

Regulation through Substitution as Policy Tool: Swap Futurization under Dodd-Frank

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I. Introduction

“Now that the entire derivatives marketplace, both futures and swaps, have come under comprehensive oversight, I think it’s the natural order of things for some realignment to take place.” – CFTC Chairman Gary Gensler, CFTC Roundtable on Futurization, 1/31/13

Recently, much attention has been paid to a trend known as “futurization”—the recasting of economic arrangements previously transacted as “swaps” to trade as “futures” as a result of the new regulation of the swaps markets under the Dodd-Frank Act.¹ Proponents of futurization view it as a desired transition from previously opaque swap markets to more transparent futures markets.² Opponents of futurization view it as regulatory arbitrage and a thwarting of congressional intent.³

¹ See, e.g., Katy Burne, *Traders Seek Harmonization in New Futures, Swaps Rules*, WALL ST. J., Jan. 30, 2013, available at <http://online.wsj.com/article/SB10001424127887323701904578274704132048858.html>; Silla Brush, *Swap-to-Future Conversion Has Regulators Studying Rules*, BLOOMBERG, Jan. 28, 2013, available at <http://www.bloomberg.com/news/2013-01-28/swap-to-future-conversion-has-regulators-studying-rules.html>.

² See, e.g., Cliff Lewis, Panelist, CFTC Roundtable: The Futurization of Swaps 39 (Jan. 31, 2013), transcript available at http://www.cftc.gov/ucm/groups/public/@swaps/documents/dfs submission/dfs submission13_013113-trans.pdf (“I think the way you’ve approached this is spot on. I think you ought to hold a parade and declare victory because I think actually moving much of this to the futures market is going to be a huge improvement in buy-side financial market management, not just from a risk perspective but from an efficiency perspective.”); Bryan Durkin, Panelist, CFTC Roundtable, *id.* at 94–95 (“the suggestion that moving any type of similar product or economically equivalently similar product or however it’s been categorized today to a less transparent marketplace and trying to tie that to a futures market is just unacceptable to have to listen to that because the futures markets have many, many decades of development, and these decades of development were premised on transparency and openness. The distribution of our products and our markets are real-time. The information associated with that from a market data perspective, from a clearing perspective, is real-time.”).

³ See, e.g., George Harrington, Panelist, CFTC Roundtable, *id.* at 45 (“In summary, we believe the push towards central clearing is very positive for the market, but forced futurization is a negative and can prove extremely costly to the American consumer.”); Lee Olesky, Panelist, CFTC Roundtable, *id.* at 46 (“Fundamentally, we are concerned that as currently constructed and contemplated, the regulatory structure and rulemaking for swap futures creates an uneven playing field for market participants that wish to trade swaps and allows economically equivalent products to be traded subject to different system rules.”); Jeffrey Maron, Panelist, CFTC Roundtable, *id.* at 50 (“We believe that such overnight futurization, unlike historical market-driven product evolution, has been significantly distorted by regulation. Accordingly, we believe that (...continued)

Still others view it as inevitable, with no normative judgment necessary.⁴ The stakes in this debate are high. In April of this year Bloomberg filed a federal lawsuit against the Commodity Futures Trading Commission (“CFTC”), seeking an injunction against a rule that would set different mandatory clearinghouse margin minimums for futures and swaps.⁵

In this Article, we take a different approach to analyzing the futurization trend. We use it as an example to introduce the concept of what we call “regulation through substitution”—the ability of a regulator to encourage market participants to subject themselves to one regulatory regime versus another through the imposition of differential regulatory costs. The substitution effect, whether for individual products or regulatory regimes, is well known and well understood. What differentiates substitution between the futures and swaps regulatory regimes from most cases, however, is that both regimes are the responsibility of one regulator, the CFTC, which can significantly adjust the “price” of each regime through its regulations, thereby controlling not

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this market shifts should be carefully monitored by the Commission since it may harm market functioning if market participants are no longer able to find the choice, flexibility, and the liquidity that they require from the swaps markets.”); Chris Ferreri, Panelist, CFTC Roundtable, *id.* at 75 (“Congressional intent for distinct swaps regulatory regime is thwarted when the name of a product is changed from “swap” to “future” for the sole purpose of moving it from one regulatory framework to another.”)

⁴ See, e.g., Bart Chilton, Commissioner, CFTC Roundtable, *id.* at 24 (“I just wanted to make a quick point. You know, we’ve been hearing a lot about this and not all bad that some of these swaps are becoming futures. I mean, you know, swaps were part of the problem, and so it doesn’t bother me that we see some of this futurization, and the question is: does it become excessive?”); Will Rhode, Panelist, CFTC Roundtable, *id.* at 54 (“Swap futures acts as a wrapper to insulate swap users from some of the more punitive elements of Dodd-Frank reform. On the one hand, they may be viewed as a healthy innovative response by the financial services industry to regulatory change. Given that Congress looked to the futures market as a guide for swaps reform, it could be argued that swap futures are consistent with regulatory intent. In many ways, they appear to be a logical progression. On the other hand, swap futures can be viewed as regulatory avoidance. To borrow from Myron Scholes, one of the reasons we have financial innovation is to get around rules and regulations.”); Don Wilson, Panelist, CFTC Roundtable, *id.* at 65. (“Futurization has the potential to be one of the most innovative periods in the history of the futures industry. It’s a logical, predictable, and healthy reaction not only to Dodd-Frank, but also to Basel III, which incentivizes standardization. The intent of Dodd-Frank was to prevent another AIG. Futurization will certainly help to achieve this goal.”).

⁵ Complaint, *Bloomberg L.P. vs. U.S. Commodity Futures Trading Commission*, 13-cv-00523 (D.D.C. Apr. 16, 2013).

only the *absolute* price of each regulatory regime but also the *relative* price of the two regimes it oversees.

