Gambling by Another Name? The Challenge of Purely Speculative Derivatives

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Timothy E. Lynch*1

Abstract

Derivatives contracts can be used to hedge pre-existing risks, but they can also be used to speculate. This Article focuses on derivatives contracts in which both counterparties are speculators. These “purely speculative derivatives (PSD) contracts” have become increasingly common over the last several years and have notably resulted in the transfer of many tens of billions of dollars from institutions that had invested in the US subprime housing market to a handful of speculators who foresaw the market’s collapse, as well as many billions of dollars in fees to PSD brokers.

PSD contracts are problematic. PSD contracts are less-than-zero-sum transactions which decrease social wealth and are economically irrational. PSD contracts also pose systemic risks to the economy, jeopardize corporate stakeholders, are used for undesirable regulatory arbitrage, and can increase moral hazard.

Despite claims by champions of derivatives, PSD contracts benefit society in only limited ways. They contribute somewhat to asset price discovery and may foster valuable financial innovation skills. The existence of PSD contracts also provides economic activity to financial industry intermediaries. It is imaginable that PSDs re-distribute wealth to those better able to invest it. Finally, some PSDs provide entertainment utility. However, these marginal benefits often come at the expense of alternative, more beneficial activities, and PSDs may decrease liquidity in the market for potential hedgers.

Since the social costs of PSD contracts outweigh their social benefits, PSD contracts, except when they are explicitly authorized because of their entertainment value or because of their price discovery function, should be void for public policy.

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When the capital development of a country becomes a byproduct of the operations of a casino, the job is likely to be ill done.2

INTRODUCTION

In 2007, John Paulson earned over $3 billion dollars, believed to be the largest one-year payday in Wall Street history.3 His hedge fund, Paulson & Co., earned $15 billion.4 Paulson had invested in a set of derivatives that had the potential to pay large sums of money if the US housing market faltered. Specifically, he sold a set of synthetic collateral debt obligations (CDOs) referencing a set of credit default swaps which themselves referenced a set of subprime mortgage-related securities. When the US housing market began to falter, his investments began to pay off. His success and his prescience were heralded throughout the financial industry and throughout the world.5

Also in 2007, IKB Deutsche Industriebank AG, a large German bank, lost approximately $4 billion.6 Immediately after its initial loss announcement, IKB’s chief executive officer was forced to resign and shares of IKB plunged 50%. IKB was on the brink of collapse. Facing a possible widespread threat to the German economy, the German government and a consortium of German banks provided IKB with over $10 billion in bail-out financing.7 The bulk of IKB’s losses resulted from its investments related to the US housing market. Among those investments were derivatives referencing US housing, including the purchase of synthetic CDO notes referencing a set of credit default swaps which themselves referenced a set of subprime mortgage-related securities.8 IKB would have received handsome regular payments provided these subprime mortgage-related securities performed well. Alas, they did not.

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3 Gregory Zuckerman, Trader Made Billions on Subprime: John Paulson Bet Big on Drop in Housing Values, WALL ST. J., Jan. 15, 2008, at A1. GREGORY ZUCKERMAN, THE GREATEST TRADE EVER: THE BEHIND THE SCENES STORY OF HOW JOHN PAULSON DEFIED WALL STREET AND MADE FINANCIAL HISTORY , (2009); Complaint, SEC v. Goldman Sachs & Co. and Fabrice Tourre, No. 10-CV-3229 (S.D.N.Y. Apr. 15, 2010) (describing ABACUS 2007-AC1, a synthetic CDO “sold” by the hedge fund Paulson & Co., Inc., and “purchased” by the IKB Deutsche Industriebank and ACA Capital resulting in approximately $1 billion of losses to the purchasers (and ABN Amro, which had assumed the credit risk posed by ACA Capital) and a payoff to the Paulson fund of an equivalent amount (less fees to intermediaries)).
4 Zuckerman, supra note 3.
7 Elisabeth Atzler, et al., Germany’s First Big Subprime Victim Rescued, FINANCIAL TIMES (London ed.2), Aug. 2, 2007, at 1; Carter Dougherty, German Government Backs IKB Bailout, NEW YORK TIMES, February 13, 2008 (noting that IKB had tapped out the €5.65 billion rescue fund and reporting on the third round of government bailout since July 2007).
We now know that at least $150 million of the amount Paulson earned in 2007 was taken from IKB. They had been counterparties to a $150 million bet (in the form a synthetic CDO and intermediated by the investment bank Goldman Sachs) on the performance of a large set of subprime mortgages. Paulson, bearish, had predicted that these subprime mortgages would perform poorly; IKB, bullish, had predicted that investing in US residential mortgages, even these subprime ones, was a prudent investment. Much like two friends betting on the outcome of the Super Bowl, each predicting that a different team would win, Paulson and IKB could not have both been right; someone was going to lose this bet.

Synthetic CDOs, such as the one to which Paulson and IKB were each counterparties, are derivatives. A derivative is commonly described in words to the following effect: “a financial instrument whose value depends on or is derived from the performance of a secondary source such as an underlying bond, currency or commodity,” or “a financial instrument whose value depends on (or derives from) the value of other, more basic underlying variables.” More precisely, a derivative is simply an aleatory contract between two counterparties wherein the payoffs to and/or from each counterparty depend on the outcome of one or a set of extrinsic, future, uncertain event(s) and/or metric(s) and wherein each counterparty expects an outcome opposite to that expected by the other counterparty.

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9 We know this thanks to a lawsuit filed by the SEC against Goldman Sachs, the investment bank which brokered and intermediated at least one synthetic CDO between Paulson and IKB. In 2010, the SEC brought civil fraud charges against Goldman Sachs alleging that it violated securities laws and committed fraud in intermediating the synthetic CDO agreements between, on one hand, Paulson & Co. and, on the other, IKB and ACA Capital. Complaint, SEC, supra note 3; Carrick Mollenkamp & Laura Stevens, SEC v. Goldman Sachs: German Bank: Victim or a Contributor? – IKB’s Investments at the Heart of SEC’s Goldman Probe, WALL ST. JOURNAL, Apr. 22, 2010, at C2; Jay Rivera, Dissecting the Goldman Sachs Fraud Lawsuit, Legalmatch Law Blog (May 18, 2010), available at http://lawblog.legalmatch.com/2010/05/18/dissecting-the-goldman-sachs-fraud-lawsuit/. See also Submission on Behalf of Goldman Sachs & Co. to the SEC In the Matter of ABACUS CDO, Sep. 10, 2009, available at http://online.wsj.com/public/resources/documents/GSWellsSubmission.pdf.

10 For a list of potential Super Bowl derivatives, see Lynch, Derivatives, A Twenty-First Understanding, [forthcoming] at [__].

11 The extent and timing of their respective winnings and losses would be determined over time depending on the actual performance of the set of referenced subprime mortgages. Paulson would earn most if not all of his $3 billion from bearishly speculating this way on US subprime mortgage-related securities with other investors (or, rather, gamblers) like IKB. ZUCKERMAN, supra note 3.

12 Formally, Paulson and IKB were not in privity of contract. They had each contracted with an intermediary, Goldman Sachs, who effectively played the role of a derivatives clearinghouse between what would have otherwise been a direct (synthetic CDO) contractual relationship between Paulson and IKB (though Goldman’s contractual position with Paulson was not perfectly hedged with its contractual position with IKB). See Complaint, SEC, supra note 3.


14 John Hull, Options Futures and Other Derivatives, (7th ed) 2009; For other formulations of the definition of “derivatives,” see, e.g., Brady Dennis, Financial Regulation Bill Gets Last Minute Amendment from Sen. Chris Dodd, WASH. POST, May 19, 2010 (“a financial contract whose price depends on the value of a separate asset, such as a stock or bond”); ROBERT W. KOLB & JAMES OVERDAHL, FUTURES, OPTIONS AND SWAPS, 1 (5th ed. 2007) (“A derivative instrument is one who principal source of value depends on the value of something else, such as an underlying asset, reference rate or index.”); Lynn Stout, Why the Law Hates Speculators: Regulation and Private Ordering in the Market for OTC Derivatives, 48 DUKE L.J. 701, 704 (1998-1999) (“contracts for the payments determined by the changing price of some underlying commodity or financial instrument.”) Patrick Rains & Charles G. Leathers, Financial Derivative Instruments and Social Ethics, 13 JOURNAL OF BUSINESS ETHICS 197, 197 (“Financial derivatives are contract whose values are dependent upon the values of the underlying financial assets which traded separately.”).

15 For a comprehensive framework for understanding the nature of derivatives contracts generally, see Lynch, supra note 10.
Derivatives contracts may be used by counterparties either to hedge pre-existing risks or to speculate. In a taxonomy of derivatives contracts in which the key variable is counterparty motivation, there are three types – (i) derivatives contracts in which both parties are hedging a pre-existing risk, (ii) derivatives contracts in which one counterparty is hedging a pre-existing risk and the other is merely speculating, and (iii) derivatives contracts in which both counterparties are speculators. I term these speculator-speculator derivatives contracts “purely speculative derivatives contracts” (PSDs, or PSD contracts). PSDs, like the synthetic collateralized debt obligation between Paulson & Co. and IKB Deutsche Industriebank, are the primary subject of this Article.

PSD contracts are problematic, so much so that I argue here that except in limited prescribed circumstances, they should be void for public policy reasons. But before summarizing the problems and issues PSDs pose, it is worth first determining how prevalent they are in today’s marketplace. The derivatives market as a whole is enormous. The notional amount of derivatives contracts outstanding globally by the end of 2009 was estimated at $691 trillion. Many different categories of derivatives have grown enormously in the last two decades too. For example, the notional amount of outstanding credit default swaps, which were non-existent as of 1990, is estimated to have reached $58 trillion by the end of 2008. The market for synthetic CDOs, also non-existent twenty years ago, has grown so large that it is

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16 See infra Part II. If a counterparty is not hedging a pre-existing risk with the derivatives contract, he is deemed to be a speculator. See also Lynch, supra note 10 at [__].

17 This taxonomy simply presented here in the introduction does not address the cases where a counterparty in a given derivatives contract may be acting both as a hedger and a speculator nor does it address the claim that there is a third category of counterparties, arbitrageurs. For more discussion of mixed motivations and arbitrageurs, see infra note 39 and accompanying text.

18 Note that not all synthetic CDOs are necessarily PSD contracts. Whether or not a derivatives contracts is classified as a PSD is a function of the motivation of the contractual counterparties to enter into the derivatives contract.

19 The “notional amount” of a derivatives contract is a fixed amount of money recorded in the derivatives contract, (or occasionally a calculatable amount of money based upon a formula fixed in the contract) against which actual payments will be calculated. Often this amount is also referred to as the “notional principal” or the “face value” of the contract. For example, if the notional amount of an interest rate swap is $10 million and Counterparty A must pay Counterparty B 3.0% of the notional amount, then Counterparty A must pay Counterparty B $300,000, and the value of the contract to each of the counterparties will only in part be based on the notional amount. Using the notional amount to determine the size of any derivatives market (or the value of a derivatives contract) is problematic since the notional amount is not necessarily the value of the contract to either of the counterparties nor the amount of money that will eventually change hands between the two derivatives contract counterparties over the life of the contract. Furthermore, unless contracts are cleared, each contract which passes along a particular risk from one party to another to another and so on increases the outstanding notional amount, much like a series of contracts for the sale of a particular good between the original producer, a series of middlemen and then the ultimate consumer. See Peter Wallison, Comment, REGULATION 35, 37 (Fall 2009) (Commenting on Lynn A. Stout, Regulate OTC Derivatives by Deregulating Them, REGULATION 30) (“Big notional numbers do not always add up to systemic risk.”)


22 Bank of International Settlement, BIS Quarterly Review, Statistical Annex, September 2010, at A121 (reporting an estimate of the outstanding notional amount of over-the-counter credit default swaps as of December 2007); See also, U.S. Gov’t Accountability Office, GAO-09-397T, (Systemic Risk: Regulatory Oversight and Recent Initiatives to Address Risk Posed by Credit Default Swaps) March 5, 2009, at 5.
estimated that just the fees for brokering and structuring these derivatives have reached $20 billion a year.\textsuperscript{23}

Although it is difficult to know the exact size of the PSD segment of the overall derivatives market, with the great expansion of the derivatives market generally and the deregulation of derivatives that occurred under the Commodity Future Trading Modernization Act of 2000,\textsuperscript{24} the number of PSD contracts has almost certainly also expanded enormously in the last twenty years and is likely to be, in absolute terms, very large. Furthermore, proxy measures, such as comparing the amount of all outstanding derivatives (notional amount as of 2009: $691 trillion) to other global economic measures – such as global GDP (approx. $58 trillion),\textsuperscript{25} the amount of outstanding global debt securities (approx. $92 trillion)\textsuperscript{26} and total global stock market capitalization (approx. $48 trillion)\textsuperscript{27} – also suggest that the size of the PSD market may be quite immense. Additionally, most, if not all, of the billions John Paulson won through speculating in derivatives was earned from other speculating entities. And Paulson & Co. was not the only big winner in betting on the housing market’s collapse. Tens of billions of dollars shifted hands from bullish speculators – typically commercial and government entities around the world that thought they were investing their capital relatively conservatively, but were caught unawares – to a small handful of bearish speculators, all courtesy of PSDs.\textsuperscript{28}

Researchers at the Wharton School after conducting a survey on the use of derivatives by American non-financial firms, found that “a surprising 40% of the respondents evaluate their derivatives according to the profits they generate rather than by their effectiveness in reducing volatility or boosting risk-adjusted performance.”\textsuperscript{29} This finding suggests a widespread motivation to speculate using derivatives.

As previously stated, PSDs are problematic. They are problematic for several reasons. Like many wagers between counterparties, they do not create economic wealth; they merely transfer wealth from the pockets of one counterparty to the pockets of another. Since counterparties to PSDs incur transaction costs and opportunity costs, PSDs are, in the aggregate, less-than-zero-sum transactions. And since the average economic payoff for a PSD is less than zero, they are economically irrational. The fact that seemingly sophisticated entities (or anyone) might enter into PSDs suggests that investors might be hampered by certain


\textsuperscript{24} This act’s most dramatic deregulatory provisions have been significantly curtailed by the Wall Street Reform and Consumer Protection Act.


\textsuperscript{26} Figure calculated by adding all “international debt securities – all issuers” and “domestic debt securities” as of December 2009, as reported by the Bank of International Settlements, BIS Quarterly Review, Sep. 2010, at A103, A114 available at http://www.bis.org/publ/qtrpdf/r_qa1009.pdf#page=104.


\textsuperscript{28} MICHAEL LEWIS, THE BIG SHORT: INSIDE THE DOOMSDAY MACHINE (2010) (telling the story of other prescient speculators who made fortunes after founding counterparties willing to take speculative long positions on derivatives referencing subprime mortgage-related securities). At least one relative

cognitive limitations such as those uncovered by behavioral economists. Furthermore, PSDs add artificial risk to the economy, and, unlike the traditional capital markets which seek to move capital to where it is most efficiently utilized, PSDs provide only limited public benefits.

In Part I of this Article, I present the basic taxonomy of derivatives contracts based on counterparty motivation. I then focus on the PSD category and discuss in detail these problematic issues. Part I concludes with the question of whether firms and others should be permitted to engage in PSDs given their economic irrationality and other drawbacks.

PSDs would appear to hurt only those who engage in them. In Part II, however, I discuss how PSDs harm others. A firm engaged in PSDs uses — and jeopardizes — the wealth of its equity holders and creditors to gamble, often without their informed consent. Employees, retirees, suppliers and customers, are also threatened by the potential gambling losses of a firm engaged in PSDs. When systemically important firms take on additional risk with PSDs, they increase the systemic threat to the wider economy and society generally. Furthermore, the existence of PSDs increases the opportunities to engage in societally injurious regulatory arbitrage and may create moral hazards and conflicts of interests for corporate executives and corporate creditors.

However, PSDs may also benefit others. In Part III I analyze and weigh their possible societal benefits. PSDs can contribute to better price discovery in markets where futures prices are aggregated and offered for public use. It is questionable, however, whether or not this particular benefit is great enough to warrant the continued existence of PSDs. Other plausible or alleged societal benefits, such as enhancing liquidity for the hedging market, creating desirable opportunities for regulatory arbitrage, generating economic activity and jobs, redistributing wealth from less efficient investors to more efficient ones, and contributing to desirable financial innovation, are probably illusory.

In Part IV I observe that what are commonly referred to as gambling or wagering contracts are, in fact, PSD contracts, note that some of these PSDs provide entertainment value to their counterparties, and analyze the ramifications of such observations.

In light of this cost-benefit analysis, especially with respect to third parties, there is little reason to encourage the creation of PSD contracts. In Part V, I recommend that PSD contracts, except in circumstances where they serve a desirable price discovery function or when they provide desirable entertainment utility, be void for public policy reasons. Speculators should also be limited in their ability to enter into PSDs on recognized derivatives exchanges.

A brief note on what this Article does not do is in order. It does not attempt to provide a thorough analysis of derivatives speculation generally. Speculators will often contract with hedging counterparties, but the explicit focus of this Article is speculator-speculator derivatives contracts, i.e., PSD contracts. Observations, analysis and conclusions in this Article about the role of speculators and speculation generally is for the purpose of most clearly observing PSDs, analyzing PSDs and drawing conclusions and recommendations regarding PSDs. Nor does this Article attempt to thoroughly address the legality and enforceability of PSDs in the United

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30 See infra Part I.C.ii.c.

31 This article frequently uses the word “contract” to describe derivatives agreements, without reference to whether or not the agreement it represents would be enforced under law. For brevity and readability, and since this Article does not explicitly examine how the current law would in fact be enforce particular PSDs, this Article makes no cumbersome attempt to use the word “contract” only in the sense of being a legally enforceable agreement.
This Article identifies the PSD as a particular problematic subset of derivatives contracts, explains how to think about PSDs and, in the process, sets the stage for subsequent analysis of how current law—of any jurisdiction—addresses, successfully and unsuccessfully, the problems associated with PSDs.

I. A TAXONOMY OF DERIVATIVES BASED ON COUNTERPARTY MOTIVATION

There are numerous bases upon which derivatives contracts can be categorized in a systematic taxonomy. Derivatives could be classified, for example, on the basis of the underlying asset, index or metric. Derivatives could be classified on the basis of whether they are exchange-traded or not. They could be classified on the basis of whether they are options, futures or some other kind of instrument. This list could go on. Clearly, each of the taxonomies would be useful for certain purposes. For this Article’s purposes, the following is a taxonomy of derivatives contracts based on the motivations of the counterparties to enter into a derivatives contract.

Professor Lynn Stout has provided the basis of a derivatives taxonomy based on such motivations. One who enters into a derivatives contract is either motivated to hedge a pre-existing risk or he is not. As stated above, those who are not motivated to hedge a pre-existing risk are typically deemed “speculators.” The complete set of derivatives counterparties can, therefore, be divided into two mutually exclusive categories, hedges and speculators. Therefore, in the matrix classifying derivatives contracts based on counterparty motivation, there are only three categories: (i) hedger-hedger contracts, (ii) hedger-speculator contracts, and (iii) speculator-speculator contracts. As discussed below, hedger-speculator contracts can themselves be divided into two types of contracts depending on the knowledge of the speculating counterparty.

