

# UNCERTAINTY, DANGEROUS OPTIMISM, AND SPECULATION: AN INQUIRY INTO SOME LIMITS OF DEMOCRATIC GOVERNANCE

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## INTRODUCTION

People are often optimistic. Nearly fifty percent of marriages end in divorce, but one survey found that 100 percent of individuals planning to get married believed they would never get divorced.<sup>1</sup> Most people think they drive better than the average driver, and at one university, ninety-four percent of professors placed themselves in the top fifty percent in terms of teaching skills.<sup>2</sup> We often seem to think we are like the youth of Garrison Keillor's fictional hometown Lake Wobegon, where "all the children are above average."<sup>3</sup>

This is not always a bad thing. Optimism can be advantageous. Without optimism, Columbus might not have discovered the New World and Steve Jobs might not have started Apple Computer in his parents' garage. Indeed, without optimism, many of us might not be able to rouse ourselves from our beds each morning to face the day. But optimism poses dangers as well. This Article examines one of the more costly and intractable problems that can arise from optimism: the problem of regulating optimism-driven speculation in financial markets.

Part I shows how optimism-driven speculative trading can be a kind of market failure that predictably generates economic losses to society. It begins by defining the difference between risk and uncertainty, and demonstrating how uncertainty (unlike risk) permits subjective disagreement over future values. It then offers a simple model of markets in which relative optimism generates disagreement-based trading in financial instruments and derivative contracts by speculators who hope to profit from predicting future events more accurately than others do. It notes how this sort of disagreement-based trading has received relatively little attention in the modern economic literature, which instead tends to implicitly (and somewhat misleadingly) assume that "speculative" trading is driven not by subjective disagreement in the face of uncertainty, but by differences in traders' risk aversion and liquidity needs, or differences in their access to certain, but costly, information. Nevertheless, disagreement-based speculative trading represents a form of market failure that deserves attention. Part I demonstrates how transactions driven by uncertainty and disagreement can generate net economic losses by increasing traders'

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<sup>1</sup> See Lynn A. Baker & Robert E. Emery, *When Every Relationship Is Above Average: Perceptions and Expectations of Divorce at the Time of Marriage*, 17 LAW & HUM. BEHAV. 439, 443 (1993).

<sup>2</sup> RICHARD H. THALER & CASS R. SUNSTEIN, NUDGE: IMPROVING DECISIONS ABOUT HEALTH, WEALTH, AND HAPPINESS 32 (2008).

<sup>3</sup> See generally Nan L. Maxwell & Jane S. Lopus, *The Lake Wobegon Effect in Student Self-Reported Data*, 84 AM. ECON. REV. 201, 201 (1994) (discussing self-reporting biases among students).

risks, eroding their returns, and distorting consumption decisions in a fashion that leads to boom-and-bust cycles.

Part II then turns to a second, and still more daunting, challenge raised by the phenomenon of dangerous optimism: the challenge that societies that rely on democratic governance face in attempting to use law to limit the social costs of disagreement-based speculation. Part II shows how, just as optimism in the face of uncertainty leads to adverse selection among participants in speculative trading markets, it also leads to adverse selection among participants in democratic political systems. In particular, optimism systematically stunts the development of constituencies that favor reining in costly speculation, both before and after social losses have been incurred. This suggests that democratic institutions may be fundamentally unsuited for dealing with the economic problems that can arise from optimism-fueled financial speculation. Part II develops this argument by examining the history of the regulation of derivatives, perhaps the quintessential speculative financial market. History supports the view that only relatively undemocratic institutions—in particular, courts, independent agencies, and private self-regulatory bodies—have proven successful at stemming social losses from speculative trading. It also offers cautionary lessons into the likely success of the newly enacted Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank) as a regulatory response intended to ward off future speculative crises like those we have just experienced.<sup>4</sup>

## I

### OPTIMISTIC SPECULATION AS MARKET FAILURE

#### A. Optimism And Uncertainty

To understand how optimism-driven speculative trading can reduce social welfare, it is first essential to understand the phenomenon that allows for optimism: *uncertainty*. Because the idea of uncertainty is fundamental to our analysis, let us take some time to unpack it and explore its meaning.

Laypersons often treat the words “risk” and “uncertainty” as synonyms. However, in economic theory in general, and in finance in particular, there is a great distinction between statistical risk and the more fundamental (and far more intractable) problem of statistical uncertainty. The point was perhaps first made by early twentieth century economist Frank Knight in his 1921 treatise *Risk, Uncertainty and Profit*.<sup>5</sup> Knight argued that the word “risk” should be used to refer to

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<sup>4</sup> Dodd-Frank Wall Street Reform and Consumer Protection Act, Pub. L. No. 111-203, 124 Stat. 1376 (2010) (codified in scattered sections of U.S.C.).

<sup>5</sup> FRANK H. KNIGHT, *RISK, UNCERTAINTY AND PROFIT* (1921).

situations where we expect variation in *ex post* outcomes, but the probabilities of the different possible future outcomes are known *ex ante*.<sup>6</sup> For example, a coin toss is risky. Although we do not know if the coin will come up heads or tails, we do know (with certainty) that the odds of either outcome are fifty percent. Similarly, we do not know whether a particular fifty-year-old American male will develop prostate cancer. However, we do know that the risk of the average fifty-year-old American male developing prostate cancer within twenty years is 8.3 percent.<sup>7</sup>

As these examples illustrate, when we face mere risk, the probabilities of possible outcomes are known *ex ante*, even if the outcomes themselves are not. Uncertainty, Knight argued, is quite different from risk. Uncertainty exists in situations where we not only face variations in future outcomes, but the probabilities associated with possible future outcomes—indeed, possibly even the nature of future outcomes—are not known *ex ante*.<sup>8</sup> As John Maynard Keynes put it:

By “uncertain” knowledge . . . I do not mean merely to distinguish what is known for certain from what is only probable. The game of roulette is not subject, in this sense, to uncertainty . . . . The sense in which I am using the term is that in which the prospect of a European war is uncertain, or the price of copper and the rate of interest twenty years hence . . . . About these matters there is no scientific basis on which to form any calculable probability whatever. *We simply do not know*.<sup>9</sup>

Most modern bankers, traders, and finance theorists are quite comfortable with the concept of risk. There are plenty of mathematical tools for valuing assets and investments on the basis of known probabilities. But dealing with uncertainty is a different, and far more difficult matter. In his bestseller, *The Black Swan*, Nassim Taleb documents how people in general—and people in the financial world and academic finance in particular—often fail to take account of or even recognize uncertainty.<sup>10</sup> Taleb points out that even though uncertainty often keeps people from making perfect forecasts, people often also fail to understand or appreciate their own inability to make perfect forecasts. According to Taleb, “What is surprising is not the magnitude of our forecast errors, *but our absence of awareness of it*.”<sup>11</sup> In Taleb’s view, we are surprisingly blind to the reality of uncertainty. To

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<sup>6</sup> See *id.* at 19–20.

<sup>7</sup> See *Prostate Cancer Risk by Age*, CTRS. FOR DISEASE CONTROL & PREVENTION, <http://www.cdc.gov/cancer/prostate/statistics/age.htm> (last updated Aug. 13, 2010).

<sup>8</sup> See KNIGHT, *supra* note 5, at 19–20.

<sup>9</sup> J.M. Keynes, *The General Theory of Employment*, 51 Q.J. ECON. 209, 213–14 (1937).

<sup>10</sup> See NASSIM NICHOLAS TALEB, *THE BLACK SWAN: THE IMPACT OF THE HIGHLY IMPROBABLE* *passim* (2007).

<sup>11</sup> *Id.* at xx (emphasis added).

paraphrase Keynes, we simply do not know that we simply do not know.

This blindness to uncertainty permits both relative optimism and relative pessimism.<sup>12</sup> Risk alone does not permit optimism—it would be unreasonable to be optimistic about the outcome of a coin toss. There is a fifty percent probability a fair coin will come up heads, and a fifty percent probability that it will come up tails. One would have to be disconnected from reality to think the chances of a fair coin coming up heads were eighty percent. But we can be optimistic or pessimistic when we forecast the odds that the global population will be decimated by a pandemic by 2015; that China will account for more than fifty percent of the world's GDP by 2025; or that petroleum will become irrelevant as an energy source by 2030. We can assign subjective probabilities to these outcomes, but our assignments are little more than guesses. These sorts of events are unique, so we have little or no solid basis in past experience to make predictions.

In a world of uncertainty, in other words, *rational people can have differing subjective beliefs about probabilities*. One Italian adventurer might estimate the chances of finding a new route to India by sailing west at zero (and, presumably, venture in another direction). Another Italian adventurer might be more optimistic about a western route, and set out to find one. In the case of Christopher Columbus, such relative optimism brought reward, albeit unexpectedly, with the discovery of the New World (although there were plenty of other optimistic adventurers who never returned from optimism-fueled and uncertain voyages).

Relative optimism and pessimism appear endemic among human beings.<sup>13</sup> This indicates that uncertainty is endemic, too. After all, the less we know about the probabilities of future events, the more it becomes possible to hold a subjective belief about those events that is different from, and either more optimistic or more pessimistic than, beliefs held by other people. This observation suggests that in many areas of life, it will be difficult to understand human behavior without taking account of uncertainty and relative optimism. Nowhere may this be more true than in financial markets.

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<sup>12</sup> In the face of uncertainty, optimism and pessimism are always relative phenomena. When probabilities are uncertain, we simply lack the information necessary to judge whether a particular forecast is objectively more or less optimistic than the unknown future. All we can judge is whether an individual's prediction is optimistic or pessimistic relative to the predictions of others.

<sup>13</sup> Again, under uncertainty, optimism and pessimism are relative. See *supra* note 12.

## B. Speculation in Financial Markets

Finance economists have developed a number of tools for valuing risky assets in situations where probabilities can be estimated accurately. The Capital Asset Pricing Model (CAPM)<sup>14</sup> and the Black–Scholes options pricing formula<sup>15</sup> are two well-known examples. But we lack the tools necessary to place a value on assets whose worth depends on the uncertain unknown. When people disagree in the face of uncertainty, there is no way to determine *ex ante* whose beliefs are correct. The attempt to employ formal mathematical valuation models is defeated by what Keynes described as “the dark forces of time and ignorance which envelop our future.”<sup>16</sup>

This has led many in the world of finance, and especially many in academic finance, to simply ignore uncertainty and analyze financial markets as if they suffered only from risk.<sup>17</sup> In effect, they choose to look for the car keys under the lamppost where the light is, rather than in the dark parking lot where the keys were lost. In the process, they overlook the key to understanding one of the most endemic and important characteristics of many financial markets: a fundamentally speculative nature.

Financial markets are irresistibly attractive to speculators. To understand why, it is useful to begin by recognizing that in nonfinancial markets, people typically buy goods and services in order to consume them. We buy cars to transport us from one place to another, hire accountants to calculate our taxes, and purchase penicillin to cure infections. Sometimes, however, people do buy nonfinancial commodities not to consume them, but to try to profit by reselling them to someone else at a higher price. This Article will refer to this practice as “speculation.” If I buy a house to live in it, I have purchased the house for consumption. If I buy a house to “flip” it by selling it to someone else for a higher price, I am speculating. The speculator’s mantra is “buy low, sell high.”

Speculation requires disagreement. After all, if the market prices a house at \$500,000 and I agree with that valuation, I will only want to purchase the house if I want to live in (“consume”) it. But if the market prices a house at \$500,000 and I believe it is really worth \$525,000,

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<sup>14</sup> See RICHARD A. BREALEY & STEWART C. MYERS, *PRINCIPLES OF CORPORATE FINANCE* 161–62, 916 (4th ed. 1991).

<sup>15</sup> See *id.* at 502–03, 917.