We develop a simple economic model of “regulation through substitution” and apply it to the futurization trend. We use this model to describe how the CFTC’s new Dodd-Frank regulations will incentive the futurization of certain swap products transacted by certain market participants, and what types of transactions by other market participants will not. Our regulation through substitution model, as applied to futurization, has potentially important normative implications for the CFTC’s rulemaking under the Dodd-Frank Act and, in our view, the way in which the CFTC should analyze the costs and benefits of its Dodd-Frank Act regulations. While most commentators have viewed futurization as a trend affecting the swap markets in a uniform manner, our model shows how different types of regulations are likely to futurize different segments of the swaps market. We believe that viewing futurization as a monolithic trend that impacts all transactions and all market participants equally prevents the CFTC from using the lessons of futurization to inform its rulemaking.

In summary, in this Article, we seek to apply the concept of regulation through substitution, using a simple economic model, to describe the recent trend of futurization, with a view to informing the CFTC’s ongoing rulemaking for the futures and swaps regulatory regimes. In Part II, we introduce futures and swaps and their regulatory history, which is essential for understanding the dual regulatory structure for economically similar (and indeed sometimes identical) futures and swaps products, which gives rise to the opportunity for futurization. We then introduce the debate over futurization that has taken place over the past several months and that led the CFTC to host an all-day public roundtable on the topic in January of this year.

In Part III, we introduce a basic economic model of substitution of financial instruments under conditions of unlimited supply,⁶ including the concepts of absolute and relative costs. Part IV applies this model to futurization and describes the ways in which the Dodd-Frank Act and the CFTC’s rules are changing both the absolute cost of swap transactions and,

⁶ The ability of market participants to enter into futures and swaps contracts is, of course, constrained by various factors, such as the amount of capital available to collateralize the contracts, credit lines of financial institutions, and the aggregate amount of risk market participants are willing to bear. For our purposes, however, these effects of these supply constraints in the current swaps and futures markets are negligible.

importantly for the futurization debate, the relative cost of swap transactions versus futures transactions.

In Part V, we take another step towards formal treatment of futurization, describing how the set of Dodd-Frank Act swap regulations should not be viewed as a single regulation with a single corresponding increased regulatory cost, but rather as a series of individual regulations each of which will have differential (and sometimes conflicting) cost effects on different market segments. Specifically, we discuss three critical areas of Dodd-Frank Act swap rulemaking—margin requirements, protection of customer collateral and public dissemination of swap trading data—and apply the substitution model developed in Parts III and IV to describe the types of transactions, and in what market segments, that are likely to be “futurized.” We believe that this approach has significant implications for the CFTC’s swaps and futures rulemakings. The CFTC can use the *relative* costs and benefits of different regulations in various (complex) ways to ensure that the transactions most appropriate for each regulatory regime are transacted in that regime. Part VI describes two key policy implications—the development of different regulatory regimes tailored to the needs of different market participants, and the importance of relative costs in cost-benefit analyses. Part VII concludes.

II. Regulation of Futures and Swaps, and the Controversy over “Futurization”

A. The Historical Regulation of Futures and Swaps Contracts

Throughout history, producers and consumers of agricultural commodities have faced uncertainty as to price fluctuations that result from the influence of weather, soil conditions or other uncontrollable events affecting supply-and-demand dynamics. The futures markets developed as a mechanism for farmers, ranchers, millers and others who produced agricultural products, or used them as inputs, to hedge the price of these commodities. Rather than a wheat farmer (Mr. Filburn) worrying in advance about how a bountiful harvest could increase the wheat supply and thereby decrease the price of his product, or a miller (Mr. Wickard) worrying in advance about how a drought could decrease the supply of wheat and increase the cost of his inputs for flour, Mr. Filburn and Mr. Wickard could agree in January that Mr. Filburn would sell Mr. Wickard 100 bushels of wheat for \$1 per bushel at harvest time. Each year, either Mr. Filburn would benefit (if the spot price of wheat at harvest time—the

price he could have received in the open market—was below \$1)⁷ or Mr. Wickard would benefit (if the spot price of wheat at harvest time was above \$1).⁸ Despite the potential for benefit or loss to either Mr. Filburn or Mr. Wickard *ex post*, the arrangement would benefit both *ex ante* because of the certainty it provides: Mr. Filburn the wheat farmer can budget his expenses based on a more certain income and Mr. Wickard the miller can plan his production based on a more certain price of inputs.

As this market developed, market participants realized that they could decrease their transaction costs by settling these contracts in cash, based on the prevailing spot market price, rather than physically delivering the agricultural commodity. Mr. Filburn, instead of physically delivering 100 bushels of wheat to Mr. Wickard for \$1 a bushel, could enter into a contract with Mr. Wickard under which Mr. Filburn would pay Mr. Wickard 100 times any increase in the spot price of wheat above \$1, and Mr. Wickard would pay Mr. Filburn 100 times any decrease in the spot price of wheat below \$1. Mr. Filburn could then sell his wheat in the open market the spot price, and Mr. Wickard could buy his wheat in the open market at the spot price, with each being in economically the same position as if he had transacted 100 bushels of wheat for \$1.⁹ With this cash-settled innovation, the “forward” market for agricultural products deepened, as market participants were no longer constrained by the geographical and cost limitations imposed by a requirement to effect physical delivery at a particular place at a particular time.

⁷ For example, if the spot price of wheat at harvest time turned out to be \$0.98, Mr. Filburn would sell the wheat for \$0.02 more per bushel than he could have on the open market, and Mr. Wickard would buy the wheat for \$0.02 more per bushel than he could have on the open market.

⁸ For example, if the spot price of wheat at harvest time turned out to be \$1.03, Mr. Filburn would sell the wheat for \$0.03 less per bushel than he could have on the open market, and Mr. Wickard would buy the wheat for \$0.03 less per bushel than he could have on the open market.

