that the Division or Office will not recommend enforcement action to the CFTC against the futures exchange for the exchange’s failure to comply with a specific provision of the Commodities Exchange Act or a Commission rule. 17 C.F.R. §§ 140.99(a)(2), 140.99(b) (West 2009).

¹⁴ See Intrade.com—Help, <http://www.intrade.com/jsp/intrade/help/index.jsp?page=howitworks.html> (last visited Nov. 9, 2008).

¹⁵ See Arrow et al., *supra* note 3, at 877–78.

¹⁶ *Id.* at 878.

¹⁷ See, e.g., Melonyce McAfee, *Are “Political Futures” Illegal?*, SLATE, Apr. 27, 2007, <http://www.slate.com/toolbar.aspx?action=print&id=2164916>.

¹⁸ Concept Release on the Appropriate Regulatory Treatment of Event Contracts, 73 Fed. Reg. 25,669, (May 7, 2008).

¹⁹ *Id.*

²⁰ Zumbun, *supra* note 4.

²¹ Concept Release on the Appropriate Regulatory Treatment of Event Contracts, 73 Fed. Reg. at 25,673.

²² *Id.* at 25,674.

²³ E-mails from Bruce Fekrat, Special Counsel, Office of the Director, Division of Market

Prediction market scholars disagree about whether the CFTC legally *can* regulate public prediction markets generally under the CEA,²⁴ or whether state gambling laws should regulate these markets.²⁵ This Article does not address these questions. Rather, this Article argues that *if* the CFTC acquires jurisdiction over political prediction markets specifically, it must abandon the CEA's anti-manipulation jurisprudence toward these markets. This argument is raised because the CEA's regulatory rubric is incoherent when applied to the types of activities and effects that market analysts, participants and observers consider manipulative in political prediction markets.

The incoherence results because the concepts of *artificial price* and *specific intent to influence market price* that are central to the CEA's anti-manipulation jurisprudence are inapplicable in the context of political prediction markets. After abandoning the CEA's anti-manipulation jurisprudence, the CFTC will have at least three options with regard to regulating the manipulation we worry about in political prediction markets: it can develop a revised anti-manipulation doctrine with elements that *are* coherent when applied to political election markets; it can encourage private contracting between market participants to prohibit certain trading activities; or it can take no action and simply allow political prediction markets themselves to control manipulation through self-deterrence mechanisms.

Part II of this Article offers a brief background to prediction markets generally. Part III catalogues five examples of activity considered manipulative in political prediction markets, and draws conclusions about the types of trading activities that trouble market analysts. Part IV addresses the CEA's current anti-manipulation jurisprudence, and explains why this jurisprudence is incoherent when applied to manipulation in political prediction markets. Part V suggests three alternatives to the CEA's anti-manipulation jurisprudence to control manipulation in political prediction markets: a new regulatory scheme, private contractual enforcement, or self-deterrence. Part VI concludes by urging the CFTC, *if* it acquires jurisdiction over political prediction markets, to exercise

Oversight, Commodity Futures Trading Commission, to Alexandra Lee Newman, J.D. Candidate, Northwestern University School of Law (Oct. 9, 2008, 11:56 CST, Jan. 14, 2009, 08:56 CST, and Oct. 13, 2009, 09:13 CST) (on file with author).

²⁴ For arguments favoring CFTC regulation, see generally MICHAEL ABRAMOWICZ, PREDICTOCRACY 50 (2007); Robert W. Hahn & Paul C. Tetlock, *A New Approach for Regulating Information Markets*, 29 J. REG. ECON. 265, 268, 272–80 (2006); Paul Architzel, *Event Markets Evolve: Legal Certainty Needed*, FUTURES INDUSTRY, Mar.–Apr. 2006, at 53, available at http://www.futureindustry.org/downloads/fimag/2006/marapr06/Mar-Apr_EventMarkets.pdf; Kenneth J. Arrow et al., *Statement on Prediction Markets 2* (AEI-Brookings Joint Ctr. for Regulatory Studies, Working Paper, 2007), available at <http://ssrn.com/abstract=984584>. For arguments opposing CFTC regulation, see generally Tom W. Bell, *Private Prediction Markets and the Law*, 3 J. PREDICTION MARKETS 89 (2009), available at <http://tomwbell.com/writings/PrivatePMs&theLaw.pdf> [hereinafter Bell, *Private Prediction Markets*]; Tom W. Bell, *Prediction Markets for Promoting the Progress of Science and the Useful Arts*, 14 GEO. MASON L. REV. 37, 67–77 (2006); Tom W. Bell, *Architzel on Legality of Prediction Markets*, Mar. 29, 2006, <http://agoraphilia.blogspot.com/2006/03/architzel-on-legality-of-prediction.html> [hereinafter Bell, *Science and the Useful Arts*].

²⁵ See generally, e.g., Tom W. Bell, *Gambling for the Good, Trading for the Future: The Legality of Markets in Science Claims*, 5 CHAP. L. REV. 159, 165–67 (2002) (arguing that prediction markets are distinct from gambling); Ryan P. McCarthy, Comment, *Information Markets as Games of Chance*, 155 U. PA. L. REV. 749, 755 (2007). *But cf.* Christopher T. Pickens, Comment, *Of Bookies and Brokers: Are Sports Futures Gambling or Investing, and Does It Even Matter?*, 14 GEO. MASON L. REV. 227, 269 (2006) (arguing that a distinction between gambling and investing is nonsensical because the activities “are too similar to distinguish categorically”).

restraint in the regulation of manipulative trading, in order to promote further experimentation and development of these markets.

II. BACKGROUND TO PREDICTION MARKETS

Public prediction markets, of which political prediction markets are a type, are markets in which members of the public can trade event contracts, which are financial agreements that yield payments based on the outcome of uncertain events.²⁶ A public prediction market is contrasted with a private or “in-house” prediction market, where the prediction market is only open to members of a particular firm.²⁷ The uncertain event that lays the foundation for the event contract on a public prediction market can range from the results of a presidential election to the occurrence of a scientific discovery to the length of a celebrity marriage.²⁸

A typical event contract in a political prediction market specifies a single uncertain event as follows: “Barack Obama to be elected President of the United States in 2008.” Only two possibilities exist for the outcome of this contract: either Barack Obama will be elected President of the United States in 2008, or he will not. This type of event contract is known as a binary-option contract,²⁹ and it is the most prevalent type of event contract traded today. The name reflects the fact that there are only two possibilities for the outcome of the contract.

To participate in a typical public prediction market, a buyer purchases a binary-option contract from a market sponsor such as the IEM or Intrade, which issues contracts linked to various event outcomes and facilitates trades between buyers and sellers.³⁰ The price that the buyer pays for the contract indicates the lowest probability at which the buyer thinks the event will occur (the buyer wants to buy the contract for the lowest possible price).³¹ The seller will sell the share at a price that exceeds his purchase price, and the seller’s willingness to sell the contract at the buyer’s offered price indicates the highest probability at which the seller thinks the event will occur (the seller naturally wants to obtain the highest price possible for the sale of the contract).³² When all of the event contracts for a

²⁶ Arrow et al., *supra* note 3, at 877. For additional background information, see generally, e.g., Miriam A. Cherry & Robert L. Rogers, *Markets for Markets: Origins and Subjects of Information Markets*, 58 RUTGERS L. REV. 339 (2006) (providing in-depth introduction to prediction markets).

²⁷ Bell, *Private Prediction Markets*, *supra* note 24, at 14.

²⁸ Concept Release on the Appropriate Regulatory Treatment of Event Contracts, 73 Fed. Reg. at 25,670.

²⁹ *Id.* Binary-option contracts are traded on both the IEM and Intrade.

³⁰ These market sponsors, which are often online forums, are analogous to the clearing houses familiar in the commodity futures contract trading context. See generally U.S. Commodity Futures Trading Commission, *The Economic Purpose of Futures Markets and How They Work* <http://www.cftc.gov/educationcenter/economicpurpose.html> (last visited Feb. 2, 2010) (“Futures trades that are made on an exchange are cleared through a clearing organization (clearing house), which acts as the buyer to all sellers and the seller to all buyers.”).

³¹ See generally Michael Abramowicz, *Information Markets, Administrative Decisionmaking, and Predictive Cost-Benefit Analysis*, 71 U. CHI. L. REV. 933, 934–44 (2004) (“The prices at which these transactions occur, as well as the bid and ask prices, reflect market predictions of the eventual payout and thus of the number or numbers on which that payout is based.”).

³² *Id.*

specific event are aggregated on a prediction market, the price of the event contract on the market represents the average perceived likelihood that the event will actually occur—this is the “aggregated expected probability” of the event.³³

For example, the buyer selects the event in which she is interested—“Barack Obama to be elected President of the United States in 2008.” This binary-option contract will pay \$1 if Barack Obama is elected, but will pay \$0 if he is not elected. Therefore, if the buyer purchases the contract for \$0.85, the buyer has expressed her belief that Barack Obama has an 85% or greater chance of winning the 2008 U.S. presidential election. By selling the contract for \$0.85, the seller has indicated his belief that the price of the Barack Obama contract will not exceed \$0.85, and that Barack Obama has less than an 85% chance of being elected. If Barack Obama is actually elected, the buyer will receive \$1, thus making \$0.15 profit on that event contract. Market participants who bought contracts favoring other presidential candidates will receive nothing.

The virtues of public prediction markets are manifold. Functioning as “information aggregation vehicles,”³⁴ prediction markets may boast predictive accuracy exceeding the precision of other predictive processes such as deliberation,³⁵ polling, or expert opinion-making.³⁶ For example, one research study found that political prediction markets are more accurate long-run forecasting tools in political elections than political polls both across elections and across long periods of time preceding elections.³⁷ This study aggregated over 964 polls from the five U.S. presidential elections since 1988, and concluded that the political prediction market was closer to the final two-party vote split 74% of the time.³⁸ This study also concluded that the political prediction market significantly outperformed the polls in each of these elections when forecasting more than 100 days in advance of the election.³⁹

Cass Sunstein argues that this predictive accuracy arises because prediction markets provide incentives for the disclosure of information.⁴⁰ He theorizes:

Precisely because many people are making purchasing decisions, their aggregate

³³ The term “aggregated expected probability” appears in Chris F. Masse’s prediction market blog, CFM = Prediction Markets—Vortal to Prediction Markets, <http://www.chrisfmasse.com> (last visited Mar. 11, 2009).