<sup>16</sup> JOHN MAYNARD KEYNES, *THE GENERAL THEORY OF EMPLOYMENT, INTEREST AND MONEY* 155 (1936).

<sup>17</sup> The index of the typical finance text contains numerous references to risk and few, if any, to uncertainty. See, e.g., BREALEY & MYERS, *supra* note 14, at I-17 to I-21; EUGENE F. BRIGHAM & JOEL F. HOUSTON, *FUNDAMENTALS OF FINANCIAL MANAGEMENT*, I-6, I-7 (Concise 6th ed., 2009); JOHN C. HULL, *FUNDAMENTALS OF FUTURES AND OPTIONS MARKETS* 558, 560 (6th ed., 2008).

my disagreement with the market's valuation might tempt me to buy the house for \$500,000 (if possible) in order to resell it and make a \$25,000 profit. It should be noted that this type of speculation requires me to be optimistic in at least two senses. First, I have to be optimistic about the house's value, and believe it is worth more than the market price. (If I were pessimistic about the home's future value, I would simply avoid buying it.)<sup>18</sup> Second, I have to be optimistic about my own valuation skills. If I were pessimistic about my own forecasting ability, I would not trust my judgment more than the market's.<sup>19</sup>

Still, given sufficient optimism of both sorts, it is perfectly possible that some people might choose to speculate in the "spot" markets for physical commodities like houses, wheat, or oil. But as a general rule, spot market speculation in physical commodities is an expensive proposition. If you buy wheat or oil with the hope that the price will rise, you must find somewhere to store it and protect it from spoilage. If you buy a house with the idea of reselling it, you must water the flowers and cut the lawn in the interim, and when you do sell, you will pay a hefty real estate agent commission. There is no point buying a house to resell for \$25,000 more than you paid if you must pay a real estate agent a commission of \$30,000 to do so. As a result, taking a purely speculative position in the spot market for a physical commodity like a house will only seem justified when the speculator anticipates a relatively large price shift, in a relatively short time, with low transaction costs.

Financial markets offer would-be speculators just such enticing opportunities to try to profit from relatively large price shifts, in relatively short periods of time, at relatively low cost. (It is far easier and cheaper to trade in mortgage-backed bonds or stocks in home-building companies than in actual houses.) As a result, speculation is endemic in many financial markets.<sup>20</sup> Consider the example of the stock

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<sup>18</sup> In spot markets, pessimists can only benefit from bearish forecasts if they happen to own the commodity in question, in which case they can hope to avoid a loss by selling it. Otherwise, to profit from a bearish forecast, a pessimist must either "short sell" (sell a borrowed good that is subsequently repurchased at a lower price and returned to the lender) or employ derivatives contracts, which are bets on the future. See *infra* note 29 and accompanying text.

<sup>19</sup> Game theorists have argued that given certain conditions, it is irrational to trade in the belief that one's own opinion of value might be more accurate than another's. See Robert J. Aumann, *Agreeing to Disagree*, 4 ANNALS STAT. 1236, 1236 (1976) (discussing the effects of common knowledge on trading decisions); Paul Milgrom & Nancy Stokey, *Information, Trade and Common Knowledge*, 26 J. ECON. THEORY 17, 17 (1982) (discussing a "no-trade" theorem). However, the conditions on which this argument rests are highly unrealistic. See Lynn A. Stout, *Irrational Expectations*, 3 LEGAL THEORY 227, 240-43 (1997) [hereinafter Stout, *Irrational Expectations*] (critiquing "no-trade" theorems).

<sup>20</sup> See Lynn A. Stout, *Are Stock Markets Costly Casinos? Disagreement, Market Failure, and Securities Regulation*, 81 VA. L. REV. 611, 616 (1995) [hereinafter Stout, *Costly Casinos*]

market. Most corporate equities are held by individuals, either directly or indirectly through institutional intermediaries like pension funds and mutual funds.<sup>21</sup> These individuals typically are saving for some long-term project—paying for retirement or a child’s college tuition. Given such a long investing time horizon, we might expect annual turnover in the stock market to be modest, with perhaps ten or at most twenty percent of outstanding shares bought and sold each year. Instead, stocks are traded so frequently that the average annual turnover in U.S. equities today is more than 300 percent.<sup>22</sup> Why do investors buy and sell so frequently and frantically? Because they hope to “beat the market” and do better by trading than merely holding. They disagree with market prices, believing they can beat the market’s return by buying low and selling high. Indeed, this is the basic business model for the entire industry of actively managed mutual funds.<sup>23</sup>

Speculative trading can be even easier and cheaper in another financial market: the market for the type of contracts commonly called “derivatives.” For most of U.S. history, speculative trading in derivatives was confined to futures and options trading on organized exchanges like the Chicago Board of Trade.<sup>24</sup> However, as a result of relatively recent regulatory changes,<sup>25</sup> the last quarter of the twentieth century saw the emergence of an off-exchange or “over-the-counter” (OTC) market in derivatives that by 2011 had reached a notional value of \$708 trillion.<sup>26</sup>

Derivative contracts are often vaguely described as investments or assets (sometimes, as toxic assets). However, the true nature of derivatives is best captured by the short, simple word “bets.” This is not metaphor or hyperbole. Derivatives are *literally* bets—contractual agreements between two parties that one will pay the other an amount

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(“[I]nvestors’ asymmetrical expectations will inspire them to seek short-term profits by speculating on stocks they perceive as mispriced.” (footnote omitted)).

<sup>21</sup> See *id.* at 643.

<sup>22</sup> Leo E. Strine, Jr., *One Fundamental Corporate Governance Question We Face: Can Corporations Be Managed for the Long Term Unless Their Powerful Electorates Also Act and Think Long Term?*, 66 *BUS. LAW.* 1, 11 (2010).

<sup>23</sup> See, e.g., *About NAAIM*, NAT’L ASS’N OF ACTIVE INV. MANAGERS, <http://www.naaim.org/about.aspx> (last visited Mar. 18, 2012).

<sup>24</sup> See Lynn A. Stout, *Why the Law Hates Speculators: Regulation and Private Ordering in the Market for OTC Derivatives*, 48 *DUKE L.J.* 701, 713–23 (1999) [hereinafter Stout, *Why the Law Hates Speculators*] (discussing the common-law rule against difference contracts).

<sup>25</sup> See Lynn A. Stout, *Derivatives and the Legal Origin of the 2008 Credit Crisis*, 1 *HARV. BUS. L. REV.* 1, 18–22 (2011) [hereinafter Stout, *Origin of the 2008 Credit Crisis*] (describing legal changes in the late 1990s that permitted off-exchange derivative speculation on interest rates and other financial phenomena); *infra* notes 120–25 and accompanying text.

<sup>26</sup> *BIS Quarterly Review: International Banking and Financial Market Developments*, BANK FOR INT’L SETTLEMENTS statistical annex A131 tbl. 19 (Dec. 2011), [http://www.bis.org/publ/qrpdf/r\\_qa1112.pdf](http://www.bis.org/publ/qrpdf/r_qa1112.pdf) [hereinafter *Amounts Outstanding of OTC Derivatives*]. To put this figure in perspective, it averages out to about \$100,000 in derivatives wagers for every human alive on the planet.



of money determined by whether or not some future event occurs.<sup>27</sup> This is exactly why derivatives are called “derivatives.” The value of a derivative agreement is derived from the future behavior of some “underlying” market phenomenon (market prices, interest rates, credit ratings) just as the value of a bet on the Super Bowl is derived from the performance of football teams in the game. (One can imagine an optimistic bettor might also view her “sure thing” Super Bowl wager as an investment or asset.)

For at least two reasons, off-exchange derivatives markets are particularly attractive venues for disagreement-based speculation. First, trading stocks and bonds generally requires the speculator to put up the money necessary to buy the stock or bond in question.<sup>28</sup> Off-exchange derivatives wagering, in contrast, can cost nothing initially, just as placing a bet on the outcome of the Super Bowl may cost a bettor nothing until the game is over and the gamblers learn who won and who lost and must pay up. (The opportunity to use derivatives wagers to take very large speculative positions on market phenomena with very little up-front investment explains why another term often applied to derivatives is “leverage.” It also explains why derivatives trading is especially popular with hedge funds, whose business model is to reap speculative profits from buying low and selling high.)

The second reason why derivatives contracts appeal especially to speculators is that, because derivatives are fundamentally wagers, they offer a unique opportunity for pessimists to try to make profits betting on falling prices. While this is hard to do in spot markets, which accordingly only attract speculators who expect prices to rise, derivatives markets can be used by speculators who expect prices to fall.<sup>29</sup>

To sum up, it is possible to speculate—that is, to try to profit from trading on disagreement about the future—in a host of different markets. However, as a practical matter we can expect speculative activity to be more common in markets where the costs of trading are relatively low compared to the perceived profits to be reaped from differing opinions of valuation. Given their low transaction costs and high volatility, logic tells us that financial markets—especially the market

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<sup>27</sup> See Roberta Romano, *A Thumbnail Sketch of Derivative Securities and Their Regulation*, 55 MD. L. REV. 1, 2 (1996) (defining derivative securities as “financial instruments whose value derives from some other, more fundamental, asset”); Stout, *Origin of the 2008 Credit Crisis*, *supra* note 25, at 5–6 (describing how “[t]he value of a derivative agreement is ‘derived’ from the performance of the underlying financial phenomenon”).

<sup>28</sup> See Stout, *Why the Law Hates Speculators*, *supra* note 24, at 728. Of course, if a speculator can find a lender willing to make a loan to fund a stock purchase, she may be able to make a speculative purchase without putting up her own money. However, provisions of the Securities Exchange Act limit stock investors’ ability to purchase shares “on margin” in this way. The restriction on margin purchases is one of a number of securities laws designed to curb speculation in stock markets. See *id.* at 729–31.

<sup>29</sup> See *id.* at 732 n.130.

for corporate stocks and bonds and for financial derivatives—should be archetypal speculative markets.

### C. Contemporary Economic Views of Speculation

As we saw earlier, in the first half of the twentieth century, noted economists like Frank Knight and John Maynard Keynes were keenly aware of the roles that uncertainty and disagreement played in fomenting speculative trading in corporate securities.<sup>30</sup> Nor is there any reason to believe disagreement-based speculation in financial markets has become less common today. To the contrary, the increase in stock market turnover in recent decades, as well as the appearance of a multi-hundred-trillion dollar OTC derivatives market, suggests that speculation now plays an even more prominent role in our economy than it did in Knight's and Keynes's day.

Nevertheless, modern economic and finance texts typically pay little attention to the roles that uncertainty and disagreement play in markets, or the policy implications of this phenomenon. Many basic finance and economics texts don't discuss speculation as an economic activity at all.<sup>31</sup> Those that do discuss speculation usually discuss it only briefly, and rely on one of two common—but, as we shall see below, incomplete and arguably misleading—descriptions of speculative trading that implicitly assume away the twin problems of uncertainty and optimism.<sup>32</sup> This Article refers to these two descriptions as the “risk hedging” and the “information arbitrage” theories of speculative trading.

#### 1. *Risk Hedging*

According to the risk-hedging theory of speculation, speculators profit from trading on favorable terms with other actors in the market who are willing to deal with them on slightly disadvantageous terms in order to offload risk (or, relatedly but somewhat differently, in order to seek riskless liquidity).<sup>33</sup> For example, a risk-averse farmer with a field of wheat that is not quite ready to harvest might enter a forward contract with a speculator to sell the wheat at a price slightly less than today's prevailing market price and deliver it next month. This allows the farmer to lock in the price and avoid the risk that wheat prices

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<sup>30</sup> See *supra* notes 5–6, 8–9 and accompanying text.