⁹ For example, if the spot price of wheat turned out to be \$1.02 at harvest time, Mr. Filburn would pay Mr. Wickard \$0.02 per bushel. Mr. Filburn would sell his wheat for \$1.02 per bushel on the open market which, when the \$0.02 paid to Mr. Wickard is subtracted, would net him \$1.00 per bushel—the same amount per bushel as if the contract had remained physically settled. Mr. Wickard, on the other hand, would purchase wheat on the open market at \$1.02 per bushel, but his cost would be somewhat offset by the \$0.02 per bushel he would be paid by Mr. Filburn to settle the contract, thereby resulting in a net cost of \$1.00 per bushel—also the same amount as if the contract had been physically settled.

Much as the early pioneers of securities contracts congregated around a tree on Wall Street in New York to negotiate and enter into securities transactions, market makers in these standardized forward contracts, known as “futures,” congregated to buy and sell these contracts in an open market. Given the agricultural focus of this market, its capital quickly became Chicago—and thus was born the Chicago Mercantile Exchange (the “CME”), the Chicago Board of Trade (“CBOT”) and others.

Given this early agricultural focus, the futures markets in the United States were placed under the jurisdiction of the agriculture committees of the House of Representative and the Senate. In 1936, the Commodity Exchange Act was enacted,¹⁰ and the U.S. Department of Agriculture was given authority to oversee and enforce the Act. The Commodity Exchange Act required that futures contracts on “commodities”¹¹—a term that is defined very broadly—be traded on “designated contract markets,” cleared at clearinghouses and subject to a host of regulatory requirements tailored to the standardized products traded and the commercial nature of the participants in the market. In 1974, Congress amended the Commodity Exchange Act to establish the Commodity Futures Trading Commission as an independent agency to administer the Commodity Exchange Act.¹²

A few years before the Commodity Exchange Act was enacted, Congress separately enacted legislation to regulate what was then an entirely different market, financially focused market—the securities market. The Securities Act of 1933¹³ was enacted to regulate offerings of securities, and the Securities Exchange Act of 1934¹⁴ established the Securities and Exchange Commission (the “SEC”) and imposed regulations on securities market participants.

¹⁰ Commodity Exchange Act, Pub. L. No. 74-675, 49 Stat. 1491 (1936).

¹¹ In addition to a list of agricultural products, the definition includes “all other goods and articles ... and all services, rights, and interests ... in which contracts for future delivery are presently or in the future dealt in.” Commodity Exchange Act § 1(a)(9), 7 U.S.C. § 1a(9) (2010). The only items explicitly excluded, for historical reasons, are onions and motion picture box office receipts.

¹² Commodity Futures Trading Commission Act, Pub. L. No. 93-463, 88 Stat. 1389 (1974).

¹³ Securities Act of 1933, Pub. L. No. 73-22, 48 Stat. 74 (1933).

¹⁴ Securities Exchange Act of 1934, Pub. L. No. 73-291, 48 Stat. 881 (1934).

In the late 1970s and early 1980s, the sharp line between the agriculturally focused products regulated by the CFTC and the financially focused products regulated by the SEC began to blur. Futures markets began to list futures contracts with non-agricultural underlying products, which were within the CFTC's jurisdiction based on the broad definition of "commodity" in the Commodity Exchange Act. Under the inexorable force of innovation, these products grew more complex and started to resemble modern financial products more than their agricultural futures ancestors. Rather than being standardized products, these "swap" transactions were customized to the specifications of the market participants that entered into them, and thus could provide a more tailored allocation of risks between the two counterparties.

As these markets evolved, the CFTC and SEC, and the agriculture and banking committees in Congress that gave them jurisdiction, hotly debated which agency should regulate these new "swap"¹⁵ products that were neither entirely futures nor entirely securities.¹⁶ A temporary detente was reached in 1982, when Chairmen John Shad of the SEC and Philip Johnson of the CFTC negotiated the "Shad-Johnson Accord," which Solomonicly split the baby in half between the two agencies along lines that had more to do with historical jurisdiction than the economic reality of the swap products being regulated.¹⁷

In 2000, Congress passed the Commodity Futures Modernization Act (the "CFMA").¹⁸ The CFMA largely removed regulatory authority

¹⁵ "A swap is an agreement between two companies to exchange cash flows in the future." JOHN C. HULL, *OPTIONS, FUTURES AND OTHER DERIVATIVES* 149 (2006, 6th ed.). For a more thorough treatment of the economics of certain swap transactions and their uses, see *id.*; Frank Partnoy, *Financial Derivatives and the Costs of Regulatory Arbitrage*, 22 J. Corp. L. 211, 218 (1996-97)

¹⁶ For a more detailed introduction to this debate, see Annette L. Nazareth and Gabriel D. Rosenberg, *The New Regulation of Swaps – A Lost Opportunity*, COMP. ECON. STUD. (forthcoming, 2013).

¹⁷ JERRY W. MARKHAM, *A FINANCIAL HISTORY OF THE UNITED STATES, VOLUME III: FROM THE AGE OF DERIVATIVES INTO THE NEW MILLENNIUM (1970-2001)* 97 (2002). The accord was codified in Section 2 of the Securities Act of 1933, 15 U.S.C. § 77b(a)(1) (defining "security"), Section 3 of the Securities Exchange Act of 1934, 15 U.S.C. § 78c(10)-(12) (defining "security," "equity security," and "exempted security") and Section 2 of the Commodity Exchange Act, 7 U.S.C. § 2(a)(1)(A) (expressly delimiting the jurisdiction of the CFTC).

¹⁸ Commodity Futures Trading Commission Act, Pub. L. 93-463, 88 Stat. 1389 (1974).

over swaps from both the CFTC and the SEC,¹⁹ and only allowed these products to be transacted by “eligible contract participants,” a defined category intended to include only those market participants sophisticated enough to self-regulate.²⁰ By doing so, with respect to the transactions that would otherwise be under CFTC jurisdiction, Congress created two markets. One, the futures market, was a highly regulated, standardized market with regulations tailored towards all market participants, retail and institutional, including the agricultural market participants who created it. The other, the swaps market, was largely unregulated and was restricted to market participants who were presumed to be sufficiently sophisticated to not need same types of protections as participants in the futures markets.²¹

The financial crisis of 2007-08 called this de-regulatory approach to the swap markets into question.²² While swap markets did not cause the financial crisis, many have argued that the lack of regulation led to a build-up of systemic risk and fundamental misunderstandings of swap

¹⁹ “Prior to passage of the Dodd-Frank Act in July 2010, the CFTC lacked meaningful jurisdiction over the largely unregulated swaps market.” Arthur W. Hahn, Lisa A. Dunsky & Nathaniel W. Lalone, *The Futurization Equation*, 8 *CAP. MARKETS L.J.* 177, 179 (2013).