32 Federal derivatives law is primarily comprised, among others, of the Commodity Exchange Act, the Securities Exchange Act and the Wall Street Reform and Consumer Protection Act (the “Dodd-Frank Act”). State law addressing derivatives contracts is even more broadly distributed between state securities law, gambling laws and insurance laws.

33 See Lynch, supra note 10, at [].

34 Id. at [].

35 Id. at [].

36 Stout, Why the Law Hates Speculators, supra note 14. See also Lynch, supra note 10 at [].

37 Stout, Why the Law Hates Speculators, supra note 14, at 735-36; Phillip McBride Johnson and Thomas Lee Hazen, Derivatives Regulation 127 (2004) (“Any person entering the futures (or options) market other than as a hedger must labor under the unflattering designation as a speculator.”).

38 Although the term “speculator” is used to mean various things in other investment contexts, for the purposes of this Article a “speculator” in a derivatives contract means a counterparty who enters into the contract without the motivation to hedge a pre-existing risk, with or without an expertise in the subject matter of the derivative, with or without non-public or special information about the likely outcome of the underlying, and with or without the intention to hold his or her position for a short period of time or a long one.

39 Some claim that there is a third category of derivatives counterparties, arbitrageurs. E.g. Norman Menachem Feder, Deconstructing Over-the-Counter Derivatives, 2002 COLUM. BUS L REV. 667, 720. Arbitrage, however, merely denotes a trading strategy, not whether or not a derivatives contract counterparty is speculating or not. An arbitrage strategy within the derivatives context is simply strategic offsetting wherein one speculates in one market while strategically hedging that risk simultaneously in a differently-priced second market.

40 See supra notes 36-41 and accompanying test.
It is possible – and, indeed, common – for a counterparty to a single derivatives contract to be both hedging a pre-existing risk and speculating simultaneously. Such would be the case if a hedger enters into a derivatives contract that is not narrowly tailored to reduce or eliminate a pre-existing risk without creating new, additional risk. If a derivatives contract creates risk that is not effectively hedged or neutralized by a pre-existing risk, the counterparty has exposed himself to a new risk, thus engaging in speculation regarding that piece of “over protection.” For purposes of this analysis, however, such derivatives contracts can be considered two derivatives contracts, one in which the particular counterparty is only hedging and another in which that same counterparty is speculating.\footnote{If both counterparties incur risk beyond that which neutralizes their respective pre-existing risks, and if those two counterparties’ pre-existing risks are not mirror images of each other, their one derivatives contract may be deemed to be a combination of as many as four derivatives contracts, (i) a hedger-hedger contract, (ii) a hedger-speculator contract, where counterparty number one is the speculator, (iii) a hedger-speculator contract, where counterparty number two is the speculator, and (iv) a speculator-speculator contract.}

A. Hedger-Hedger Derivatives Contracts

Hedger-hedger derivatives contracts are contracts in which the counterparties each have an equal and opposite risk to the other’s and they hedge their respective risks by contracting with each other, each eliminating his own pre-existing risk without incurring additional, or speculative, risk in the process. An example of such a contract might be a forward contract on some commodity, between a producer of that commodity and a consumer of that commodity, in which delivery of the commodity is expected by both parties. For example, a wheat farmer has the risk that the spot price of wheat will decrease by the time her wheat is ready to be harvested and sold. Correspondingly, a flour mill owner has the risk that the spot price of wheat will increase by the time he is ready to purchase and consume the wheat. By entering into a forward contract at a pre-determined price on an amount of wheat the farmer is certain to harvest and the mill owner is certain to want to purchase, both the wheat farmer and the flour mill have effectively hedged against the possibility that the spot price of wheat will move against them.
Or, two firms which have opposing currency exchange exposure may enter into a currency swap. For example, a company in Japan with a US parent will earn revenues in the form of Japanese yen. However, the US parent might want to repatriate a portion of these revenues to the US for use by the parent or distribution to its shareholders. The parent company, however, needs US dollars to pay for its costs, to make its investments and to distribute dividends to its shareholders. Therefore, the US firm has the risk that the US dollar will depreciate against the yen, thus reducing the net income earned by the subsidiary in Japan (as measured in dollars). Likewise, a Japanese firm with a subsidiary in the US faces the identical but reciprocal risk that the yen will depreciate against the US dollar. The US firm and the Japanese firm may hedge their respective currency exchange risks by entering into a currency exchange swap wherein the US firm pays the Japanese firm a fixed amount of yen and in return the Japanese company pays the US firm a fixed amount of US dollars. In this process, by effectively fixing the dollar-yen exchange rate, both firms have hedged their risk of unfavorable currency exchange movements.42

It is important to note here that even though derivatives contracts are considered zero-sum transactions in the sense that there is no net gain or loss of overall monetary wealth, i.e., the net monetary gain earned by one counterparty to the derivatives contract exactly equals the net monetary loss paid by the other counterparty,43 the hedger-hedger derivatives contract clearly augments social welfare. Each party eliminates its respective risk through the benefits offered by this type of insurance. By reducing aggregate risk, these contracts increase social welfare.44

B. Speculator-Hedger Derivatives Contracts

Speculator-hedger derivatives contracts allow a hedger to hedge against his pre-existing risk by transferring that risk, for a price, to the speculating counterparty who is prepared to assume that risk.45 For example, a wheat farmer might enter the same forward contract with the same terms as described above but not with a mill or some other wheat consumer but instead with an entity that has no prior interest or risk involving the price movements of spot wheat. Or, a firm that generates revenues in Japanese yen but converts much of it to US dollars to distribute to its shareholders may enter into a currency exchange swap with an entity that has no previous risk that the US dollar will depreciate relative to the yen. (It should be emphasized that the speculators in such contracts, immediately after entering into a speculator-hedger contract, are exposed to risk, the risk transferred to them from the hedging counterparty. The speculating counterparty in the wheat future contract now has risk that the spot (or even the

42 Chance & Brooks, An Introduction to Derivatives and Risk Management (7th ed. 2007) at 420-22. In a typical currency swap, two notional amounts, one in each of the two currencies, would be swapped at the beginning of the transaction and then returned at the conclusion of the transaction and the amounts in each currency may float relative to some reference value. Id.
43 Lynch supra note 10, at [__]
44 The social value of derivatives as a risk hedging mechanism is widely acknowledged. E.g., Christopher L. Culp, The Social Functions of Financial Derivatives, in Financial Derivatives: Pricing and Risk Management, 57, 58 (Robert W. Kolb & James A. Overdahl eds., 2010) (“Perhaps the archetypical social function provided by derivatives is risk transfer.”).
45 Speculators have been described as “people who accept the risk that hedgers do not want.” Robert A Strong, Speculative Markets 5 (2d ed. 1994).
futures) market of wheat will decrease, and the speculating counterparty in the currency exchange swap now has risk related to the USD-yen exchange rate.)

The ability of derivatives to serve as a hedging device and as a way to allocate risk to those speculating parties who are more willing and able to bear such risk is, perhaps, the greatest advantage of derivatives, and derivatives defenders never fail to highlight this all-important characteristic.46

There are two theories on why speculators would be rationally motivated to enter into such a transaction, (ii) the insurance or “risk transfer” theory and (ii) the informational arbitrage theory.47

i. The Insurance (or “Risk Hedging”) Model

According to the “risk hedging” theory, a speculator assumes the risk held by another in return for a favorable price premium from that other party.48 Indeed, this is the basic business model of the insurance industry.49 In the case of a derivatives transaction, a speculator will contract with a hedger, and the terms of the derivatives contract will be at least slightly more favorable to the speculator than would otherwise be the case in a situation where the price terms and other terms were set by a perfectly informed and perfectly efficient market.50 In such a

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47 See Stout, Why the Law Hates Speculators, supra note 14, at 735-36.

48 Indeed, in the insurance industry, having assumed risk under their insurance policies, insurance companies will often hedge this newly acquired risk by then hedging in the re-insurance market. PATRIZIA BAUR & ANTOINETTE BREUTEL-O’DONOGHUE, SWISS REINSURANCE CO., UNDERSTANDING REINSURANCE: HOW REINSURERS CREATE VALUE AND MANAGE RISK 4-8 (2004), available at http://www.hec.unil.ch/isa/RiskMan06/Understanding_reinsurance_p.pdf.

49 Using derivatives jargon, one might say that the “protection seller” receives a “price premium” from the “protection buyer.” Such terminology is wholly understandable when the derivative in question is, for example, a forward contract or an options contract. In the case of a forward contract, in which an asset is contracted to be sold for an actual price, a selling speculator might require an elevated asset price, and a speculating buyer might require a decreased price. In the case of an option contract, wherein an asset may be sold for a predetermined strike price, a buying speculator might require that the strike price be lower than it might be otherwise and a selling speculator might require that the asset price be lower. However, in the case of other derivatives, like an interest rate swap, there is no “price” – in the sense of a dollar amount for an asset – embedded within the contract, but the formulas used to calculate the amount of monies to be swapped may be formulated to be more favorable to the speculating party. Indeed, even in the case of an option, the price premium may not be in the form of an elevated strike price but could be, for example in the case of a call option, a lower option premium. As can be seen by this point, any loose reference to the “price” may include not just “prices” per se, but any term under the derivatives contract.
case, the speculator need not have any superior information about the future movements in price of the underlying asset or in the metric or events used to calculate the payoffs due under the contract. The speculator in this case, despite the risk he has undertaken by virtue of assuming them from the hedging counterparty, can expect to earn profits in the aggregate, over time, by entering into numerous such contracts and allowing his favorable contract terms and the machinations of probability benefit him.\textsuperscript{51}

Derivatives contracts under the risk hedging model add to net societal welfare. Assuming an unbiased market, both counterparties benefit in such a transaction. The hedging party insures against a risk he did not want for a price he was willing to pay. Thus, it may be said that the hedger, qua insurance consumer, received a consumer surplus.\textsuperscript{52} And the speculator chose to assume a previously existing risk in return for a price premium. It may be said, then, that the speculator, qua insurance supplier, received a supplier surplus.\textsuperscript{53}

Furthermore, the existence of speculators creates liquidity in the derivatives markets, allowing derivatives contracts to be bought and sold more readily, and hence allowing hedgers to be more able to enter into hedging transactions under the most favorable terms.\textsuperscript{54}

\textbf{ii. The Information Arbitrage Model}

A given speculator may not, however, be assuming risk in return for a price premium. According to the “information arbitrage” theory, a speculator may possess (or at least think he possesses) superior information about the direction of the price of the underlying asset or underlying metrics or events that are used to calculate the derivatives payoff. He may have (or think he has) superior predictive skills or access to information that the market does not widely have. In such a case, the speculator need not demand contract terms more favorable than prevailing market terms, but can enter into the contract under prevailing market terms and wait until (or hope that) his superior predictive skills and/or information advantages bear fruit.\textsuperscript{55} The speculator makes an investment in research and analysis, which it is assumed that the hedger does not do. The hedger merely wants to hedge at the current market rate.

\textsuperscript{51} In the insurance industry, this is known as “pooling” risk. \textit{But see Robert Kolb, et al., Futures Prices and Expected Future Spot Prices, 2 REV. RESEARCH IN FUTURES MARKETS 110 (1983) (noting that empirical studies at least through 1983 found mixed evidence for the theory that speculators willing to hold a position in the futures market only if they expect compensation for their risk-bearing services).}

\textsuperscript{52} \textit{See generally, PAUL KRUGMAN \& ROBIN WELLS, ECONOMICS 105-06 (2d ed. 2009).}

\textsuperscript{53} \textit{See Stout, Why the Law Hates Speculators, supra note 14, at 736-37 (“[B]oth parties regard themselves as better off after trading than they were before… The risk hedging model is consistent with the “invisible hand” view of the markets in which voluntary exchange is presumed to reallocate resources in a fashion that benefits both the trading parties and society as a whole.”) See also, Thomas Lee Hazen, Disparate Regulatory Schemes for Parallel Activities, 24 ANN. REV. BANKING \& Fin. L 375, 436 (2005) (“[Speculators] perform a very important function for commercial participants looking to hedge business risks.”).}

\textsuperscript{54} Lynn A. Stout, Insurance or Gambling? Derivatives Trading in A world of Risk and Uncertainty, 14 BROOKINGS REV. 38, 40 (1996) (“The argument that derivatives markets can benefit investors by allowing firms to hedge against risk seems to rest on a sound theoretical footing. If all derivatives trades were simple hedging transactions, we could perhaps assume that derivativeness markets benefit investors.”).

\textsuperscript{55} The trade is a time arbitrage trade in the sense that the speculator is arbitraging between two time periods, (i) the present period, when his superior information is not known by the market nor impounded into the price, and (ii) the future period, when the (truly) superior information possessed by the speculator becomes widely known to the market and is reflected in the future price, a price the speculator predicted.
Derivatives contracts in which the speculating counterparty contracts under the information arbitrage model also add to net societal welfare in at least three ways. First, consumer and supplier surpluses are generated. As in the risk transfer theory, the hedging party insures against a risk he does not want for a price he is willing to pay. In such a case, given the price and the fact that hedgers agree to pay it in return for the insurance, it may be said that hedgers, qua insurance consumers, receive a consumer surplus. And the speculator assumes the risk with the confidence that the market relating to the underlying will move in his favor. From the speculator’s perspective, the price received more than compensates for the risk assumed. It may be said, then, that speculators, qua insurance suppliers, receive a supplier surplus. (Furthermore, if a particular speculator actually has superior information and/or predictive skill, she is also likely to actually benefit economically at the expiration of a contract.)

Second, just as in the risk hedging model, the existence of information arbitrage speculators creates liquidity benefiting hedgers.

Third, information arbitrage-based hedger-speculator derivatives contracts in which the underlyings are assets with market prices also contribute to the discovery of more accurate market prices for these assets. Given the assumption that the speculator has information about the probable future supply and demand of the underlying asset, information that has not yet been impounded into the price, the derivatives contract terms – at least if the terms are made public or otherwise transmitted into the market – will signal this superior information to the marketplace, and market participants can then incorporate it into their own decision making.

C. Purely Speculative Derivatives Contracts

The third category of derivatives contracts in this taxonomy is the one where both counterparties are speculators, the “purely speculative derivative” contract.

i. Basic Description of Purely Speculative Derivatives Contracts

In the PSD contract, neither counterparty hedges a pre-existing risk. Since there is no risk-hedging value to be gained, and no price premium to be extracted from a hedging counterparty, one might wonder why a speculator would enter into such a contract.

Professor Stout points to “heterogeneous expectations” as an explanation for why two speculating counterparties would enter into a PSD. “The heterogeneous expectations model of speculation begins with the assumption that individuals’ predictions for future prices can differ markedly; where a bull believes that prices are sure to rise, a bear predicts a fall.”

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56 Note that we would not necessarily expect a price premium to be paid by the hedger in this case.

57 See Stout, Why the Law Hates Speculators, supra note 14, at 736-37 (“[B]oth parties regard themselves as better off after trading than they were before… The risk hedging model is consistent with the “invisible hand” view of the markets in which voluntary exchange is presumed to reallocate resources in a fashion that benefits both the trading parties and society as a whole.”)

58 For a more detailed discussion of price discovery, see Part III.A.


60 Stout, Why the Law Hates Speculators, supra note 14, at 741.
Of course, heterogeneous expectations can exist between two parties with regard to things other than prices. We see this in our daily lives. One student extensively studies a particularly difficult topic since she is sure the class final exam will address this topic; another student, sure that the topic is so difficult and esoteric that the professor will avoid testing her students on it, expends his studying resources elsewhere. One person was sure Pittsburg had a better chance of winning the 2011 Super Bowl, another was sure Green Bay did. John Paulson was convinced the US housing market was heading for trouble, while IKG was certain it was not.

We can easily illustrate the development of a purely speculative derivatives contract using the price of a commodity commonly traded on contemporary derivatives exchanges, oil.\(^\text{61}\) One speculator may predict that some brewing tension in the Middle East will escalate, limiting oil production, forcing a steep increase in world oil prices.\(^\text{62}\) Seeking to invest in oil without having to actually own (and store) oil, this speculator can invest in oil futures in which he buys future oil\(^\text{63}\) at a fixed price, a price which – based on his prediction – will be lower than the market price of oil at the expiration date of the futures contract. This speculator would get the most favorable contract terms from a speculator who predicts that the tension in the Middle East has not only artificially increased the price of oil but will soon de-escalate resulting in lower prices.\(^\text{64}\) These two parties, \textit{because} they have heterogeneous expectations, should be able to negotiate an oil futures contract on terms acceptable to both.\(^\text{65}\)

Heterogeneous expectations are so common that it seems needless to explain how they might come about.\(^\text{66}\) It appears to be a fact of life that people come to conclusions based on imperfect information, use heuristics to enable them to make conclusions, and have different life and business experiences that inform their predictions and conclusions and from which they form assumptions. Indeed, two parties given identical facts about some thing may often come up with different predictions concerning that thing. It would be, frankly, surprising if they did not.\(^\text{67}\)

\(^{61}\) [My thanks to [____] for inspiring this example. Citation]

\(^{62}\) Or, in other words, estimate or concludes that the probability distribution of future oil prices is such that there is a high probability that future oil prices will be higher.

\(^{63}\) This speculator would have no intention of actually having the oil delivered; he would intend to cash settle the contract with his contractual counterparty or eliminate his receipt obligation by entering into an offsetting contract at a later date. For a basic description of cash settlements and offset transactions, see Lynch supra note 10, at [\text{____}].

\(^{64}\) Or in other words, estimates or concludes that the probability distribution of future oil prices such that there is a high probability that future oil prices will be lower.

\(^{65}\) In order to enter into a futures contract with regard to oil prices, all that is minimally required of two speculators (assuming they have identical risk profiles) is that one’s current estimate of the probability distribution of future oil prices is merely \textit{different} than the other’s, i.e., that they have heterogeneous expectations. \textit{See}, Stout, Why the Law Hates Speculators, supra note 14, at 742 (“[T]raders who share identical risk preference and willingness to invest in information nevertheless may trade voluntarily in assets they neither produce nor consume if they make differing estimates of the probability distribution of futures prices.”).

\(^{66}\) See Stout, Why the Law Hates Speculators, supra note 14, at 743-44 (explaining the how “uncertainty” – that is, the \textit{ex ante} uncertainty of the shape and nature of the distribution curve describing all possible outcomes – is a prerequisite to the formation of an agreement based on HE expectations). \textit{See also}, NASSIM NICHOLAS TALIB, THE BLACK SWAN: THE IMPACT OF THE HIGHLY IMPROBABLE 127-129 (2010) (claiming that in the real world, except for a narrow set of circumstances which includes coin tosses and some casino gambling, there is \textit{always} some uncertainty and often large uncertainties and, therefore, making a distinction between risk and uncertainty is largely meaningless).