<sup>31</sup> See, e.g., BRIGHAM & HOUSTON, *supra* note 17, at I-6 (index does not contain entry for “speculation”).

<sup>32</sup> See, e.g., RICHARD A. BREALEY & STEWART C. MYERS, FINANCING AND RISK MANAGEMENT 323 (2003) (describing derivatives speculators as “prepared to take on risk”); PAUL A. SAMUELSON, ECONOMICS 422 (10th ed. 1976) (describing speculators as “‘arbitragers’ who keep their ear to the market”).

<sup>33</sup> See Stout, *Irrational Expectations*, *supra* note 19, at 228–31 (discussing risk-hedging theory).

might fall in the future. He may even get immediate cash for his wheat (liquidity). For the farmer, this is much like getting twenty-four cents now, rather than tossing a quarter and getting fifty cents later if the quarter comes up heads, and nothing later if it comes up tails.

Risk-hedging and liquidity-seeking transactions do not require uncertainty. Even if both parties know and agree that the coin has a fifty percent chance of coming up heads or tails, a risk-averse or liquidity-seeking actor might prefer a riskless twenty-four cents right now over the coin toss later. Similarly, even if the farmer and his counterparty both agree on the probability that wheat prices will rise or fall next month, the farmer might prefer to trade on slightly disadvantageous terms to lock in a price or to get cash today. Thus risk-hedging and liquidity-dealing trades are mutually beneficial. They benefit the hedger or liquidity seeker, who feels better off with less risk or more liquidity. They also benefit the “speculator,” who is either an insurer paid to accept a risk she may be able to bear more easily than the hedger (perhaps because she can pool it with other risks to reduce overall risk through diversification),<sup>34</sup> or a liquidity dealer who is paid to bear the risk and expense of maintaining an inventory of assets for buyers and sellers willing to accept a less advantageous price in return for the convenience and safety of one-stop shopping.<sup>35</sup> But whether “speculators” are providing insurance or liquidity, the risk-hedging, liquidity-dealing theory fits the standard economic model of mutually beneficial exchange that improves the welfare of both trading parties.

## 2. *Information Arbitrage*

The information arbitrage model of speculation also suggests that speculative trading can be socially beneficial, but through a quite different, and far less reliable, route.<sup>36</sup> Information arbitrage theory treats speculators as savvy researchers who invest in available but costly information that allows them to make better probability estimates

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<sup>34</sup> Alternatively, the “speculator” may know of another risk-averse party—say a cereal manufacturer that would like to buy the farmer’s forward contract to lock in a future supply of wheat at today’s price—and see an opportunity to profit by acting as the middleman. Because the insurance industry is generally profitable, this suggests that insurance companies typically insure against only known and quantifiable risks, not against uncertainties.

<sup>35</sup> Although I might be able to sell my used car at a higher price if I market it myself, I am willing to accept the slightly lower price that a used car dealer would offer me in order to enjoy the convenience of one-stop selling. Similarly, a used car buyer might be willing to pay the dealer a slightly higher price in order to avoid the expense and inconvenience of launching his or her own search for a suitable automobile.

<sup>36</sup> For perhaps the most famous exploration of the information arbitrage theory, see MILTON FRIEDMAN, *In Defense of Destabilizing Speculation*, in *THE OPTIMUM QUANTITY OF MONEY AND OTHER ESSAYS* 285, 285–91 (1969).

than others can.<sup>37</sup> Thus, a “speculator” who studies meteorological patterns might conclude that a drought is likely and so buy forward contracts for wheat in the expectation that wheat prices will rise by the time of delivery.<sup>38</sup>

Like risk hedging or liquidity dealing, information-arbitrage trading does not require uncertainty.<sup>39</sup> To the contrary, the information arbitrage theory of speculation necessarily assumes that future probabilities can be known with certainty by at least one party—the arbitrageur willing to incur the cost of investing in information—who therefore enjoys a certain advantage over her counterparty. Meanwhile, an arbitrageur’s counterparties do not necessarily disagree with the arbitrageur’s valuations. Rather, they grudgingly accept that given the relatively high cost of their acquiring more certain information themselves, it is cheaper simply to accept the inevitability of trading at a disadvantage relative to the information arbitrageur.

As this implies, “speculative” trading driven by information arbitrage differs from “speculative” trading driven by risk aversion or liquidity needs in that it cannot be presumed to benefit both parties. Other actors in the market might well prefer to avoid dealing at a disadvantage with better-informed arbitrageurs. But information arbitrage still can provide a social benefit if arbitrageurs’ trades result in more accurate market prices that help society efficiently allocate scarce resources. For example, the arbitrageur’s purchase of wheat forward contracts might drive up prices and motivate farmers to plant more wheat in a fashion that helps to offset the effects of the drought.<sup>40</sup>

As noted economist Jack Hirshleifer has pointed out, it is easy to overestimate the social value of the “price discovery” benefits of information arbitrage, as often arbitrageurs may move information into prices only slightly more quickly than it would arrive anyway.<sup>41</sup> (It is questionable whether the activities of “flash trading” hedge funds that use computers to try to profit from trading milliseconds before others do significantly improve the allocation of social resources.<sup>42</sup>) Never-

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<sup>37</sup> See Stout, *Irrational Expectations*, *supra* note 19, at 229.

<sup>38</sup> See *id.* at 230.

<sup>39</sup> Friedman concedes this point in his famous essay. He calls uncertainty “avoidable ignorance,” which he defines as an *ex ante* lack of knowledge about probabilities. He then makes clear that his essay intends to discuss only “speculation . . . without avoidable ignorance.” FRIEDMAN, *supra* note 36, at 287–88.

<sup>40</sup> See Stout, *Irrational Expectations*, *supra* note 19, at 230.

<sup>41</sup> Jack Hirshleifer, *The Private and Social Value of Information and the Reward to Inventive Activity*, 61 AM. ECON. REV. 561, 564 (1971).

<sup>42</sup> See Jill Treanor, *What Does High-Frequency Trading Do to the Markets?*, GUARDIAN (Oct. 6, 2011, 6:19 AM), <http://www.guardian.co.uk/commentisfree/2011/oct/06/high-frequency-trading-flash-crash> (noting that although “high-frequency trading could add liquidity to markets and reduce the difference between the price at which customers want to buy

theless, at least in theory, “speculation” that is really information arbitrage can contribute, at least on the margin, to social welfare.

Thus, when commentators emphasize either the risk-hedging and liquidity-dealing or information-arbitrage theories of so-called speculative trading, they are taking an approach that generally supports the claim that speculation has at least the possibility of contributing to social welfare. But what happens when we leave a world where traders face only risk, and enter the dark kingdom of uncertainty? What are the social welfare consequences of what this Article will call “true” or “purely” speculative trading driven by subjective disagreement and relative optimism?

#### D. The Social Costs of Disagreement-Based Speculation

One of the most basic tenets taught to students in introductory economics courses is that, absent fraud or duress, voluntary exchange benefits both parties to the exchange. This is, of course, the lesson of Scottish economist Adam Smith’s famous metaphor of the market’s “invisible hand.” When the butcher gives a cut of meat to the baker in return for a loaf of the baker’s bread, each party is better off (each can now make a sandwich). In making themselves feel better off, they increase social welfare as well.<sup>43</sup> As we have just seen, risk hedging and liquidity trading conform to Smith’s basic model of mutually beneficial exchange. And while information arbitrageurs’ trades are not mutually beneficial, they can provide at least an indirect social benefit by moving certain but costly information into markets and producing more accurate prices.

But trading driven by disagreement in the face of uncertainty turns out to violate the basic free-market tenet that exchange improves social welfare. The reason is simple. By definition, when two people disagree in their forecasts of the future, we know *ex ante* that only one (at most) can be correct. When bullish Bob Buyer purchases 100 shares of Google from bearish Sue Seller because Buyer thinks Google’s share price is going to rise while Seller believes Google is about to decline, both initially expect to earn a profit (or in Seller’s case, avoid a loss). *But at least one of the two disagreeing traders must be proven wrong.* Google’s stock price may rise or fall, but it cannot do both simultaneously. Disagreement-based trading is by its nature a zero-sum game. *Ex ante*, Buyer and Seller both expect to benefit from their trade. *Ex post*, at least one inevitably will be disappointed.

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and sell,” this may accompany “increased volatility in markets . . . and perhaps . . . a correlation between markets”).

<sup>43</sup> See ADAM SMITH, AN INQUIRY INTO THE NATURE AND CAUSES OF THE WEALTH OF NATIONS, 273–75 (Edwin Cannan ed., Random House, Inc. 1937) (1776).

This means that disagreement-based speculative trading involves unilateral, and possibly bilateral, mistake on the part of the contracting parties. Like other contracts based on mistake, purely speculative contracts cannot be presumed to improve social welfare by leaving both parties better off *ex post*.<sup>44</sup> Indeed, logic demonstrates that speculation driven by disagreement and relative optimism in the face of uncertainty *reduces* social welfare through at least three different mechanisms: reducing traders' returns, increasing their risks, and distorting perceptions of personal wealth in a fashion that contributes to boom-and-bust economic cycles.

### 1. *Reducing Wealth*

First, when transaction costs are positive, trading on subjective disagreement over the future reduces social welfare by reducing the wealth of the trading parties. To understand this point, suppose Google stock is trading at \$50 per share. Suppose also that bullish Buyer thinks Google stock is about to rise to \$60, while bearish Seller, who owns Google stock, thinks Google is about to fall to \$40. Assume as well that in order to either buy or sell, both Buyer and Seller must each pay transaction costs (e.g., brokerage commissions) of \$1 per share.

Thanks to uncertainty, Buyer sees an opportunity to earn a net profit of \$9 per share after trading costs from buying Google. Seller, in contrast, sees an opportunity to avoid a net loss of \$9 per share after trading costs by selling. But whether Google rises or falls, one party's trading profit inevitably comes at the other party's expense. Meanwhile, each party has lost \$1 per share—not to mention a portion of his or her time and attention—to transaction costs. These transaction costs are a social waste, since the trade was a zero-sum game that did not generate any net new wealth for the parties or for society.

In contrast, the transaction costs associated with risk hedging and liquidity dealing are well spent, because both parties view themselves as better off after trading despite having incurred these costs. As Hirshleifer pointed out, the transaction costs lost to information arbitrage trading could be wasteful if they outweigh the social benefits the arbitrageur produces in making prices more accurate. But it is at least possible that the price discovery that information arbitrage provides might bring social benefits that more than offset the social losses from the costs of trading.

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<sup>44</sup> See DAVID W. BARNES & LYNN A. STOUT, CASES AND MATERIALS ON LAW AND ECONOMICS 192–97 (1992).

Not so with purely speculative, disagreement-based trading. When speculators trade on disagreement, positive transaction costs inevitably ensure their net wealth will be eroded.<sup>45</sup> Interestingly, this possibility is well-recognized among experts who study stock markets. As a number have pointed out, thanks to transaction costs, investors who try to beat the market usually end up underperforming it.<sup>46</sup>

This observation also offers important empirical evidence into the pervasiveness of disagreement-based speculation (as opposed to risk hedging and liquidity dealing or information arbitrage trading) in financial markets. The risk-hedging and information-arbitrage theories both predict that *speculators as a class, over time, should make money*. Sadly for speculators, this prediction is rarely borne out in financial markets.<sup>47</sup> This is perhaps most obvious in the case of the stock market, where it has been demonstrated time and again that, on average, actively managed mutual funds that attempt to beat the market in fact underperform it due to transaction costs.<sup>48</sup> A similar pattern can be seen in organized futures markets, where traders who self-identify as profit-seeking speculators suffer losses on average.<sup>49</sup>

Of course, in modern markets, the transaction costs associated with trading financial instruments like stocks, bonds, and derivatives, although positive, are very low.<sup>50</sup> Thus, it might be argued that if the demand for disagreement-based trading is relatively inelastic, the social welfare losses from speculative trading in financial markets are modest and can perhaps be ignored.<sup>51</sup> This argument overlooks a second, and perhaps even more serious kind of cost that speculative trading imposes on speculators and society: the cost of the increased *risk* that can flow from disagreement-based speculation.