³⁴ Concept Release on the Appropriate Regulatory Treatment of Event Contracts, 73 Fed. Reg. at 25,670.

³⁵ SUNSTEIN, *supra* note 9, at 104.

³⁶ See Arrow et al., *supra* note 3, at 877; Justin Wolfers & Eric Zitzewitz, *Prediction Markets*, 18 J. ECON. PERSP. 107, 108 (2004). The methods and processes of information aggregation in public prediction markets is currently an active area for empirical investigation. See Katarína Kálovcová, *Why Betting and Prediction Markets Work (Not) Well: An Inventory of Open Questions*, 19–20 (CERGE-EI, Discussion Paper Series, Paper No. 2007-178, 2007), available at <http://home.cerge-ei.cz/kalovcova/files/dp.pdf>.

³⁷ Joyce E. Berg et al., *Prediction Market Accuracy in the Long Run*, 24 INT’L J. FORECASTING 285, 286 (2008), available at http://www.sciencedirect.com/science?_ob=MIimg&_imagekey=B6V92-4SCTMTB-1-H&_cdi=5886&_user=1458830&_orig=search&_coverDate=06%2F30%2F2008&_sk=999759997&view=c&wchp=dGLbVzb-zSkzk&md5=432bb517cf9e9ac013d22dc6822b18ef&ie=/sdarticle.pdf.

³⁸ *Id.* at 287.

³⁹ *Id.*

⁴⁰ SUNSTEIN, *supra* note 9, at 104.

judgments are highly likely to be correct, at least if most purchasers have relevant information. And simply because purchasers are purchasers, and hence are willing to put money on the line, they probably do have some such information, at least most of the time. . . . When people are willing to put their money where their mouth is, there is an increased likelihood that they will be right.⁴¹

The information aggregation feature of prediction markets is enhanced by the fact that these markets have the potential to be completely objective since “they provide financial incentive for honest predictions.”⁴²

Information aggregation can occur quickly, which is another virtue of the markets.⁴³ For example, on November 8, 1995, at 8:10 a.m. CST, Colin Powell announced that he would be holding a press conference later that afternoon, but revealed no explicit information about the content of that conference.⁴⁴ Traders on the IEM reacted quickly to this announcement, and within minutes the price of the Colin Powell Nomination Market for the 1996 Republican National Convention dropped from \$0.60 to almost zero.⁴⁵ This drop occurred more than seven hours in advance of the press conference at which Powell actually made the announcement that he would not campaign for the nomination.⁴⁶

While rapid information aggregation is the most prominent virtue of public prediction markets, scholars postulate other virtues as well. Public prediction markets may promote free speech,⁴⁷ democratic deliberation,⁴⁸ public decision making,⁴⁹ scientific progress,⁵⁰ and risk management.⁵¹ Given these potential virtues, it is no wonder that some scholars “wish that anything even remotely resembling a prediction market be free to thrive, in order that this important field might enjoy the optimal conditions for growth.”⁵²

Other commentators, however, are more cautious in their enthusiasm for prediction markets. For example, one scholar has observed that prediction markets are valuable only as long as they maintain a competitive advantage in making

⁴¹ *Id.* at 121.

⁴² Abramowicz, *supra* note 31, at 971. For a famous version of the argument that betting encourages the expression of objective belief, see generally IMMANUEL KANT, *CRITIQUE OF PURE REASON* 687 (Paul Guyer & Allen W. Wood eds., trans., 1998).

⁴³ Joyce E. Berg et al., *The Iowa Electronic Markets: Stylized Facts and Open Issues*, in *INFORMATION MARKETS: A NEW WAY OF MAKING DECISIONS* 142, 152 (Robert W. Hahn & Paul C. Tetlock eds., 2006), available at <http://reg-markets.org/admin/authorpdfs/redirect-safely.php?fname=../pdffiles/phpoY.pdf>; see also Yiling Chen et al., *Information Markets vs. Opinion Polls: An Empirical Comparison* 9 (Working Paper, 2005) (“[I]nformation markets can provide real-time predictions, which are hardly achievable through resorting to experts.”).

⁴⁴ Berg, *supra* note 43, at 152.

⁴⁵ *Id.*

⁴⁶ *Id.*

⁴⁷ See Cherry & Rogers, *supra* note 10, at 835, 875.

⁴⁸ See John O. McGinnis, *Who Will Be President?*, WALL ST. J., July 11, 2008, at A13; John O. McGinnis, *A Democracy of Accelerating Technology* 22 (Working Paper, 2008); SUNSTEIN, *supra* note 9, at vii.

⁴⁹ Robert W. Hahn & Paul C. Tetlock, *Using Information Markets to Improve Public Decision Making*, 29 HARV. J. L. & PUB. POL’Y 213 (2005).

⁵⁰ See Bell, *Science and the Useful Arts*, *supra* note 24.

⁵¹ See Arrow et al., *supra* note 3, at 877.

⁵² Cherry & Rogers, *supra* note 10, at 835, 878.

accurate predictions relative to other forecasting models—”[a] highly accurate set of prediction markets has little value if some other meta predictive mechanism(s) can provide similar accuracy at a lower cost, or if very few substantial decisions are influenced by accurate predictions on its topic.”⁵³

Another concern is that prediction markets may merely *reflect* information that is already available, rather than actually *predict* new information.⁵⁴ In one recent study, economists postulated that the 2008 U.S. presidential prediction markets merely reacted to the release of polling information, and did not actually anticipate any significant changes in voter sentiment.⁵⁵

Moreover, prediction markets may be susceptible to various types of “foul play,” including lying, sabotage, embezzlement, retribution, vulnerability to bubbles or information cascades, bias, or other possible weaknesses.⁵⁶ Market observers are also concerned about particular applications of prediction markets, such as those used to predict terrorist attacks, assassinations, and nuclear missile attacks.⁵⁷

This Article does not address these concerns, but rather focuses on the legal concept of manipulation as it pertains to *trading activities* on political prediction markets. Part III offers five examples of activities and effects that market analysts have considered manipulative in political prediction markets.

III. EXAMPLES OF MANIPULATION IN POLITICAL PREDICTION MARKETS

Over the past several years, political prediction market analysts in the popular media and academia have identified activities constituting manipulation in these markets. Most commentators identifying manipulated markets have not explicitly defined the term manipulation. However, it appears that all of these commentators have implicitly adopted the definition of manipulation recently asserted by Paul W. Rhode and Koleman S. Strumpf.⁵⁸ Rhode and Strumpf define manipulation in political prediction markets as a “speculative attack that achieves its objective of changing prices” that is “usually not possible unless the trades

⁵³ CFM = Prediction Markets, *supra* note 33.

⁵⁴ See ABRAMOWICZ, *supra* note 24, at 38.

⁵⁵ David S. Lee & Enrico Moretti, *Learning in Investment Decisions: Evidence from Prediction Markets and Polls 2* (Am. Econ. Ass’n, Working Paper, 2008), available at http://www.aeaweb.org/annual_mtg_papers/2009/retrieve.php?pdfid=360.

⁵⁶ See generally Yiling Chen et al., *Bluffing and Strategic Reticence in Prediction Markets 1* (Working Paper, 2007) available at <http://www.yiling.seas.harvard.edu/files/wine082.pdf> (“[T]here exist circumstances when traders can benefit by either hiding information (reticence) or lying about information (bluffing).”); Robin Hanson, *Foul Play in Information Markets*, in INFORMATION MARKETS, *supra* note 43, at 126, 130 (analyzing various forms of foul play in prediction markets); Note, *Prediction Markets and Law*, *supra* note 9, at 1221-24 (identifying situations where prediction markets “go wrong”).

⁵⁷ See generally SUNSTEIN, *supra* note 9, at 106-08 (providing background information on the controversial Policy Analysis Market).

⁵⁸ Paul W. Rhode & Koleman S. Strumpf, *Manipulating Political Stock Markets: A Field Experiment and a Century of Observational Data 6* (Working Paper, 2008), available at [http://www.unc.edu/~cigar/papers/ManipIHT_June2008\(KS\).pdf](http://www.unc.edu/~cigar/papers/ManipIHT_June2008(KS).pdf).

influence the beliefs of other market participants."⁵⁹ A *speculative attack* is "any trade uninformed by fundamentals, intended to change prices," and a *fundamental* is "any information that influences the underlying value of the contract."⁶⁰

Pursuant to this definition, political prediction market commentators find in the five examples below that attempted manipulation has occurred when it appears that a trader has purchased contracts attempting to influence the perception that other people have about the viability of a particular candidate. Manipulation is successful when these perceptions actually are influenced. The manipulative trader does not necessarily purchase contracts with the hope of making a profit. In fact, the manipulative trader often loses money on the trade, even intentionally, and is unable to affect the price of the contract substantially or in the long-term.

A. September/October 2008: "John McCain Wins Presidency" Contracts on Intrade

In September and October, 2008, trading activity occurred in the John McCain contract on Intrade that raised concerns. As Intrade CEO John Delaney described the questionable trading, "[m]ultiple large volume Buy orders placed and matched rapidly caused the McCain market to move significantly above the previously prevailing market price by up to 10 pts," while at the same time "[m]ultiple large volume Sell orders placed and matched rapidly caused the Obama market to move significantly below the previously prevailing market price by up to 9 pts."⁶¹

From a public relations perspective, Delaney analyzed these transactions by explaining that a single "institutional" investor on Intrade had purchased a large number of McCain contracts in order to "manage certain risks."⁶² Other market observers, however, described the trading as "manipulative."⁶³ The *New York Times* reported that the price of McCain contracts on Intrade was up to ten points higher than the price of McCain stock on other large online prediction markets such as Britain's BetFair market.⁶⁴ The discrepancies between the same types of contracts on different election prediction markets raised concerns about the integrity of these markets.

One commentator observed that this price discrepancy between the different public prediction markets created arbitrage opportunities.⁶⁵ This type of

⁵⁹ *Id.* (emphasis added).

⁶⁰ *Id.*

⁶¹ John Delaney, http://delaneyintrade.blogspot.com/2008_10_01_archive.html (Oct. 16, 2008, 06:40 EST).

⁶² *Id.*

⁶³ See generally Noam Cohen, *Trading Variance in Election Predictions Raises Questions*, N.Y. TIMES, Oct. 19, 2008, at B4 (discussing John Delaney's response to allegations of market manipulation).