\(^{67}\) Economist Jack Hirshleifer has proposed a more formal theory on how heterogeneous expectations can lead to trading or, as he referred to it, trading based on differential beliefs. \textit{See} Jack Hirshleifer, Speculation and Equilibrium: Information, Risk, and Markets, 89 Q. J. ECON. 519 (1975); Jack Hirshleifer, Reply to Comments on “Speculation and
ii. Particular Observations of Purely Speculative Derivatives

The purely speculative nature of this kind of derivative entails several fundamental characteristics that may cause harms outweighing any benefits. The following observations should make us question why these contracts exist and whether they should be legal and enforceable.

a. Less-than-Zero Sum Transactions

PSD contracts are, as between their respective two counterparties, zero-sum transactions, in that there is no net gain or loss of overall monetary wealth between the two. The financial gain of any counterparty will be taken directly from the pocket of the other counterparty. The aggregate economic value generated by a PSD is zero; whatever one party gains, the other loses.

There is no consumer or supplier surplus associated with such a derivatives contract. Unlike hedger-hedger derivatives contracts and speculator-hedger derivatives contracts, PSDs do not effectuate risk shifting. Additionally, there is no asset or service being supplied or purchased that would represent consumer and producer surplus. With the exception of possible entertainment utility, which is discussed below, there appears to be absolutely no opportunity for economic gain by either party without a commensurate economic loss from the other party; one party’s gain is the other’s loss, i.e., a true zero-sum transaction.

We can even go further as this analysis does not take into account transaction costs and opportunity costs incurred by the counterparties. The transaction costs associated with each derivative deal include the costs of any research and informational analysis, the costs of any contract negotiation, the costs of executing the transaction, and the costs associated with monitoring the deal, deciding whether or not to exit the deal prior to the expiration of the contract, and settling upon the expiration. Many of these costs manifest themselves as monetary payments to third parties, such as brokers and researchers; others represent an

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68 Lynch, supra note 10 at [__] (noting that derivatives which serve a hedging, commercial, or entertainment purpose are not, in fact, zero-sum transactions).
69 See supra note 9 and accompanying text.
70 Stout, Betting the Bank, supra note 59, at 59.
71 See Stout, Why the Law Hates Speculators, supra note 14, at 745-46 (discussing the transaction costs of purely speculative derivatives); Stout, Betting the Bank, supra note 59, at 66 (“Heterogeneous expectations trading in derivatives, like gambling, is a negative sum game that erodes wealth and increases the risks of the average player who indulges in it.”). See also Thomas Lee Hazen, Rational Investments, Speculation or Gambling? Derivatives Securities and Financial Futures and Their Effect on the Underlying Capital Markets, 86 NW. U. L. REV. 987, 1006 (1992) (“Participants in the futures and options markets therefore break even in the aggregate, in terms of the quoted transaction prices. There is, however, an aggregate net loss due to the transaction costs which take the form of the amount paid in commissions, brokerage fees, and clearing fees.”)
72 Stout, Betting the Bank, supra note 59, at 60 (discussing the costs associated with information gathering and analysis, arranging a derivatives transactions, dealer fees and on-going deal monitoring). The fees earned by Wall Street
expenditure of time, energy and other resources. Indeed, the only parties to enjoy any aggregate gain are those who facilitate the execution, monitoring, and settling of these purely speculative transactions, e.g., researchers, brokers, exchanges, clearinghouses, etc.

Each speculator also incurs opportunity costs associated with diverting his resources to playing this zero-sum game, resources that in the alternative could be used for more productive purposes.

Given these transaction and opportunity costs, the expected value for any counterparty to a purely speculative derivatives contract is less than zero, and the average frequent speculator can expect that over time his actual net payoffs will be less than zero.

The one exception to the claim that PSDs are less than zero-sum transactions as between the counterparties are PSDs that provide entertainment utility to one or both of the counterparties. As I argue elsewhere, agreements which are commonly referred to as gambling or wagering are also derivatives. Gambling can often be a form of entertainment for one or both of the counterparties, and thus, to the extent that a PSD contract provides entertainment utility, it may create value and thus be a positive-sum transaction. As a result, in the context where a PSD provides entertainment, there is no reason to resort to heterogeneous expectations theory to explain why two speculators would rationally enter into such a contract. The issue of PSDs, gambling and entertainment utility is discussed in further detail in Part IV.

b. Irrational

Since PSD transactions (at least those that do not provide entertainment utility) have a negative expected value for the average counterparty, there is a strong argument that those who


73 “Expected value,” in the case of possible derivatives monetary payoffs, is equivalent to the probability-weighted average of all possible payoff outcomes. See David R. Anderson et al., Statistics for Business and Economics 190-93, 196-97 (10th rev. ed. 2009).

74 Stout, Insurance or Gambling?, supra note 54, at 40 (“Zero-sum games involving transactions costs are actually negative-sum games in which the average player loses money.”). From a broader social perspective, some of the transactional and opportunity costs incurred by the derivative counterparties manifest themselves as economic gains to third parties, so from a broader social perspective, the aggregate costs are not as great as those incurred merely by the contracting parties, and the aggregate value of whole transaction is not quite as negative as it would appear when just looking at the sum of the contracting parties’ net costs in isolation. The real costs associated with a purely derivatives transaction are in the form of economic inefficiencies.

75 Lynch, supra note 10, at [____] (“All derivatives are simply contracts between two counterparties wherein the payoff to and from each counterparty depends on the outcome of some extrinsic, future, uncertain event(s) and/or metric(s) and wherein each counterparty expects such outcome to be opposite to that expected by the other counterparty.”) “An aleatory contract” may be defined as a “contract in which at least one party’s performance depends on some uncertain event that is beyond the control of the parties involved.” Black’s Law Dictionary (8th ed. 2004). The word “aleatory” is derived from the Latin aleator, which means “gambler,” and which itself comes from the Latin word, alea, which means “the throwing of dice.” Id.
trade speculatively in such derivatives are not behaving economically rationally. It is simply economically irrational to engage in a transaction for which the expected value is negative.

However, it would presumably must be the case that such speculators believe they are not behaving irrationally, e.g., that they believe they have superior predictive skills to those of their speculating counterparties. In the case of sophisticated derivatives speculators, one might assume that some amount of extensive informational research and analysis go into their predictions. If a potential speculator concludes that the probability distribution of a positive monetary payoff is high enough and that the range and size of positive payoffs is great enough, he may very well conclude that his expected value is greater than zero and that it is, in fact, rational to engage in the derivatives transaction. However, the notion that engaging in PSD transactions is irrational can be extended.

In a heterogeneous expectations transaction where both parties believe they have superior predictive skills, if both parties have equivalent levels of risk aversion, at least one of those counterparties must be mistaken with regard to their probability estimates for the outcome of the underlying event. Based on the theory of rational expectation theorists, all disagreement-based trading is irrational since a speculative should assume that his information and future expectations are imperfect and thus be forced to re-evaluate his expectations upon encountering another speculator, in this case, a potential derivatives counterparty, who has different expectations. Through a constant process of evaluation and re-evaluation, on the part of both potential counterparties, either (i) disagreement evaporates resulting in no contract or (ii) disagreement persists resulting in a lack of confidence regarding one’s expectations and thus no contract.

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76 It may be possible that one appears to be speculating in the derivatives market in order increase the diversity of one’s investment portfolio, however, to the extent that diversification is motivated by a desire to hedge risk in the rest of the portfolio, such a derivatives counterparty would not be speculating at all but hedging a pre-existing risk. See Edwin J. Elton & Martin J. Gruber, Modern Portfolio Theory and Investment Analysis (2010).

77 The research and analysis conducted by John Paulson and others who shorted the US housing market is becoming legendary. See Zuckerman, supra note 3; Lewis, supra note 28 (telling the story of other prescient speculators who found counterparties willing to take speculative long positions on derivatives referencing subprime mortgage-related securities).

78 Economic rationality would also assume that his opportunity costs were also taken into account. Furthermore, it is worth noting that in a PSD contract, two speculators each make a prediction with regard to the same issue, predict opposite outcomes and then take opposite sides of a deal in which, like all investments, only the ex post predictive accuracy – not the “reasonableness” (or persuasiveness) of their predictions ex ante – will determine which counterparty will take money, property or other rights from the other counterparty. But see, Lynn A. Stout, Are Stock Markets Costly Casinos? Disagreement, Market Failure, and Securities Regulation, 81 Virginia L. Rev. 661, 624 (1995) (“A variant of the irrationality argument holds that speculators recognize that they dissipate wealth, but trade anyway because they enjoy it.”). For more discussion on the entertainment utility of derivatives trading, see infra Part IV and accompanying text.

79 It is not the case, however, that a party with superior predicative skills will necessarily benefit from any particular derivatives transaction; the market may simply move against him.

80 Goldman Sachs, in its defense against the civil suit filed by the SEC alleging that Goldman engaged in fraud when brokering the synthetic CDO between Paulson and his IKB and his other counterparties, claimed that those counterparties must have known that there was someone on the other side of the transactions who would incur an opposite and reciprocal risk. Submission on Behalf of Goldman Sachs & Co. to the SEC In the Matter of ABACUS CDO, Sep. 10, 2009, available at http://online.wsj.com/public/resources/documents/GSWellsSubmission.pdf.

Such would certainly be the case in a marketplace where the price and other terms of a derivatives contract are efficiently established, that is, where all (publicly) available information is ferreted out and rationally incorporated into the determination of the contract’s price and non-price terms, and where no one party (without non-publicly available information (or a crystal ball)) can be expected to predict future price movements better than the market has already done so. In such an informationally efficient market no party could reasonably claim superior predictive skills. In the case of a PSD contract, therefore, neither counterparty should be able to expect to win. Furthermore, if a speculator enters into many PSD contracts in an informationally efficient marketplace, then over time, he can expect that he would actually win and lose in equal amounts but that his aggregate actual payoffs or winnings, after taking into consideration transaction and opportunity costs, would less than zero.

Consequently, rational parties do not conclude PSD contracts in efficient markets.

If we assume, however, that market prices and other terms are based on market forces that are somewhat less than efficient and that price and non-price terms fail to take into consideration all publically available information and perhaps take into consideration irrelevant information and false beliefs, then a speculator with superior information gathering, processing and analyzing skills may be able to speculate profitably over time by predicting the future movement of prices as the market eventually prices in the information it currently fails to appropriately price. But it must be noted that in order to be profitable, such an informed and prescient speculator must find less informed speculators willing to take the other side of the bet. In other words, he needs to find a sucker.


83 For the purposes of this discussion, we will assume semi-strong efficiency, in which all publically available information is incorporated by the market into market prices, as opposed to strong form efficiency in which even all inside or privately-held information is also incorporated into current market prices. Fama, supra note 82, at 388.

84 Since entering into PSDs is irrational, one might question whether or not they exist in an amount which should concern us. But see supra notes 23 through 33 and accompanying text presenting evidence that there is an enormous amount of such trading.

85 John Paulson had convinced himself that subprime mortgage-related securities would soon collapse (a prediction which would soon prove to be correct) and sought out suckers to entice into entering into derivatives contracts referencing such securities. IKB and ABN Amro collectively lost $1 billion on their Paulson contracts when the underlying subprime mortgage-related securities did indeed collapse in value. Complaint, SEC, supra note 3; Carrick Mollenkamp & Laura Stevens, SEC v. Goldman Sachs: German Bank: Victim or a Contributor? – IKB’s Investments at the Heart of SEC’s Goldman Probe, WALL ST. JOURNAL, Apr. 22, 2010, at C2; Jay Rivera, Dissecting the Goldman Sachs Fraud Lawsuit, Legalmatch Law Blog (May 18, 2010), available at http://lawblog.legalmatch.com/2010/05/18/dissecting-the-goldman-sachs-fraud-lawsuit/ ZUCKERMAN, supra note 3. One of Goldman’s defenses was the “Big Boy” defense, i.e., a claim that IKB and ABN could not have been suckers since they were resource-rich, sophisticated financial actors. Submission on Behalf of Goldman Sachs & Co. to the SEC In the Matter of ABACUSCDO, Sep. 10, 2009, available at http://online.wsj.com/public/resources/documents/GSWellsSubmission.pdf. Binyamin Appelbaum, A Difficult Path in Goldman Case, NEW YORK TIMES, April 20, 2010, at A1; Ashby Jones, Another Look at Goldman’s ‘Big Boy’ Defense, WALL ST. JOURNAL, available at http://blogs.wsj.com/law/2010/04/20/another-look-at-goldmans-big-boy-defense/. It should not be particularly surprising that there are entities and persons, e.g., investment banks, who are willing, for a fee, to act as intermediaries and find willing suckers, or more generously to such intermediaries, to broker derivatives deals by find two persons willing to enter into an irrational derivatives contract, but otherwise agnostic about who might be a sucker.
Behavioral finance and studies on the psychology of gambling may shed light on the inability of speculative derivatives traders to refrain from entering into PSD contracts. Behavioral finance is the branch of economics that studies the irrational behavior of investors and other finance industry agents. It is based in part on the findings of cognitive psychologists. For example, psychologists have discovered that people have a tendency to be overconfident in their knowledge of facts and in their ability to understand things and predict the future.

There are numerous examples of speculative derivatives traders who appear, certainly in retrospect, to have been not only overconfident in their ability to predict future market movements but who experienced devastating losses as a result of exposing themselves to a tremendous amount of derivatives risk. In 1994, Orange County, California, lost $1.7 billion by speculating in interest rate derivatives and, when interest rates rose, contrary to what Orange Country had been betting, it went bankrupt. Its treasurer, Robert Citron, famously remarked the year before after having been asked how he knew interest rates would remain low, “I am one of the largest investors in America. I know these things.” And after Goldman Sachs advised him not to make such risky investments, Citron angrily wrote back, “You don’t understand the type of investment strategies that we are using. I would suggest that you not seek doing business with Orange County.”

It is widely accepted that the hedge fund Long-Term Capital Management was overconfident in its derivatives pricing models. LTCM collapsed in 1998, in part because of its failed speculative derivatives activity. The executives of Barings Bank, in the time period

See also LEWIS, supra note 28 (telling the story of other prescient speculators who found counterparties willing to take speculative long positions on derivatives referencing subprime mortgage-related securities).


Formally speaking, Orange Country bought debt instruments which had derivative components referencing various interest rates, including LIBOR and certain US Treasury rates. See FRANK PARTNOY, INFECTIOUS GREED: HOW DECEIT AND RISK CORRUPTED THE FINANCIAL MARKETS 114-21 (2003).

Sarah Lubman & John R. Emshwiller, Before the Fall: Hubris and Ambition in Orange County: Robert Citron’s Story, WALL ST. JOURNAL, Jan. 18, 1995 at A1. See also SHEFRIN, supra note 86 at 197-205; PARTNOY, INFECTIOUS GREED, supra note 88, at 119.

PARTNOY, INFECTIOUS GREED, supra note 88, at 118.

See SHEFRIN, supra note 86 at 41.
before it collapsed, may have been overconfident in the trading strategies of rogue trader Nick Leeson.  

In the current economic downturn, triggered by the collapse of subprime mortgages and subprime mortgage-related securities, many, if not most, investors in the US housing market – home purchasers, mortgage-related securities purchasers, sellers of synthetic CDOs referencing mortgage-related securities and protection sellers of credit default swaps referencing mortgage-related securities – appear to have been overconfident in their belief that there was adequate security in US housing values and that housing prices would not fall. AIG, which sold protection on billions of dollars’ worth of credit default swaps was certainly confident – and in hindsight, overconfident – that its risk was practically non-existent.

Indeed, the mere existence of the ability to speculate using derivatives may entice financial actors who would otherwise be disinclined to so speculate to become overconfident in their future predictions, a confidence which then tempts them to engage in this sort of irrational transaction.

Psychologists have also discovered that people have a tendency to anchor to initial values or judgments and then to make insufficient adjustments in these values or judgments when provided later with more reliable information. The tendency to anchor oneself to an initial value or judgment would seem to compound the problem of overconfidence. This anchoring bias may be a particularly influential cognitive process in making judgments about the direction of future market prices and future values of some metric and the likelihood of some normally rare event. Likely anchors in this regard may include current prices or values, recent prices and values, and the prices and values of other seemingly related assets and metrics, whether or not the relationship between the seemingly related assets or metrics is relevant, and whether or not the relationship is one that points to a relationship in fundamental valuation and changes in values.

Anchoring may also be a particularly influential cognitive process in making judgments about the likelihood of some normally rare event. Likely anchors in this regard would certainly

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92 See Partnoy, Infectious Greed supra note 88, at 241 (relating how bank officials had Leeson present his trading strategies (many of which would later prove to be fraudulent) to other bank traders).


94 See Brady Dennis & Robert O’Harrow, Jr., The Crash; What Went Wrong: A Crack in the System, Washington Post, Dec. 30, 2008, at A1 (reporting that as of 1998 AIG Financial, after running its credit default swap financial models, estimated that it would only have to pay under its CDSs if the US economy went into a depression and quoting a former AIG Financial President, “The models suggested that the risk was so remote that the [CDS] fees were almost free money.”); Robert O’Harrow, Jr. & Brady Dennis, The Crash; What Went Wrong: Downgrades and Downfall, Washington Post, Dec. 31, 2008, at A1 (reporting that these financial models continued to show only a minute chance that AIG would have to pay on its CDSs).

95 Stout, Betting the Bank, supra note 59, at 62 (“The opportunity to bet cheaply on one’s predictions through the derivatives markets similarly can tempt corporate executives, fund managers, and municipal treasurers who believe they can predict future changes in rates and prices to accept additional risk in their portfolios in the hope that they will be compensated for that risk by trading profits.”).

96 Barberis & Thaler, supra note 86, at 1068.

include the frequency of their occurrence in the salient past. Baring Bank’s Nick Leeson’s speculative derivatives trades moved dramatically against him largely as a result of the Japanese stock market’s tremendous decline in the immediate aftermath of the Great Kobe Earthquake of 1995. Earthquakes, although they occur frequently in Japan, are normally not predictable or catastrophic, so it is easy to see how Leeson became anchored to a reality in which huge earthquakes with enormous negative economic effects did not exist. The subprime mortgage crisis was triggered in large part by the nation-wide decline of the US housing market. But the US housing market had never experienced such a nation-wide decline. It is not surprising that investors and derivatives speculators made investments decisions based on a belief that such a collapse would not occur. Insightfully, John Marthinsen writes that a common element in every derivatives fiasco is a “significant exogenous shocks that are difficult to predict and probabilistically rare.”

As observed above, for years executives at AIG Financial had estimated that there was essentially no realistic way AIG would lose money on its credit default swaps. The only way they could foresee losing money on these credit default swaps was if the economy went into a depression, but that possibility seemed exceedingly remote. Nor, it seems, could they imagine that the US housing market would decline nationwide, an event that had not happened before in the salient past. AIG Financial executives would state that the credit default swaps they were selling were “like catastrophe insurance for events that would never happen.” These AIG executives seem, at least in retrospect, to have been anchored to a reality where depressions, deep and prolonged recessions and nationwide housing declines do not happen.

Loss aversion may be another psychological bias that might encourage irrational speculative derivatives trading. Loss aversion refers to the fact that people tend to value what they have more than what they do not have, and, with regard to speculative derivatives trading and other investing, can take the form of what is known as “get-eventitis,” an irrational difficulty in accepting losses and then taking excessive risks in order to recoup those losses.