## 2. *Increasing Risk*

To see how speculative trading can increase risk, let us return to the example of bullish Bob Buyer who expects Google's price to rise, and bearish Sue Seller who expects Google's share price to fall. But

<sup>45</sup> See Lynn A. Stout, *Technology, Transaction Costs, and Investor Welfare: Is a Motley Fool Born Every Minute?*, 75 WASH. U. L.Q. 791, 797 (1997) [hereinafter Stout, *Technology, Transaction Costs, and Investor Welfare*].

<sup>46</sup> See, e.g., JOHN C. BOGLE, COMMON SENSE ON MUTUAL FUNDS: NEW IMPERATIVES FOR THE INTELLIGENT INVESTOR 245–46 (1999); Stout, *Costly Casinos*, *supra* note 20, at 618, 635 n.65.

<sup>47</sup> See Stout, *Irrational Expectations*, *supra* note 19, at 231–32.

<sup>48</sup> See Stout, *Costly Casinos*, *supra* note 20, at 623, 664.

<sup>49</sup> See Stout, *Irrational Expectations*, *supra* note 19, at 232 n.12.

<sup>50</sup> See Stout, *Costly Casinos*, *supra* note 20, at 633.

<sup>51</sup> See Stout, *Technology, Transaction Costs, and Investor Welfare*, *supra* note 45, at 808–10. If the demand for speculative trading is highly elastic, meaning a slight decrease in price greatly increases demand, lowering transaction costs will actually increase social welfare losses from trading. *Id.*

now let us change our hypothetical a bit, and assume that prior to trading, neither Buyer nor Seller had any economic stake in Google shares. Buyer can try to profit from his forecast of a Google price rise by simply purchasing Google shares. But how can bearish Seller profit from her pessimistic forecast if she doesn't have Google shares to sell? The answer is simple: Seller can wager on a Google price decline through derivatives contracts.

Seller might, for example, suggest a Google "swap" with Buyer in which the parties agree that if Google's share price rises, Seller will pay Buyer the difference between today's price for 100 Google shares and tomorrow's higher price, while if Google falls, Buyer will pay Seller the difference between today's price and tomorrow's lower price—but without any shares changing hands. As we have already seen, if Buyer and Seller have to pay transaction costs to arrange their swap, their net wealth must be reduced accordingly. But the swap has done more than predictably reduce Buyer's and Seller's wealth; it has also increased the amount of risk they are exposed to. By entering the Google swap, Buyer is now exposed to a source of risk that he was not exposed to before. He now has a risk that if Google's price falls, he will lose money. Similarly, Seller is now exposed to a new risk of loss should Google shares rise.

As this example illustrates, speculative trading in general—and speculative trading in derivatives in particular—can create new risks for traders exactly as gambling creates new risks for gamblers. (You may enter a casino with a riskless \$100 bill, but once you start playing roulette you are likely to leave with either more or less.) This should not come as a surprise. As noted earlier, despite the plethora of vague euphemisms the finance industry likes to apply to derivatives—"assets," "investments," "leverage," "contracts," and so forth—derivatives are nothing more or less than bets on financial phenomena. Again, this is not a figure of a speech. The Google swap arranged between Buyer and Seller neatly fits the definition of a bet as an agreement between parties that one will pay the other an amount of money determined by whether or not some forecasted event occurs in the future.

It is important to note, however, that talking about derivatives in a straightforward fashion as bets or wagers does not necessarily imply that derivatives always add risk or that they might not be socially beneficial. As the insurance industry demonstrates, sometimes betting contributes to social welfare by actually reducing risk.<sup>52</sup> Similarly, derivatives bets can be used to reduce risk. For example, if bearish Sue Seller works for Google and is concerned the firm might suffer a

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<sup>52</sup> Buying fire insurance on your house is really betting with your insurance company that your house will burn down. If the house burns, you win the bet, while losing the house.



reversal and that she might lose her job, she can offset the risk of lost future income by selling Google futures or credit default swaps (CDS) that increase in value as Google's stock declines.

Thus, it is ultimately an empirical question whether any particular derivatives wager has the practical effect of creating new risks, or hedging against and reducing old ones. But it is also worth noting that derivatives gambling on financial markets can not only create new risks, it can create risks that are orders of magnitude larger than the risks in the underlying financial market being bet on. For example, a derivatives trader might sell \$1 million in credit default swaps (CDS) on a \$100,000 corporate bond, just as a racetrack gambler might place a \$100,000 bet on a horserace with a \$10,000 purse.

### 3. *Distorting Consumption Decisions*

Finally, disagreement-based speculation in financial markets can impose a third type of social cost by distorting individuals' savings and consumption decisions, leading to financial instability and boom-and-bust cycles. This is because speculation under conditions of uncertainty increases perceptions of personal wealth in much the same way that excessive lending under conditions of uncertainty increases perceptions of personal wealth. As in the case of credit bubbles, the result can be asset price increases and temporary overconsumption that must eventually be paid for with reduced consumption, harming economic growth.

It is a truism in finance that "an expansion of bank lending is tantamount to an expansion in the money supply."<sup>53</sup> To understand this point, assume a simple world with a car dealer who has a \$20,000 car, a bank that has \$20,000 in cash, and Bill Borrower, who has nothing. The monetary value of the wealth in this small, three-member society is \$40,000 (the cash and the car). But if the bank lends Borrower its \$20,000 on the promise he will repay it in the future, and if Borrower uses the \$20,000 to buy the car, our small society now has \$60,000. The bank has a \$20,000 asset (Borrower's debt), Borrower has a \$20,000 car, and the car dealer has the \$20,000 in cash.

How did our small society's wealth increase from \$40,000 to \$60,000? In effect, by accepting a loan, Borrower "monetized" his optimistic expectation that he would earn money in the future to pay off the loan he received today. In this sense, banks that make loans are like a combination ATM and time machine, generating money from people's forecasts of their own future incomes. If those forecasts prove too optimistic—if both Borrower and the bank, faced with un-

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<sup>53</sup> JAMES GRANT, *MONEY OF THE MIND: BORROWING AND LENDING IN AMERICA FROM THE CIVIL WAR TO MICHAEL MILKEN* 220 (1992).

certainty, have overestimated Borrower's future ability to repay the loan—a credit bubble results, leading to rising asset prices (because an expanding money supply chases a fixed pool of assets) and overconsumption (because lending leads borrowers to feel richer than they really are).<sup>54</sup>

Much the same result obtains when disagreement-based speculation in financial markets leads speculators to believe that the stocks, bonds, or financial derivatives they buy today are going to rise in value in the future.<sup>55</sup> Optimistic expectations for future speculative gains lead speculators to believe subjectively that they are wealthier than they really are, leading to rising asset prices and overconsumption. Then this optimism becomes monetized, albeit in the form of an “expected money” bubble rather than an actual money bubble from expanding credit.

As an example of this phenomenon, consider the story told by a hedge fund manager who recounted how a junior derivatives trader rushed into his office one day after negotiating a deal with an investment bank. “This is a great transaction,” bubbled the junior trader. “Both sides are making money!”<sup>56</sup> Such mutual optimism explains why so many in the finance world like to optimistically describe derivatives as adding “leverage” rather than simply describing them as adding “risk.”

Thus, speculative bubbles, like credit bubbles, distort perceptions of personal wealth in ways that distort consumption and savings decisions. It should be noted, however, that speculative bubbles are somewhat easier to detect than credit bubbles.<sup>57</sup> Banks, hedge funds, and mutual funds speculate in risky derivatives to make profits, just as banks lend money to risky borrowers to profit. In the case of bank lending, however, the expected profits from lending may turn out to be real: it is actually possible to make loans that are always, or almost always, repaid. In contrast, the zero-sum nature of speculation ensures that speculators' perceived opportunities for gain must be, on average, an illusion. Nevertheless, until the uncertain future is revealed, speculators enjoy a subjective perception of greater wealth that

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<sup>54</sup> Cf. GEORGE COOPER, *THE ORIGIN OF FINANCIAL CRISES: CENTRAL BANKS, CREDIT BUBBLES AND THE EFFICIENT MARKET FALLACY* (2008) (describing the nature and causes of credit bubbles).

<sup>55</sup> This phenomenon is related to the familiar “winner's curse.” See RICHARD H. THALER, *THE WINNER'S CURSE: PARADOXES AND ANOMALIES OF ECONOMIC LIFE* 50–62 (1992).

<sup>56</sup> The author is indebted to Nick Patterson, a former hedge fund research manager, for this anecdote. Its humor lies in the hard reality that, just as two people who make a bet with each other cannot both profit from the bet, counterparties in a derivatives deal cannot both make money from the deal.

<sup>57</sup> See Harrison Hong & David Sraer, *Quiet Bubbles* 1 (Feb. 21, 2011) (working paper), available at <http://www.princeton.edu/bcf/newsevents/seminar/Harrison-quiet.pdf>.

eventually must disappear (unless, of course, the losing speculator receives a government bailout).

### E. Summary: Disagreement-Based Trading as Market Failure

Every student who takes an introductory economics course learns that markets sometimes fail to maximize social welfare. Externalities, principal-agent problems, anticompetitive tactics, informational asymmetries, and public goods all present situations where government intervention has the potential to allocate resources more efficiently than letting the “free market” reign.<sup>58</sup> To this list of foreseeable market failures, this Article adds another: disagreement-based speculative trading.

We have examined how disagreement-based trading in the face of uncertainty predictably reduces traders’ returns, increases their risks, and distorts perceptions of personal wealth in a fashion that contributes to boom-and-bust economic cycles. Thus, highly speculative markets seem ideal arenas for government intervention. This intervention could take a wide variety of forms, including refusing to enforce speculative transactions, making them more difficult, taxing them, or simply prohibiting them.<sup>59</sup> Each approach offers hope for limiting the social losses that flow from disagreement-based trading.

Unfortunately, as we shall see in Part II of this Article, there is reason to fear that disagreement-based trading is a form of market failure that is likely to prove particularly difficult for democratic societies to address. Populist governance institutions—democratically elected legislatures in particular—are reasonably well suited for curbing activities that impose observable external costs on others (theft, fraud, polluting) and for providing needed public goods (police, parks, military defense). But they may be structurally unsuited to curbing optimism-driven speculation in financial markets.

## II

### OPTIMISM AND DEMOCRATIC FAILURE IN THE REGULATION OF OTC DERIVATIVES

#### A. Optimism and Regulatory Failure

When markets cause trouble, it is natural to think of government intervention as a potential solution. At the same time, experts who study government and political science have long recognized that, just

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<sup>58</sup> See Richard O. Zerbo Jr. & Howard McCurdy, *The End of Market Failure*, REGULATION, Summer 2000, at 10, 10–11, available at <http://www.cato.org/pubs/regulation/regv23n2/zerbe.pdf> (exploring the boundaries of market failure).

<sup>59</sup> For a discussion of examples of a variety of different legal approaches to curbing speculation, see Stout, *Why the Law Hates Speculators*, *supra* note 24, at 722–33.

as markets sometimes fail to efficiently allocate resources, governments sometimes fail to efficiently regulate markets. For example, an extensive literature investigates how small, organized interest groups (e.g., corn farmers) can push through self-interested policy agendas (e.g., ethanol subsidies) that exploit a much larger but more disorganized and inattentive general public.<sup>60</sup>

We can expect to confront these sorts of well-understood “public choice” obstacles in attempting to efficiently regulate speculative trading in financial markets, just as we can expect to confront them in other areas of public policy. In particular, stock exchanges and broker-dealers who make a living from providing their services to speculating investors would resist any attempt to limit speculative trading in corporate stocks. Similarly, attempts to rein in OTC derivatives trading have been vigorously—and to a considerable extent, successfully—fought off by Wall Street interests, especially investment banks that run derivatives dealing desks.<sup>61</sup> After all, such middlemen not only expect to profit from derivatives trading, they are the only parties that reliably do.