⁶⁴ *Id.*

⁶⁵ Nate Silver, *Intrade Betting is Suspicious*, FIVETHIRTYEIGHT: POLITICS DONE RIGHT, Sept. 24, 2008, <http://www.fivethirtyeight.com/2008/09/intrade-betting-is-suspicious.html> (last visited Feb. 24, 2010). Arbitrage is "the simultaneous buying and selling of identical securities in different markets, with the hope of profiting from the price difference in those markets." BLACK'S LAW DICTIONARY 14

opportunity was found on September 24, 2008—the Obama contract on Intrade was trading at 52.3, suggesting that Obama had a 52.3% chance of being elected president.⁶⁶ At the same time, on the BetFair prediction market site, Obama contracts were trading at 1.62, suggesting that Obama had a 61.7% chance of winning the presidency.⁶⁷ A savvy investor could make a substantial profit by purchasing Obama contracts for a lower price on Intrade and then selling them for a higher price on BetFair.

The *Wall Street Journal* observed that in addition to price disparity with other markets, McCain contracts were being traded at high volume during unusual times, such as early in the morning, during periods of relative political calm.⁶⁸ Such timing raised concerns that a manipulator's hand was involved.

The *New York Times* offered a “political explanation” for the increased value of McCain contracts to explain the trading activity of those contracts:

The political explanation—that someone was trying to game the system to give Mr. McCain some momentum—has the advantage of at least appearing rational to economists. Increasing a candidate's perceived standing would be something of value to offset the irrational decision to waste money buying a share in Mr. McCain for more than the absolute minimum price.⁶⁹

Similarly, Justin Wolfers of the University of Pennsylvania's Wharton School of Business noted that whoever bought the large number of McCain contracts was “obviously someone who want[ed] good news for McCain.”⁷⁰ As reported in the *Wall Street Journal*:

[T]he trader placing the suspicious orders moved the contracts to price levels that weren't sustained, so it's nearly impossible that they made money on the transaction. That suggests to us that the trader had an ulterior motive, such as a desire to raise Sen. McCain's stock and alter the public perception of how the horserace was unfolding.⁷¹

The fact that the non-manipulative prediction market participants quickly identified the manipulative inflationary trading of the McCain contract meant that the manipulative trader likely lost thousands of dollars.⁷² This suggests that the manipulative trader had incentives that went beyond financial gain from the market.

Highlighting the possibility of unsavory motivations held by manipulative traders, Nate Silver of the political blog fivethirtyeight.com observed that on

(8th ed. 2004).

⁶⁶ Silver, *supra* note 65.

⁶⁷ *Id.*

⁶⁸ David Rothschild & Justin Wolfers, *Market Manipulation Muddies Election Outlook*, WALL ST. J., Oct. 2, 2008, available at <http://online.wsj.com/article/SB122283114935193363.html>.

⁶⁹ Cohen, *supra* note 63.

⁷⁰ Josh Rogin, *Trader Drove Up Price of McCain 'Stock' in Online Market*, CONG. Q., Oct. 21, 2008, available at <http://www.cqpolitics.com/wmspage.cfm?docID=news-000002976265&referrer=js>.

⁷¹ Rothschild & Wolfers, *supra* note 68.

⁷² Elizabeth Dickinson, *Future Perfect*, FOREIGN POL'Y, Oct. 2008, http://www.foreignpolicy.com/story/cms.php?story_id=4541&page=1.

September 22, 2008, a “rogue trader” who bought large volumes of McCain contracts was also purchasing Hillary Clinton contracts.⁷³ Silver hypothesized that “someone is betting on some sort of disqualifying event happening to Obama,”⁷⁴ and he encouraged the FBI to uncover the rogue trader’s identity.⁷⁵

These various analyses suggest that whereas a rational *economic* actor would not risk losing money by purchasing McCain contracts for more than their market value, a rational *political* actor would purchase a large number of McCain’s Intrade contracts to make the probability of a McCain victory appear higher to outside observers. The goal of the manipulative trader would be to influence the beliefs that other market observers had about the viability of McCain’s candidacy.

B. May 2007: “Hillary Clinton Wins Presidency” Contracts on Intrade

In May 2007, economist Eric Zitzewitz observed that the “Hillary Clinton for President” contract, which had been trading consistently between twenty-three and twenty-six points on Intrade, suddenly increased to forty points around May 12.⁷⁶ With her odds of winning the Democratic nomination hovering around fifty percent, these numbers implied that, if nominated, Hillary Clinton’s chance of winning the presidency would be about eighty percent.⁷⁷

Zitzewitz noted that this price was “clearly ridiculous” for two reasons: first, “[y]ou could sell the President contracts of Hillary, Obama, Gore, and Edwards for a combined 69 (40+17+8+4) and buy the ‘Democrat to win’ contract for 56,” and second, “[s]ince there was no movement in the nomination contract, the conditional probability of Hillary was now a ridiculous $40/52 = 77\%$, while the conditional probability of ‘Not Hillary’ was $16/48 = 33\%$.”⁷⁸ The first reason raised red flags because it defied logic why an aggregated bundle of contracts indicating that one of the four major Democratic candidates would win the presidency would cost substantially more than a single contract predicting generally that a Democrat would win. The second reason was odd because the conditional contract predicting that Clinton would win the presidency *if* she were nominated suggested that Clinton was a significantly more popular candidate than the contract predicting the likelihood of her nomination suggested.

Additionally, Zitzewitz observed that the “Hillary Clinton for President” contract price stayed at forty points for about a week on higher than normal volume, suggesting that someone was putting a very large amount of money into the market and sustaining that investment at a high level.⁷⁹ Overall, Zitzewitz

⁷³ Silver, *supra* note 65.

⁷⁴ *Id.*

⁷⁵ *Id.* (“Still, if I were the ~~Secret Service~~ FBI (**), I would probably want to know the identity of this trader.”).

⁷⁶ Eric Zitzewitz, *Manipulation Can Affect Prices*, May 30, 2007, <http://www.midasoracle.org/2007/05/30/manipulation-can-affect-prices/> (last visited Feb. 24, 2010).

⁷⁷ Tim Harford, *Hillary’s Odds: Can You Rig the Political Betting Markets?*, SLATE, July 7, 2007, available at <http://www.slate.com/id/2169647/>.

⁷⁸ Zitzewitz, *supra* note 76.

⁷⁹ *Id.*

concluded that this market participant spent \$10,000 to increase the price of “Hillary Clinton for President” contracts by twelve points over the course of two weeks.⁸⁰

Similar to the John McCain contract above,⁸¹ the question arises whether a Hillary Clinton supporter was trying to manipulate the market to make Clinton’s success in the market a self-fulfilling prophecy at the polls, or whether a rival candidate was trying to make the Clinton camp look manipulative.⁸² At any rate, astute Intrade investors who noticed the overvalued “Hillary Clinton for President” contracts had the opportunity, even two weeks after the start of the allegedly manipulative activity, to make “free money” by selling their contracts purchased before the activity at the “true” price of twenty-six points to other market participants who bid for “Hillary Clinton for President” contracts valued at thirty-three points and higher after the attempted manipulation.

C. October 2004: “George W. Bush Wins Presidency” Contracts on TradeSports

Prediction market analysts also observed attempted manipulation in the fall of 2004 “George W. Bush Wins Presidency” contracts on TradeSports (formerly part of Intrade).⁸³ Economists Paul Rhode and Koleman Strumpf summarize the trades as follows:

Shortly after 2:30 pm (EDT) on Friday, October 15, 2004, the *TradeSports* odds price on the re-election of President Bush began to fall precipitously. From a plateau of 54 points at 2:30 pm, a series of thirty trades in less than a second dropped the price to 48 at 2:31 pm. After stabilizing for two minutes, another rapid set of trades led prices to tumble to 10 at 2:33 pm. Thus prices fell by 44 points in just three minutes, suggesting that Bush went from a slight favorite to serious underdog.⁸⁴

Rhode and Strumpf note that the manipulator spent around \$20,000 in an attempt to alter the market, but likely did not make any profit from his efforts.⁸⁵ The price impact of these trades was reversed within twenty-four hours.⁸⁶

Discussing the trader’s motivations, one commentator suggested, “either someone was drunk, or a political hack made a crass attempt to change the odds.”⁸⁷ Rhode and Strumpf wrote:

This sharp drop was the most dramatic of a series of trades that *National Review Online* blogger Donald Luskin soon charged were politically-motivated speculative attacks on Bush futures “to sway the election towards Kerry.” Reports circulated

⁸⁰ Harford, *supra* note 77.

⁸¹ *See supra* Part IV.A.

⁸² *Id.*

⁸³ Rhode & Strumpf, *supra* note 58, at 2-3.

⁸⁴ *Id.*

⁸⁵ *Id.* at 35, 37.

⁸⁶ Wolfers & Zitzewitz, *supra* note 36, at 23.

⁸⁷ Harford, *supra* note 77.

that George Soros was behind the October 15 plunge as well as earlier bear raids on Bush. Such rumors gained currency when a *TradeSports* press release, publicized in *Wall Street Journal* and *Time*, confirmed that the large trades of a single investor produced the October 15 price moves. The press release asserted “Bush contract has become the battle ground of wills between a cadre of large, well financed rogue traders seemingly bent on driving down the Bush re-election contract and a growing list of financial traders who think they can predict the outcome of this election.”⁸⁸

Under the Rhode and Strumpf definition of attempted manipulation, the trader sought to influence the political decisions of market observers, and to use market prices as a means of doing so.

D. Year 2000: “Patrick Buchanan for President” Contracts on IEM

Cass Sunstein observed that an attempt to manipulate a political prediction market occurred during the 2000 presidential election.⁸⁹ The value of the contracts for Patrick Buchanan increased suddenly after a group of traders bought large volumes of these contracts, but the price soon dropped when other “well-informed traders” sold these contracts for a profit.⁹⁰ Sunstein does not define the meaning of attempted manipulation, but from his description it appears that he implicitly adopted the Rhode and Strumpf definition. Sunstein’s description suggests that manipulation involves an effort to increase the price of a candidate’s contracts through high-volume purchasing to signal the candidate’s popularity to other market observers.