²⁰ Commodity Futures Modernization Act, Pub. L. No. 106-554, Appendix E, § 101(4), 114 Stat. 2763 (2000).

²¹ The futures and swaps markets are, in fact, often distinguished based on the standardization or customization of the instruments. *See, e.g.*, Brush, *Swap-to-Future Conversion*, *supra* note [x]. (“Futures are agreements to buy or sell an asset or commodity at a specific price and time. They have standard sizes and maturities, are traded on exchanges and guaranteed at clearinghouses that take collateral from buyers and sellers. Swaps are traditionally traded directly between buyers and sellers, sometimes with customized maturities and sizes, and often aren’t guaranteed at clearinghouses.”).

²² According to the Financial Crisis Inquiry Commission Report, in September 2008 “[t]he OTC derivatives markets came to a grinding halt, jeopardizing the viability of every participant . . . Furthermore, when the OTC derivatives markets collapsed, participants reacted by liquidating their positions in other assets those swaps were designed to hedge.’ This market was unregulated and largely opaque, with no public reporting requirements and little or no price discovery. With the Lehman bankruptcy, participants in the market became concerned about the exposures and creditworthiness of their counterparties and the value of their contracts. That uncertainty caused an abrupt retreat from the market.” U.S. FINANCIAL CRISIS INQUIRY COMMISSION, *THE FINANCIAL CRISIS INQUIRY REPORT: FINAL REPORT OF THE NATIONAL COMMISSION ON THE CAUSES OF THE FINANCIAL AND ECONOMIC CRISIS IN THE UNITED STATES* 363–64 (2011), available at <http://www.gpo.gov/fdsys/pkg/GPO-FCIC/pdf/GPO-FCIC.pdf>; *see also* Benjamin M. Weadon, *International Regulatory Arbitrage Resulting from Dodd-Frank Derivatives Regulation*, 16 *N.C. BANKING INST.* 249, 256 (2012).

products that exacerbated the financial crisis and spread its effects throughout the economy. The result, not surprisingly, was a legislative “fix” in Title VII of the Dodd-Frank Act,²³ which brings comprehensive new regulation to the swap markets, modeled in large part on the oversight already afforded the futures markets.²⁴ The main pillars of Title VII are provisions that:

- divide jurisdiction over swap products between the CFTC and SEC;²⁵
- subject standardized swaps to centralized clearing to decrease systemic risk²⁶ and to electronic platform trading to increase market transparency;²⁷

²³ Wall Street Transparency and Accountability Act of 2010, Pub. L. No. 111-203, 124 Stat. 1641 (2010) (to be codified in scattered sections of the U.S. Code) (hereinafter “Dodd-Frank Act”); *see also* Davis Polk & Wardwell, *Summary of the Dodd-Frank Wall Street Reform and Consumer Protection Act, Passed by the House of Representatives on June 30, 2010* (July 21, 2010), available at http://www.davispolk.com/files/Publication/7084f9fe-6580-413b-b870-b7c025ed2ecf/Presentation/PublicationAttachment/1d4495c7-0be0-4e9a-ba77-f786fb90464a/070910_Financial_Reform_Summary.pdf.

²⁴ “In the 1980s, the swaps markets emerged, and until now it lacked the benefit of ... rules to promote transparency, lower risk through central clearing, and promote integrity by overseeing the intermediaries. We know what followed: the 2008 financial crisis, [in] which eight million American jobs were lost. In contrast, the futures markets supported by earlier reforms weathered the financial crisis. President Obama and Congress responded and crafted a swaps provision of Dodd-Frank by borrowing from what had worked best in the futures markets for decades: clearing, transparency, oversight of intermediaries.” Gary Gensler, Chairman, Commodity Futures Trading Commission, CFTC Roundtable, *supra* note [x], at 11 –12.

²⁵ Commodity Exchange Act § 1(a)(47), 7 U.S.C. § 1a(47) (definition of “swap”); Securities Exchange Act § 3(a)(68), 15 U.S.C. § 78c(68) (definition of “security-based swap”); Further Definition of “Swap,” “Security-Based Swap,” and “Security-Based Swap Agreement”; Mixed Swaps; Security-Based Swap Agreement Recordkeeping, 77 Fed. Reg. 48,208 (Aug. 13, 2012).

²⁶ *See* Commodity Exchange Act § 2(h)(1), 7 U.S.C. § 2(h)(1) (clearing requirement) and Commodity Exchange Act § 2(h)(8) (trade execution requirement), 7 U.S.C. § 2(h)(8); Securities Exchange Act § 3C(a); 15 U.S.C. § 78c-3(a) (clearing requirement) and Securities Exchange Act § 3C(h), 15 U.S.C. § 78c-3(h) (trade execution requirement); Clearing Requirement Determination Under Section 2(h) of the CEA, 77 Fed. Reg. 74,284 (Dec. 13, 2012) (amending 17 CFR Parts 39 and 50); Swap Transaction Compliance and Implementation Schedule: Clearing Requirement Under Section 2(h) of the CEA, 77 Fed. Reg. 44,441 (Jul. 30, 2012) (amending 17 CFR Part 50); End-User Exception to the Clearing Requirement for Swaps, 77 Fed. Reg. 42,560 (Jul. 19, 2012) (...continued)

- mandate reporting of swap transaction information to regulators²⁸ and dissemination of a subset of that information to the public;²⁹
- require the collection of collateral (known as “margin”) to protect against counterparty risk, both in the form of an up-front buffer payment (known as “initial margin”) and an ongoing exchange of payments based on daily mark-to-market moves (known as “variation margin”);³⁰
- require registration of key market participants known as “swap dealers” and “major swap participants”;³¹

(continued...)