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98 See TALIB, supra note 66, at 1 (recounting the how the unavailability of Australian black swans in the Old World convinced people that black swans did not exist).

99 PARTNOY, INFECTIOUS GREED, supra note 88, at 242. The Great Kobe Earthquake was the most powerful earthquake to hit Japan since 1923. It killed approximately 6,500 people and caused over $100 billion in damage. 1995: Earthquake Devastates Kobe, BBC: On This Day 1950-2005 available at http://news.bbc.co.uk/onthisday/hi/dates/stories/january/17/newsid_3375000/3375733.stm

100 See Lynch, supra note 93 at 283-87.


102 Brady Dennis & Robert O’Harrow, Jr., The Crash; What Went Wrong: A Crack in the System, WASHINGTON POST, Dec. 30, 2008, at A1 (reporting that as of 1998 AIG Financial, after running its credit default swap financial models, estimated that it would only have to pay under its CDSs if the US economy went into a depression and quoting a former AIG Financial President, “The models suggested that the risk was so remote that the [CDS] fees were almost free money.”); Robert O’Harrow, Jr. & Brady Dennis, The Crash; What Went Wrong: Downgrades and Downfall, WASHINGTON POST, Dec. 31, 2008, at A1 (reporting that these financial models continued to show only a minute chance that AIG would have to pay on its CDSs, an increasingly large portion of its business).

103 Robert O’Harrow, Jr. & Brady Dennis, supra note 102.

104 Daniel Kahneman & Amos Tversky, Prospect Theory: An Analysis of Decision Making Under Risk, 47 ECONOMETRICA 263 (1979); THALER, supra note 87, at 63, 70-74; SHEFRIN, supra note 86, at 24-25, 107-17 (sophisticatedly referring to get-eventitis as the “disposition effect,” as shorthand for the predisposition towards get-eventitis); LEROY GROSS, THE ART OF SELLING INTANGIBLES: HOW TO MAKE YOUR MILLION($) BY INVESTING OTHER
For example, Barings Bank went bankrupt in 1995, in part as a result of speculative derivatives losses amounting to approximately $1.4 billion.\textsuperscript{105} Nicholas Leeson, the derivatives trader responsible for making those bets, was in part inclined to make such large bets in order to make up for previous losses. As his losses compounded, the bets he would subsequently make grew larger and larger in order to recoup his earlier losses.\textsuperscript{106} Even the aftermath of the Barings collapse provides an example of loss aversion. Professor Partnoy relates how the Barings collapse caused Barings’s Japanese creditors to lose their investments and the Japanese stock market to tumble. As a result of these losses, Japanese institutions were desperate to recoup their losses quickly, and the only feasible way to do this was to speculate in derivatives – which many did – and hope for the best.\textsuperscript{107}

Robert Citron, the treasurer who bankrupted Orange County, also appears to have been captured by loss aversion. He is reported to have increased his borrowing and made increasingly leveraged bets prior to the county’s declaring bankruptcy “in a desperate bid to recoup his losses.”\textsuperscript{108}

Finally, many derivatives speculators are investment managers and firm executives investing (or playing) with other people’s money, that is to say, their shareholders’ and creditors’ money. People are inclined to take more risk with other people’s assets than with their own. This “house money effect” may also encourage people to engage in PSDs more frequently than they would otherwise do.\textsuperscript{109}

c. Creates Risk Where None Existed Before

Since derivatives do not exist independently of two parties agreeing to enter into derivatives contract, and since PSD contracts do not re-allocate pre-existing risk, PSDs create risk where no risk existed before.\textsuperscript{110} Once the derivatives contract is executed, each party suddenly incurs

\textsuperscript{105} \textit{PARTNOY, INFECTIOUS GREED}, supra note 88, at 240-43. Approximately half of these losses resulted from losing speculative bets on the level, volatility and direction of the Nikkei 225 stock index.

\textsuperscript{106} \textit{Id.} at 242 (stating that as the value of his derivatives positions plummeted, Leeson “increased his bets, desperately doubling down to try to get back to even”); \textit{SHEFRIN, supra} note 86, at 24.


\textsuperscript{108} \textit{David J. Lynch, Orange County, How It Happened; How Golden Touch Turned into Crisis, USA TODAY}, Dec. 23, 1994, at 1B.

\textsuperscript{109} \textit{See SHEFRIN, supra} note 86, at 218. It may be that the there are agency costs associated with having individual investment and financial managers make such decisions. Their own personal interests may not be perfectly aligned with those of their firms, raising the possibility that although it may be irrational for their firms to engage in PSDs, the expected personal payoffs may make it rational from the point of view of these managers to engage their firms in PSDs. For example, the manager’s compensation may be based on the amount of revenue her decisions garner for the firm but she may be insulated from any personal costs if her investment decisions for the firm do not pay off.

\textsuperscript{110} \textit{RICHARD E. SPEIDEL & IAN AYRES, STUDIES IN CONTRACT LAW} 612 (6th Edition 2003) (claiming that those insured seek insurance “to compensate them for the possible occurrence of an existing risk” while “gamblers by their contract create the risk at issue). \textit{See also THOMAS A. HIERONYMUS, ECONOMICS OF FUTURE TRADING} 138 (1971) (“Gambling involves the creation of risks that would not otherwise exist”).
market risk, i.e., the risk of losing its bet. In addition to the risk of losing the derivatives bet, each party also incurs counterparty risk, the risk that his contractual counterparty will not live up to its obligations under the derivatives contract. Additionally, if leverage is used to enter into a derivatives contract, risk is again created, this time for the lender, who risks not being fully repaid in a timely manner and for the borrower who risks triggering unfavorable provisions in the loan agreement.

The upshot is that each time a PSD contract is executed, risk is not simply shifted or allocated, but created, created by the transaction itself. Some refer to such risk as “artificial risk.”

Given that executing such contracts is economically irrational, exposing oneself to such additional risk is simply unnecessary and undesirable – yet sophisticated, economically important institutions do so all the time. Furthermore, the risk resulting from PSDs is limitless; if regulation does not limit the execution of PSD contracts, the creation of such risks is limited only by the marketplace’s participants’ desire to limit their own participation in PSDs and associated contracts.

d. Identical to Gambling

Undoubtedly, the moderately attentive reader has already come to the conclusion that PSD contracts are simply gambles, nothing but bets between two parties on the outcome of some thing over which they have no control.

Borna and Lowry have defined “gambling” as “a reallocation of wealth, on the basis of deliberate risk, involving gain to one party and loss to another, usually without the introduction of productive work on either side.” They note that “in all gambling situations the transfer of money (property) among participants is based upon chance alone. In other words, the element of chance must be present in the mind of at least one of the players.”

Numerous commentators have previously noted the similarity between what is commonly referred to as derivatives trading (e.g., stock options, trading in commodity futures, currency futures, interest rates swaps) and what is commonly referred to as gambling (e.g., sports betting, casino gambling, horse races, card games). Too often, however, they have shied

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111 Credit derivatives like synthetic CDOs can increase the amount of debt-related risk far beyond the amount of actual debt existing in a marketplace, and can increase it to an unlimited extent provided enough credit derivatives contracts are executed.

112 When derivatives contracts are cleared through a central clearinghouse, counterparty risk is greatly diminished but is not necessarily eliminated. See generally Lynch, supra note 10, at [__]. Counterparty risk can also be diminished when counterparties in an over-the-counter transaction agree to post margin or collateral to be applied to their financial obligations in the event of an unfavorable movement of the underlying metric, but again, depending on the extent and other specific collateral requirements, the posting of margin or collateral does not necessarily eliminate counterparty risk.

113 E.g., Borna & Lowry, supra note 81, at 220. (“A characteristic of gambling risk is that it is an artificial risk, i.e., a risk created by the gambling transaction itself.”). One might also refer to such risk as “synthetic” risk.

114 Borna & Lowry, supra note 81, at 219, quoting Fuller and Holliday (1975).

115 Borna & Lowry, supra note 81, at 220.

116 See, e.g., Hazen, Disparate Regulatory Schemes, supra note 53, at 404-407 (noting the similarity between gambling and derivatives contracts by noting that the law has declared “difference contracts,” derivative-like contracts for which there is no valid physical deliverability provision, are void as illegal gambling and that “the delivery obligation in futures and options contracts does not provide a satisfactory basis for the distinction between legal derivatives and illegal difference contracts. Most futures contracts, [therefore,] are functionally the same as a wager”); Stout, Why the
away from concluding that the purely speculative form of what are popularly known as derivatives and what is popularly known as gambling are indeed identical.117 And very few have identified the purely speculative derivative in particular as the derivatives contract which most resembles what is commonly referred to as gambling.

Professor Stout has written (in this instance without differentiating between PSDs and hedger-speculator derivatives contracts),

Speculative trading in derivatives consequently might be better analogized... to disagreement-based “trading” on the outcomes of horse races, poker games, and athletic contests. In other words, from a social perspective, derivatives speculation may amount to simple gambling. The intent of the Barings trader who hazards his firm’s fortunes on the Nikkei 225 stock index because he expects it to rise is essentially the same as the intent of the punter who puts his life savings on the number three horse because he expects it to win. The social effects of such “investment” also may be similar.118

She has also written, “In effect, [heterogeneous expectation] speculation is a form of wagering where the gamblers bet on market prices, rather than on the outcome of a card game or sporting contest.”119 Her suggestion that heterogeneous expectation speculation agreements, or PSD agreements, amount to gambling is accurate; heterogeneous expectation speculation can indeed take the form of gambling on the outcome of a card game or a sporting contest. Though to date there are no sports derivatives listed on any major derivatives exchanges recognized by

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*Law Hates Speculators, supra* note 14, at 712 (“placing wagers on the outcomes of horse races, card games, and sporting events... is more commonly known as “wagering” or “gambling” [as opposed to “speculation”]; see also Hazen, *Rational Investments, Speculation, or Gambling?*, supra note 71, at 1017-18; Borna & Lowry, supra note 81, at 221. (“Since [a transaction in which an individual insures property which he does own] creates ‘artificial’ (additional) risk, it should be considered a form of gambling. In the stock exchange, if someone sells his stock, he is merely transferring the risk involved in holding them to the buyer. On the other hand, if a person not presently owning the stock of a company sells it forward... then the risk bearing of both parties to the contract is increased. This transaction may be called gambling.”); Raines & Leathers, *Financial Derivative Instruments*, supra note 14, at 197 (suggesting that if the ethical precepts in vogue when transactions in bucket shops were deemed to be gambling, then modern financial derivatives would also be deemed gambling); Raines & Leathers, *Financial Derivatives Instruments supra* note 14, at 201 (“The nature of financial derivatives as gambling contracts has largely escaped critical attention in the recent literature... Yet the contracts involved in modern derivative trading are fundamentally similar in nature to the commodity futures and bucket shop transaction of a century ago.”); *Johnson & Hazen, supra* note 37, at 129 (“Were there a derivative instrument that profits from the New York Yankees winning the World Series, it would be a “bet” or a “gamble” in the eyes of many.”); Tony Woodhams, NPR’s Marketplace, July Sport is currency in Galileo sports hedge fund (Jul. 22, 2010) (in responding to the question of why we shouldn’t refer the hedge fund’s investment strategy of betting on the outcomes of sporting events as simply “gambling or sports betting,” the former derivatives trader stated, “You can call it gambling if you’d like, as long as you apply the word gambling to the process that Goldman Sachs apply when they’re trading currency. It's the same process. You can call it gambling, you can call it betting, you can call it trading; it's whatever word you chose to apply.”). You can even call it “derivatives trading.”

117 E.g., *Stout, Why the Law Hates Speculators, supra* note14, at 712, (suggesting that the market for gambling in casinos, at the horsetrack or in the lottery, since these forms of gambling may at least include an element of entertainment utility, “probably differs significantly from the market for speculative trading.... A discussion of the gambling market accordingly lies beyond the scope of this Article.”); Borna & Lowry, *supra* note 81, at 219 (“Certain “speculative business” practices such as futures trading... resemble gambling.”);

118 E.g., *Stout, Betting the Bank, supra* note 59, at 66.

the Commodities Futures Trading Commission, sports gambling is only possible because of heterogeneous expectations, and, as I have argued elsewhere, sports bets are derivatives contracts. In fact, echoing the price discovery function of the futures markets, sports bookies’ odds are determined by the collection of gamblers with heterogeneous expectations about the outcome of the contest. Furthermore, given that there are sports-related risks that could be hedged, and the fact that there are reasons to suspect that sports gambling has recently taken on the patina of a respected financial strategy, it may only be a matter of time before a sports derivative is recognized by a derivatives exchange or before a court applies derivatives law to a sports bet instead of applying state gambling law. In other words, PSDs are merely gambles, disguised in the cloak of “derivatives” respectability.

**e. Inefficient and Apparently Devoid of Social Benefit**

Much of the capital markets, in particular the equity and debt markets, attempt to ensure that capital is shifted from where it is to where it is best or most efficiently utilized in the real economy. Those who provide the capital to the users of the capital are expected to be rewarded with a return on their investment. For example, when investors lend money to a firm or other debt-issuing entity or infuse capital into a corporation through the initial purchase of corporate stock, it is expected that the issuing entity will use this money for productive purposes such as product development, capital improvements, business expansion, investing in personnel talent, etc. If all goes as expected, debt issuers and equity issuers, through skillful capital budgeting and wise investing, will earn a positive return on this new capital, thus enabling them to repay their lenders principal and interest, increase shareholder wealth, and (according to orthodox economic theory) increase societal welfare generally.

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120 Lynch, supra note 10.


122 There exists at least one hedge fund whose investment strategy is to engage in sports gambling Paul Wachter, A League of Their Own; A New London Hedge Fund is Making History by Betting On Sports, Bloomberg BusinessWeek found at http://www.businessweek.com/magazine/content/10_29/b418706936116.htm (describing the Centaur Group’s establishment in April 2010 of the Galileo Managed Sports Fund, a fund which bets on soccer, tennis, golf, cricket and rugby matches). Tony Woodhams, the fund’s managing director, was a “derivatives trader” for two decades before taking his current position. Id. It would seem conceivable that this or another hedge fund could similarly bet on the outcome of “World Series of Poker” tournaments, i.e. on card games! See World Series of Poker, website, available at http://www.wsop.com/.

123 Currently, however, the existence of the Professional and Amateur Sports Protection Act of 1992, 28 U.S.C. §§ 3701-3704 (2010), restricting gambling on sports events would seem to pose an obstacle to any proposal to have a sports derivative approved for inclusion on a recognized derivatives exchange or enforced by a court. See John Warren Kindt & Thomas Asmar, Amateur Sports Gambling: Gambling Away Our Youth, 8 Vill. Sports & Ent. L.J. 221, 231-32 (2002).

124 Some have argued that the secondary markets for equities and debt do not provide the same function of shifting capital from where it is to where it is best utilized since transactions in the secondary markets merely re-allocate equity and debt assets between those who possess them but want to liquidate them and those who wish to possess them. E.g., Stout, Are Stock Markets Costly Casinos? Disagreement, Market Failure, and Securities Regulation, 81 Va. L. Rev. 611, 682-91 (1995). However, the existence of the secondary market, in particular the liquidity within the secondary markets for financial securities, lowers the cost of capital for equity and debt issuers, thus more efficiently allocating capital to is most efficient uses. But see, Stout, Are Stock Markets Costly Casinos? Disagreement, Market Failure, and Securities Regulation, 81 Va. L. Rev. 611, 682-91 (1995) (suggesting that the transactions costs associated with ensuring that securities can be traded publically in the secondary market actually might have the effect of raising the net cost of capital).
In providing a mechanism for the markets to try to ensure that capital is most efficiently allocated across the real economy, the capital market would seem to be undoubtedly valuable to society. However, although typically considered part of the capital markets and referred to as “investments,” derivatives are not designed to play a similar role; derivatives are not designed to ensure that capital is allocated to where is it most efficiently and productively utilized in the real economy. Many derivatives transactions do provide the social benefit of voluntary risk shifting, but, at first blush at least, there appears to be no net social benefits derived from PSD contracts.  

It has already been noted that a PSD creates no aggregate gain for its counterparties; it is a zero-sum game for them, and, once transaction costs and opportunity costs are deducted from their aggregate welfare, a negative-sum game. Consequently, engaging in PSD trading appears to be economically inefficient, since it merely diverts resources, including any margin funds, from more productive purposes. Speculators and those facilitating the execution, trade and settlement of purely speculative derivatives could – in the alternative – be using their resources for more productive purposes. As Professor Stout has written,

[H]eterogeneous expectations trading in derivatives, like gambling, may actually draw capital away from more productive uses. Just as individuals who frequent casinos have less money left to invest in securities, the corporations, municipalities and investment funds that devote scarce resources to trading stock index futures have less to invest in the stock market itself.

And,

Careful inquiry consequently suggests that heterogeneous expectations trading in derivative instruments can no more be presumed to benefit society at large than it can be presumed to benefit the average derivatives trader. Indeed, by adding risk to the marketplace, and by diverting scarce resources from more productive forms of investment, the opportunities to take large speculative positions at very small cost created by the development of derivatives may actually do much harm.

iii. Questioning Why Purely Speculative Derivatives Might Be Permitted

Given that speculating through PSD contracts seems to be an economically irrational enterprise, devoid of aggregate economic benefit to the participants or to society generally, and that it diverts participants’ scarce resources from more productive uses and exposes them to additional risk, the question arises of whether or not it should be allowed at all.

It should be observed that everyone occasionally engages in economically irrational activities or occasionally uses their scarce resources in a less than efficient or optimal way.

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125 This is a contention which will be scrutinized more thoroughly in Part III.
126 Stout, Betting the Bank, supra note 59, at 66.
127 Stout, Betting the Bank, supra note 59, at 66.
Indeed, who is not guilty of occasionally behaving in such ways? Who or what entity is hyper-economically rational? Furthermore, one can argue that anytime one executes a contract he assumes some degree or form of risk that he did not bear prior to its execution. However, it is the collection of all these factors – irrationality, inefficiency, and artificial risk – without any apparent net gain to the collection of participants – which raises the question of why PSD contracts should be permitted.

The libertarian would argue that regulations limiting what person and entities can do with their money, in this case, whether or not they can gamble with each other, can only be justified on the grounds that such contracts harm others and that, in the absence of such harm, persons should be free to enter into such contracts. Putting aside any arguments that restrictive regulations may be desirable on purely paternalistic grounds, the next two sections of this Article will discuss the negative and positive externalities associated with PSD contracts, i.e., how they hurt, and how they might actually benefit, society.

II. WAYS THAT PURELY SPECULATIVE DERIVATIVES MIGHT HARM THE PUBLIC

As discussed above, purely speculative derivatives contracts are economically irrational, create unnecessary risk and subject resources to inefficient use. The average derivatives speculator, by gambling with other speculators, harms himself since his transaction is economically irrational. However, he also harms others. Firms that enter into PSD contracts often gamble with other people’s money and expose their other stakeholders to increased risk. PSD contracts subject the economy to increased systemic risk, and the ability to enter into such contracts presents opportunities to engage in socially undesirable regulatory arbitrage and, in some instances, can pose a moral hazard.