E. Year 1999: “FDP Party to Win Berlin State Election” Contracts on WahlStreet

Economists Jan Hansen, Carsten Schmidt and Martin Strobel identified unusual trading activity in political prediction markets that were run during the 1999 Berlin state election.⁹¹ Two independent political prediction markets were conducted to predict the outcome of this election.⁹² One of these markets, the *Walboerse* market run through the Humboldt University Berlin and the newspaper *Berliner Zeitung*, took about one week to enroll new market participants.⁹³ In contrast, the *WahlStreet* prediction market run through the daily newspapers *Der*

⁸⁸ Rhode & Strumpf, *supra* note 58, at 2-3 (citing Donald Luskin, *Who’s Behind the Bush-Futures Attacks?*, NAT’L REV. ONLINE, Oct. 18, 2004, http://www.nationalreview.com/nrof_luskin/luskin200410181132.asp; Donald Luskin, *Bush Futures Being Manipulated*, Oct. 16, 2004, http://www.poorandstupid.com/2004_10_10_chronArchive.asp; Amanda Ripley, *Let’s Make This Vote Interesting, Shall We?*, TIME, Nov. 1, 2004, available at <http://www.time.com/time/magazine/article/0,9171,995538,00.html>; *Bids and Offers*, WALL ST. J., Oct. 22, 2004, at C4).

⁸⁹ SUNSTEIN, *supra* note 9, at 137-38.

⁹⁰ *Id.*

⁹¹ Jan Hansen et al., *Manipulation in Political Stock Markets—Preconditions and Evidence*, 11 APPLIED ECON. LETTERS 459 (2004), available at <http://www.informaworld.com/smpp/content~db=all~content=a713691811~tab=content>.

⁹² *Id.* at 460.

⁹³ *Id.* at 461.

Tagesspiegel and *Berliner Morgenpost* enabled new market participants to trade instantly upon enrollment.⁹⁴ All three of the newspapers involved published the daily results of the vote share-contracts on the first page of their Berlin editions for six weeks preceding the election.⁹⁵

The headquarters of the liberal Free Democratic Party (“FDP”) party sent out an email message to all Berlin FDP party members eleven days prior to the election.⁹⁶ In this email, party members were encouraged to enroll in the *WahlStreet* prediction market and to purchase FDP party stock, in order to increase the demand, and thus the price, of the FDP contracts on the *WahlStreet* market.⁹⁷ Discussing these political stock markets (“PSMs”), the email read:

The *Tagesspiegel* is publishing a PSM on a daily basis, according to which the FDP is traded at 4.23% at the moment. You find the PSM on the internet at <http://berlin.wahlstreet.de>. Many citizens do not think of the PSM as a game, but consider it a result of opinion polls. Hence, it is important that the price of the FDP will rise during the last days. As is the case with every exchange, the price level is a result of the demand. Please participate at the PSM and buy FDP contracts. Eventually, we are all convinced of the success of our party.⁹⁸

Shortly after this email was sent, the FDP prices began to increase slowly on the *WahlStreet* market, up until the day of the last newspaper announcement of the *WahlStreet* prediction price favoring the FDP party.⁹⁹ After the final announcement at 4:00 p.m. on the eve of the election day, the FDP price at *WahlStreet* fell by thirty percent, suggesting that people had purchased FDP contracts solely to increase the reported probability of an FDP victory.¹⁰⁰ Strikingly, similar price increases did not occur on the *Wahlboerse* market where enrollment was not instantaneous, as it was on *WahlStreet*.¹⁰¹

Like the other examples above, the discussion of the 1999 Berlin state election conforms to Rhode and Strumpf’s definition of manipulation. The FDP party organizers sought to influence the beliefs of external market observers by increasing the price of the FDP contract, hoping that a higher contract price would motivate observers to support the FDP at the polls. Rhode and Strumpf note that a manipulator’s actions in increasing the price of a contract “might influence the choice of undecided voters, either directly or through the media.”¹⁰² Because of this influence, some scholars suggest that an extreme solution to avoiding manipulative effects in political prediction markets is to prevent media coverage of

⁹⁴ *Id.*

⁹⁵ *Id.* at 460.

⁹⁶ Hansen et al., *supra* note 91, at 460.

⁹⁷ *Id.* at 460-461.

⁹⁸ Jan Hansen et al., *Manipulation in Political Stock Markets – Preconditions and Evidence* 5-6 (Working Paper, 2001), available at <http://edoc.hu-berlin.de/series/sfb-373-papers/2001-61/PDF/61.pdf>.

⁹⁹ Hansen et al., *supra* note 91, at 461.

¹⁰⁰ *Id.*

¹⁰¹ *Id.* at 462.

¹⁰² Rhode & Strumpf, *supra* note 58, at 7.

prediction market results.¹⁰³ It is unlikely that such a solution would be viable or even legal in the United States.¹⁰⁴

IV. THE INCOHERENCE OF THE CEA'S ANTI-MANIPULATION JURISPRUDENCE AS APPLIED TO POLITICAL PREDICTION MARKETS

The five examples of trading activities in political prediction markets above comply with the Rhode and Strumpf definition of manipulation, which heavily emphasizes the trader's hope that the trades will influence the beliefs of other market participants through the price changes in the market, regardless of whether the manipulative trader sought to or actually did make a profit.¹⁰⁵ This concept of manipulation is markedly different from the CEA's anti-manipulation doctrine.

Whereas the adopted concept of manipulation in political prediction markets depends on the attempt or ability to *influence external beliefs*, the CEA's doctrine depends upon the concepts of *artificial price* and *specific intent to influence the market price*. In what follows, this Article summarizes the CEA's anti-manipulation doctrine, and argues that the CEA's concepts of *artificial price* and *specific intent to influence the market price* are incoherent as applied to political prediction markets. No other prediction market commentator has engaged in this type of sustained analysis of why the CEA's traditional doctrine of manipulation in commodity futures market is incoherent when applied to public prediction markets.¹⁰⁶ This Article argues that *if* the CFTC eventually acquires jurisdiction over political prediction markets, it must abandon the CEA's anti-manipulation jurisprudence in the context of regulating political prediction markets, because the CEA's regulatory rubric is incoherent when applied to the types of activities that market analysts consider to be manipulation in political prediction markets.

A. Background to the CEA's Anti-Manipulation Jurisprudence

The CFTC operates pursuant to the CEA, which regulates the trading of commodities markets in the United States.¹⁰⁷ Under the CEA, the CFTC has exclusive jurisdiction over commodity options and commodity futures contracts.¹⁰⁸

¹⁰³ Hansen et al., *supra* note 91, at 462.

¹⁰⁴ See generally New York Times Company: Press: Ethics in Journalism, Avoiding Market Conflicts, available at <http://www.nytc.com/press/ethics.html#avoiding> (last visited Mar. 8, 2009) (asserting ethical journalism principles under the assumption that journalists have the responsibility to "regularly cover business and financial news"); U.S. CONST. amend. I ("Congress shall make no law . . . abridging the freedom of . . . the press . . .").

¹⁰⁵ See discussion *supra* Part III.

¹⁰⁶ See generally Rhode & Strumpf, *supra* note 58, at 6-7 (distinguishing "manipulation" in political prediction markets from manipulation in derivative markets because "[t]here are no underlying assets in political stock markets, and so manipulation can only be detected using data from the prediction market alone," but not justifying this claim or analyzing its legal implications).

¹⁰⁷ Commodity Exchange Act § 1, 7 U.S.C. §§ 1-27 (2006).

¹⁰⁸ Concept Release on the Appropriate Regulatory Treatment of Event Contracts, 73 Fed. Reg. at 25,670. Section 4c(b) of the CEA gives the CFTC plenary jurisdiction over commodity options, and provides that "[n]o person shall . . . enter into . . . any transaction involving any commodity regulated under this Act which is of the character of, or is commonly known to the trade as, an option . . . contrary to any rule, regulation or order of the Commission [.]" *Id.* Section 2(a)(1)(A) awards the Commission

If public prediction markets fall under the jurisdiction of the CFTC and are regulated under the CEA, then the question arises whether the CEA's anti-manipulation jurisprudence can apply to political prediction markets.

The CEA does not contain any explicit statutory definition of the term manipulation.¹⁰⁹ However, § 13(a)(2) makes it a felony for “[a]ny person to manipulate or attempt to manipulate the price of any commodity in interstate commerce,” and § 13(b) specifically prohibits “[a]ny person [from] manipulate[ing] or attempt[ing] to manipulate the price of any commodity in interstate commerce, or for future delivery on or subject to the rules of any registered entity.”¹¹⁰ Congress may have intentionally left the term manipulation undefined, because it wanted to cast a wide net and cover all types of conduct that someone seeking to affect market prices could perform.¹¹¹ After all, “[t]he methods and techniques of manipulation are limited only by the ingenuity of man.”¹¹² The analysis of whether manipulation has occurred in a commodities market is usually highly fact-specific.¹¹³

Although the CEA's anti-manipulation jurisprudence has been described as “a murky miasma of questionable analysis and unclear effect,”¹¹⁴ a four-part test has emerged which federal courts and the CFTC use to evaluate manipulation on commodity futures markets.¹¹⁵ Under the four-part test, the following elements must be established by a preponderance of the evidence before a court will determine that manipulation has occurred on a commodity futures market: (1) the accused had the ability to influence market prices; (2) the accused specifically intended to influence market prices; (3) artificial prices existed; and (4) the accused caused the artificial prices.¹¹⁶ Moreover, a claim of attempted manipulation requires proof of the following two elements: (1) intent to affect market prices; and (2) an overt act in furtherance thereof.¹¹⁷

The legal test for manipulation and attempted manipulation under the CEA is an extraordinarily difficult test to apply.¹¹⁸ The difficulty is due to the resource-

exclusive jurisdiction with respect to accounts, agreements, and transactions (including options) involving contracts of sale of a commodity for future delivery. *Id.*

¹⁰⁹ Volkart Bros., Inc., v. Freeman, 311 F.2d 52, 58 (5th Cir. 1962).

¹¹⁰ 7 U.S.C. at § 13(a)(2), (b)(2).

¹¹¹ Jerry W. Markham, *Manipulation of Commodity Futures Prices—The Unprosecutable Crime*, 8 YALE J. ON REG. 281, 360 (1991).

¹¹² Cargill, Inc. v. Hardin, 452 F.2d 1154, 1163 (8th Cir. 1971).

¹¹³ *In re Soybean Futures Litig.*, 892 F. Supp. 1025, 1044 (N.D. Ill. 1995).

¹¹⁴ TIMOTHY J. SNIDER, 2 REGULATION OF THE COMMODITIES FUTURES AND OPTIONS MARKETS § 12.01, at 12-15 (2d ed. 1995).