(amending 17 CFR Part 39); Process for Submissions for Review of Security-Based Swaps for Mandatory Clearing and Notice Filing Requirements for Clearing Agencies; Technical Amendments to Rule 19b-4 and Form 19b-4 Applicable to All Self-Regulatory Organizations, 77 Fed. Reg. 41,602 (Jul. 13, 2012) (amending 17 CFR Parts 240 and 249); Process for Review of Swaps for Mandatory Clearing, 17 CFR 44,464 (Jul. 26, 2011) (amending 17 CFR Parts 39 and 140).

²⁷ Process for a Designated Contract Market or Swap Execution Facility to Make a Swap Available to Trade, 76 Fed. Reg. 77,728 (proposed Dec. 14, 2011) (amending 17 CFR Parts 37 and 38); Registration and Regulation of Security-Based Swap Execution Facilities, 76 Fed. Reg. 10,948 (proposed February 28, 2011) (amending 17 CFR Parts 240, 242, and 249); Core Principles and Other Requirements for Swap Execution Facilities, 76 Fed. Reg. 1214 (proposed January 7, 2011) (amending 17 CFR Part 37).

²⁸ Swap Data Recordkeeping and Reporting Requirements: Pre-Enactment and Transition Swaps, 77 Fed. Reg. 35,200 (June 12, 2012) (amending 17 CFR Part 46); Swap Data Recordkeeping and Reporting Requirements, 77 Fed. Reg. 2136 (Jan. 13, 2012) (amending 17 CFR Part 45); Swap Data Repositories: Registration Standards, Duties and Core Principles, 76 Fed. Reg. 54,538 (Sept. 1, 2011) (amending 17 CFR Part 49).

²⁹ Real-Time Public Reporting of Swap Transaction Data, 77 Fed. Reg. 1182 (Jan. 9, 2012) (amending 17 CFR Part 43).

³⁰ Capital, Margin, and Segregation Requirements for Security-Based Swap Dealers and Major Security-Based Swap Participants and Capital Requirements for Broker-Dealers (Nov. 23, 2012) (amending 17 CFR Part 240); Margin and Capital Requirements for Covered Swap Entities, 76 Fed. Reg. 27,564 (proposed May 11, 2011) (amending 12 CFR Parts 45, 237, 324, 624, and 1221); Margin Requirements for Uncleared Swaps for Swap Dealers and Major Swap Participants, 76 Fed. Reg. 23,732 (proposed Apr. 28, 2011) (amending 17 CFR Part 23).

³¹ Further Definition of "Swap Dealer," Security-Based Swap Dealer," "Major Swap Participants," "Major Security-Based Swap Participant" and "Eligible Contract (...continued)

- subject these swap dealers and major swap participants to capital and margin requirements,³²
- impose “internal business conduct requirements” that require swap dealers and major swap participants to develop risk management programs around swaps and hire a chief compliance officer,³³ and
- subject swap dealers and major swap participants to “external business conduct requirements” with respect to their counterparties, including significant disclosure requirements and requirements to verify counterparty eligibility.³⁴

Title VII of the Dodd-Frank Act established the general framework for these requirements, which must be implemented by the CFTC.³⁵ Congress included 43 separate rulemaking mandates in Title VII for the CFTC.³⁶ The choices made by the CFTC in adopting these regulations

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Participant", 77 Fed. Reg. 30,596 (May 23, 2012) (amending 17 CFR Part 240); Registration of Swap Dealers and Major Swap Participants, 77 Fed. Reg. 2613 (Jan. 19, 2012) (amending 17 CFR Parts 1, 3, 23, 170); Registration of Security-Based Swap Dealers and Major Security-Based Swap Participants, 76 Fed. Reg. 65,784 (proposed Oct. 24, 2011).

³² See *supra* note [x].

³³ Confirmation, Portfolio Reconciliation, Portfolio Compression, and Swap Trading Relationship Documentation Requirements for Swap Dealers and Major Swap Participants, 77 Fed. Reg. 55,904 (Sep. 11, 2012) (amending 17 CFR Part 23); Swap Dealer and Major Swap Participant Recordkeeping and Reporting, Duties, and Conflicts of Interest Policies and Procedures; Futures Commission Merchant and Introducing Broker Conflicts of Interest Policies and Procedures; Swap Dealer, Major Swap Participant, and Futures Commission Merchant Chief Compliance Officer, 77 Fed. Reg. 21,278 (Apr. 9, 2012) (amending 17 CFR Parts 1, 23, 37, 38, and 39).

³⁴ Business Conduct Standards for Swap Dealers and Major Swap Participants with Counterparties, 77 Fed. Reg. 9734 (Feb. 17, 2012) (amending 17 CFR Parts 4 and 23); Business Conduct Standards for Security-Based Swap Dealers and Major Security-Based Swap Participants, 76 Fed. Reg. 42,396 (proposed Jul. 18, 2011) (amending 17 CFR Part 240).

³⁵ And, with respect to “security-based swaps,” by the SEC.

³⁶ See Davis Polk & Wardwell, *Dodd-Frank Progress Report: April 2013* 6, available at http://www.davispolk.com/files/Publication/900769d7-74f0-474c-9bce-0014949f0685/Presentation/PublicationAttachment/3983137e-639b-4bbc-a901-002b21e2e246/Apr2013_Dodd.Frank.Progress.Report.pdf.

will determine the success of the new swap regulatory regime, and the extent to which this regime may end the swap markets.