A. Gambling with Other People’s Money

Firms which engage in speculative derivatives activities are likely to be gambling with other people’s money. Speculating banks gamble with deposits. Investment funds gamble with investors’ contributions. Pension funds gamble with pensioners’ retirement savings. Corporations gamble with the capital of their shareholders. Firms with creditors jeopardize creditor interests. States, municipalities and other public entities gamble with public funds.


129 See, Borna & Lowry, supra note 81, at 221 (“The critical concern... is not whether the element of risk is present in a give type of business activity; rather it is the impart of a given transaction on the aggregate level of risk which the community or society in general has to bear.”); Christine Hurt, Regulating Public Morals and Private Markets: Online Securities Trading, Internet Gambling, and the Speculation Paradox, 86 BOSTON U LAW R. 371, 376 (2006) (“[T]he federal government should prohibit, regulate, leave alone, or encourage speculative activities based on the utility of the enterprise and the corresponding social cost of that activity, not on whether the lure of the activity can be harnessed for government gain.”).

130 Stout, Insurance or Gambling?, supra note 54, at 39 (referring the speculative activities of “the banks, corporations and investment funds to which depositors, investors and pensioners entrust their savings”); Id. at 40. (“[D]erivatives speculation also may harm investors by increasing the level of risk in their portfolios.”).
And given that on average, speculators in PSD contracts lose money, i.e., it is a less-than-zero-sum transaction, these shareholders and creditors will lose money too.\textsuperscript{131}

In addition to IKB and John Paulson’s other counterparties, recent history is full of examples of firms that speculated extensively in derivatives, only to see the market move against them causing enormous shareholder and creditor losses.

In the middle 1990s, Proctor & Gamble lost approximately $157 million on speculative derivatives, most of which were sales of put options referencing various US and European interest rates.\textsuperscript{132} The hedge fund Long-Term Capital Management lost approximately $1.3 billion in 1998 speculatively selling options, most referencing European stock indices.\textsuperscript{133} The British bank, Barings, went bankrupt after losing approximately $1.4 billion in speculative derivatives.\textsuperscript{134} Orange Country lost $1.7 billion of tax payer money in the mid-nineties on speculative derivatives.\textsuperscript{135} The Louisiana State Pension Fund lost $50 million.\textsuperscript{136} City Colleges of Chicago lost $96 million.\textsuperscript{137} And these are only some of the larger and most newsworthy examples of speculative derivatives traders losing other people’s money.\textsuperscript{138}

It must be emphasized that it is not this Article’s intention to eliminate the use of other people’s money when a firm invests. Firms do this all the time, and are expected to do this, by applying the capital received from shareholders and creditors to what is hoped to be productive, wealth-producing business projects and other investments. However, with regard to PSD contracts, no aggregate wealth will be produced since PSDs have a negative expected value.

If shareholders and creditors were to give informed consent to these gambling activities, one might temper one’s criticism of their firms’ PSD activities.\textsuperscript{139} However, given the general lack of public knowledge of what a derivative is, the complexity of some derivatives,\textsuperscript{140} and the

\begin{itemize}
    \item \textsuperscript{131} The Wall Street Reform and Consumer Protection Act significantly restricts depository institutions from engaging in proprietary speculative trading in derivatives. Section 619 of the Dodd-Frank Act. This restriction is popularly known as the “Volcker Rule.”
    \item \textsuperscript{132} PARTNOY, INFECTIOUS GREED, supra note 88, at 53-59; Carol J. Loomis, Untangling the Derivatives Mess: The Story of How Lies, Leverage and Ignorance – and a Lot of Arrogance – Burned Some Big Players, FORTUNE (March 25, 1995).
    \item \textsuperscript{133} For a comprehensive summary of the LTCM collapse, see The President’s Working Group on Financial Markets, Hedge Funds, Leverage, and the Lessons of Long-Term Capital Management (1999) 10-22; PARTNOY, INFECTIOUS GREED, supra note 88, at 2, 251-262; John E. Marthinsen, Derivatives Scandals and Disasters, in FINANCIAL DERIVATIVES: PRICING AND RISK MANAGEMENT, 313, 316-17 (Robert W. Kolb & James A. Overdahl eds., 2010).
    \item \textsuperscript{134} PARTNOY, INFECTIOUS GREED, supra note 88, at 243.
    \item \textsuperscript{135} Id. at 115-122
    \item \textsuperscript{136} Id. at 121.
    \item \textsuperscript{137} Id.
    \item \textsuperscript{138} For a discussion of many entities which lost large amounts of money in the 1980s and 1990s as a result of speculative derivatives trading, See Id.; PARTNOY, F.I.A.S.C.O. supra note 107.
    \item \textsuperscript{139} It would be an interesting rhetorical question, however, to ask whether the one would like his savings institution, for example, to be betting at all on the price of wheat, the weather or the outcome of the Super Bowl.
    \item \textsuperscript{140} See Frank Partnoy, Derivatives on TV: A Tale of Two Derivatives Debacles in Prime Time, 4 GREEN BAG 2nd 257 (2001) (describing televisions propensity to refer to derivatives as too complex to understand). Although mortgage-backed securities and CDOs based on them are not technically derivatives, they are far less complex than many derivatives (including most synthetic CDOs) and there are of examples in the aftermath of the subprime crisis where investment managers have confessed to not understanding their MBS and CDO investments. See Lynch, supra note 93, at 242 (relating how many institutional investors simply relied on credit rating agencies to evaluate the creditworthiness of their MCS and CDO counterparties). See also PARTNOY, F.I.A.S.C.O., supra note 107 (discussing many examples where investors did not
difficulties associated with assessing their risks.\textsuperscript{141} It is difficult to imagine that a firm can get the informed consent of all its equity holders and creditors (unless, perhaps, it is a closely held firm with only the most sophisticated shareholders and creditors), and it is difficult to imagine that potential equity investors and potential creditors would regularly make the appropriate risk assessments when deciding whether or not to invest in a firm already committed to derivatives contracts and, if so, under what terms.\textsuperscript{142}

\textbf{B. Increased Risk to Corporate Stakeholders}

Not only does a firm’s speculative derivatives activities expose the assets of its shareholders and creditors to risk, but the firm’s other stakeholders are also exposed. Extensive derivatives losses can impose collateral damage on the speculating firm’s employees, suppliers, customers, business partners, retirees, community, and other stakeholders.\textsuperscript{143}

Thousands of Barings Bank and Lehman Brothers employees became unemployed in part as a result of their firms’ massive derivatives losses. Orange County citizens lost nearly two billion in public funds – and the social services and infrastructure that those funds would have paid for – and were subject to higher municipal borrowing rates.\textsuperscript{144}

Again, it is not this Article’s intention to eliminate risk incurred by firm stakeholders. All for-profit firms necessarily engage in commercial risk taking, particularly with regard to their area of expertise, and collateral damage to innocents often occurs. However, given the expected collateral damage to innocent stakeholders resulting from mere artificial risk, it is difficult to justify permitting firms to engage in the wealth destroying activity that are PSD contracts.\textsuperscript{145} And perhaps here, too, one might condone a firm’s engaging in PSD contracts if all stakeholders gave informed consent to the activity, but gathering such consent seems to be a far more unrealistic possibility than obtaining informed consent from the firm’s equity and debt holders.

\textbf{C. Systemic risk}

Part I.C noted that when purely speculative derivatives contracts are executed, various risks are created, including market risk (i.e., the risk of losing the derivatives bet) and counterparty

\textsuperscript{141} Such analysis would have to include the extent of counterparty risk exposure.

\textsuperscript{142} Even hedge fund investors may be largely ignorant of their hedge fund investment strategies. The private placement memorandum provided by Long-Term Capital Management, a hedge fund which famously lost several billion dollars of its investors’ contributions, over a billion of it on speculative derivatives, notably provided its investors only scant details of its investment strategy. \textit{See Partnoy, Infectious Greed, supra note 88, at 111, 252.}

\textsuperscript{143} Hazen, \textit{Disparate Regulatory Schemes, supra} note 53, at 431 ("The collateral damage resulting from gambling losses and invest losses is tremendous… Consider, for example, the Enron employees who lost their jobs and the Arthur Anderson employees and retirees who lost their pensions.").

\textsuperscript{144} David J. Lynch, \textit{supra} note 113.

\textsuperscript{145} It would also be an interesting rhetorical question to ask whether the one would like his employer to be betting at all on the price of wheat, the weather or the outcome of the Super Bowl.
The creation of speculative derivatives risks, no matter how small, at least by systemically important entities, therefore, necessarily also increases systemic risk within the economy.

Systemic risk can be defined as “the risk that the failure of a single market participant [would have] a disproportionate effect on the overall market,” or more generally as “the potential for the financial distress of a particular firm or group of firms to trigger broad spillover effects in financial markets, further triggering... dislocations that affect broad economic performance.” When a firm enters into PSD contracts it exposes itself to additional risk. A firm exposing itself to such risks exposes not only itself to possible collapse but also exposes its creditors, its contractual counterparties and other related entities to financial collapse. If the firms exposing themselves to speculative derivatives risks are relatively large or deeply integrated with the rest of the economy, such risk can expose a significant segment of the larger economy to a threat, most likely a threat that the majority of potentially affected entities and persons may not have knowingly agreed to bear.

Just in the last two decades there have been several examples where large entities have speculated in the derivatives market, lost their bets, and thus threatened the economy with some degree of financial collapse. When Long-Term Capital Management collapsed in 1998, the Federal Reserve Bank, fearful that the collapse would trigger a cascade of failures elsewhere in the economy, strong-armed a set of private banks to buy the fund, saving it.

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146 See supra notes 16 and 17 and accompanying text.
148 Emil W. Henry, Jr. Remarks of Emil W. Henry, Jr., Assistant Secretary for Financial Institutions, U.S. Department of the Treasury, Before the Housing Policy Council of the Financial Services Roundtable (2006), available at http://www.treasury.gov/press/releases/js4338.htm. See also Daniel L. Thornton, The Federal Reserve Bank of St. Louis, A Perspective on Financial Market Reform (2010) (“the lack of a consensus definition not-with-standing, the phraseology that is used in discussions of systemic risk – “large, interconnected and systemically important” – suggests that systemic risk is related to the interconnectedness of firms. A high degree of interconnectedness suggests the possibility that the failure of a “highly” interconnected firm could trigger the failure of firms with whom it has connections.”) available at http://research.stlouisfed.org/econ/thornton/Prospective_on_Financial_Reform.pdf; US GAO, March 2009, at 2 (“Traditionally systemic risk was viewed as the risk that the failure of one large institution would cause other institutions to fail... Recent events have illustrated a more macro-level definition: the risk that an event could broadly affect the financial system rather than just one of a few institutions.”). See also Darrell Duffie, Ada Li & Theo Lubke, Policy Perspectives on OTC Derivatives Markets, Federal Reserve Bank of New York Staff Report no. 424 (March 2010), at 5 (describing how both derivatives counterparty risk and mere fear of a derivatives counterparty’s failure may raise to the level of systemic risk).
149 Furthermore, unless restricted through regulation, any entity can expose itself to an unlimited amount speculative derivatives risk provided a willing derivatives counterparty can be found.
150 See Partnoy, Infectious Greed, supra note 88, at 229 (“Derivatives tighten the connections among various markets... [raising] the prospect of a system-wide breakdown.”). The use of leverage to finance speculative derivatives activity magnifies the new risk.
151 See Id., at 229.
152 Note that absent from the following discussion is Enron. Although Enron speculated extensively in the derivatives market, and although its collapse threatened the wider economy, Enron’s collapse was not a result of speculative derivatives losses. Enron, in fact, made a considerable amount of money speculating in derivatives. Id., at 2, 296-349, (noting that the market came “to the brink of collapse” with the meltdown of Enron).
153 See supra note 133 and accompanying text; The President’s Working Group, supra note 133, at 11-12.
154 Alan Greenspan, Testimony of Chairman Alan Greenspan, Private-sector refinancing of the large hedge fund, Long-Term Capital Management, Before the Committee on Banking and Financial Services, U.S. House of Representatives
Lehman Brothers filed for bankruptcy in 2008. Although its collapse was triggered largely as a result of its subprime investment losses, as its stock price and credit rating fell, counterparties to its 900,000 outstanding derivatives contracts demanded increasing amounts of collateral, thus accelerating its demise. Its collapse not only realized its derivatives counterparties’ worst counterparty risk fears, as the value of their contracts with Lehman plummeted, but its collapse also shook the market generally and a federal bailout was contemplated. To the extent Lehman was engaged in PSDs, its collapse threatened the market more than it would have otherwise.

Most recently, IKB Deutsche Industriebank, as noted in the Introduction, speculated extensively with derivatives, and its resulting losses and threat to the larger economy prompted the German government and several private German banks to bail it out. And AIG, which had, through its subsidiary AIG Financial Products, speculatively entered into hundreds of billions of dollars of credit default swaps, insuring its counterparties against, among other things, potential losses incurred as a result of a collapse in the US housing market and the collapse of their third-party contractual counterparties, found itself on the brink of collapse as a result of the housing market and the economy moving against it. Often AIG insured parties against risks they incurred as a result of engaging in PSDs they created. The US federal government (October 1, 1998) (“It was the judgment of officials at the Federal Reserve Bank of New York... that the act of unwinding LTCM’s portfolio in a forced liquidation would not only have a significant distorting impact on market prices but also in the process could produce large losses, or worse, for a number of creditors and counterparties, and for other market participants who were not directly involved with LTCM.”). See also PARTNOY, INFECTIOUS GREED, supra note 88, at 261 (noting that the Federal Reserve Bank was “concerned that LTCM’s failure might trigger a... widespread international crisis”).

Susanne Craig, et al., AIG, Lehman Shock Hits World Markets; Focus Moves to Fate of Giant Insurer After U.S. Allows Investment Bank to Fail; Barclays in Talks to Buy Core Lehman Unit, WALL ST. J. (Sept. 16, 2008) at A1. With over $600 billion in assets, Lehman filed for the largest bankruptcy in US history. Id.

Darrell, et al, supra note 148, at 2. It is estimated that the outstanding notional amount of Lehman’s derivatives contracts at the time of its bankruptcy was approximately $800 billion. Its derivatives contracts were with over 8,000 individual counterparties. After filing for bankruptcy, many of Lehman’s derivatives counterparties were prevented from reclaiming the collateral they posted with Lehman. Some of these counterparties were entitled to the return of as much as hundreds of millions of dollars. See also THE ECONOMIST, Derivatives of Mass Destruction: Lehman Brothers’ Fallout, September 2009 available at http://www.seattlepi.com/opinion/379793_doomsdayonline20.html. See also Jane Baird, CDS Dealers Honor Trades to Cut Lehman Risk, Sep. 15, 2008 available at http://www.reuters.com/article/idUSLF13895120080915. Matthew Goldstein & David Henry, Lehman: One Big derivatives mess, BUSINESS WEEK, Oct. 8, 2008, available at http://www.businessweek.com/magazine/content/08_42/b4104000160047.htm?chan=top+news_top+news+index++temp_news+%2B+analysis.

US GAO, Systemic Risk, supra note 148, at 27.


US GAO, Systemic Risk, supra note 148, at 5.

See US GAO, Systemic Risk, supra note 148, at 14 (reporting that when [AIG’s] credit rating was downgraded it was required to post more collateral in favor of its derivatives counterparties, which contributed to the company’s liquidity crisis, decreasing its creditworthiness even further. “The precipitating event of the housing bubble bursting pushed AIG into a situation where thousands of derivatives contracts with their contingent margin requirements jeopardized the existence of AIG.”).
deemed AIG’s imminent collapse a threat to the entire financial system and bailed it out with a $182.5 billion financing.

The derivatives contracts entered into by each of these systemically important entities, LTCM, Barings, Lehman and AIG, were not all PSD contracts. In many instances, these entities were speculating in derivatives contracts with hedging counterparties. AIG, in particular, appears to have primarily been a speculator in speculator-hedger derivatives transactions. However, this observation does not detract from the fact that speculation within the derivatives market can increase systemic risk, potentially with disastrous consequences. Furthermore, the AIG experience in particular demonstrates that the use of PSDs to create risk and the use of risk-hedging derivatives to subsequently shift that risk can all result in risk being pooled within a single entity – most likely a systemically important one, like AIG.

In this Article I do not argue that all systemic risk should be eliminated or discouraged. Not only would the realization of such a goal eliminate all economic opportunities, but is most likely impossible in any economic system. Indeed, systemic risk increases with many desirable types of investments. For example, a systemically important entity could rationally invest in the equity or debt of a firm which later collapses or in a capital project that ultimately fails. But at least these investments are done in the context of what are fundamentally socially beneficial transactions, wherein capital is transferred from where it is to where it is rationally expected be to most efficiently utilized. With regard to PSD contracts transactions, however, any social benefit derived from them is absent. As with all sources of systemic risk, it may be possible to imagine managing speculative derivatives-created systemic risk by first requiring that firms incurring speculative derivatives risk disclose this information to all potential stakeholders, including those entities that are subject, directly or indirectly, to these firms’ distress or collapse. If such risks were disclosed, all the potential stakeholders might be able to take steps to avoid or hedge against that risk, including avoiding contracting with the firm and with firms that have a close relationship with it. However, given the complexity of the global economy, the deep integration of so many firms, including links which are indirect or consist of several degrees of separation, and the potential complexity of many derivatives and the difficulty of pricing them, it is certainly impossible to analyze and comprehend all the potential risk and systemic scenarios and then to take appropriate steps to protect oneself from them.

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161 US GAO, Systemic Risk, supra note 148, at 27 (“[T]he volume and nature of [AIG’s] CDS business made it such a large counterparty that its difficulty in meeting its CDS obligations not only threatened the stability of AIG but of the entire financial system as well.”).


163 See Craig Pirrong, Comment, REGULATION 38, 38 (Fall 2009) (commenting on Lynn A. Stout, Regulate OTC Derivatives by Deregulating Them, REGULATION 30). Id.

164 A difficulty in realizing such thorough disclosure can be seen from the fact that Long-Term Capital Management, like many hedge funds, deliberately kept their trading strategies secret, including from their own investors, in order, in part, to ensure that their strategies would not be copied by others and thus eroding away their profit opportunities. See PARTNOY, INFECTIOUS GREED, supra note 88, at 256.
D. Regulatory Arbitrage

Derivatives are often used to circumvent the law, especially tax law, securities law, insurance law, banking law and accounting regulations. For example, prudentially regulated entities such as commercial banks, insurance companies and pension funds are often legally restricted in what kinds of investments they can make. Such restrictions are for the protection of public stakeholders such as depositors, insurance policy holders and retirees.\(^{165}\) Typically such entities are restricted from engaging in very risky types of investments.\(^{166}\) Derivatives, however, can often exploit differences between various laws by providing a way to construct transactions which offer identical economic outcomes that the prudential law or regulation is designed to discourage or prohibit.\(^{167}\)

For example, Orange County was restricted to investing only in highly rated securities. But in order to enable it to chase higher returns, Orange County turned to investing in adequately rated bonds,\(^{168}\) but ones which contained a highly risky derivatives component referencing interest rates. Japanese insurance regulation capped insurance companies’ exposure to foreign currency-denominated securities at ten percent. However, by entering into a series of transactions which included foreign currency derivatives, Japanese insurance companies were able to construct transactions which perfectly mimicked the economic returns offered by foreign currency-denominated securities without triggering the ten-percent rule.\(^{169}\)

Tax laws are intended to direct a certain flow of revenue to public coffers. However, derivatives can also be used to categorize income gains so they are subject to a more favorable tax treatment than what they would otherwise be subject to.\(^{170}\) For example, equity swaps are often used by executives who want to change large amounts of stock into cash without triggering capital gains taxes.\(^{171}\) Also, accounting rules are designed to ensure that an entity’s financial statements reflect its economic status. But, through the use of derivatives, transactions can be executed which avoids otherwise applicable accounting rules for economically equivalent transactions.\(^{172}\)

“Simply put, investors often [can] do indirectly with derivatives what they are not permitted to do directly without them.”\(^{173}\) Such financial engineering is known as “regulatory

\(^{165}\) Lynch, supra note 93, at 244-46.