¹¹⁵ *E.g.*, Kohen v. Pac. Inv. Mgmt. Co., 244 F.R.D. 469, 481 (N.D. Ill. 2007) (stating four-part test for manipulation).

¹¹⁶ *Id.*

¹¹⁷ *E.g.*, CFTC v. Amaranth Advisors, L.L.C., 554 F. Supp. 2d 523, 532 (S.D.N.Y. 2008).

¹¹⁸ For in-depth analyses of the four-part test, see generally EMILIOS AVGOULEAS, THE MECHANICS AND REGULATION OF MARKET ABUSE: A LEGAL AND ECONOMIC ANALYSIS 104 (2005); Daniel R. Fischel & David J. Ross, *Should the Law Prohibit “Manipulation” in Financial Markets?*, 105 HARV. L. REV. 503 (1991); Jerry W. Markham et al., *Market Manipulation—From Star Chamber to Lone Star*, 23 NO. 8 FUTURES & DERIVATIVES L. REP. 7 (2003) [hereinafter Markham et al., *Star Chamber*]; Markham, *supra* note 111; Matthijs Nelemans, *Redefining Trade-Based Market Manipulation*, 42 VAL. U. L. REV. 1169 (2008); Wendy Collins Perdue, *Manipulation of Futures*

intensive investigation required, the complexity between the market variables involved in an artificial price and the mind-reading problems of proving intent, among other challenges.¹¹⁹ The conceptual vagueness of these elements makes their application a “daunting, indeed impossible, task for the CFTC staff.”¹²⁰ According to one commentator, manipulation in commodities markets is “virtually an unprosecutable crime” due to the difficulty of applying the CEA’s anti-manipulation doctrine.¹²¹ As hard as it is to apply the doctrine to commodity exchange markets, it is downright incoherent to apply the doctrine to political prediction markets.

B. *The Incoherence of “Artificial Price”*

The elements of the CEA’s anti-manipulation doctrine hinge on the concept of an *artificial price*. There is no single test for what constitutes an artificial price in a commodity futures market. Every test presents its own problems—commodity futures market scholars find that the task of defining what constitutes an artificial price is “a very perilous exercise.”¹²² Despite the difficulties, it appears that three of the predominant tests that courts and the CFTC have developed for “artificial price” in commodity futures markets depend upon the relationship between the futures contract and the value of an “underlying cash asset,”¹²³ and two of the tests depend upon a “historical relationship” between similar futures contracts compared against each other in different time periods.¹²⁴ In the political prediction market context, the concepts of underlying cash asset and historical relationships are incoherent. Therefore, the main five tests for artificial price developed under the CEA all fail to analogize meaningfully to political prediction markets.

Regarding the underlying cash asset relationship, the first test defines an artificial price as a price that diverges from basic forces of supply and demand.¹²⁵ The standard technique to determine whether the basic forces of supply and demand are being violated in a commodity futures market is to look for squeezes and corners in the underlying deliverable assets.¹²⁶ A “corner” is a situation where

Markets: Redefining the Offense, 56 FORDHAM L. REV. 345 (1987); Craig Pirrong, *Commodity Market Manipulation Law: A (Very) Critical Analysis and a Proposed Alternative*, 51 WASH. & LEE L. REV. 945 (1994).

¹¹⁹ Markham, *supra* note 111, at 356-57.

¹²⁰ *Id.* at 357.

¹²¹ *Id.* at 356.

¹²² AVGOULEAS, *supra* note 118, at 109.

¹²³ Rhode & Strumpf, *supra* note 58, at 6-7.

¹²⁴ *In re Cox*, [1986-1987 Transfer Binder] Comm. Fut. L. Rep. (CCH) ¶ 23,786, at 34,064-66 (C.F.T.C. 1987) (analyzing “Historical Market Comparisons” and “Cash Market Price Comparisons” in assessing whether price was artificial); *Great W. Food Distrib., Inc. v. Brannan*, 201 F.2d 476, 482-83 (7th Cir. 1953) (discussing the three methods that the government sought to show an abnormal price in egg futures); Benjamin E. Kozinn, Note, *The Great Copper Caper: Is Market Manipulation Really a Problem in the Wake of the Sumitomo Debacle?*, 69 FORDHAM L. REV. 243, 261-62 n.146 (2000) (citing *Cargill, Inc. v. Hardin*, 452 F.2d 1154, 1167-68 (8th Cir. 1971) (addressing the various approaches that the government argued demonstrated the existence of an artificial price)).

¹²⁵ *Cargill, Inc. v. Hardin*, 452 F.2d 1154, 1163 (8th Cir. 1971).

¹²⁶ Rhode & Strumpf, *supra* note 58, at 6 (citing Craig Pirrong, *Detecting Manipulation in Futures Markets: The Ferruzzi Soybean Episode*, 6 AM. L. & ECON. REV. 28 (2004); Craig Pirrong,

a trader “intentionally causes a price to rise by acquiring a dominant position in the futures market and simultaneously achieving sufficient dominance in the cash market ‘to dry up the sources of deliverable goods.’”¹²⁷ A “squeeze” is a situation in which “the open interest on the futures market is considerably in excess of the deliverable supplies.”¹²⁸ The concepts of corners and squeezes both concern abuses of the basic force of supply and demand, and both concepts are inextricably linked to cash markets for the underlying commodity. Political prediction markets lack this link to a cash market, and thus the supply and demand test is incoherent as applied to political prediction markets.

Moreover, the concept of manipulation based upon a violation of supply and demand forces is itself troublesome. This is because the concept rests on the paradoxical notion that there is no such thing as an artificial price if all market forces that contribute to shaping a price are considered to be part of legitimate supply and demand.¹²⁹ As one scholar explains, “After all, the trader is a part of the market. If he believes a commodity is under priced and seeks advantage, who is to say that the resulting price is artificial?”¹³⁰

A second test compares the futures price to the cash prices of the commodity.¹³¹ Commodity futures contracts require physical delivery of the commodity as a means of settlement.¹³² This requirement is important because it causes futures prices and cash prices to converge.¹³³ This convergence occurs because arbitrage is profitable when a price disparity exists, but the arbitrage transactions themselves will ultimately force cash and futures price convergence.¹³⁴ Whereas a commodity futures contract has a connection to an actual physical commodity that can be delivered in the future or immediately received for cash, the political event forming the basis of the political prediction market contract has no relationship to any underlying physical commodity that can be traded instantly in a cash market or physically delivered in the future. Political prediction markets are even more abstract than futures trading in intangible goods such as stock index futures contracts, because at least with stock index futures the trader “receives a cash settlement based on the theoretical results of his having bought or sold that basket of stocks.”¹³⁵ Due to the absence of a cash market basis and delivery in the political prediction market context, this second test is also incoherent when applied to political prediction markets.

Manipulation of the Commodity Futures Market Delivery Process, 66 J. BUS. 335, 335-69 (1993).

¹²⁷ Perdue, *supra* note 118, at 381 n.217 (citing Note, *The Delivery Requirement: An Illusory Bar to Regulation of Manipulation in Commodity Exchanges*, 73 YALE L. J. 171, 175 (1963)).

¹²⁸ *Cargill*, 452 F.2d at 1162.

¹²⁹ *Ind. Farm Bureau Coop. Ass'n v. Johnston*, [1982-1984 Transfer Binder] Commodity Futures L. Rep. (CCH) ¶21,796 at 27,300 (C.F.T.C. Dec. 17, 1982).

¹³⁰ Markham et al., *Star Chamber*, *supra* note 118.

¹³¹ Kozinn, *supra* note 124, at 262.

¹³² Perdue, *supra* note 118, at 381 n.217.

¹³³ *Id.* (citing Kenneth D. Garbade & William L. Silber, *Cash Settlement of Futures Contracts: An Economic Analysis*, 3 J. FUTURES MARKETS. 451, 454 (1983)).

¹³⁴ *Id.*

¹³⁵ Robert C. Lower, *Disruptions of the Futures Market: A Comment on Dealing with Market Manipulation*, 8 YALE J. ON REG. 391, 395 (1991).

Additionally, a third test analyzes the historical price relationship between different Boards of Trade.¹³⁶ Under this test, the price of commodity futures contracts in one market during a given time frame is compared with the price of the same type of commodity futures contracts in a different market during the same time frame.¹³⁷ This test is problematic when applied to political prediction markets, because these markets lack any cash basis by which to compare market prices. Direct comparisons between the same types of political event contracts in the same time period on different political prediction markets do not account for whether the benchmark of comparison in any of the markets represents the “true” value of the contract. A cash market basis is essential for this third test to provide a meaningful basis of comparison, and the test therefore cannot apply to political prediction markets.

Moving on to the historical relationship puzzle, a fourth test for artificial prices in commodity futures markets compares “the price changes of the suspect contract during the suspect period with price changes of the same type of contract during the same historical period.”¹³⁸ Under this test, we compare the contract’s price during the “suspect period” with the contract’s price movements during the same period in earlier years.¹³⁹ A fifth test for artificial price in commodity futures markets evaluates “price movement in the spread . . . in comparison to price changes in the previous years’ spreads.”¹⁴⁰ This test compares the price difference between the futures contract in a particular commodity in one given month as well as in the subsequent month.¹⁴¹

While these two historical relationship tests may be sensible in commodity futures markets, where the commodities are often agricultural products¹⁴² that are traded seasonally year after year, both of these tests are incoherent in the political prediction market context. This is because the event forming the basis of the political prediction market contract is *unique* under the strictest meaning of the word.¹⁴³ Political events do not have repetitive, cyclical “harvesting” periods. Each particular nomination or election can occur only once.

Although it is true that elections generally occur according to cyclical, predictable schedules pursuant to the expiration of pre-determined terms of office, the infinite distinct variables surrounding a political election thwart direct historical comparison between election cycles, even when the same candidate is involved. It is not fruitful, for example, to analyze the price fluctuations of a “George W. Bush will be elected President in 2000” contract’s price with the price fluctuations of a “George W. Bush will be elected President in 2004” contract’s

¹³⁶ Kozinn, *supra* note 124, at 261-62.

¹³⁷ *Id.* at 262 n.150.

¹³⁸ *Id.* 261-62.

¹³⁹ *Id.* at 262 n.147.

¹⁴⁰ *Id.* at 262.

¹⁴¹ *Id.* at 262 n.148.