B. The Futurization Debate

In the period between the CFMA and the Dodd-Frank Act, market participants often structured transactions to avoid futures regulation where possible because of the relatively high regulatory costs of futures as compared to the less regulated swap markets. The Dodd-Frank Act, which increased regulatory costs of previously unregulated swaps, caused market participants, academics and commentators to wonder whether Dodd-Frank would lead market participants to do exactly the opposite—that is, to embrace the opportunity for a transaction to be treated as a future rather than as a swap. This trend has been termed “futurization.”

As the CFTC’s regulations implementing Dodd-Frank have been finalized and started to come into effect, futurization has begun in earnest.³⁷ In July 2012, the IntercontinentalExchange stated that it would futurize all energy contracts that had traded as swaps, and CME Group Inc. followed soon thereafter.³⁸ As of January 2013, 52% of the IntercontinentalExchange’s volume of energy futures was in contracts that were swaps prior to October 15, 2012,³⁹ while 90% of CME’s energy trades were done as futures, dramatically up from 10% before.⁴⁰

In response to these developments, the CFTC held a one day public roundtable on the futurization of swaps on January 31, 2013.⁴¹ The

³⁷ “Small wonder . . . that swaps market participants have increasingly been contemplating ‘futurisation’, which generally refers to the process by which a standardized swap is recreated as a futures contract. The newly created futures contract can trade as a replacement for, or as an alternative to, the swap. The most likely candidates for futurization are those swaps that, due to their liquidity and relative standardization, are already voluntarily cleared or are likely to be subject to mandatory clearing. A futurized swap is a futures contract, and is regulated as such.” Hahn, Dunskey & Lalone, *supra* note [x].

³⁸ For a more in depth discussion of the futurization of swaps by IntercontinentalExchange and CME Group Inc., *see id.* at 3-4.

³⁹ Silla Brush, *U.S. Rules Are Scrutinized as Energy Futures Swapped for Swaps*, BLOOMBERG, Jan. 31, 2013, <http://www.bloomberg.com/news/2013-01-31/u-s-rules-get-scrutiny-as-energy-futures-are-swapped-for-swaps.html>.

⁴⁰ Silla Brush, *Swap-to-Future Conversion*, *supra* note [x].

⁴¹ CFTC Roundtable, *supra* note [x].

purpose of the roundtable, as expressed by the CFTC, was to “provide industry participants and others an opportunity to present their views relating to the listing for trading and the clearing of various swap-like instruments, futures, and options contracts on regulated designated contract markets, or DCMs.”⁴² Over the course of four panels lasting approximately five hours,⁴³ debate raged between proponents of futurization,⁴⁴ its opponents,⁴⁵ and those who felt that futurization was inevitable, good or bad.⁴⁶ In general, proponents of futurization laud it as a movement of previously opaque products to a more transparent and protected market that withstood the financial crisis well. Opponents of futurization view it as an attempt at regulatory arbitrage.

In this Article, we take a different approach to the futurization debate. We make no normative judgment as to whether futurization in and of itself is good or bad.⁴⁷ Instead, we develop a simple model of regulation through substitution, and apply it to futurization. In doing so,

⁴² Richard Shilts, Acting Director of the Division of Market Oversight, CFTC, CFTC Roundtable, *supra* note [x], at 8. Similarly, Ananda Radhakrishnan, Director of the Division of Clearing and Risk at the CFTC, stated towards the beginning of the roundtable: “Is it a bad thing for all clearable derivatives to become futures? And I'm not demonstrating a bias. I'm just asking: is that a bad thing? Because, you know, if that happens, there will be certainty of clearing because everything has to be cleared. Does the government have a role to play this? Should we care about whether all clearable derivatives become futures contracts? And if so, why? And if not, why not?” *Id.* at 28.

⁴³ See Press Release, Commodity Futures Trading Commission, CFTC Staff to Host Public Roundtable to Discuss the “Fururization of Swaps,” <http://www.cftc.gov/PressRoom/PressReleases/pr6500-13> (Jan. 18, 2013). Specifically, panels were held on “General Industry Views and Concerns Regarding the Fururization of Swaps in Different Asset Classes,” “Clearing and Different Margin Requirements for Swaps and Futures,” “Transaction-Related Matters Including Appropriate Block Rules for Swaps and Futures” and “The Effect of the Conversion of Swaps to Futures on End-Users.”

⁴⁴ See *supra* note [x].

⁴⁵ See *supra* note [x].

⁴⁶ See *supra* note [x].

⁴⁷ We are, of course, not the first to take this view. For example, Mark Carney, head of the Financial Stability Board and now incoming Governor of the Bank of England, noted that “‘Fururization is not necessarily a bad thing’ if it is consistent with the FSB changes ‘That said, we are not trying to fururize everything. We leave it to the market to adjust.’” FSB’s Carney Says Much To Do on Financial Rules, REUTERS, Jan. 28, 2013, *available at* <http://www.reuters.com/article/2013/01/28/g20-fsb-idUSWEA008FE20130128>.

we seek to provide the CFTC a framework by which to better understand the costs and benefits of futurization. The next Part introduces this regulation through substitution model.

III. A Model of Regulation through Substitution—Absolute vs. Relative Costs of Regulation

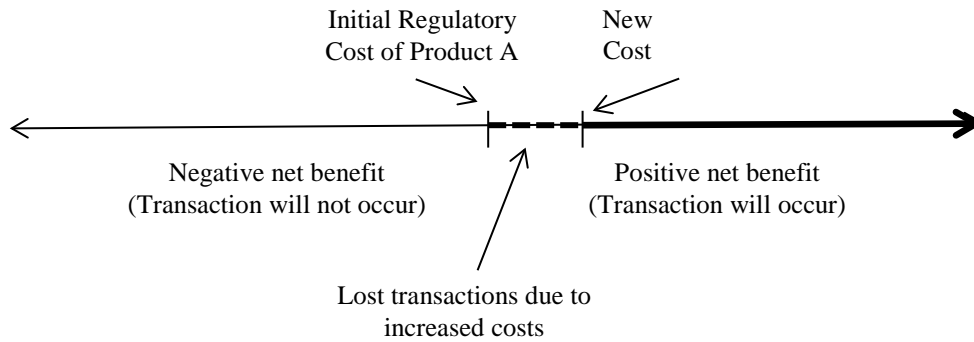
As described above, by historical accident, the CFTC is now charged with implementing and operating two different regulatory regimes for economically similar or identical financial products. Some of the usual reasons for differences in regulation of identical products—regulators with different missions, different scopes of authority, or differences in philosophies, approaches or views—are not present here. Instead, differences in the regulation of the futures and swaps markets are a result of historical and legislative chance.