\(^{166}\) Id.


\(^{168}\) Which may have been poorly or inaccurately rated.

\(^{169}\) See Partnoy, Regulatory Arbitrage, supra note 167, at 233; Partnoy, Infectious Greed, supra note 88, at 40-41.

\(^{170}\) See Partnoy, Regulatory Arbitrage, supra note 167, at 228-30.

\(^{171}\) Stout, Betting the Bank, supra note 59, at 57.

\(^{172}\) See Partnoy, Regulatory Arbitrage, supra note 167, at 231-32 (noting traditional transactions might trigger disclosure rules, inflict stiff capital charges, or require the recognition of a loss, but that derivatives contracts can be used to construct transactions which not only are economically equivalent transactions but avoid the disclosure rules, capital charge requirements and accounting losses.)

\(^{173}\) Partnoy, Regulatory Arbitrage, supra note 167, at 232.
arbitrage.”\textsuperscript{174} And regulatory arbitrage transactions using derivatives have been, understandably, extensively pursued.\textsuperscript{175} Yet, if taxes and prudential regulations are in place to serve public purposes, it is a violation of the public interest for firms to avoid paying taxes and adhering to regulations by engaging in derivatives-oriented financial engineering.\textsuperscript{176}

\textbf{E. Conflicts of Interest and Moral Hazard}

It has already been discussed that firms which speculate in derivatives risk losing their bets. Such risks can jeopardize the continued vitality or even the continued existence of the firm. Additionally, in certain instances, those speculating in derivatives may jeopardize the continued vitality or existence of their firm because their speculative derivatives position creates a moral hazard or conflict of interest vis-à-vis the firm’s interests.

For example, a manager, a major shareholder or a creditor may be in a position to make decisions that would not be in the best interests of a firm. If any of these persons holds speculative derivatives in which he is betting against the success of the firm – i.e., derivatives positions exceeding what would be necessary to hedge any risk that person has with regard to the firm – he may be inclined to make decisions detrimental to the firm in order to make outsized gains on his derivatives transactions. Such persons may have, for example, purchased credit default swaps referencing the firm or bought put options on the firm’s stock.\textsuperscript{177} In such a case, such persons would stand to gain more from a firm’s default than if the firm successfully averts a default. The actions of such persons would be the equivalent of a home owner committing arson on her own house for the sake of more valuable insurance proceeds, or a person murdering his or her spouse in order to receive more valuable life insurance proceeds, or a football player throwing a game because he stands to win more on his football derivative than he has to lose from losing the game.

Recently there have been several instances of creditors holding speculative credit default swaps on the corporations whose debt they held, that is to say, a derivatives position exceeding that needed to hedge their risks associated with holding such debt. As debtor firms would start to face difficulties paying amounts due on their loans, creditors, instead of closely monitoring

\textsuperscript{174} For a comprehensive discussion of the use of derivatives in regulatory arbitrage, see Partnoy, Regulatory Arbitrage, supra note 167. “Regulatory arbitrage” may be defined as “those financial transactions designed specifically to reduce costs or capture profit opportunities created by differential regulations or laws.” Id. at 227. Professor Partnoy has also referred to regulatory arbitrage as “using derivatives instead of securities simply for the purpose of avoiding the law.” Partnoy, Infectious Greed, supra note 88, at 397. See also Merton H. Miller, Financial Innovation: The Last Twenty Years and the Next, 21 THE J OF FINANCIAL AND QUANTITATIVE ANALYSIS 459. Some commentators include the passing of risk from entities which are more regulated and more able to assess and manage risk to entities less regulated and less able to assess and manage that risk. See, e.g., Partnoy, Infectious Greed, supra note 88, at 378. This definition of regulatory arbitrage which focuses on the transfer of risk is not a component of the definition of regulatory arbitrage used in the Article.

\textsuperscript{175} Partnoy, Regulatory Arbitrage, supra note 167, at 227.

\textsuperscript{176} See Darrell Duffie, et al., supra note 148, at 10 (“[I]nnovation should not be used as a means of avoiding the thrust of proposed regulatory changes…”). However, despite the social costs associated regulatory arbitrage, some commentators have praised derivatives for their ability to permit entities to avoid costly regulation. This line of argument is pursued further in Part III.C.

\textsuperscript{177} See Frank Partnoy & David A. Skill, Jr., The Promise and Perils of Credit Derivatives, 75 U. OF CINCINNATI L. REV. 1019, 1034-36 (discussing how holding the rights under a credit derivative may provide the holder with incentives to destroy value embedded in the reference entity).
the financial health of the firm or agreeing to modify the terms of the loan for the sake of the firm’s financial health thus cutting their debt losses, would simply ignore the firm’s poor managerial decisions or its pleas for loan modification and allow the firm to experience a credit event in order to make outsized gains on their credit default positions.

III. WAYS THAT PURELY SPECULATIVE DERIVATIVES MIGHT BENEFIT THE PUBLIC

Before condemning purely speculative derivatives for their myriad of negative externalities, it is necessary to consider if they might create some positive externalities and weigh those positive externalities against their social costs. Some possible positive externalities are considered here.

A. Asset Price Discovery

Those who praise the derivatives markets generally first cite the markets’ ability to allow hedging transactions. Of course, this does not apply to derivatives that are purely speculative in nature. Following hedging, however, the defenders of the derivatives markets typically next cite the value of the markets’ ability to provide what is known as “price discovery.”

i. An Introduction to Price Discovery

Price discovery refers to “the process by which trading in a market incorporates new information and market participants’ expectation into asset prices.” Both “spot” (or “cash”) markets and futures markets are examples of markets in which price discovery occurs. Whereas the spot markets provide current prices for today’s assets, price discovery through the futures markets refers to the discovery of both current and future spot prices.

Within the world of derivatives markets, there are generally only two markets which provide useful price discovery. First are exchange-traded futures markets, in particular,
exchange-traded futures markets of contracts on underlyings which have a spot price, and second, to a much lesser extent, are exchange-traded options markets. Over-the-counter (OTC) derivative markets do not serve a significant price-discovery role since first, the OTC markets are generally too dispersed to aggregate information, and second, there is generally no transmission mechanism from the private OTC markets to the public. However, to the extent that an OTC market takes on the characteristics of an exchange, a price discovery service may be provided.

Futures prices are determined in part as futures market participants gather and analyze information about the future supply and demand of a particular commodity and then estimate future supply and demand curves, leading to a determination of a reasonable futures price. The price discovery process is dynamic, and futures prices are constantly updated since new information is continuously obtained and impounded into the futures prices. Since futures contracts are often executed for the delivery of an underlying commodity (whether or not the underlying commodity is actually delivered) at various times in the future, the market price of futures contracts for delivery at some particular future time X of a particular commodity reflects the current market’s expectation about what the spot price will be at time X. So in this sense, futures prices are predictors of future spot prices. (It should be emphasized, however, that futures prices do not drive or dictate spot prices; they merely reflect future expectations.)

Occasionally, the term “price discovery” will be used to refer to the actual use of futures prices for pricing market transactions. And, indeed, futures prices are used extensively,

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184 CHANCE & BROOKS, supra note 42, at 12; BRETT F. CARVER, WHEAT SCIENCE AND TRADE (2009) at 552 ("Commodity futures prices can serve as a mechanism for price discovery either for the present price or for determining expected future prices.").

185 Exchange-traded options markets do not provide forecasts for future spot prices but do aggregate and provide some price-related information to the market. CHANCE & BROOKS, supra note 42, at 13; Culp, supra note 44, at 57, 59 ("Market expectations of future price movements, for example, can be extracted from observed traded option prices and the volatility surface.").

186 Over-the-counter derivatives are non-standardized derivatives which are not traded on exchanges but rather are negotiated and entered into bilaterally in private forums. See generally, Darrell Duffie, et al., supra note 148, at 1.


188 For a discussion of the spectrum from exchange-traded derivatives to the OTC market, see Lynch, supra note 10, at [...]. See CARVER, supra note 184, at 553. See also SOMANATHAN, supra note 181, at 13.

189 Rosenburg & Traub, supra note 182; DIMITRIS CHORAFAS, INTRODUCTION TO DERIVATIVES FINANCIAL INSTRUMENTS: BONDS, SWAPS, OPTIONS AND HEDGING (2008) at 282; MANISH BANSAL & NAVNEET BANSAL, DERIVATIVES AND FINANCIAL INNOVATIONS (2007) at 56-57 ("Future prices are essentially the expected cash prices of the underlying asset, at the maturity of the futures contract.")

190 CHICAGO BOARD OF TRADE, COMMODITY TRADING MANUAL (1998) at 23 (hereinafter, CHICAGO MANUAL); DAVID LOADER, CLEARING AND SETTLEMENT OF DERIVATIVES (2005) at 3; SOMANATHAN, supra note 181, at 13; CHORAFAS, supra note 190, at 278. Formally there is a difference between the “futures price” and the “expected future (spot) price.” Each incorporates slightly different considerations. For example, both incorporate cost of carry differently. See CHORAFAS, supra note 190, at 280-81; Culp, supra note 44, at 57, 58-9 ("The term structure of futures prices... is regarded for some assets as a good estimate of expected future spot prices."); Kolb and Overdahl supra note 44, at 31 ("[F]or some commodities an estimate of the future price of the commodity can be derived from an examination of futures price.")

191 CHICAGO MANUAL, supra note 191, at 23; LOADER, supra note 191, at 3.

192 E.g., Garbade & Silber, supra note 183, at 289.
especially by those engaged in commerce. Since futures markets help firms and individuals make better estimates of future spot prices, they can make their consumption, production, investment and marketing decisions more wisely. Market participants who buy and sell physical commodities often incorporate the relevant futures price into their sales contracts. This is especially true of financial, metals and agricultural markets. The value of this price discovery function is also evidenced by the fact that futures exchanges record and then sell futures prices to market participants for significant revenue. Indeed, because of their usefulness to the business community, the price discovery function of the derivatives markets is often said to provide a “social purpose” and to be a “public good.”

Indeed, the notion of price discovery can be understood more broadly as a way to capture and aggregate the wisdom of the market about almost any event. Some commentators have proposed that derivatives prices can be used to estimate or predict things other than asset prices, things such as debtor creditworthiness, the weather, the likelihood of climate change, and the chances of a terrorist attack.

One way to measure the magnitude of the price discovery function of futures markets relative to the price discovery function of the spot market is by determining whether new information is reflected first in changed futures prices or in changed spot prices and by how long it takes for the lagging market to reflect the new information after the leading market

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194 Price plays a socially legitimate role by reflecting true values and efficiently allocating resources. See Culp, supra note 44, at 57, 58-9 (“Reliable, public prices that reflect current information are essential in guiding the invisible hand for which the free price system is held in such high regard.”); Hazen, Rational Investment, Speculation or Gambling?, supra note 71, at 1007-8 (“Society benefits from the resulting fairer and more stable prices – consumers, as a group, and producers are in a better position to operate smoothly in the market environment. . . . Increased information about market conditions permit more informed decisions as to the need to stockpile, thus allowing for rational storage decisions and more efficient allocation of commodities.”); Kolb & Overdahl, supra note 44, at 31; S. L. GUPTA, FINANCIAL DERIVATIVES (THEORY, CONCEPTS AND PROBLEMS) (2006) at 35; CHICAGO MANUAL, supra note 191, at 36; CARVER, supra note 184, at 552 (referring to agricultural business’s use of the price of future wheat and other grains to determine what kinds of grains to plant).

195 Culp, supra note 44, at 57, 58-9; CARVER, supra note 184, at 553. See JOHNSON & HAZEN, supra note 37, at 126 (discussing how a futures prices may serve as the “basis” for the final contract price, e.g., a final sales price which is “ten cents per bushel higher than the May futures contract when the transaction is completed”).

196 CHICAGO MANUAL, supra note 191, at 23.

197 Culp, supra note 44, at 57, 59; CARVER, supra note 184, at 553; CHICAGO MANUAL, supra note 191, at 23; CHORAFAS, supra note 190, at 280.

198 E.g., Kolb & Overdahl supra note 44, at 31; Hasbrouck, supra note 179, at L4; GUPTA, supra note 194, at 90.

199 It has been suggested that credit default swap spreads be used to estimate the creditworthiness of bond issuers and hence to provide a price discovery function for bonds, and that such price discovery function would function better than credit rating agencies. See Frank Partnoy, How and Why Credit Rating Agencies are not like Other Gatekeepers, in FINANCIAL GATEKEEPERS: CAN THEY PROTECT INVESTORS? 59 (Barry Bosworth & Robert Litan eds., 2006); Mark J. Flannery, et al., Credit Default Swap Spreads as Viable Substitutes for Credit Ratings, 158 U. PA. L. REV. 2085 (2009-2010) (suggesting how such spreads might provide the market with better creditworthiness information than credit rating agencies do); Lynch, supra note 93.

200 At times, orange juice concentrate futures prices have predicted the weather in Florida better than meteorologists did. Richard Roll, Orange Juice and Weather, 74 AM. ECON. REV. 861, 871 (1984).

reflects it. Many empirical studies have shown that many futures markets lead (or “dominate”) spot markets in impounding new information into new prices. Some studies have shown that a few spot markets dominate the futures markets.

Futures markets so often dominate spot markets because futures markets tend to have certain attributes which facilitate information impounding. Compared to spot markets,
futures markets tend to have lower trading costs, greater transparency, no restrictions on assuming short positions, faster trade execution, and a greater ability to use leverage. Futures markets are also more centralized than most spot markets, so new information about many commodities is more readily funneled through the futures markets than through the spot markets. Furthermore, futures markets, unlike many spot markets, provide counterparty anonymity. As a result there is often greater trade volume and greater liquidity on futures markets, which facilitates price discovery.

ii. Price Discovery Caveats

Before evaluating the alleged price discovery value of speculators in the derivatives markets – and in particular PSD contracts – it is important to make the following four observations about price discovery generally. First, at stated above, valuable price discovery generally occurs only on exchanges, where supply and demand estimates of many derivatives participants can be aggregated and then the price can be disseminated to the public. Unless their contracts are standardized and their pricing information is aggregated, i.e., they become more like exchanges, the OTC markets contribute little to price discovery.

Second, exchange derivatives contracts which trade in little volume provide little price discovery information, often less price information than their associated spot markets provide. And although price discovery is praised as a service to the public, many commodities are not represented by exchange-traded derivatives contracts at all, often, presumably, because the markets for such derivatives are too small, underappreciated or have yet to materialize. Consumers and producers of these commodities must survive in their competitive environment without the assistance of derivatives-originated price discovery.

Third, with regard to the ability of derivatives exchanges to generally impound new information more quickly on average than spot markets do, it should be noted that most empirical studies have demonstrated that the exchanges only beat the spot markets by at most a

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206 If both markets were perfectly frictionless, rational and informationally efficient, one would expect that both the futures markets and the spot markets would impound new information simultaneously. Fleming, et al., supra note 204, at 353; Tse, supra note 203, at 912; Rosenberg & Traub, supra note 182 (“A market is defined as an efficient market if the market accounts for all public and non-public information in determining an equilibrium price in the market.”).

207 See Fleming, et al., supra note 204, at 354 (“Price discovery will tend to occur first in the lowest-cost market, as information-based trades are executed where they produce the highest net profit.”); N.D. Vohra & B.R. Bagri, Futures and Options (2nd ed., 2003) at 16.


210 Tse, supra note 203, at 912; Ng & Pirrong, supra note 179.

211 See Carver, supra note 184, at 553; Gregory Kuserk & Peter Locke, The Chicago Loop Tunnel Flood: Cash Pricing and Activity, 13 Rev. Futures Markets 115 (1993); Wallison, supra note 19, at 36.
few hours and more typically mere minutes. In other words, generally speaking, futures markets are only slightly more informationally efficient than spot markets and lead spot markets by very little, a social benefit, as Professor Stout has stated, “of debatable importance.” Presumably, in a world without derivatives, the spot prices of assets still would reflect market expectations.

Fourth, the notions that the price discovery function efficiently – and correctly – impounds new information into price and that price discovery facilitates the efficient – and optimal – allocation of scarce resources within the marketplace depend on the assumption that the market is itself informationally efficient and rational or that the markets are, in fact, “wise.” In the last twenty years, behavioral finance theorists have poked notable holes in the efficient market hypothesis, discovering many ways that markets and pricing behavior are not rational. Such irrationality at least partially undermines the value of using futures prices to predict future spot prices. And, indeed, many empirical studies have found evidence suggesting that derivatives markets experience price bubbles, severe underpricings and unstable prices and permit market participants to successfully manipulate market prices.

However, despite their demonstrated inaccuracies and other reasons to be skeptical of the capability of futures prices to facilitate the prediction of future spot prices, “the forecasts of future [spot] prices that can be drawn from the futures market compare in accuracy quite

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212 See supra note 203 and accompanying text. Arbitrageurs not only try to profit from the differences in prices across markets, but through their arbitrage activities, contributed to shrinking the extent one market might dominate another and accelerating the speed that prices across markets converge. Culp, supra note 44, at 57, 60.

213 Stout, Betting the Bank, supra note 59, at 65-66.

214 There are clearly short term spikes (and troughs) in prices which result from market panic, not efficient impounding of normal, rational supply and demand forces. A curious aspect of many of the empirical studies looking the price discovery and extent of market domination over another market is that empiricists often try to remove these spikes and troughs in order to ensure that the results of their statistical models are not corrupted by these kind of real world pricing inefficiencies. In effect, then, they often assume an efficient market in order to test for market efficiency! See Chakriya Bowman & Aasim Husain, Forecasting Commodity Prices: Futures Versus Judgment (March 2004). IMF Working Paper No. 04/41, available at http://ssrn.com/abstract=878864 (acknowledging this practice).