¹⁴² See generally 7 U.S.C. § 1(a)(4) (2006) (defining “commodity” by listing specific agricultural products along with “all other goods and articles . . . and all services, rights, and interests in which contracts for future delivery are presently or in the future dealt in”).

¹⁴³ The Oxford English Dictionary defines “unique” as “[o]f which there is only one; one and no other; single, sole, solitary.” OXFORD ENGLISH DICTIONARY (2d ed. 1989).

price. Although both markets concern the same candidate for U.S. President, the political environments and variance in overall candidate pools were different enough to make direct historical price comparison meaningless.

Since the doctrines of artificial price that courts and the CFTC have developed in light of the CEA's anti-manipulation jurisprudence are incoherent when applied to political prediction markets, the CFTC cannot utilize this jurisprudence if it acquires jurisdiction to regulate political prediction markets. As we see next, the CEA's doctrinal concept of *specific intent to influence market price* is also incoherent when applied to political prediction markets.

C. The Incoherence of "Specific Intent to Influence Market Price"

The element of *specific intent to influence market price* is the most elusive component of the current CEA anti-manipulation doctrine in the commodity futures market context, due to its circumstantial and subjective nature. After all, "it is hard to read people's minds."¹⁴⁴ Despite the difficulties that arise in defining specific intent to influence market prices in commodities markets, the underlying basic premise is that manipulators intend to affect the market such that they can buy a commodity futures contract at a low price and sell at a high price.¹⁴⁵ As we will see, this basic premise is incoherent when applied to political prediction markets, because as illustrated in Part III, manipulative traders in political prediction markets seek to change the price of the contract *in order to influence external beliefs about the candidate's viability*. In the commodity futures market context, price change for profit is the manipulator's end in itself. In the political prediction market context, price change for profit *or loss* is a means to the secondary end of influencing beliefs.

Commodities market scholar Wendy Collins Perdue starts with the basic premise of the CEA's anti-manipulation doctrine that rational investors try to buy a commodity futures contract at a low price and sell at a high price.¹⁴⁶ Perdue explains that a rational, non-manipulative trader seeks to minimize the price impacts of his own trades on the commodity futures markets, because doing so will enable the trader to obtain the best price.¹⁴⁷ This is because the rational, non-manipulative trader wants to purchase the contract for the lowest possible price in order to obtain the greatest possible profit upon sale at a higher price.

Perdue suggests that a trader may indicate manipulative intent when the trader purchases a large quantity of a commodity contract and does so in a manner that seems designed specifically to increase the price impact of that purchase.¹⁴⁸ Another indication of manipulative intent is "reaching," which occurs "when the trader makes a bid at a price that is substantially higher, (or lower) than the last bid or transaction."¹⁴⁹ Either activity comports with basic economic rationality,

¹⁴⁴ Fischel & Ross, *supra* note 118, at 519.

¹⁴⁵ Perdue, *supra* note 118, at 393.

¹⁴⁶ *Id.*

¹⁴⁷ *Id.* at 396.

¹⁴⁸ *Id.*

¹⁴⁹ *Id.* at 397.

because it is the manipulative trader's goal to *make a monetary profit* off of the market-based trades.

However, Perdue's analysis is problematic when applied to the context of political prediction markets, because her basic premise—that rational traders on commodities futures markets try to buy low and sell high—does not apply to the manipulation relevant to political prediction markets. As illustrated in Part III, traders in political prediction markets will purchase event contracts in order to influence the beliefs of other market observers, and ultimately policy decisions. It would be *politically* rational, though not economically rational under the CEA's manipulation doctrine, for a political prediction market trader to try to force the price of the contract *down* if the trader's object was to indicate that a particular candidate was falling out of popular favor. Prediction market scholar Robin Hanson observes that people will make trades on public prediction markets that lose money in order to change prices and therefore policy.¹⁵⁰ Hanson writes, "[e]ven if such trades lost money on average, those losses might be outweighed by gains from more favorable policy."¹⁵¹ Whereas manipulation in a political prediction market is rational if it influences external political belief, manipulation in a traditional commodities market is rational only if it results in the trader's own monetary gain. The two types of manipulation are not analogous.

Ironically, it is likely *politically irrational* for traders in political prediction markets to structure their trades with the intent to influence beliefs. Empirical research suggests that even the secondary goal of influencing beliefs is not likely to be accomplished through contract trading in political prediction markets. While some prediction market traders engage in trade-based manipulation with the intent to influence external beliefs, an experiment by prediction market researchers suggests that "price manipulation is a largely ineffective strategy for altering the beliefs of investors and other decision makers."¹⁵² Although the experiment was designed to provide manipulation incentives to some market participants while other participants were "kept in the dark about the direction in which manipulation incentives ran," the manipulation did not reduce the accuracy of the third party observers' forecasts.¹⁵³ The manipulative trader's efforts to influence the third parties' beliefs were ineffective, and the effort was an economic and political waste.

In another prediction market experiment, researchers discovered that within limited boundaries of experimental design, when a non-manipulative market participant suspects the presence of prediction market manipulators and knows the direction in which the manipulators are likely to push the price, the manipulation efforts are ineffective.¹⁵⁴ This experiment was limited to situations in which all the participants knew that prediction market manipulators were present, how strong the incentive to manipulate was, and in which direction the manipulators

¹⁵⁰ Hanson, *supra* note 56, at 128.

¹⁵¹ *Id.*

¹⁵² Ryan Oprea et al., *Can Manipulators Mislead Market Observers?* 16 (George Mason Univ., Working Paper, 2007), available at <http://people.ucsc.edu/~roprea/manipEX2.pdf>.

¹⁵³ *Id.*

¹⁵⁴ Robin Hanson et al., *Information Aggregation and Manipulation in an Experimental Market*, 60 J. ECON. BEHAV. & ORG. 449, 458 (2006), available at <http://people.ucsc.edu/~roprea/manipEX1.pdf>.

had an incentive to push the price.¹⁵⁵

The authors acknowledge that the experimental conditions of this research should be altered in future experimental designs, to uncover more information about the robustness of prediction markets to manipulative trading designed to influence external beliefs of other market participants or observers.¹⁵⁶ Nonetheless, these studies suggest that it does not matter whether prediction market traders share the same rational basis to buy low and sell high as commodities market traders, because even if prediction market traders trade to influence policy rather than maximize personal economic profits pursuant to the CEA's anti-manipulation doctrine, such efforts are likely to be ineffective anyway.¹⁵⁷

This Part has argued that the concepts of *artificial price* and *specific intent to influence market price* as developed under the CEA's anti-manipulation jurisprudence are incoherent when applied to political prediction markets. Therefore, the CFTC must abandon the CEA's regime if it acquires jurisdiction over political prediction markets. Part V suggests three different alternatives to the CEA regime to address the issue of manipulation in political prediction markets.

V. THREE ALTERNATIVES FOR PREVENTING MANIPULATION IN POLITICAL PREDICTION MARKETS

Part IV demonstrated that the concept of manipulation under the CEA's anti-manipulation doctrine is incoherent when applied to political prediction markets due to the nature of the concepts of *artificial price* and *specific intent to influence market prices* as developed under the CEA's jurisprudence. Part V now presents three alternatives to the CEA's regime that the CFTC can choose to adopt if it acquires jurisdiction over political prediction markets. These three alternatives are: (1) the CFTC can develop a revised anti-manipulation doctrine with elements that *are* coherent when applied to political election markets; (2) the CFTC can encourage private contracting between market participants to prohibit certain trading activities; or (3) the CFTC can take no action and simply allow political prediction markets themselves to control manipulation through self-deterrence mechanisms.

A. *Designing a New Regulatory Regime*

Since the anti-manipulation doctrine involving *artificial price* and *specific intent to influence market prices* under the CEA is incoherent when applied to political prediction markets, the CFTC and courts may develop a new set of tests to apply when analyzing whether a trader has manipulated or attempted to manipulate a political prediction market.

¹⁵⁵ *Id.*

¹⁵⁶ *Id.*

¹⁵⁷ These studies generally relate to the notion that trade-based price manipulation in both commodity futures markets and political prediction markets is self-detering. See discussion *infra*, Part V.C.

One approach is for the courts and the CFTC to develop a set of objective factors that can be observed and discovered *ex post*.¹⁵⁸ The *ex post* approach avoids the “mind reading” exercise typically involved in discerning specific intent. Under the *ex post* approach, where it is found that a trader engaged in specific prohibited practices in the political prediction markets, CFTC regulation would be necessary, but the trader’s intent to influence the beliefs of outside observers would only be relevant at the sanctions stage.¹⁵⁹

Several *ex post* factors that the CFTC and the courts could analyze to discern whether a trader attempted to manipulate a political prediction markets are 1) whether the purchase price of the contract was substantially above the market price; 2) whether the purchases were made rapidly at increasingly higher prices; 3) whether extremely large purchases were made relative to the market as a whole;¹⁶⁰ 4) whether a single trader spent a significant amount of money on contracts for a single candidate; 5) whether the resulting price of the candidate’s contract after the trade is significantly different from the political poll data for that candidate; 6) whether arbitrage opportunities existed between different political prediction market boards of trade after the attempted manipulative trading has occurred; 7) whether the trader in question is affiliated with a political party; 8) whether the candidate endorses policies that would personally benefit or hurt the trader or parties in privity with the trader; and 9) whether the trader has a history of contributing to political campaigns.

None of these *ex post* factors would be outcome-determinative as to whether the trader attempted to manipulate the political prediction market. However, they at least provide some starting factors that the CFTC and courts could consider in combination when analyzing whether the trader engaged in manipulation with the ultimate intent to influence the beliefs of external market observers.

Rather than prevent market manipulation with criteria that identifies problematic objective behaviors indicative of manipulative intent *ex post*, some scholars argue that unwanted market behavior should be policed *ex ante* through the use of affirmative regulation.¹⁶¹ Writing in the context of combating manipulation in commodity future markets, Jerry Markham argues that the CFTC should engage in intensive surveillance.¹⁶² This surveillance would continue throughout the life of the commodity futures contract, in order, for example, “to see if large traders are affecting prices through their trades and whether these positions are so large that they should be required to liquidate well before the delivery period.”¹⁶³ In addition to this intensive daily surveillance, Markham proposes limits on the amount of short trading that any one commodity futures

¹⁵⁸ See generally Markham, *supra* note 111, at 369 (offering objective factors in the commodity futures market context).