But in addition to such well-studied and well-understood sources of regulatory failure, optimism in the face of uncertainty may throw up another virtually insurmountable barrier to curbing disagreement-based speculative trading in financial markets. This is because optimism and uncertainty not only drive speculation, they also undermine our political capacity to rein in speculation through democratically “accountable” institutions like elected legislatures or elected executives.

In particular, optimism in the face of uncertainty raises a powerful, if hitherto unrecognized, public choice barrier to regulation because it results in adverse selection among those who might become politically active in a fashion that systematically prevents the development of any active constituency that would try to rein in speculative trading. To understand this adverse selection bias, it is useful to start by thinking about the selection bias inherent in voluntary market exchange: people only enter trades when they think trading will make them better off. If they think a particular trade will leave them worse off, they decline to trade.<sup>62</sup>

This process of self-selection in markets does not pose a problem (is not “adverse”) when we are talking about trades of the Adam Smith variety that actually promote the parties’ joint welfare. But the selec-

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<sup>60</sup> See generally BARNES & STOUT, *supra* note 44, at 476–527 (discussing public choice literature and interest-group theory).

<sup>61</sup> See Jeremy Grant, *Wall St ‘Allergic’ to OTC Derivative Reform*, FIN. TIMES, Mar. 11, 2010, <http://www.ft.com/cms/s/0/1771a5fc-2d3a-11df-9c5b-00144feabdc0.html>.

<sup>62</sup> See Stout, *Costly Casinos*, *supra* note 20, at 642 n.84.

tion bias intrinsic in voluntary market exchange poses special difficulties when we are dealing with disagreement-based trading that the parties think will make them better off *ex ante*, but which predictably makes them worse off *ex post*.<sup>63</sup> Consider again the example of bullish Bob Buyer and bearish Sue Seller. Before they begin trading Google stock or Google equity swaps with each other, Buyer and Seller both expect to reap profits from their deal. Even though one is optimistic about Google's fate and the other pessimistic, both are self-selected optimists when it comes to their belief in their personal abilities to reap profits from trading on their forecasts for the future.<sup>64</sup>

This means that before trading, Buyer and Seller would each perceive any rule making speculation more difficult—say, a transaction tax—as working *against* their financial interests. For this reason, we cannot expect either Buyer or Seller to show any enthusiasm for regulations that restrain their speculative trading *ex ante*. To the contrary, each would perceive any attempt at such regulation as reducing their expected future wealth.

What about individuals who are more pessimistic about their forecasting ability? Their remedy is simple: they decline to speculate at all. In effect, pessimists who doubt their own speculative talents simply opt out of speculative trading, protecting themselves from the possibility of future risk and losses by declining to trade in the first place.<sup>65</sup>

The overall effect of selection bias in speculative trading is that, *ex ante*, optimistic speculators don't demand regulation because they think it will harm their interests, while pessimistic nonspeculators similarly don't demand regulation because they think it unnecessary for self-protection. But what happens later, after the speculators have found out through bitter experience that speculating has reduced their returns, increased their risks, and distorted their perceptions of their own wealth? Might we see *ex post* democratic demand for reining in speculative disagreement-based trading?

Unfortunately, we can imagine at least three reasons why speculators might not push for government intervention even after suffering substantial trading losses. First, there is the embarrassing problem of having to admit one was a "loser" in the trading game. Second, some traders who lose may nevertheless remain optimistic about their trad-

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<sup>63</sup> See *id.* at 614–17.

<sup>64</sup> See *supra* note 19 and accompanying text (discussing how speculation requires optimism about one's own ability to make forecasts).

<sup>65</sup> One interesting study documents a real-life example of this selection bias: women who own stock portfolios earn significantly higher average investment returns than men do, for the simple reason that men trade more often and so incur higher transaction costs. Brad M. Barber & Terrance Odean, *Boys Will Be Boys: Gender, Overconfidence, and Common Stock Investment*, 116 Q.J. ECON. 261, 278 (2001).

ing abilities and dismiss their losses as the result of poor timing or poor luck; these eternal hopefuls may still believe they can reap future profits if they are allowed to speculate (although they might try their hand at other markets, say for currency futures, or for gold). Third and perhaps greatest, chastened speculators who decide they can't profit from trading will rationally conclude they can adequately protect themselves from future losses simply by refraining from trading. In other words, losing speculators won't clamor for government intervention because they can protect themselves simply by becoming ex-speculators.<sup>66</sup>

The result is that, just as optimism in the face of uncertainty produces market failure in the form of disagreement-based trading, it also produces political failure in democratic systems that emphasize accountability to the public's demands. *Ex ante*, people who think they will lose money by speculating simply don't speculate, while those who think they will profit from speculating affirmatively object to regulations that make speculation more difficult. *Ex post*, even former speculators who suffered losses still believe regulation is unnecessary because now they can protect themselves from future losses by refraining from further trading.

This analysis raises serious questions about the wisdom and efficacy of democratic governance when it comes to addressing the economic harms that flow from financial speculation. Political institutions that are subject to democratic pressures—especially elected legislatures and elected executive officers—may be fundamentally unsuited to addressing the negative economic effects of disagreement-based trading in financial markets. Legislatures and elected executives may be relatively effective when it comes to addressing market failures that the voting public can easily recognize and anticipate (e.g., limiting the external costs that result from deliberate fraud and manipulation in financial markets, or promoting the public benefit of a uniform mandatory disclosure system that provides investors with cheap and accessible information). But when economic inefficiency can be traced most directly to people's own optimism about their ability to forecast in the face of uncertainty, the problems that result are not likely to be recognized except, perhaps, in the wake of collective disaster. And even then, once the immediate crisis is past, the problems are likely to be quickly forgotten.<sup>67</sup>

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<sup>66</sup> See generally Stout, *Costly Casinos*, *supra* note 20, at 695–97 (discussing the effects of failed speculation on the speculator's subsequent activities).

<sup>67</sup> See John C. Coffee, Jr., *The Political Economy of Dodd-Frank: Why Financial Reform Tends to Be Frustrated and Systemic Risk Perpetuated*, 97 CORNELL L. REV. 1019, 1020 (2012) (“A good crisis should never go to waste. . . [O]nly after a catastrophic market collapse, can legislators and regulators overcome the resistance of the financial community and adopt comprehensive ‘reform’ legislation.”).

This suggests that, when it comes to regulating optimism-driven speculation, we would do better to rely instead on relatively nondemocratic governing institutions and authorities, such as an independent judiciary, independent agencies, and even private self-regulatory bodies. There is an extensive literature on the roles and dangers of such nondemocratic institutions, and a full survey of all their benefits and costs lies well beyond the scope of this Article.<sup>68</sup> Rather, this discussion seeks to contribute in a small way to our understanding of the possible benefits of nondemocratic political institutions by examining how they may offer unique advantages in addressing the particular (and somewhat peculiar) public choice problem posed by optimism-fueled speculation in financial markets.

In illustration, the next section of this Article offers a case study of the history of the regulation of speculative trading in off-exchange derivatives. As we shall see, in the U.S. alone, that regulatory history dates back at least to the mid-nineteenth century. Trading in derivatives contracts has at different times and places been regulated by common-law courts, state legislatures, an independent federal agency, and the U.S. Congress. By examining the relative success of these differing strategies, we can gain insight not only into the general question of how to best regulate disagreement-based speculation in financial markets but also into the challenges we still face in responding to the speculative excesses of the past decade and the 2008 credit crisis.

## B. A History of Speculative Derivatives Trading in America and Attempts to Regulate It

### 1. *Common-Law Regulation of Derivatives Speculation*

Although derivatives defenders often describe derivatives as “innovations,” derivatives contracts have been used to wager on market phenomena for millennia.<sup>69</sup> An early American example was a type of derivative known as a “difference contract.” Difference contracts were

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<sup>68</sup> See generally Lisa Schultz Bressman & Robert B. Thompson, *The Future of Agency Independence*, 63 VAND. L. REV. 599 (2010) (discussing the costs and benefits of independent agencies and their place in the constitutional structure); William M. Landes & Richard A. Posner, *The Independent Judiciary in an Interest-Group Perspective*, 18 J.L. & ECON. 875 (1975) (examining the role of an independent judiciary in facilitating beneficial economic governance by balancing the political branches); Jerry L. Mashaw, *Prodelegation: Why Administrators Should Make Political Decisions*, 1 J.L. ECON. & ORG. 81 (1985) (making a case for broad delegations of power to agencies and administrators); Peter L. Strauss, *The Place of Agencies in Government: Separation of Powers and the Fourth Branch*, 84 COLUM. L. REV. 573 (1984) (querying the appropriate scope of administrative power in the constitutional structure).

<sup>69</sup> Aristotle recounts the story of philosopher Thales using derivatives contracts to wager on his forecasts for the upcoming olive harvest. See ARISTOTLE, *POLITICS* 73–74 (Benjamin Jowett trans., The Modern Library 1943) (c. 350 B.C.E.).

agreements between two parties that one would make a payment of money to the other determined by future changes in some market phenomenon, usually the market price for an agricultural commodity like wheat or corn.<sup>70</sup> They were often formally structured like modern futures contracts, with one party promising to buy wheat at today's price and the other promising to purchase it, but with the contract to be performed at some future time. However, the parties further agreed that the contract would not be performed by actually delivering the wheat. Rather, the wheat "buyer" would pay the "seller" the difference between the contract price and the market price of wheat at the time of performance.

Not surprisingly, difference contract trading proved highly appealing to speculators. The transaction costs involved in difference contract trading were much lower than those associated with spot market trading in physical commodities and may have compared favorably to trading in corporate securities.<sup>71</sup> Moreover, because difference contracts were essentially wagers, they could be used to bet on price declines and to take speculative positions virtually without cost—at least, until the bet came due.

Part I examined how disagreement-based trading can be viewed as a form of market failure. This view is consistent with the suspicious attitude common-law courts adopted toward difference contracts, as reflected in an ancient and fundamental contract law doctrine that has been nearly forgotten today: the "rule against difference contracts."<sup>72</sup>

As the rule was described in one 1884 case from the United States Supreme Court,

The generally accepted doctrine in this country is . . . a contract is only valid when the parties really intend and agree that the goods are to be delivered by the seller and the price to be paid by the buyer; and, if under guise of such a contract, the real intent be

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<sup>70</sup> See Stout, *Why the Law Hates Speculators*, *supra* note 24, at 713–14.

<sup>71</sup> As recently as the 1960s, trading corporate equities required investors to pay substantial fixed brokerage commissions. Annual turnover in corporate equities was accordingly much lower, typically less than twenty percent. See Vaughn S. Armstrong & Norman Gardner, *The Effect of Financial Institution Objectives on Equity Turnover*, 9 ACAD. ACCT. & FIN. STUD. J. 13, 22 (2005) (reporting twenty percent turnover in the 1960s). By 2010, with the advent of deregulated brokerage commissions measured in pennies and near costless computerized trading, average annual turnover in corporate equities was approximately 300 percent. See Strine, *supra* note 22, at 11.