215 See Hashbrouck, supra note 179, at L4 (“Nothing in this approach measures in any absolute sense the total information that is impounded in prices.”); Bowman & Husain, supra note 214 (“Researchers have come to varying conclusions regarding the efficiency of commodity futures markets and whether futures of prices are unbiased predictors of futures spot prices.” The authors list various studies which have found conflicting evidence about this issue, including those trying to examine the performance of forecasts implied by futures prices versus those generated by models or expert opinions); Kolb, et al., supra note 51. (“[N]o evidence was found to suggest that futures prices typically equal the expected spot price.... Unfortunately, no single explanation (e.g., normal backwardation or unanticipated inflation) can account for the price behavior of all commodities. Instead, each commodity appears to exhibit its own peculiarities and the key to understanding the price behavior of each commodity must lie ultimately in the microstructure of the market for that particular commodity.”).

216 See GUPTA, supra note 194, at 16 (“Most of the speculative activities are ‘professional speculating’ or ‘movement speculation’ which lead to destabilization in the market. Sudden and sharp variations in prices have been caused due to common, frequent and widespread consequence of speculation.”); KOLB & OVERDAHL, supra note 44, at 116, 118-19 (“As is typical for many commodities... [f]utures prices fluctuate radically, which means that most of the time they provide an inaccurate forecast of the underlying commodity’s spot price at the time of delivery. Without question, the large size of the forecast errors from the from the futures market limits the reliability of the forecasts.”).

217 See US GAO, Systemic Risk, supra note 148, at 15-17 (“D[erivatives] can be used to manipulate prices, including the price of corporate equity and bond corporate yields. CDS might be used as a proxy for the creditworthiness of corporate entities and the general health of corporate entities, the higher difference between CDS prices and treasuries may be unreliable evidence of health and creditworthiness. Opaqueless, including lack of regulation and inadequate transparency within the OTC market – and even within the exchange traded market – can contribute to this possibility.”).
favorably with other types of forecasts."218 The estimates based on futures prices are “generally regarded as being the best, or one of the best estimates possible.”219 Furthermore, the existence of the derivatives market may make commodity spot prices more stable than they would be in the absence of the derivatives markets.220

iii. Speculators and Price Discovery

Traditionally, the defenders of speculation in the derivatives markets have stated that the participation of speculators contributes to price discovery and price stability, that speculators enhance price discovery by bringing additional information into the marketplace which would not be impounded into price, or at least impounded much more slowly, if speculators were barred from participating in the derivatives markets.221

The underlying assumption of this argument is that the information and future spot price expectations that speculators impound into futures prices are somehow better or more complete than the information impounded by non-speculators. (Recall that this is the theory upon which the information arbitrage model was based.222) Although it seems wholly plausible that including additional participants improves the accuracy of pricing, at least some commentators challenge this assumption. As Borna and Lowry have written,

The underlying assumption of the theory of speculation is that speculators are people with better than average foresight who enter the market either as buyers or sellers whenever there is a temporary deficiency of supply and demand, thereby moderating price fluctuations. [However,] [t]he conclusion reached in the traditional theory of speculation is at best questionable one. The theory assumes that the speculators can predict non-speculative factors in the market better than the average man. There is no concrete evidence proving this.223

iv. Purely Speculative Derivatives and Price Discovery

218 Kolb & Overdahl, supra note 44, at 31.
219 Id. (“[T]he accuracy of futures forecasts is not that good, but it is certainly better than the alternatives”). See also, Bowman & Husain, supra note 214 (“The analysis indicates that on the basis of statistical and direction accuracy measures, futures-based models yield better forecasts than historical data based models or judgment especially at longer horizons.”).
220 See Bowman & Husain, supra note 214, at 3-4. See also Gary Robinson, The Effect of Futures Trading on Cash Market Volatility: Evidence from the London Stock Exchange 13 J. FUTURES MARKETS 429 (1994) (presenting evidence suggesting that stock index futures contracts have reduced the volatility of stock prices by around 17 percent after noting that “[f]utures prices tend to fluctuate in step with spot prices, although the volatility of futures is markedly lower for virtually all commodities”); Pirrong, supra note 163, at 40 (“The existence of derivatives markets makes bubbles less likely to form, not more.”).
221 E.g., Borna & Lowry, supra note 81, at 222; CHICAGO MANUAL, supra note 191, at 118 (“Speculators stabilize the market by dampening extreme price moves.”); LOADER, supra note 191 at 3; Hazen, Rational Investment, Speculation or Gambling?, supra note 71, at 1007 (“Futures and options result in more accurate spot prices because options and futures provide incentives for generating new information. This increases the total volume of information generated, which is reflected in the underlying commodity’s spot price.”)
222 See supra notes 55-58 and accompanying text.
223 Borna & Lowry, supra note 81, at 222.
If derivatives markets indeed have the capacity to be informationally efficient and if speculators have better than average foresight, then allowing speculators to contract with other speculators in the markets may very well contribute to price discovery. A party need not have any direct financial interest in, including bearing any pre-existing risk associated with, an underlying to contribute to the process of price discovery.²²⁴

An example of this process can be seen in sports gambling. For example, a point spread was established at the Las Vegas Hilton for the 2010 Super Bowl between the Colts and the Saints. The experts behind the counter at the house initially set the point spread at 5.5 points in favor of the Colts.²²⁵ Over the course of the next two weeks, as sports gamblers – speculators – placed bets with the house, the point spread changed.²²⁶ It changed in response to the market’s consensus or aggregate belief in what the point spread should actually be and in response to new information about the teams and the game conditions. By the time of the game’s opening kickoff, the point spread had decreased to 4.5 points in favor of the Colts. It decreased because the market collectively thought that the original point spread was too high, and it communicated its collective thoughts by betting predominantly in favor of the Saints until the point spread was adjusted so as to ensure that there was an equilibrium between the value of money being placed on the Colts and that being placed on the Saints. In order to ensure that they had an equal amount of bets on both sides of the transaction (so they would not risk losing money), the house was forced to adjust the point spread to a point where there were equal amounts of bets being placed on the Colts as there was on the Saints. This is an example of price discovery, though in this case the “price” being discovered was a point spread, and it was adjusted, perhaps to a more accurate value, because of the collective acts of speculators, and speculators only, i.e., PSD contracts.

PSDs also find the “price” in other arenas where there are certainly few hedgers. For example, The Hollywood Stock Exchange, an on-line derivatives trading site, allows speculators (using virtual money) to enter into film- and television-related derivatives contracts. The price of these contracts is indicative of the odds on such important questions as who’s going to win American Idol or how much the movie “Saw 3D” will make in its first four weeks after release. The terrorism derivates market proposed to take advantage of not only the information known by those simply desiring to hedge against a terrorist attack, but also the information held by speculators (and preferably, but not necessarily, speculators who might have actual information about potential terrorist attacks), the collective wisdom of speculators.²²⁷ In other words, the exchange relies on PSD contracts to determine the odds, i.e., the “price,” of outcomes.²²⁸

²²⁴ Id. at 36 (making these points and specifically addressing the price discovery contribution of these trading in naked credit default swaps).
²²⁷ See supra note 201 and accompanying text.
The introduction of speculative traders with heterogeneous expectations, ones with bullish expectations and others with bearish expectations, might add to the dispersion of opinions regarding future expectations, but this does not necessarily mean that they fail to contribute to price discovery. Accurate price discovery is not a function of how narrow the range of independent expectations is, but rather a function of impounding as much information – and the markets analysis of such information – into a single price. Of course, the markets may not be so informationally efficient, and the “wisdom of the markets” may not be so wise. Speculators, as a group, may be impounding invalid information into any price. But this may also be true of hedgers and may be true of any market, including cash markets, and thus not an indictment of speculators or PSD contracts per se.

The issue regarding PSD contracts and their relation to price discovery, though, is not whether or not they contribute to price discovery, but whether or not it is necessary, given PSDs’ costs and potential harms, to permit them for the purpose of augmenting the price discovery function, and, if so, under what circumstances. In other words, do we have enough price discovery without adding the contribution of PSD contracts? It is not clear that there is an easy answer to this question. However, given that derivatives markets tend to dominate the cash markets by only mere minutes or hours, when they dominate at all, it would seem doubtful that the price discovery costs associated with eliminating PSDs would be significant. If the cash markets will eventually incorporate the same information, do we need the futures markets to incorporate PSDs in order to impound information as quickly as possible? Of course, the futures markets influence spot market prices, so untangling this relationship and the costs associated with eliminating PSD contracts from the exchange-traded futures markets is difficult to hypothesize.

B. Enhanced Liquidity and Reduced Prices for Hedging Market

But see Stout, Why the Law Hates Speculators, supra note 14, at 759 (using the following example to argue that heterogeneous expectations trading fails to contribute to price discovery: Imagine that the market price of gold, based on suppliers and consumers expectations is based on homogenous expectations and is $500/oz. Imagine then that two speculators develop different expectations about the future movement of gold prices; one predicts up, and the other down. They could contract on a futures or option contract. “The ambiguous new information [upon which the speculators based their predictions] consequently has increased the dispersion of expectations in the market without changing the average expectations, which remains $500 per ounce.”). Id. However, this transaction would reinforce the $500 price. The discovered price remains the same!

Indeed, price bubbles occur in cash markets and fear may grip cash markets – just as they do in derivatives markets.

But see, Stout, Why the Law Hates Speculators, supra note 14, at 754. (“The [heterogeneous expectations] model of trading suggests… that traders who believe they have superior information can be mistaken in their belief. Their information is not superior to the information of other traders; it is merely different. This possibility challenges the conventional presumption that speculators improve the accuracy of market process…. Unlike true information arbitrage, HE speculation does not produce a social benefit in the form of better pricing.”).

See Stout, Regulate OTC Derivatives, supra note 19, at 33 (“[T]here is virtually no empirical evidence to establish the value of the supposed liquidity and “price discovery” benefits from derivatives speculation, much less evidence that shows the value of those benefits exceeds the enormous social cost of the systemic risk created by derivatives speculation.”)
There is little doubt that speculators add liquidity to the derivatives markets. Most importantly, without speculators, potential hedgers would have to find other hedgers with an exactly (or nearly exactly) opposite position in order to enter into a derivatives contract to hedge their pre-existing risks.\(^{233}\) Finding such hedgers with an exactly opposite pre-existing risks may be costly to do and may often be impossible.\(^{234}\) With the addition of speculators into the derivatives marketplace, hedgers have more potential counterparties, allowing them to find a willing counterparty more readily and with less cost.\(^{235}\) As Norman Feder has written, “Theoretically a market can have a perfect balance of natural long and short hedgers; realistically speculators fill a counterparty void.”\(^{236}\)

I do not challenge the view that speculators add liquidity and that this liquidity is valuable. This additional liquidity, however, is valuable because it allows hedgers to find would-be counterparties. In a PSD contract there are no hedgers. Added liquidity, therefore, in the context of a marketplace comprised only of speculators, is liquidity which facilitates the creation of PSD contracts, i.e. gambles. It is, therefore, nonsensical to think of speculators who enter into PSD contracts as providing additional valuable liquidity to the derivatives marketplace – unless we simply want to increase the opportunities to gamble.

Additionally, the creation of PSD contracts would actually seem to reduce liquidity for potential hedgers by sopping up counterparties who would have otherwise contracted with hedgers. For example, let’s say there is a potential hedger seeking to take a short position. That hedger is in competition with short speculators in his search for a long counterparty. To the extent that a short speculator, instead of the hedger, contracts with a long speculator who was conducing his own search for a counterparty, that long speculator is taken out of the pool of potential counterparties for the short hedger, thus reducing liquidity for the hedger. The hedger’s search must go on, but now in an environment where there is one less potential counterparty.

C. Regulatory Arbitrage

The nature of regulatory arbitrage was discussed above in section II.D. Consistent with the anti-regulatory sentiment of the early 2000s, some have argued that derivatives are beneficial because they allow people and firms to avoid regulation through regulatory arbitrage.\(^{237}\) Merton Miller has referred to the ability of derivatives to innovate around what he viewed as onerous regulatory burdens as being “much like a snake bursting through its old skin.”\(^{238}\) Edward Klienbard has written, “[R]egulated entities, such as pension funds or insurance companies, often are subject to limitations on investments in foreign equity securities. Derivative

\(^{233}\) CHICAGO MANUAL, supra note 191, at 118.

\(^{234}\) Id.

\(^{235}\) Id.; Hazen, Disparate Regulatory Schemes, supra note 53, at 329-30 (“[T]he markets use speculators to help provide liquidity to these risk-shifting markets.”); Hazen, Rational Investments, Speculation or Gambling?, supra note 71, at 1019; CARVER, supra note 184, at 554.

\(^{236}\) Feder, supra note 39, at 719. Or, in the words of the Chicago Board of Trade, speculators add “depth and immediacy to the market.” CHICAGO MANUAL, supra note 191, at 118.

\(^{237}\) E.g. Ian Bell & Petrina Dawson, Synthetic Securitization: Use of Derivative Technology for Credit Transfer, 12 DUKE J. COMP. & INT’L L. 541, 554; Feder, supra note 39, at 721.

\(^{238}\) Miller, supra note 174, at 471.
instruments can be used to overcome these inefficiencies, by enabling parties to take an economic position in an equity security without actually owning it."

However, regulatory arbitrage is not so clearly beneficial. Regulations passed by the public’s representatives in the public’s interest should be respected and not undermined by the use of derivative-based regulatory arbitrage. “While conservative commentators may believe that such opportunities to do an end run around regulations are cause for celebration, observers willing to assume that existing banking, securities and tax laws serve a public function should find the notion of regulatory arbitrage far more troubling.”

Perhaps the question of whether or not the use of derivatives is socially beneficial or socially harmful depends on the wisdom, desirability, value and effect of the tax, securities or other law any particular derivatives transaction is trying to skirt. However, unless there is convincing reason to believe that such a law or rule certainly a “bad” one, it should be respected, especially in a democratic political system. It is the role of the legislature to change the law instead of relying on a gambling transaction to avoid, evade or eviscerate it.

D. Economic Activity and Job Creation

The casino gambling industry and its advocates often cite the positive economic spillover effects resulting from the construction and operation of casinos. Economic activity is generated. Casinos provide employment, businesses that service the casinos expand, and revenues are earned. Communities centered on the activities of a commercial casino can thrive, and tax revenues for the local taxing jurisdictions increase. The same arguments are applicable when the gambling activities do not involve just slot machines, cards and roulette wheels but when they involve derivatives contracts.

Exchanges, clearinghouses, brokers, and other intermediaries all benefit from the continued existence of derivatives trading. By facilitating the execution and settlement of, and other

240 Stout, Betting the Bank, supra note 59, at 57.
241 See Partnoy, Regulatory Arbitrage, supra note 167, at 216 (“[T]he question of whether increased derivatives use is “good” or “bad” depends on the particular use. To the extent derivatives use is directed at avoiding regulation that seeks to ameliorate market failure, redistribute wealth, in accordance with society’s wishes, or otherwise achieve efficient results, derivatives may create unanticipated and serious regulatory distortion, deadweight losses and wealth redistribution.”).
244 See Stout, Betting the Bank, supra note 59, at 62 (“conservatively” estimating that the amount of third-party economic activity is one-tenth of one percent the notional amount of all derivatives contracts).
activities associated with, derivatives contracts, these fee-charging intermediaries provide jobs, pay dividends, pay taxes and create opportunities for those businesses which service the derivatives industry. The desire to maintain or even expand the economic activity associated with the financial industry in general and derivatives in particular has been articulated by numerous notable sources including the US Treasury.245

PSD trading expands the amount of derivatives contracts beyond that which can exist based solely on risk hedging. PSD trading, then, expands the economic activity associated with the derivatives industry.246

Expanded economic activity, however, is a type of benefit which results from any transactional activity, including ones which clearly impose obvious, even horrendous, negative external costs on society. Such transactional activities include cigarette sales, prostitution, usurious lending, human trafficking, fencing stolen goods and murder for hire. In each of these transactional activities, certain members of society profit, but few among us would support the expansion of most of these industries despite the obvious attendant economic benefits to those participating in and servicing these industries.247 The value of the spillover economic benefits resulting from PSD contracting must be assessed in the context of its economic and non-economic costs.

Additionally, the notion that there is economic benefit to be gained by a thriving derivatives industry must also be measured against the fact that in the absence of a such an industry, the resources that would have otherwise been devoted to that industry would be applied to alternative uses, alternate uses that might contribute more to society’s economic and non-economic well-being. Purely speculative derivatives merely redistribute wealth amongst the counterparties and intermediaries, and the expenditure of resources devoted to engaging in PSD contracts and the activities surrounding them represents opportunity costs.

E. Re-distribution of Wealth to More Efficient Investors

It might not be unreasonable to assume that the research, analysis and predictive skills it takes to win, on average, in the derivatives markets are the same ones which enable investors to invest their wealth efficiently.248 In that case, PSD contracts might operate as a mechanism for

245 See e.g., U.S. DEPT. OF TREASURY, BLUEPRINT FOR A MODERNIZED FINANCIAL REGULATORY STRUCTURE (March 2008) at 2-4, 27 (stressing the fact that there are foreign jurisdictions which, compared to the United States, have more efficient and adaptive regulatory structures which are also more adaptive to the complexity and increasing pace of financial innovation, and noting that the US’s financial regulatory system’s inefficiencies compel the migration of financial services and products to more adaptive foreign markets).

246 Since there is no theoretical limit to the number of PSDs which can be executed (or the number of times a pre-existing risk can be passed along to the next person willing to bear it via a hedger-speculator derivatives contract), the derivatives industry would seem to have no natural limit.

247 It should go without saying that I do not equate speculative derivatives trading with absolutely condemnable activities such as human trafficking and murder for hire.

248 This possibility can only arise in a less than perfectly efficient derivatives market, i.e., a market which would provide inaccurate prices and thus enable those with superior predictive skills to identify mispricings and, on average, win their derivatives bets. In an informationally efficient market, there would be little reason to expect that there are people who are more likely than others to consistently win their derivatives contracts. There is reason to believe that the markets are at least somewhat inefficient since approximately 25% of exchange-traded derivatives investors win on average, taking
re-distributing wealth from those who are less able to invest efficiently (and socially productively) to those who are more capable.\textsuperscript{249} However, there appears to be no direct evidence suggesting that derivatives winners are on average better able to invest their derivatives winnings than do derivatives losers.

Furthermore, even if it were the case that derivatives winners were able to invest their winnings more efficiently than derivatives losers, such redistribution of wealth would not necessarily be socially desirable if it were inequitable or otherwise undesirable.\textsuperscript{250} In order to be a less ambiguous benefit, then, the wealth re-distribution resulting from PSD outcomes and the distribution of the resulting investment proceeds ought to not only be desirable, but preferable to the distribution of wealth in a society without PSDs.