¹⁵⁹ *Id.*

¹⁶⁰ See *id.* (citing CFTC DIVISION OF TRADING AND MARKETS, ANALYSIS OF TRADING IN THE CHICAGO BOARD OF TRADE’S MAJOR MARKET INDEX FUTURES CONTRACT ON OCTOBER 20, 1987, at 1-2 (1988)).

¹⁶¹ *Id.* at 375.

¹⁶² *Id.* at 365.

¹⁶³ *Id.*

trader can engage in on a single day,¹⁶⁴ and advocates for an automatic order execution system for small orders that would minimize petty theft.¹⁶⁵

As a policy matter, Markham argues that strict affirmative regulation is required in the commodity futures market context for the trading public to gain confidence in the “highly innovative and still-growing futures industry.”¹⁶⁶ Markham writes that the alternative to aggressive, affirmative regulation is “to declare that the manipulation of commodity prices is an unprosecutable crime in which traders may engage with no regard for the effect upon the consumer and the economy in general.”¹⁶⁷ His tone suggests that it would be disgraceful for our government to concede that manipulation is unprosecutable.¹⁶⁸

Markham’s argument in favor of *ex ante* affirmative regulation is powerful in the political prediction market context, because public acceptance of the markets as legitimate is crucial if these markets are to grow on a large scale. The mere fact that prediction markets are novel, complex and anonymous causes some concern for market abuse.¹⁶⁹ John Delaney, the CEO of Intrade.com, is concerned enough about the effect of political prediction market “manipulation” on public confidence in these markets that he has solicited feedback on the matter in a public online forum.¹⁷⁰

Several scholars have posited reasons why manipulation in public prediction markets is troubling. The most emotionally compelling argument against manipulation of prediction markets is that it undermines potential market participants’ belief in the integrity of the market, and therefore discourages them from participating.¹⁷¹ Eric Zitzewitz points out, “[p]eople have a taste for institutional integrity itself.”¹⁷² Zitzewitz also notes that the possibility for manipulation creates bad incentive effects, and manipulation relies on surprise, which is a source of vexation for honest prediction market participants.¹⁷³

However, Markham’s approach to affirmative *ex ante* regulation has several drawbacks. First, even Markham acknowledges that the greatest danger from this type of affirmative regulation is that it “might strangle the markets and stifle

¹⁶⁴ Markham, *supra* note 111, at 368.

¹⁶⁵ *Id.* at 373-74.

¹⁶⁶ *Id.* at 373, 375.

¹⁶⁷ *Id.* at 375.

¹⁶⁸ See generally *id.* at 375-76 (discussing the significant societal costs resulting from manipulated artificial prices).

¹⁶⁹ Robin Hanson & Ryan Oprea, *A Manipulator Can Aid Prediction Market Accuracy*, 76 *ECONOMICA* 304, 312 (2009)

¹⁷⁰ Posting of John Delaney, CEO, Intrade.com, to Google Groups—Prediction Markets, http://groups.google.com/group/Prediction-Markets/browse_thread/thread/7d88abc019dc6552/249a39a22a9422ab (July 31, 2008, 00:30 PDT).

¹⁷¹ See Michael Giberson, *Deep-Pocketed Manipulators are a Prediction Market’s Friend*, July 8, 2007, <http://www.midasoracle.org/2007/07/08/deep-pocketed-manipulators-are-a-prediction-market%E2%80%99s-friend/>.

¹⁷² See Eric Zitzewitz, *Is Manipulation Good for a Prediction Market? Accuracy Isn’t Everything*, July 9, 2007, <http://www.midasoracle.org/2007/07/09/is-manipulation-good-for-a-prediction-market-accuracy-isnt-everything/>.

¹⁷³ *Id.*

innovation.”¹⁷⁴ There is a risk that potential traders will be overly-deterred from participation due to fear of legal repercussions for “questionable” trades.¹⁷⁵ In a newly developing field such as political prediction markets, it is desirable to invite wide participation without threatening participants with stiff regulations that will prevent them from exploring and experimenting with this new market medium.

Second, some commentators fear that Markham’s approach to strong government regulation could obscure the underlying economic information on commodity futures markets. Robert Lower argues, “[w]ith the CFTC acting as a ‘hands-on’ policeman and occasional market participant, the markets could easily become governed by political considerations having nothing to do with the economic factors affecting price.”¹⁷⁶ Political actors would seek to control the price of commodities having a disproportionately influential effect in their constituents’ region.¹⁷⁷

Lower’s worry suggests that governmental regulatory intervention will obscure the underlying prediction price data, thus resulting in inferior predictive ability of these markets.¹⁷⁸ Analogizing to the political prediction market context, Gary Becker fears that political prediction markets with distorted underlying price data are less reliable as predictors of outcomes.¹⁷⁹ These considerations indicate that aggressive affirmative regulation of prediction markets is not the best solution to manipulation in political prediction markets.

B. Private Contract Solutions

Rather than monitor manipulation in the political prediction market through either *ex post* or *ex ante* regulation, the CFTC could encourage private contractual solutions to curb manipulative trading activities. Private contract solutions provide an alternative to aggressive governmental regulation of manipulation in public prediction markets. Gaining insight from the commodities market context, some scholars have argued that governmental regulation of commodity futures market manipulation is unnecessary because the exchanges that offer these futures contracts have a private incentive to regulate manipulation.¹⁸⁰ To attract business, compete with other exchanges, and compete with other securities markets, private exchanges have the incentive to adopt contract terms and trading rules that reduce the costs of manipulation.¹⁸¹

This observation is easily applied to the prediction market context generally.

¹⁷⁴ Markham, *supra* note 111, at 375.

¹⁷⁵ See generally Fischel & Ross, *supra* note 118, at 523 (“Even a seemingly narrow legal rule focusing on ‘clear’ evidence of manipulative intent (assuming such ‘clear’ evidence exists) is unlikely to provide net social benefits. Any rule that addresses the difficult problem of identifying manipulative conduct risks overdeterrence—causing society to bear the costs of foregone beneficial activity.”).

¹⁷⁶ Lower, *supra* note 135, at 397.

¹⁷⁷ See *id.*

¹⁷⁸ *Id.* at 398.

¹⁷⁹ See generally Posting of Gary Becker to The Becker-Posner Blog, http://www.becker-posner-blog.com/archives/2008/09/political_predi.html (Sept. 14, 2008, 05:33 EST).

¹⁸⁰ Fischel & Ross, *supra* note 118, at 549.

¹⁸¹ *Id.*

In fact, Cantor Futures Exchange, L.P. (“Cantor”), presumably in anticipation of imminent CFTC regulation of public prediction markets, recently filed an application with the CFTC to become a fully regulated futures exchange.¹⁸² In its application, Cantor expressed its intent to list contracts on domestic movie box office receipts.¹⁸³ This course of action would constitute a public prediction market in which traders predict the total gross domestic box office receipts in the United States and Canada in U.S. dollars.¹⁸⁴ Notably, Cantor’s application includes private contractual provisions to control manipulation on its box office exchange.¹⁸⁵

Box office receipt prediction markets can suffer from the same types of manipulation as political prediction markets. Traders in box office receipt contracts may seek to influence the beliefs of outside observers as to the movie’s commercial appeal and success to persuade others to attend the film in the theater. Unfortunately, Cantor does not define the term manipulation in its application. If the private contractual solutions were applied to political prediction markets, parties would be well-advised to define manipulation clearly to avoid the interpretive difficulties discussed in Part IV.

Although private contracts avoid some of the problems associated with aggressive governmental regulation, these private contractual solutions pose several problems of their own. As Fischel and Ross acknowledge in the commodities market context, “rules designed to prevent the exercise of market power also reduce the return to information about future prices and thus reduce the incentive for market participants to gather such information.”¹⁸⁶ This reduction in information gathering incentives would be highly problematic in the political prediction market context, in which the incentive to gather information is one of

¹⁸² Cantor Fitzgerald, L.P., Application for Contract Market Designation Compliance with Designation Criteria and Core Principles, <http://www.cftc.gov/stellent/groups/public/@requestsandactions/documents/ifdocs/cantordcmcompliancechart.pdf> (last visited Feb. 19, 2010).

¹⁸³ Cantor Futures Exchange, L.P., Domestic Box Office Receipts: Contract Rules, <http://www.cftc.gov/stellent/groups/public/@requestsandactions/documents/ifdocs/cantordborcontracttermsandcond.pdf> (last visited Feb. 19, 2010).

¹⁸⁴ *Id.*

¹⁸⁵ *Id.* Under section III-3, Execution of the Pre-Opening Auction, the Contract Rules state:

(c) Prior to closing the Pre-Opening Auction, the Exchange will determine . . . whether any bids or offers . . . may potentially be part of a manipulation or attempted manipulation of the relevant DBOR Contract, or may otherwise be in violation of Exchange Rules. In making this determination, the Exchange will consider and examine, among other things, any large quantities that the Exchange determines to be inappropriate, or patterns of orders that might be considered disruptive to the auction process. The Exchange may request, and Participants shall provide, any additional information or documentation reasonably requested by the Exchange in connection with its consideration of these issues. The Exchange shall have the authority to reject or cancel any bids or offers that it determines to be part of a manipulation or attempted manipulation, or that are otherwise not in accordance with the Rules of the Exchange, including these DBOR Contract Rules.

Id.; see also Cantor Futures Exchange, L.P. Rules, VI-5. <http://www.cftc.gov/stellent/groups/public/@requestsandactions/documents/ifdocs/cantordcmrules.pdf> (“Any manipulation of the market in any Contract is prohibited.”) (last visited Feb. 19, 2010).

¹⁸⁶ Fischel & Ross, *supra* note 118, at 549.

the prime virtues of such a market.¹⁸⁷

Another problem is whether the private contractual rules adopted by the public prediction market exchange will adopt the optimal amount of precautions against manipulation, however it is defined.¹⁸⁸ The optimal precaution level against manipulation in private contractual agreement occurs when the marginal private gains equal the marginal private costs, and the private gains and costs approximate the social gains and costs.¹⁸⁹

In the commodities market context, scholars disagree about whether the level of precautions against manipulation undertaken by private contracting parties will approximate the social gains and costs. On the one hand, some believe this convergence is likely because “traders on the futures market are those who bear most of the costs and receive most of the gains from trading in these markets.”¹⁹⁰ If the privately contracting traders capture nearly *all* the benefits or burdens of the trades resulting from private agreement, then the private and social costs do converge almost completely.