<sup>72</sup> See Stout, *Why the Law Hates Speculators*, *supra* note 24, at 713. Although common-law hostility towards speculation is most apparent in the case of the rule against difference contracts, it crops up in other areas of the common law as well, including the indemnity and insurable interest requirements in insurance law, trust law's "prudent person" rule, and the champerty prohibition against buying and selling future interests in the outcomes of legal disputes. See *id.* at 704 n.6 (referencing anti-speculation laws, including champerty prohibition and sections of the Securities Exchange Act of 1934).



merely to speculate in the rise or fall of prices, and the goods are not to be delivered, but one party is to pay to the other the difference between the contract price and the market price of the goods at the date fixed for executing the contract, then the whole transaction constitutes nothing more than a wager, and is null and void.<sup>73</sup>

It should be noted that this rule was subject to an “indemnity” exception, under which courts would enforce contracts if one party could show that he or she was in fact truly hedging and using the difference contract to offset a preexisting economic interest that was at risk.<sup>74</sup> Moreover, even when the hedging exception was not available, the rule above did not treat pure speculative trading through difference contracts as illegal or prohibited. It merely precluded enforcement of such contracts in public courts on grounds of public policy.

In describing this public policy, some cases employed moral rhetoric, describing difference contracts as “tainted and poisoned”<sup>75</sup> or “the source of great injury to morals.”<sup>76</sup> But many others justified the rule on economic grounds. For example, courts often noted that difference contract speculation was at best a zero-sum activity.<sup>77</sup> Although they did not use economic terms like “opportunity cost,” judges clearly understood that society lost when people devoted their time and effort to the pursuit of personal profit through zero-sum transactions. Thus, one case condemned speculation in difference contracts on the grounds that it “promotes no legitimate trade,”<sup>78</sup> while another denounced speculation because it “discourage[s] the disposition to engage in steady business or labor.”<sup>79</sup>

A second economic concern that courts associated with difference contracts seems even more relevant to our understanding of the consequences of runaway speculation today. This was the concern that, by offering an easy way to bet on forecasts, difference contracts tempted people to create and accept new risks. Thus, difference contracts trading was criticized for “encourag[ing] wild speculations”<sup>80</sup> and “induc[ing] men to risk their money or property,”<sup>81</sup> resulting in “bankruptcies, defalcations of public officers, embezzlements, forger-

<sup>73</sup> *Irwin v. Williar*, 110 U.S. 499, 508–09 (1884).

<sup>74</sup> *See Stout, Why the Law Hates Speculators*, *supra* note 24, at 718–19.

<sup>75</sup> *Cunningham v. Nat'l Bank of Augusta*, 71 Ga. 400, 403 (1883).

<sup>76</sup> *State v. Stripling*, 21 So. 409, 410 (Ala. 1897).

<sup>77</sup> *See Brua's Appeal*, 55 Pa. 294, 299 (1867) (“[T]he losing party has received . . . for the money parted with . . . nothing at all. The lucky winner of course is the gainer, and he will continue so until fickle fortune in due time makes him feel the woes he has inflicted on others.”).

<sup>78</sup> *Melchert v. Am. Union Tel. Co.*, 11 F. 193, 195 (C.C.D. Iowa 1882).

<sup>79</sup> *Justh v. Holliday*, 13 D.C. (2 Mackey) 346, 349 (1883).

<sup>80</sup> *Id.* at 348–49.

<sup>81</sup> *Brua's Appeal*, 55 Pa. at 298–99.

ies, larcenies, and death.”<sup>82</sup> The result was to “fill the cities with the bankrupt victims” brought down by their own speculative fever.<sup>83</sup> Moreover, some cases acknowledged that risks created by speculating traders might be borne not just by the traders themselves, but by the broader community. One 1872 Pennsylvania decision warned that a crash in a speculative market would “carry[ ] down the bona fide dealer in its collapse.”<sup>84</sup> This fear echoes modern concerns about “systemic risk”—the possibility that the risks created by rampant speculation threaten the stability of interconnected markets.

Finally, nineteenth-century case law expressed judicial fears that unrestrained speculation could lead to bubbles and price spikes, fears that resonate with the idea that optimism-fueled speculative trading can inflate perceptions of wealth and encourage excessive consumption. In 1882, for example, a federal district court judge in Iowa condemned difference contracts for “agitat[ing] the markets,” observing that “sudden fluctuations in values are [the] illegitimate progeny” of speculative trading.<sup>85</sup> An 1883 case faulted difference contracts for “derang[ing] prices to the detriment of the community.”<sup>86</sup> The same Pennsylvania judge who expressed concern for systemic risk also observed that “ventures upon prices invite men of small means to enter into transactions far beyond their capital, which they do not intend to fulfil [sic], and thus the apparent business in the particular trade is inflated and unreal, and like a bubble needs only to be pricked to disappear.”<sup>87</sup>

In sum, a survey of nineteenth-century contract cases shows that the judiciary seemed quite cognizant of the danger that speculation in derivatives could waste valuable resources, increase risks, and distort market prices. What is more, common-law courts routinely employed the rule against difference contracts to discourage such purely speculative transactions.

## 2. *Private Ordering and the Rise of Futures Exchanges*

As noted above, despite courts’ concern about the negative economic effects of derivatives speculation, the common law did not try to stop those who wanted to use difference contracts to wager on the markets from doing so. It simply declined to subsidize speculators by allowing them to employ public courts to enforce their bets.<sup>88</sup> As a result, would-be speculators had to worry that their counterparties

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<sup>82</sup> *Cunningham v. Nat’l Bank of Augusta*, 71 Ga. 400, 403 (1883).

<sup>83</sup> *Justh*, 13 D.C. (2 Mackey) at 349.

<sup>84</sup> *Kirkpatrick v. Bonsall*, 72 Pa. 155, 158 (1872).

<sup>85</sup> *Melchert v. Am. Union Tel. Co.*, 11 F. 193, 195 (C.C.D. Iowa 1882).

<sup>86</sup> *Justh*, 13 D.C. (2 Mackey) at 349.

<sup>87</sup> *Kirkpatrick*, 72 Pa. at 158.

<sup>88</sup> *See Irwin v. Williar*, 110 U.S. 499, 508–09 (1884).

might not perform. A private solution to this enforcement problem soon emerged: privately organized futures exchanges.

Buyers and sellers have met to exchange their wares for millennia. However, beginning in the mid-nineteenth century,<sup>89</sup> U.S. agricultural exchanges came to be dominated not by producers and consumers dealing in physical corn or cotton, but by traders exchanging “elevator receipts” representing a quantity of a commodity stored elsewhere (e.g., in a grain elevator).<sup>90</sup> Soon elevator receipts morphed into “futures contracts” that called for delivery of the commodity in the future, at today’s market price. However, most exchange-traded futures were not performed by actually delivering the corn or cotton. Rather, traders employed a “set off” process, purchasing a second, offsetting futures contract for delivery of the same quantity of the same goods on the same date.<sup>91</sup> Futures contracts performed by set-off were just difference contracts by another name.

Nevertheless, traders who wanted to use exchange-traded futures for speculation rather than hedging generally did not worry their counterparties might use the common-law rule against difference contracts as an excuse not to perform. This is not because public courts enforced speculative futures contracts, but because anyone who wanted to trade on a futures exchange had to use the brokerage services of an exchange member who would guarantee the traders’ performance.<sup>92</sup> Members were closely monitored by the exchanges, and were required to meet capital requirements, to post collateral, and to use standardized contract terms to further the offset process. Thus, the commodity exchanges functioned like private gambling clubs whose owners had the motive and the means to make sure that everyone who gambled in the club would pay off their bets.<sup>93</sup> Because exchange members collectively assumed the risk of nonperformance of any futures contract traded on the exchange, they wanted to ensure that both their trading clients, and their fellow members, could and would perform.

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<sup>89</sup> The triggering event seems to have been the invention of the telegraph, which allowed speculators in any major city to place bets on the prices of commodities they would never see and could not even be sure existed. See generally Joel A. Tarr et al., *The City and the Telegraph: Urban Telecommunications in the Pre-Telephone Era*, 14 J. URB. HIST. 38, 38–39 (1987), available at <http://juh.sagepub.com/content/14/1/38.citation>.

<sup>90</sup> See Jonathan Ira Levy, *Contemplating Delivery: Futures Trading and the Problem of Commodity Exchange in the United States, 1875–1905*, 111 AM. HIST. REV. 307, 313 (2006).

<sup>91</sup> See *id.* at 313–14.

<sup>92</sup> See *Bd. of Trade of Chicago v. Christie Grain & Stock Co.*, 198 U.S. 236, 245 (1905) (“[T]he members make sales and purchases exclusively for future delivery, the members dealing always as principals between themselves . . .”).

<sup>93</sup> See Lynn A. Stout, *Regulate OTC Derivatives by Deregulating Them*, REGULATION, Fall 2009, at 32, 33, available at <http://www.cato.org/pubs/regulation/regv32n3/v32n3-1.pdf>; Stout, *Why the Law Hates Speculators*, *supra* note 24, at 719.

The creation of the futures exchanges was accompanied by explosive growth in speculative trading. At the close of the nineteenth century, more than twenty different futures trading markets had emerged in the United States, dealing not only in futures on wheat and corn but also contracts on mules, lard, beef, cheese, coffee, petroleum, and a host of other products.<sup>94</sup> The futures markets swiftly outgrew the markets for the underlying commodities. In 1888, an estimated 25 *quadrillion* bushels of wheat were traded through futures contracts, even though farmers harvested only 415 *million* actual bushels of wheat in the United States that year.<sup>95</sup>

Nevertheless, the private futures exchanges proved stable, long-lived organizations that seemed reasonably adept at limiting the most negative economic consequences of speculative trading. Many futures exchanges created in the nineteenth century—for example, the Chicago Board of Trade and the Chicago Mercantile Exchange—still operate today. Moreover, while there were many financial crises during the nineteenth and early twentieth century, none involved either difference contracts or futures trading on private exchanges.<sup>96</sup> It appears that these early, nondemocratic approaches to regulating speculation in difference contracts—the rule against difference contracts employed by common-law courts, combined with the private regulation of speculation on organized futures exchanges—worked in tandem to limit economic disruptions and losses from disagreement-based trading.<sup>97</sup>

### 3. *The Trend Toward Codification and the Creation of the CFTC*

If this nineteenth century structure served its purpose well, what happened to it? In brief, it fell prey to the same force that has consumed much of the rest of judge-made common law in the twentieth century—codification.

The process began at the state level in the late nineteenth century with the passage of “anti-bucketshop” legislation that declared

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<sup>94</sup> See Levy, *supra* note 90, at 314.

<sup>95</sup> See *id.* at 313.

<sup>96</sup> See generally FIN. CRISIS INQUIRY COMM’N, THE FINANCIAL CRISIS INQUIRY REPORT: FINAL REPORT OF THE NATIONAL COMMISSION ON THE CAUSES OF THE FINANCIAL AND ECONOMIC CRISIS IN THE UNITED STATES 29 (2011) [hereinafter FCIC REPORT] (discussing banking crises of nineteenth and early twentieth centuries).