This section seeks to provide a more formal, though necessarily highly stylized, framework by which to assess the substitution impact of changes in absolute and relative costs. This framework analyzes a situation where one regulator oversees two separate regulatory regimes for economically similar products: Product A and Product B. In our framework, the net benefit to a market participant of trading Product A depends on (1) the economic benefits of the transaction and (2) the costs of the product:

$$\text{Net Benefit}_{\text{PRODUCT A}} = \text{Economic Benefit}_{\text{PRODUCT A}} - \text{Costs}_{\text{PRODUCT A}}$$

If the regulatory cost of Product A increases, in our case through the introduction of a new regulation, the net benefit of any particular transaction in Product A will decrease. Depending on the magnitude of the initial economic benefit, and the magnitude of the cost increase, some transactions in Product A that would have occurred in the absence of the new regulation will not occur following the imposition of the regulation⁴⁸

⁴⁸ In this sense, a regulatory cost is just another transaction cost. See Ronald Coase, *The Nature of the Firm*, 4 *ECONOMICA* 386 (1937).



However, where there is a substitute for Product A (that is, Product B) a change in the regulatory costs of Product A with no change in the regulatory costs (and therefore no change in the net benefits) of Product B will have two effects. First, some transactions that were done in Product A will no longer be done. Specifically, these are transactions for which Product A had a positive net benefit before the introduction of the additional regulatory costs but which now have a net zero or net negative benefit as the result of the new regulation and where a transaction in Product B also has a net zero or net negative benefit. Second, some transactions that were done in Product A will now be done in Product B. Specifically, these are transactions for which both Product A and Product B had positive net benefit before the new regulation, but for which Product A now has a negative net benefit but a net positive benefit still exists for a transaction Product B.⁴⁹

⁴⁹ Most frequently, the tradeoff between two economic products, even in the regulatory arbitrage context, is shown through the use of standard economics supply and demand charts. *See, e.g.*, Partnoy, *supra* note [x], at 236. Since futures and swaps are contracts, and thus there is no inherent “supply,” we instead model them using the framework here. In this sense, we agree with Partnoy that “the supply of particular financial instruments is likely to be extremely elastic because financial intermediaries confront nearly perfect substitutes for particular transactions they offer to intermediate.” *Id.* at 237. In other treatments, economic products are analyzed through a risk-return framework. In this case, since the futures and swaps in question are economically identical, such a treatment is unnecessary.