On the other hand, some scholars are concerned that the private contractors will not take the optimal amount of precautions because “exchanges do not take into account the interests of those who are affected by futures prices but do not participate in the futures market.”¹⁹¹ The dispute here is whether the privately contracting traders do in fact capture *all* (or nearly all) of the benefits of the contract themselves, and whether they need to be concerned with the interests of outside market observers.

Fischel and Ross dispose of this concern by arguing that private contracts formed between traders *do* take into account the needs of outside market observers.¹⁹² This is because outside observers of commodities markets (such as farmers who look at futures prices to determine how much to plant) participate in spot markets for the commodity.¹⁹³ They explain that “[s]peculators in futures markets take positions that ensure that futures prices reflect the information in spot markets (and vice versa)” and that “[t]his interaction between spot and futures markets may provide incentives for exchanges to take the spot market into account in determining what precautions to take.”¹⁹⁴

The issue of whether privately contracting parties will adopt the optimal level of precautions against manipulation in the political prediction market context raises particular difficulties in light of Fischel and Ross’s theories. First of all, whereas in the commodity futures context it is at least arguable that the privately contracting parties capture nearly all the benefits or burdens of the trades resulting from the private agreement, this notion is false in the political prediction market

¹⁸⁷ See discussion *supra* Part II.

¹⁸⁸ Fischel & Ross, *supra* note 118, at 549 n.200.

¹⁸⁹ *Id.*

¹⁹⁰ *Id.* (citing Frank H. Easterbrook, *Monopoly, Manipulation, and the Regulation of Futures Markets*, 59 J. BUS. S103, S113 (1986)).

¹⁹¹ *Id.*

¹⁹² *Id.*

¹⁹³ Fischel & Ross, *supra* note 118, at 549 n.200.

¹⁹⁴ *Id.*

context. As discussed in Part III,¹⁹⁵ concerns about manipulation in political prediction markets are *based upon* the influence of the trades on external market observers. Outside observers look at the market prices to analyze the viability of a political candidate, and this can influence the outsider's own votes. Therefore it is not a colorable argument to suggest that private and social costs will converge completely through private contracting where political prediction markets are concerned.

Secondly, the solution by which Fischel and Ross dispose of the optimal precaution concern cannot be analogized to political prediction markets. Whereas Fischel and Ross argue that the existence of a spot market provides incentives for private contracting parties to adopt the optimal precautions against manipulation in commodity futures markets, there is no analogous spot market for the events underlying political prediction markets. In a commodities market a trader can, for example, simultaneously purchase frozen orange juice concentrate immediately on a spot market as well as purchase futures contracts for the frozen concentrate. In contrast, a trader on the political prediction market cannot simultaneously discern the final vote counts of an actual election while purchasing contracts on the political prediction market for the same exact election.

These failures of analogy between private contractual solution for manipulation in commodity futures markets and political prediction markets suggest that private contracts would not solve the problems of manipulation in political prediction markets. If affirmative government regulation and private contractual solutions both fail in the political prediction market context, perhaps a third solution—self-deterrence—can solve the problem of manipulation in these markets. We now turn to this possibility.

C. Self-Deterrence of Manipulative Trading

In the context of commodity futures markets, Fischel and Ross offer an argument that manipulation on commodity futures markets is self-detering and thus not in need of a regulatory regime. First, they observe that the acquisition of market power requires a large amount of capital, and this by itself is a deterrent to manipulative efforts.¹⁹⁶ Second, they argue that manipulation on commodity markets is self-detering because of how risky such efforts are. A manipulator must withhold supplies of a commodity to cause a price increase, but such behavior is risky because after the futures contract expires, the demand is likely to be much more elastic.¹⁹⁷ The manipulator does not necessarily have the ability to obtain a high price for the contract after its expiration.¹⁹⁸ Therefore, the would-be manipulator “has no assurance that the price at expiration will yield him a profit,” and thus attempted manipulations in futures markets are “extremely risky.”¹⁹⁹

The concept of manipulation on political prediction markets is also likely

¹⁹⁵ See discussion *supra* Part III.

¹⁹⁶ Fischel & Ross, *supra* note 118, at 547.

¹⁹⁷ *Id.* at 547–48.

¹⁹⁸ *Id.* at 548.

¹⁹⁹ *Id.*

self-detering. The cost of manipulation is high,²⁰⁰ the chance of profiting financially is low,²⁰¹ and the prices are usually altered for only a short period of time.²⁰² Alert market participants can profit off the manipulated prices, so the manipulator essentially subsidizes the profit-making ability of the non-manipulators.²⁰³ Moreover, as expressed in Part IV.C, price manipulation is largely ineffective in influencing the beliefs of observers outside the market.²⁰⁴

Saul Levmore supports the self-deterrence theory by observing, “[M]uch as there is money to be made in manipulation, there is money to be made in counter-manipulation.”²⁰⁵ He explains that the market itself will generate “corrective entrepreneurs and activities” that oppose manipulation, and that the free market will “prove superior to government-sponsored regulators even at the task of regulation itself.”²⁰⁶ The self-deterrence theory concludes that because market forces and private incentives make manipulative attempts costly, risky, and ineffective, market manipulators will be deterred from attempting to engage in such activities. Governmental regulation of these activities would be superfluous, costly, and unnecessary.

VI. CONCLUSION: URGING REGULATORY RESTRAINT

This Article has argued that the CEA’s current anti-manipulation doctrine is incoherent as applied to political prediction markets.²⁰⁷ Additionally, it has suggested that both aggressive governmental regulation and private contractual solutions are problematic.²⁰⁸ Self-deterrence within the market structure itself may be the best solution for preventing manipulation in political prediction markets.²⁰⁹ For this reason, the CFTC should exercise restraint in designing an anti-manipulation regime towards political prediction markets, if it acquires jurisdiction over these markets. Beyond the possibility that self-deterrence is the best solution, this Article concludes with an additional reason why the CFTC should exercise regulatory restraint: empirical experiments suggest that manipulation may actually improve the predictive accuracy of these markets.

Robin Hanson explains that the low impact of manipulation in prediction markets is due to the high level of “noise trades” in these markets.²¹⁰ Trades are made in these markets that have nothing to do with the underlying information; rather, trades are made because of mental mistakes, insurance purposes, or other

²⁰⁰ *Id.*; see discussion *supra* Part III.B.

²⁰¹ Fischel & Ross, *supra* note 118, at 548; see discussion *supra* Part III.B.

²⁰² Fischel & Ross, *supra* note 118, at 548; see discussion *supra* Part III.C.

²⁰³ Fischel & Ross, *supra* note 118, at 548; see discussion *supra* Part III.A.

²⁰⁴ See discussion *supra* Part IV.C.

²⁰⁵ Saul Levmore, *Simply Efficient Markets and the Role of Regulation: Lessons from the Iowa Electronic Markets and the Hollywood Stock Exchange*, 28 J. CORP. L. 589, 601 (2003).

²⁰⁶ *Id.* at 602.

²⁰⁷ See discussion *supra* Part IV.

²⁰⁸ See discussion *supra* Parts V.A, V.B.

²⁰⁹ See discussion *supra* Part V.C.

²¹⁰ Hanson, *supra* note 56, at 130.

non-informational reasons.²¹¹ Manipulation is merely another type of noise trading, and those traders holding real information have the opportunity to make a profit off of those participants who are trading for reasons other than for revealing accurate information about the underlying event probability.²¹² Moreover, manipulation “should not add any systematic bias, and the prospect of manipulation should increase liquidity and thus reduce noise overall.”²¹³

Hanson observes that non-manipulative participants will alter their behavior in two ways to profit off of the manipulative or “noise traders.” First, they will trade at a higher volume for any information they hold because doing so will increase their expected profits.²¹⁴ Second, and most significantly, they will increase their efforts to obtain relevant and accurate information to beat the price set by the manipulative trader.²¹⁵

The second behavior is important because these efforts to obtain accurate information mean that on average, more noise trading should *increase* price accuracy.²¹⁶ Hanson explains that empirically “it seems that financial and information markets with more noise trading, and hence a large trading volume, tend to be more accurate, all else being equal.”²¹⁷ This is because the presence of manipulative traders induces more effort by informed traders, and this explains the typical failure of most manipulation attempts.²¹⁸

In one of Hanson and Oprea’s empirical studies, the authors discovered that in a thin prediction market with a known manipulator possessing definite price objectives, the presence of the manipulator actually *increased* the accuracy of the market price.²¹⁹ The presence of a manipulator motivated other traders to gather information, and this additional information resulted in greater expected financial rewards for the non-manipulative traders.²²⁰ The manipulator’s known presence therefore “indirectly *increases* the accuracy of the market price as an estimate of fundamental asset value.”²²¹ Although their experiment focused on thin prediction markets, Hanson and Oprea note that the largest financial markets have the most accurate information and prices because other traders who anticipate a large volume of noise trades in the larger market will change their trading behavior in

²¹¹ *See id.*

²¹² *See id.*

²¹³ Michael Abramowicz & M. Todd Henderson, *Prediction Markets for Corporate Governance*, 82 NOTRE DAME L. REV. 1343, 1356 (2007).

²¹⁴ Hanson, *supra* note 56, at 130.

²¹⁵ *Id.* at 131.

²¹⁶ *Id.* (citing Albert S. Kyle, *Informed Speculation with Imperfect Competition*, 56 REV. ECON. STUD. 317 (1989); Matthew Spiegel & Avanidhar Subrahmanyam, *Informed Speculation and Hedging in a Noncompetitive Securities Market*, 5 REV. FIN. STUD. 307 (1992)).

²¹⁷ *Id.* (citing Joyce Berg et al., *What Makes Markets Predict Well? Evidence from the Iowa Electronic Markets*, in UNDERSTANDING STRATEGIC INTERACTION: ESSAYS IN HONOR OF REINHARD SELTEN 444–64 (Wulf Albers et al. eds., 1996)).

²¹⁸ Hanson & Oprea, *supra* note 169, at 3.

²¹⁹ *Id.*

²²⁰ *Id.*

²²¹ *Id.* at 4.

response.²²²

These empirical findings indicate that manipulation might actually be *good* for political prediction markets. Additional research is needed, but in the meantime such data suggests that the CFTC, if it acquires jurisdiction, should not hastily seek to regulate apparently manipulative trading on political prediction markets if doing so will prevent these markets from reaching their most accurate potential.

²²² *Id.* at 12.