<sup>97</sup> This relative success can be seen most readily when we compare nineteenth-century regulation of derivatives trading with the nineteenth-century regulation of bank lending, another area where relative optimism in the face of uncertainty can wreak havoc (e.g., when overoptimistic bankers and overconfident borrowers self-select and deal with each other, speculative credit bubbles result). Before the 1913 creation of the Federal Reserve—itself an independent and nondemocratic institution—speculative credit bubbles and ensuing bank runs and panics were a routine part of American life. See *id.* By comparison, the derivatives markets were oases of tranquility.

off-exchange speculative derivatives contracts to be not only unenforceable in the courts, but affirmatively illegal.<sup>98</sup> Meanwhile, the organized futures exchanges also began to face criticism. The problem was not a failure to constrain speculation, but a less subtle issue: exchanges failed to police against fraudulent price manipulation schemes. Farmers and small business owners complained that traders were using futures to “fix” market prices.<sup>99</sup> As a result, Congress took a first step toward regulating the futures exchanges by passing the Grain Futures Act of 1922, reenacted in 1936 as the Commodity Exchange Act (CEA).<sup>100</sup>

Much of the CEA was devoted to ensuring that market manipulation on future exchanges would be detected and prevented.<sup>101</sup> But the original CEA also codified and hardened the old common-law rule against speculative difference contracts by banning trading in off-exchange futures (derivatives).<sup>102</sup> The result was a somewhat heavyhanded federal approach to regulating futures exchanges that nevertheless had one notable advantage: it continued to keep speculative trading in commodity derivatives from causing problems for the rest of the economy. Apart from the occasional relatively minor manipulation scandals (onions in the 1950s, silver in the 1980s),<sup>103</sup> futures exchanges functioned so smoothly after the CEA’s passage that they received almost no public attention.<sup>104</sup> This success may be due in large part to the fact that the CEA was enforced not by an executive-branch agency subject to direct political pressures, but by an independent agency, the Commodity Futures Trading Commission (CFTC).<sup>105</sup> Unlike executive-branch agencies, the CFTC and other independent agencies typically are run by multimember commissions

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<sup>98</sup> See Stout, *Why the Law Hates Speculators*, *supra* note 24, at 721.

<sup>99</sup> See Romano, *supra* note 27, at 24 n.57.

<sup>100</sup> See generally Commodity Exchange Act, 7 U.S.C. §§ 1–25 (2006) (requiring traders to operate on organized regulated exchanges).

<sup>101</sup> See Romano, *supra* note 27, at 23 (discussing the CEA’s application to futures exchanges for the prevention of price manipulation).

<sup>102</sup> See *id.* at 26. The original CEA regulated only futures trading in certain agricultural commodities like cotton and grain. In 1974, Congress expanded the CEA to apply to futures trading in “all other goods and articles” and created the five-member CFTC dedicated to enforcing the statute. See Stout, *Why the Law Hates Speculators*, *supra* note 24, at 721–22. As in the case of the common law, there was an exception for “forward” contracts intended to be settled by actual delivery, which were presumed to serve a true hedging purpose. See *id.* at 722.

<sup>103</sup> See Kurt Eichenwald, *2 Hunts Fined and Banned from Trades*, N.Y. TIMES, Dec. 21, 1989, at D1 (discussing how William and Nelson Hunt settled CFTC charges that they had manipulated the silver market); *Odorous Onions*, TIME, July 2, 1956, at 66, 66–67 (describing the onion scandal).

<sup>104</sup> See Colleen M. Baker, *Regulating the Invisible: The Case of Over-the-Counter Derivatives*, 85 NOTRE DAME L. REV. 1287, 1298 (2010) (noting that “exchange-traded derivatives are relatively uncontroversial from a public policy perspective”).

<sup>105</sup> See 7 U.S.C. § 6b-1.

comprised of individuals from both parties who, once appointed by the President, serve a fixed term and cannot be removed except for cause.<sup>106</sup> This structure makes independent agencies relatively insensitive to democratic pressures.

Still, even independent agencies are not entirely insulated. Among other sources of democratic “accountability,” the CFTC’s commissioners are appointed by the President, and its budget is set by Congress. This may have left the CFTC open to political pressures when in the 1980s and 1990s the agency found itself faced with a new development: the appearance of a large and growing over-the-counter (OTC) market for financial derivatives.<sup>107</sup>

#### 4. *Congress Unleashes Speculative Derivatives Trading*

As we have seen, during most of the nineteenth and twentieth centuries, derivatives wagering took place through difference contracts or futures trading in agricultural and physical commodities like wheat, gold, and oil. In the final quarter of the twentieth century, however, Wall Street came up with a new idea: wagering on other market phenomena, in particular interest rates, through a new type of instrument dubbed an “interest rate swap.”<sup>108</sup>

At first, OTC swaps traders may not have realized that interest rate swaps might be deemed speculative “difference contracts” subject to the common-law rule of unenforceability, or off-exchange futures illegal under state anti-bucketshop laws and the CEA.<sup>109</sup> By the early 1980s, however, would-be derivatives traders were painfully aware of the problem.<sup>110</sup> Financial firms mounted an orchestrated campaign to give “legal certainty” to interest rate swaps.<sup>111</sup>

<sup>106</sup> Bressman & Thompson, *supra* note 68, at 610–11.

<sup>107</sup> See Thomas A. Tormey, *A Derivatives Dilemma: The Treasury Amendment Controversy and the Regulatory Status of Foreign Currency Options*, 65 *FORDHAM L. REV.* 2313, 2331–33 (1997); Bank for Int’l Settlements, *International Banking and Financial Market Developments*, *BIS Q. REV.*, Dec. 2007, at 23–24, available at [http://www.bis.org/publ/qtrpdf/r\\_qt0712.pdf](http://www.bis.org/publ/qtrpdf/r_qt0712.pdf).

<sup>108</sup> See Romano, *supra* note 27, at 27; Tormey, *supra* note 107, at 2323.

<sup>109</sup> See Jerry W. Markham, “*Confederate Bonds*,” “*General Custer*,” and the Regulation of Derivative Financial Instruments, 25 *SETON HALL L. REV.* 1, 18–19 (1994) (describing how the CFTC initially paid little attention to the growth of derivative financial instruments); Stout, *Origin of the 2008 Credit Crisis*, *supra* note 25, at 19 (“At first, financial firms accustomed to thinking of futures in terms of corn or wheat may not have realized that OTC swaps might be ‘difference contracts’ void under the common law, or ‘off-exchange futures’ of the sort banned by the CEA.”); Stout, *Why the Law Hates Speculators*, *supra* note 24, at 766–67 (discussing the CFTC’s initial reluctance to assert jurisdiction over difference contracts and financial derivatives as off-exchange futures under the CEA).

<sup>110</sup> See Tormey, *supra* note 107, at 2369–70.

<sup>111</sup> See Memorandum of Law of International Swaps & Derivatives Ass’n, Inc., Securities Industry Ass’n & the Bond Market Ass’n, as Amicus Curiae, in Support of Plaintiffs’ Objections to Magistrate Judge Eaton’s Report & Recommendation to Judge Marrero at 5–6 (2002), *Cary Oil Co. v. MG Refining & Mktg., Inc.*, 99 Civ. 1725 (VM) (DFE), (S.D.N.Y. Feb.

The CFTC was headed at the time by Reagan appointee Wendy Gramm, the wife of Texas Senator Phil Gramm and a conservative economist who strongly favored deregulation.<sup>112</sup> Accordingly, it was an easy matter to persuade the supposedly independent CFTC in 1989 to issue a “safe harbor” policy statement announcing that it would not attempt to apply the CEA’s ban on off-exchange futures to OTC trading in interest rate swaps.<sup>113</sup> Another potential problem, however, was the possible continued application of old state anti-bucketshop laws and the nearly forgotten common-law rule against difference contracts. Would-be derivatives traders turned to Congress, and the elected representatives quickly complied. In 1992, Congress amended the CEA to give the CFTC (still headed by Gramm) the legislative authority to exempt whole classes of financial derivatives from the CEA, and further declared that federal law now preempted the field.<sup>114</sup> Both state anti-bucketshop laws and the common law were made legally irrelevant.<sup>115</sup>

Just as nineteenth-century judges predicted, the almost immediate result was a series of swaps-fueled speculative disasters, including the 1994 bankruptcy of Orange County’s pension fund.<sup>116</sup> Still more threatening was the near collapse in 1998 of the giant hedge fund Long Term Capital Management (LTCM). LTCM’s brush with failure so terrified regulators that the Federal Reserve orchestrated a nearly \$4 billion bank bailout to rescue the fund.<sup>117</sup>

By this time, Wendy Gramm had left the CFTC to join Enron’s board of directors.<sup>118</sup> The agency was now headed by a Clinton appointee, Brooksley Born. Interestingly, Born proved to be a truly independent CFTC Chair. Concerned by the Orange County and LTCM disasters, she tried to revisit the question of whether the CFTC

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22. 2002) [hereinafter *ISDA Memorandum*] (describing industry effort to secure legal certainty for OTC swaps).

<sup>112</sup> See Tyson Slocum, *Blind Faith: How Deregulation and Enron’s Influence over Government Looted Billions from Americans*, PUB. CITIZEN 9 (Dec. 2001), [http://www.citizen.org/documents/Blind\\_Faith.pdf](http://www.citizen.org/documents/Blind_Faith.pdf).

<sup>113</sup> See Stout, *Origin of the 2008 Credit Crisis*, *supra* note 25, at 19.

<sup>114</sup> See *id.*

<sup>115</sup> See Futures Trading Practices Act of 1992, Pub. L. No. 102-546, § 502(a), 106 Stat. 3590 (amending 7 U.S.C. § 6); § 502(c) (amending 7 U.S.C. § 16(e)(2)(A)). The 1992 legislation thus put the final nail in the coffin of the nearly forgotten common-law rule against difference contracts.

<sup>116</sup> See FCIC REPORT, *supra* note 96, at 46–47 (describing post-1993 swaps scandals).

<sup>117</sup> FRANK PARTNOY, INFECTIOUS GREED: HOW DECEIT AND RISK CORRUPTED THE FINANCIAL MARKETS 261 (2003); see also FCIC REPORT, *supra* note 96, at 57 (noting LTCM had entered derivatives contracts with more than \$1 trillion in notional value).

<sup>118</sup> See Slocum, *supra* note 112, at 3 (noting that Gramm joined the board of Enron, a major beneficiary of her deregulatory agenda, five weeks after her resignation from the CFTC).

ought to regulate OTC swaps.<sup>119</sup> However, the derivatives industry evaded her by appealing to Congress, which obligingly passed legislation that effectively blocked the CFTC from taking any regulatory action until a “President’s Working Group” had investigated the question.<sup>120</sup> Born resigned from the CFTC; the Working Group recommended that “legal certainty” be given not just to interest-rate swaps but to all other OTC derivatives; and Congress heeded speculators’ calls by passing in 2000 a statute called the Commodities Futures Modernization Act of 2000 (CFMA).<sup>121</sup>

Although the CFMA’s passage attracted little public attention, it worked a radical change in the laws undergirding the U.S. financial system. For the first time in U.S. history, purely speculative, off-exchange derivatives contracts became legally enforceable,<sup>122</sup> effectively providing a government subsidy to derivatives traders.<sup>123</sup>

The rest of the story is reasonably well known, and I have told it elsewhere in some detail.<sup>124</sup> After the CFMA legalized purely speculative trading in OTC derivatives, there was immediate and explosive growth in the OTC market.<sup>125</sup> Many of the best and brightest young minds in math and science were called to Wall Street. The financial sector and the money supply boomed, but soon companies began to fail due to speculative losses from derivatives trading. First and fore-

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<sup>119</sup> See *Over-the-Counter Derivatives*, 63 Fed. Reg. 26,114, 26,115 (proposed May 12, 1998) (noting that OTC derivatives had caused a number of financial losses, and proposing to reexamine the role of the CFTC in regulating OTC derivative exchanges).

<sup>120</sup> See Omnibus Consolidated and Emergency Supplemental Appropriations Act, 1998, Pub. L. No. 105-277, § 760, 112 Stat. 2681; PRESIDENT’S WORKING GRP. ON FIN. MKTS., *OVER-THE-COUNTER DERIVATIVES MARKETS AND THE COMMODITIES EXCHANGE ACT 1* (1999) [hereinafter WORKING GRP. REP.], available at <http://www.treasury.gov/resource-center/fin-mkts/documents/otcact.pdf>.