\section*{F. Financial Innovation}

A lot of resources are devoted to developing new derivatives contracts, especially over-the-counter contracts. This resource expenditure results in financial innovation. And often the innovation that begins with customizations in the OTC market evolves into standardization and inclusion on exchanges. And this process of commoditization almost certainly fosters further off-exchange innovation.\textsuperscript{251}

Furthermore, it may very well be the case that the ability and legality to broker PSDs specifically has prompted investment banks and other intermediaries to expend more energy innovating and creating new derivatives products than they might otherwise have done.\textsuperscript{252} And although the social and private value of PSDs may be suspect, there may be long-term value in the processes and creativity which are realized through the innovating process. Indeed, like any musician, athlete or craftsman, a financial innovator will become more skilled in her craft by practicing financial innovation. And if it is the case that the existence of PSDs encourages innovation and increases innovative skills, then such an expansion of innovative energies contributes to the creation of new, innovative risk-hedging and other clearly socially beneficial derivatives, derivatives which would not have been developed (or at least not as soon) but for the resources dedicated to developing PSDs. So in this sense, the PSD playing field allows

\begin{footnotesize}
\begin{enumerate}
\item See, e.g., Borna & Lowry, supra note 81, at 220 (noting that as long as derivatives winners’ production schedules are not identical to the losers’ production schedule, it can be assumed that aggregate productivity will either increase or decrease as a result of the wealth transfer resulting from the derivatives payoff).
\item A comparison with casino gambling is worthwhile. Casino gambling is also zero-sum (without taking into consideration its possible entertainment value) in that the winners take their winnings from the pockets of the losers. Since the odds for winning on any particular casino gambling device, whether it be slot machines or cards, are in the casino’s favor, the casino will, on average, be the gambling winner and the customer the gambling loser. However, in most US jurisdictions, casinos are heavily taxed so a significant percentage of casino revenue becomes public revenue. See Claude Louishomme & Donald Phares, Gaming Taxation, State, in THE ENCYCLOPEDIA OF TAXATION & TAX POLICY 165 (Joseph J. Cordes et al. eds., 2d ed. 2005).
\item Darrell Duffie, et al., supra note 148, at 10 (“Without the opportunity to use the OTC derivatives market as an incubator for new financial products, the development of many new types of derivatives would be stifled, limiting the potential for financial innovation to spur economic growth… [I]nterest rates swaps [and other exchange-traded contracts] originated as relatively inactively traded OTC derivatives. They later achieved a significant level of trading activity among a broad spectrum of investors.”).
\item Perhaps, unsavoirily, because they know there is a sucker born every minute?
\end{enumerate}
\end{footnotesize}
financial innovators to practice their craft and become more able to create socially beneficial derivatives, thus benefiting society, even, perhaps, on a net basis after the social costs of the PSDs are deducted.

However, such a conclusion is itself, speculative, for it is impossible to know what kinds of innovative risk-hedging derivatives might have been developed, and which ones might not have been developed, and which ones would never materialize, in the absence of the PSD practice field.

IV. PURELY SPECULATIVE DERIVATIVES AND ENTERTAINMENT UTILITY

There is one particular value that PSDs occasionally generate for their counterparties – entertainment value. This is not an externality, but rather a value enjoyed by one or both PSD counterparties themselves. One of the traditional and perhaps most persuasive arguments justifying the legality of casino gambling is that it provides entertainment value to those who gamble.\(^{253}\) Casino gambling and interpersonal bets with friends and acquaintances might be viewed as zero-sum activities wherein one party’s winnings and losses are equal to his counterparty’s losses and winnings, respectively. A casino (and a betting partner), however, provides a service – entertainment. The enjoyment and entertainment value a gambler receives from playing roulette, pulling the slot machine or betting against his buddy on the outcome of the Super Bowl represents a real value created only as a result of participating in the gamble.\(^{254}\) As I argue elsewhere, gambling transactions (as commonly understood) are derivatives transactions.\(^{255}\) Many gambling agreements, then, are PSDs which provide entertainment utility.

It seems that investors, especially individual investors, often enjoy entertainment value when investing in securities and engaging in transactions that are commonly referred to as “derivatives” (and not “gambling”).\(^{256}\) Many people seem to enjoy the process of investing in stocks or executing derivatives contracts and anticipating and following their performances.

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253 E.g., Thomas Lee Hazen, Filling a Regulatory Gap: It Is Time to Regulate Over-the-Counter Derivatives, 12 N.C. BANKING INST. 123, 125 (“The only benefit [to society] attributed to gambling is the entertainment it provides.”); PETER COLLINS, GAMBLING AND THE PUBLIC INTEREST 42 (2003); WILLIAM N. THOMPSON, GAMBLING IN AMERICA: AN ENCYCLOPEDIA OF HISTORY, ISSUES, AND SOCIETY 126, 129 (2001).

254 Despite this Article’s articulation of the entertainment utility of casino gambling, it is beyond the scope of this article to advocate for or against casino gambling. Furthermore, it must not be inferred that all activities commonly referred to as gambling, nor all instances of gambling, are entertaining or enjoyable. Many gamblers gamble because of compulsion or addiction or because loss aversion bias prevents them from accepting their gambling losses.

255 Lynch, supra note 10 (“All derivatives are simply contracts between two counterparties wherein the payoff to and/or from each counterparty depends on the outcome of one or a set of extrinsic, future, uncertain event(s) and/or metric(s) and wherein each counterparty expects such outcome to be opposite to that expected by the other counterparty.”).

256 Hazen, Disparate Regulatory Schemes, supra note 53, at 401, 410, (“Many investors participate in the securities or derivatives markets as a form of entertainment. Some suggest that market participants often view investing as a hobby or participated for the thrill of the game.”); Ian Ayres & Stephen Choi, Internalizing Outsider Trading, 101 Mich. L. Rev. 313, 314 (2002); ROBERT J SHILLER, MARKET VOLATILITY 59 (1989) (“Investing in speculative assets clearly shares with gambling the element of play… The satisfaction afforded by gambling is related to the individual’s ego involvement in the activity, and thus individual investors must themselves play to achieve satisfaction…”); Douglas E. Allen & Elton G. McGoun, Hedonic Investment, 9 FIN. SERVICES REV. 389 (2000); Hurt, supra note 129, at 385. But see, Lynn A. Stout, Are Stock Markets Costly Casinos? Disagreement, Market Failure and Securities Regulation, 81 VIRGINIA L. REV. 661, 704 (1995) (“Although the stereotype of the Florida retiree who enjoys “playing the market” raises the possibility that some investors trade for entertainment, closer analysis suggests that recreation is likely to play only a minimal role in equities trading.”).
This entertainment value is a real benefit, and when it exists, PSDs are positive-sum transactions.

There is evidence that institutional investment managers are also motivated to some extent by their own personal enjoyment and entertainment. Speculating in derivatives, then, might provide entertainment utility for institutional investment managers. However, that utility is probably not widely shared by the other members of his institution or society generally. Indeed, large corporations and municipalities qua entities waging billions on stock options or weather futures are presumably not motivated at all by the entertainment value of the wagering process itself.

Far more importantly, institutional investors are not paid by their investors to use the investors’ contributions, deposits or pension funds to pay for the investment managers’ private entertainment or anyone else’s entertainment. One may applaud the opportunity for a day trader, like a casual blackjack player, to have the opportunity to use his own funds to engage in an activity he enjoys, but it is inappropriate for institutional managers to fund their personal entertainment with other people’s money. Consequently, any entertainment value that might be created when institutional investors engage in derivatives trading should be completely discounted when trying to determine whether or not institutional investors should be permitted or encouraged to engage in PSD investing.

V. RECOMMENDATIONS

Although, it is difficult to quantify and normalize the social costs and social benefits of PSD contracts and then weigh them against each other, their social costs seem far more extensive than their benefits. As a result, except in limited circumstances when PSD contracts provide a desirable price discovery externality or when they provide entertainment utility to the participants, PSDs should be declared void on public policy grounds and hence be legally unenforceable.

It is important to emphasize that these recommendations are motivated by, and are tailored to meet, the particular concerns associated with PSD agreements and to best ensure that the social costs inflicted by them are avoided while still allowing their potential positive externalities to be generated and harvested when necessary. These recommendations are not motivated from some paternalistic desire, nor are they designed, to protect potential speculators from themselves and their irrational PSD bets. Nor are these recommendations designed with any concern with speculation generally in the marketplace. Speculators are necessary for the risk transfer function of the derivatives market to function effectively. Speculators are still, under these recommendations, allowed to speculate in the derivatives market but only by


258 See Stout, Betting the Bank, supra note 59, at 66 (“[T]he… derivatives market is dominated by banks, corporations, pension funds, and municipalities. These institutions are run by managers who have been entrusted with the savings of depositors, employees and citizens seeking reasonable returns at a reasonable risks, rather than recreation.”).

259 But see Stout, Insurance or Gambling?, supra note 54, at 41 (“[T]he notion that speculative trading provides some ancillary social benefit outweighing the huge returnsforgone and risks incurred by traders seems implausible.”).
assuming a pre-existing risk from another and hoping for the best. This Article is otherwise agnostic toward speculating.

A. Recommendations for the OTC Market

There is little convincing reason to justify the continued existence of PSDs on the OTC market and ample reason to discourage their use. The OTC markets do not generally provide the one positive externality PSDs seem to certainly provide, price discovery. I recommend that PSD contracts entered into on the OTC market should be declared void for public policy reasons. (In this case, PSDs should be deemed to be merely “PSD agreements” not “PSD contracts.”) If PSDs are void and hence unenforceable, potential counterparties to a PSD agreement may hesitate before expending the time, energy and financial resources into negotiating and concluding the deal since each will know that if he ends up winning his PSD bet, his counterparty may refuse to pay and will have a valid defense in the face a breach of contract claim. This lack of legal certainty would severely dampen the inclination to enter into PSDs, and only those counterparties who each trust that the other will make due on its gambling debts will conclude PSD agreements.

This lack of legal certainty would severely dampen the inclination to enter into PSDs, and only those counterparties who each trust that the other will make due on its gambling debts will conclude PSD agreements. To the extent that a derivatives contract is in part insurance and in part a PSD, that component which operates to hedge can be legally enforced. This would force courts faced with a dispute between derivatives counterparties to divide such contracts into their hedging and PSD components and to determine what amount of payments are applicable to which component. Only the hedging component of the agreement would be enforced and only the payments allocated to the hedging component would be due. In an environment where OTC PSD agreements are not enforceable, potential counterparties, in particular speculating counterparties assuming risk from a hedging counterparty, for their own comfort, can be expected to spend an appropriate amount of due diligence resources prior to concluding the contract to determine the risk being hedged and to narrowly structure the derivatives contract to hedge that risk without creating and burdening the hedging counterparty with any speculative risk (or with any speculative risk over some legally permissible minimum amount.) Special attention needs to be devoted to what may be referred to as “hedging ones bets.” Once a PSD agreement has been made, both parties to that contract are now subject to the risk associated with that PSD agreement, (at least to the extent that they intend to honor their obligations under that agreement). Each party is subject to market risk and counterparty risk. After having incurred that risk, a counterparty may hedge it – i.e., may “hedge his bet” – by entering into another derivatives contract. This second contract should also be declared void based on public policy reasons even though by this account it appears to be a hedger-speculator contract. It should be void on the grounds that the risk being hedged against is artificial risk

This discussion of the OTC derivatives market does not address the OTC market for what is commonly referred to as gambling or wagering, e.g., a Super Bowl bet between friends.

One or both parties contemplating entering into a non-PSD derivatives contract might be expected to make explicit representations as the hedging nature of the contract. In a case like IKB Deutsche Industriebank, where IKB may have sincerely intended to pay whatever gambling debts became due under its PSD agreement (i.e., its synthetic CDO agreement with Paulson & Co.) it would have been empowered to change its mind when faced with such large gambling losses that it faced collapse.

See note 41 and accompanying text.
generated pursuant to an unenforceable, void, PSD agreement. The putative risk being hedged against in the second contract is not real. Since that first contract is an unenforceable, void PSD agreement, any perceived risk under that contract is illusory.\textsuperscript{264} Thus, any speculator intending to enter into a derivatives contract with a putative hedger ought to conduct adequate due diligence to convince himself that the risk being hedged, i.e., the risk he is assuming pursuant to the derivatives contract, is not merely previously created artificial risk that is being passed along in a chain of derivatives contracts. Otherwise he runs the risk that his agreement will not be enforced.\textsuperscript{265}

Additionally, unless and until all risk hedging contracts are subsumed into insurance law generally or until what are commonly referred to as insurance and derivatives are collectively subjected to a common, cohesive regulatory scheme,\textsuperscript{266} the law, regulators, scholars and others who discuss and analyze derivatives ought to refer to OTC derivatives contracts in which risk is being hedged (i.e., non-PSD agreements) as “private counterparty insurance policies.” Such terminology refers to the fact that these contracts function as insurance policies where the insuring counterparty is not a traditional insurance company governed by prudential insurance industry regulations. Such terminology would contribute to more widespread understanding of what these derivatives contracts are and how they are different from purely speculative derivatives contracts. I ask rhetorically, Would IKB have entered into its non-synthetic collateralized debt obligations if it knew they were also private-counterparty insurance policies -- and they were the insurer?

\textbf{B. Recommendations for Derivatives Exchanges}

Unlike OTC derivatives, exchange-traded derivatives cannot be customized or tailored to perfectly suit a particular hedger’s exact hedging needs. Except in that rare case where an exchange-traded product does perfectly match a hedger’s hedging needs, a hedger is forced to select the exchange-traded product which most closely meets his hedging needs. The close-but-not-perfect exchange products, then, will sometimes burden the hedger with some amount of speculative derivatives risk. Nevertheless, unlike the OTC context where it would be expected that only the hedging component of a mixed derivatives product would be enforceable, in the exchange context, for practical reasons, as long as one counterparty to a derivatives contract is primarily a hedger, the entire derivatives contract should be enforceable Otherwise, except as discussed below, PSDs should be prohibited on the exchanges too.

\textsuperscript{264} There may, however, be real risk under a non-enforceable PSD agreement. For example, there is the risk that a dispute might result in a costly dispute resolution process. There is also the risk that the winning party to the PSD agreement may engage in some unwelcomed self-help in the face of the losing party’s attempts to squelch on the bet.

\textsuperscript{265} The putative hedger, since he will have an information advantage over the speculator, is in a position where if the underlying(s) of this subsequent agreement move(s) against him, may be included to disavow his commitments under this second contract and justify his disavowal on the fact that the contract is unenforceable under this rule of PSD non-enforceability.

\textsuperscript{266} See Hazen, \textit{Disparate Regulatory Schemes}, supra note 53, at 438-439 (“Now, it is up to regulators to acknowledge the similarities between these parallel industries,[ derivatives, insurance and gambling,] and to synthesize their various regulatory approaches into a comprehensive modern scheme.”). See also, Hurt, supra note 129, at 404 (stating that all speculative and gambling activities which have similar levels of chance and skill, as well as similar levels of utility, entertainment value and social costs should be regulated similarly).
Because of the process of clearing, especially notation and offsetting, it would be difficult to determine ex post which derivatives positions are one half of a PSD contract. Therefore, in order to implement such a rule, it would be necessary for each bidder and each solicitor to designate himself as a hedger or a speculator. Agreements concluded between two speculators would not be permitted. This Article makes no attempt to analyze how to implement such a system and leaves it to others, who are convinced by the wisdom of this recommendation, to determine how to most efficiently and effectively implement and enforce such a rule and whether or not the private and public costs of implementation and enforcement are worth the benefits of reducing the existence of PSDs in the marketplace.

There are, however, two types of circumstances when exchange-traded PSD contracts may be permitted — when there is a greater need for price discovery and when there is desirable entertainment value to be garnered. When such PSDs are permitted, they should be permitted only pursuant to explicit statutory or regulatory actions permitting them. Otherwise, a default rule prohibiting them should be in force.

C. Other Possible Recommendations Considered

Some may be concerned that the adoption of a rule which states that PSDs are void may entice derivatives counterparties who find themselves on the losing end of their derivatives agreement to claim pretextually that their derivative is a PSD and that they are, therefore, not obligated to pay the winning counterparty. Some may worry that such a rule would be abused and would result in clogging the judicial system with meritless disputes.

There are ways to reduce some of the social costs associated with PSDs without declaring all PSDs void. For examples, strict margin and collateral requirements could be imposed on PSD counterparties; regulatory regimes could be better coordinated such that there are fewer inter-regime gaps within which to engage in regulatory arbitrage; and although the discussion above displayed a strong skepticism that greater corporate disclosure of their speculative derivative activities would adequately protect corporate stakeholders and reduce systemic risk, such increased disclosure may nonetheless lead to some greater degree of protection.

267 Such a restriction would be enforced on the trading floor, before any agreement is novated by a clearinghouse.

268 Such additional price discovery may be desired for commodities, but it is easier to see the desirability for such price discovery in a situation in which there is no cash market to provide prices but in which there may be valuable information to be gathered from polling the marketplace, e.g., predictions for terrorist events using a terrorism future or creditworthiness of debt issuers using credit default swap prices.

269 Casinos, sports bookies and the like would be considered derivatives exchange under scope of this Article’s definition of derivatives. See also Lynch, supra note 10, at [__]. Entertainment value could be the justification for permitting casino gambling (recognizing that casinos and on-line gambling sites are essentially derivatives exchanges), and exchanges such as The Hollywood Exchange, the Iowa Electronic Market, and Intrade.com, all of which offer gambles in the form of orthodox derivatives contracts. It has been alleged that Cantor Fitzgerald, the global financial services firm which owns The Hollywood Exchange, uses the information garnered from The Hollywood Exchange to assist Cantor’s gambling operations in the UK. Norm Alster, Business: It’s Just a Game, but Hollywood Is Paying Attention, N.Y. TIMES, Nov. 23, 2003, available at http://www.nytimes.com/2003/11/23/business/business-it-s-just-a-game-but-hollywood-is-paying-attention.html.

270 Exchanges and their associated clearinghouse invariably have extensive mechanisms for protecting themselves and their customers from counterparty risk. For more on the topic of mutualization of counterparty risk in the exchange context, see Lynch, supra note 10, at [__].
alternatives certainly have some pragmatic (and even independent) appeal. However, they are merely second best solutions for the problems posed by PSDs.

CONCLUSION

Purely speculative derivatives contracts are simply bets. They have become increasingly popular in the last twenty years and have resulted in the transfer of enormous amounts of wealth from firms losing these bets to firms winning them. All counterparties to PSD contracts, except those who are entertained by the transaction, either are behaving irrationally or, if actually equipped with superior information or negotiating power, are taking advantage of others in sucker bets. Other than that limited set of PSDs which provide a desirable or necessary price discovery function or that are entertaining to engage in, PSDs serve no significant useful purpose, can harm non-participants, and threaten entire economies. Furthermore, the growth of PSDs has been driven in large part by financial intermediaries – enablers – who have earned tens of billions of dollars in fees arranging and structuring PSDs. Given the complexity of many PSDs, many PSD counterparties, including ostensibly sophisticated institutional investors, have not completely understood the nature of their contractual arrangements and the risks they were undertaking. Such lack of understanding makes them vulnerable to both firms seeking suckers and financial intermediaries happy to broker more lucrative transactions.

Based on the conclusion that non-entertainment PSDs pose a net social harm, PSD agreements should be deemed void for public policy reasons (except to the extent they are explicitly permitted for price discovery or entertainment purposes). The recently enacted Wall Street Reform and Consumer Protection Act significantly amended derivatives regulations in the US but did not declare that such PSDs are void. However, Congress, unable to satisfactorily address many of the most problematic issues associated with derivatives, has asked the Commodity Futures Trading Commission, the Securities Exchange Commission and other federal agencies to engage in the necessary regulatory line drawing. These regulators now have an opportunity to curb derivatives gambling.