<sup>121</sup> See *Commodities Futures Modernization Act of 2000*, Pub. L. No. 106-554, 114 Stat. 2763 (2000); WORKING GRP. REP. *supra* note 120, at 9.

<sup>122</sup> See *Commodities Futures Modernization Act of 2000* §§ 103, 120 (codified at 7 U.S.C. §§ 2(h) and 25(a)(4) (2001)).

<sup>123</sup> Making speculative contracts legally enforceable is a kind of public subsidy because it relieves speculators of much of the cost of enforcing their deals. See also Mark J. Roe, *The Derivatives Market’s Payment Priorities as Financial Crisis Accelerator*, 63 STAN. L. REV. 539, 584 (2011) (describing how bankruptcy law also subsidizes speculative derivatives by giving derivatives counterparties preference over other creditors).

<sup>124</sup> See generally Stout, *Origin of the 2008 Credit Crisis*, *supra* note 25 (cataloguing the rapid growth of derivatives trading in the 2000s).

<sup>125</sup> In 1992, shortly after the swaps exemption was adopted, the General Accounting Office estimated the OTC market at only \$12.1 trillion. See U.S. GEN. ACCOUNTING OFFICE, GAO/GGD-94-133, *FINANCIAL DERIVATIVES: ACTIONS NEEDED TO PROTECT THE FINANCIAL SYSTEM 3* (1994). After the swaps exemption was created but prior to the CFMA’s passage, the notional value of OTC derivatives outstanding—mostly interest rate swaps and other exempt derivatives—rose to approximately \$88 trillion. See Press Release, Bank for Int’l Settlements, *The Global OTC Derivatives Market Continues to Grow 3 tbl.1* (Nov. 13, 2000), available at [http://www.bis.org/publ/otc\\_hy0011.pdf](http://www.bis.org/publ/otc_hy0011.pdf). By 2011, after passage of the CFMA, the derivatives market had grown by an order of magnitude to more than \$700 trillion. See *Amounts Outstanding of OTC Derivatives*, *supra* note 26.



most, ironically, was Wendy Gramm's firm, Enron.<sup>126</sup> Then 2008 brought the successive collapse or near collapse of several large financial companies due to losses from derivatives trading, including Lehman Brothers, Merrill Lynch, and insurance giant AIG.<sup>127</sup> The financial sector froze in panic, and the Federal Reserve was forced to act as lender of last resort, committing nearly \$8 trillion in credit to prevent economic collapse.<sup>128</sup> More than three years on, we are still plagued by slow economic growth, high unemployment, and weak investment returns.

### C. Summary: Democracy Is an Obstacle to (Re)Regulation of Derivatives Speculation

A brush with death focuses one's attention. So does a serious financial crisis. Although the role that newly legalized OTC derivatives speculation played in causing the 2008 credit crisis is still not fully appreciated by many laypersons, in the wake of the crisis numerous lawmakers and legal experts identified the CFMA as an important contributing cause.<sup>129</sup> Congressional politicians from the Democratic side in particular embraced the goal of reining in speculative OTC derivatives trading of the sort that nearly toppled AIG and its investment bank counterparties.<sup>130</sup> Thus, derivatives regulation—or more accurately, reregulation—became a central theme of the massive piece of legislation that eventually became known as Dodd-Frank.

One key element of Dodd-Frank is Title VII, the “Wall Street Transparency and Accountability Act,” which directly addresses the

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<sup>126</sup> Although Enron is often remembered for its accounting fraud, the motive behind the fraud was the need to conceal massive losses the company had suffered trading energy derivatives. See Jacqueline Lang Weaver, *Can Energy Markets Be Trusted? The Effect of the Rise and Fall of Enron on Energy Markets*, 4 Hous. Bus. & Tax. L.J. 1, 24–25 (2004) (noting that when Enron's accounting shams were exposed, counterparties in their derivatives trades demanded that Enron provide more cash as collateral in light of Enron's real debt burden).

<sup>127</sup> See David A. Skeel, Jr. et al., *Inside-Out Corporate Governance*, 37 J. Corp. L. 147, 149, 185 (attributing the collapse of corporations like Bear Stearns, Fannie Mae, Freddie Mac, Lehman Brothers, Merrill Lynch, and AIG to economic losses that were magnified by the OTC derivative market).

<sup>128</sup> See Bob Irvy, Bradley Keoun & Phil Kuntz, *Secret Fed Loans Gave Banks \$13 Billion Undisclosed to Congress*, BLOOMBERG (Nov. 27, 2011, 7:01 PM), <http://www.bloomberg.com/news/2011-11-28/secret-fed-loans-undisclosed-to-congress-gave-banks-13-billion-in-income.html>.

<sup>129</sup> See, e.g., FCIC REPORT, *supra* note 96, at 38–52; Michael Greenberger, *Overwhelming a Financial Regulatory Black Hole with Legislative Sunlight: Dodd-Frank's Attack on Systemic Economic Destabilization Caused by an Unregulated Multi-Trillion Dollar Derivatives Market*, 6 J. Bus. & Tech. L. 127, 142–43 (2011); Seema G. Sharma, *Over-the-Counter Derivatives: A New Era of Financial Regulation*, 17 L. & Bus. Rev. Am. 279, 290 (2011); Stout, *Origin of the 2008 Credit Crisis*, *supra* note 25, at 27–29.

<sup>130</sup> See Press Release, Comm. on Fin. Servs., Frank Circulates Discussion Draft of Legislation to Regulate OTC Derivatives (Oct. 2, 2009), <http://democrats.financialservices.house.gov/press/PRArticle.aspx?NewsID=539>.

problem of OTC derivatives speculation.<sup>131</sup> The basic strategy Title VII employs to reregulate the derivatives markets is, in effect, to reverse the CFMA's 2000 grant of "legal certainty" to speculative OTC trading. Title VII does this by imposing a "clearing requirement" on financial derivatives that is the functional equivalent of requiring them to be traded only on exchanges whose members guarantee all trades.<sup>132</sup> Thus, like the original CEA and the common-law rule against difference contracts before it, Title VII precludes public enforcement of speculative derivatives contracts that are not subject to private ordering and enforcement.<sup>133</sup>

Perhaps Title VII will prevent speculative trading in derivatives from imposing large macroeconomic costs of the sort we have recently suffered, just as the common-law rule against difference contracts largely succeeded, but there is reason to fear things may not work out this way. One serious source of concern is that, in the bruising legislative negotiations that led to Dodd-Frank's passage, Wall Street lobbyists succeeded in weakening Title VII's clearing requirement by ensuring that Title VII gives the CFTC the discretion and authority to exempt whole classes of admittedly speculative derivatives transactions from the clearing requirement.<sup>134</sup> Our brief examination of CFTC history under Chairs Gramm and Born showed that while the CFTC is an independent agency, it may not be independent enough to deal reliably with the market failure that results from disagreement-based trading. An even greater source of concern lies in the fact that Dodd-Frank did not reverse Congress's 1992 legislation declaring that federal law preempts speculative derivatives trading from state-level regulation. In effect, Congress has retained for itself the implicit power to change its mind. Federal law, and only federal law, now regulates derivatives wagering. And although for the moment federal law seems focused on restraining derivatives speculation, that could change as soon as the public's collective memory of the recent crisis fades, and

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<sup>131</sup> Dodd-Frank Wall Street Reform and Consumer Protection Act, Pub L. No. 111-203, § 701, 124 Stat. 1376, 1641 (2010).

<sup>132</sup> *See id.* § 723. "Clearing organizations" must perform the same sorts of trade-guarantee and enforcement functions performed by private futures exchanges in the nineteenth century. *See id.* (explaining clearing requirements); § 725 (defining derivatives clearing organizations).

<sup>133</sup> Also like the old CEA and the common law, Title VII provides an exemption from the clearing requirement if one of the two parties to an OTC derivative contract is, in fact, using the contract not to speculate, but to hedge against a preexisting commercial risk. *See id.* § 724(c)(4).

<sup>134</sup> Section 723 provides that the CFTC may "determine that the clearing requirement . . . shall not apply to [a particular] swap, or group, category, type, or class of swaps." *See id.* § 723(a)(3).

the forces of optimism and adverse selection re-emerge to renew populist enthusiasm for unleashing our speculative “animal spirits.”<sup>135</sup>

Unfortunately, these animal spirits, fueled by optimism and our collective blindness to uncertainty, could easily create populist pressures to dismantle the parts of Dodd-Frank that are designed to curb disagreement-based derivatives speculation. This irrational optimism comes not from Wall Street,<sup>136</sup> but from self-selected average voters who optimistically believe that they can exploit opportunities for speculative trading for their own benefit. When it comes to avoiding the negative economic effects of disagreement-based speculation in financial markets, democratic societies face a bigger obstacle than conventional interest group politics. That obstacle is democracy itself.

### CONCLUSION

In the wake of the 2008 credit crisis, the American public looked to Congress and the President to take the lead in protecting our financial markets and economy from future disasters. Both responded, but in a fashion that leaves each with substantial authority to determine whether and how speculative derivatives trading will be reined in. This Article suggests that this approach, which leaves the question of derivatives regulation largely in the hands of political institutions vulnerable to democratic pressures, is not likely to succeed. More broadly, it also highlights how optimistic self-selection in the face of uncertainty raises unique public choice obstacles in addressing certain policy problems.<sup>137</sup>

Democratic institutions are fundamentally ill-suited for dealing with certain kinds of market failures, including the market failure that flows from disagreement-based speculative trading. Just as Keynes’s “dark forces of time and ignorance” tempt us into trying to profit from the zero-sum game of speculation, they also hide from us our own best interest in reining in such trading. History shows that only relatively nondemocratic and unaccountable institutions have had much success at restraining speculation, and their ability to do so was weakened when they became subject to populist pressures. The com-

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<sup>135</sup> See William Spencer Topham, *Re-Regulating “Financial Weapons of Mass Destruction,” Observations on Repealing the Commodity Futures Modernization Act and Future Derivative Regulation*, 47 WILLAMETTE L. REV. 133, 141–42 (2010) (noting that Democratic President Clinton signed the CFMA into law, confirming the deregulatory changes endorsed by Robert Rubin and Lawrence Summers, and quashing the attempts of Chairperson Born).

<sup>136</sup> See Simon Johnson, *The Quiet Coup*, ATLANTIC, May 2009, at 46, 49–50.

<sup>137</sup> Although this Article has focused on the economic problem of disagreement-based speculation, there are other policy issues that may present similar public choice problems arising from optimistic self-selection. For example, in the area of consumer finance, optimistic self-selection is likely to pose an obstacle to attempts to limit consumers’ ability to take out usurious loans that they are unlikely to be able to repay.

mon-law rule against difference contracts, which effectively limited speculative trading in derivatives to the venue of the private commodities exchanges, was crafted by the judiciary—one of the least democratic of our governing institutions. When the common-law rule was eventually supplanted and then preempted by federal legislation, even the creation of a new independent agency could only slow, and not stop, its eventual erosion.

Today, in the immediate aftermath of the 2008 credit crisis and the economic woes that have followed it, we have ample motive to stop and recognize the hazards that can flow from optimistic, disagreement-based speculation in financial markets. We also have ample opportunity to take steps to protect ourselves from similar hazards in the future.

But we may well squander this opportunity if we rely only on solutions that require elected lawmakers—or agencies under the power of elected lawmakers—to serve ongoing roles as watchdogs charged with reining in excessive speculation. That strategy might be reasonable if we lived in a world with only risk, and not uncertainty. But just as uncertainty tempts people into trying their hand at disagreement-based speculation, it also creates populist pressures for laws and regulations that not only fail to discourage, but instead actually subsidize, speculative trading. To address the economic problem of excessive speculation we need different—and perhaps fundamentally undemocratic—solutions.