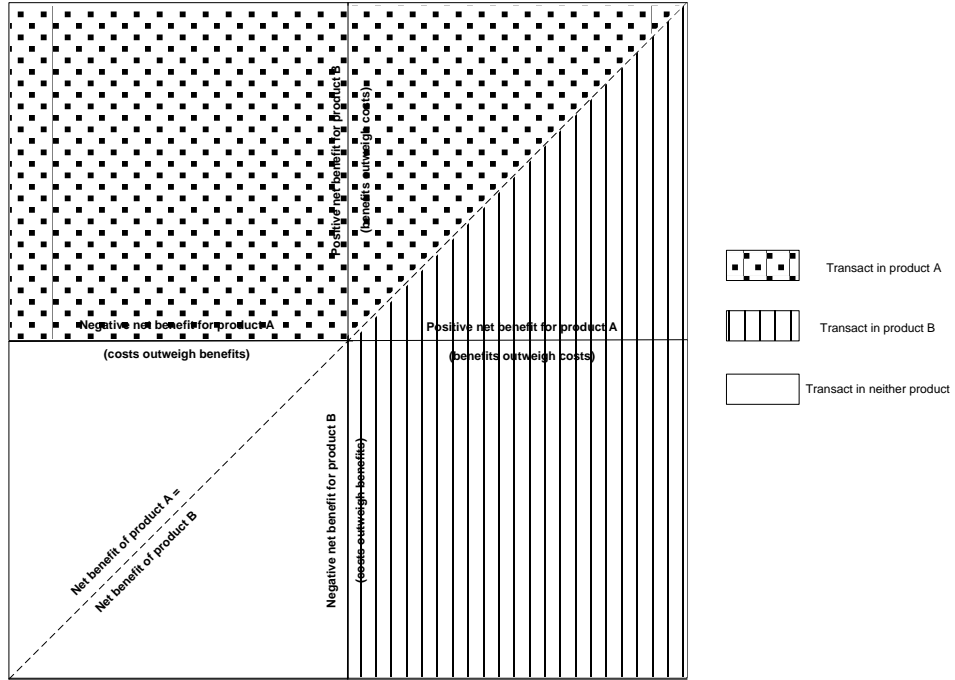


Figure 1: Before the increased regulatory cost of Product A

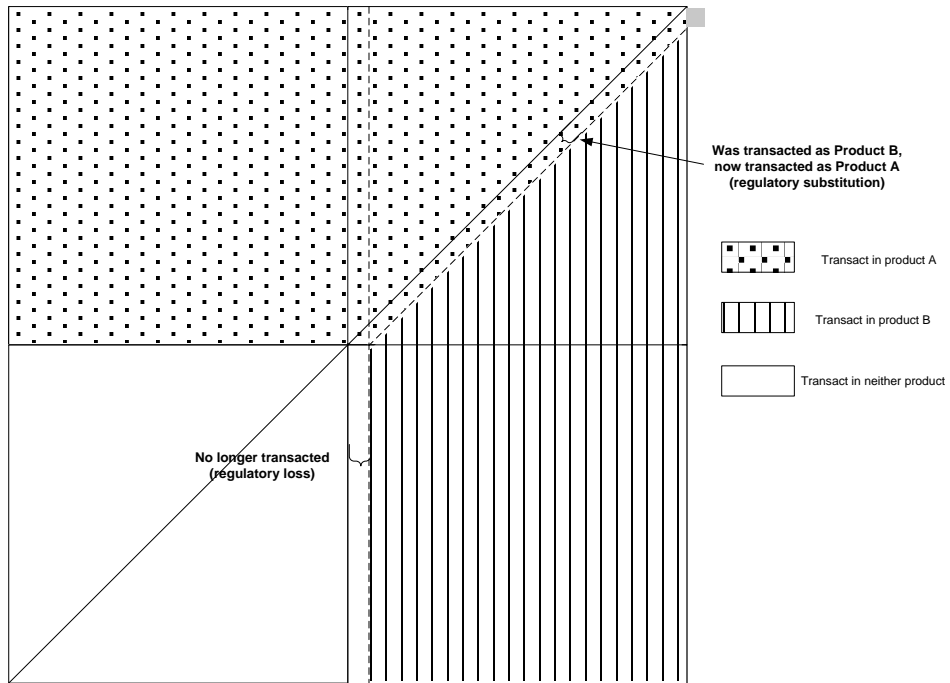


Figure 2: The absolute and relative cost effects of an increase in the “price” of Product A

Thus, unlike in a market where no substitutes for Product A exist, added costs to Product A will result both in transactions being lost (showing in

grey shading) and market participants moving away from Product A and transacting in Product B (show in the dotted shading).

This concept can be applied at a more general level, if we think in terms of regulatory regimes rather than in terms of Products A and B. Where the costs of transacting under a particular regulatory regime increase, and where a substitute regime is available, the number of transactions in the more costly regime will decrease and the number of transactions in the substitute regime will increase though, generally, not as much as the former decreases.

This simple model does not address whether the costs—or a change of costs—for a product or a regulatory regime are, as a normative matter, appropriate. In addition, it does not differentiate between different types of costs and how those costs may be necessary to achieve regulatory goals. The regulations needed for a particular market to function smoothly, and to ensure appropriate protections for market participants, may be different. This may include normative determinations by legislators and regulators about the types of market participants that may appropriately transact in different types of markets. However, even in that case, they should consider how regulatory costs and substitution effects may promote—or detract from—regulatory goals.

Futurization presents the substitution effect in the context of an interesting and unusual regulatory framework. More precisely, the CFTC controls the “price” of both futures and swaps transactions by virtue of its authority to implement the regulatory regime for both products. Thus, the CFTC controls not only the *absolute* price of each regulatory regime but also the *relative* price of the two regimes it oversees. This authority gives the CFTC the ability to use “regulation through substitution” as a policy tool. In the next Parts, we apply the simple model of futurization developed in this section to several aspects of futures and swaps regulation. We then provide suggestions for how the CFTC should view its Dodd-Frank Act regulatory mandate in light of its ability to set both absolute and relative costs of regulation.

IV. Application of the Model to Dodd-Frank’s Swap Regulations and the Futurization Debate

A key lesson of the recent financial crisis was that the swap market was oversaturated—because swaps markets were relatively unregulated, market participants were preferentially choosing to use swaps without regard for their potential systemic implications. In other words, regulation did not require market participants to internalize harmful externalities. While the CFMA generally restricted the availability of swap transactions,

in most cases, to counterparties that were sophisticated “eligible contract participants” capable of understanding the risks of these transactions, the conventional wisdom (in hindsight) is that swap counterparties were not always able to understand the risks of swap transactions, and that the lack of regulation of the swap market encouraged the use of swap instruments where they were inappropriate. Furthermore, the conventional wisdom (again, in hindsight) is that market participants entering into swaps did not take into account the externalities posed by their swap transactions in the form of systemic risk and the “too big to fail” problem. In other words, many believed as a normative matter that the *absolute* cost of entering into swap transactions was too low, either in reality or as perceived by counterparties, resulting in the number of swap transactions being too high.

A. Dodd-Frank as an Increase in the Absolute Cost of Swaps

Viewed through the *absolute/relative* regulatory cost lens, Title VII seeks to increase the *absolute* cost of swaps in two ways. First, Title VII requires market participants to internalize a portion of the absolute costs that swaps pose on external parties. Second, Title VII increases the perceived absolute cost of swap transactions, arguably aligning them with the real costs to the counterparty.

1. Internalizing Absolute Cost Externalities

A primary way in which Title VII increases the absolute cost of swap transactions is by requiring market participants to internalize externalities created by entering into swap transactions. The most important of these externalities is the creation of systemic risk in the form of increased counterparty credit risk resulting from bilateral transactions between unregulated market participants. This credit risk can have system-level impacts in times of market stress, as was clearly demonstrated by the default of Lehman Brothers on its bilateral obligations and the resulting, significant market impacts.

In an attempt to decrease the systemic risk posed by bilateral swap transactions, Title VII requires market participants to “clear” standardized swaps at a central clearinghouse.⁵⁰ In this context, “clearing” refers to the

⁵⁰ Since the financial crisis, the clearing of standardized swaps has been considered to be one of the main pillars of financial reform. In their White Paper on financial regulation that served as the blueprint for Dodd-Frank, the Department of the Treasury stated that “To contain systemic risks, the Commodities Exchange Act (CEA) and the securities laws should be amended to require clearing of all standardized OTC derivatives through regulated central counterparties (CCPs). To make these measures effective, regulators will need to require that CCPs impose robust margin requirements as (...continued)

process of taking a bilateral swap between Party A and Party B, and separating the “market risk” of movements in the underlying prices (which is what the parties want to achieve through entering into the swap) from “credit risk” of the counterparty’s default (which parties would usually prefer to avoid). Clearing breaks the swap into two components, with each counterparty facing a central clearinghouse that intermediates the credit risk that each swap counterparty would have otherwise faced vis a vis its bilateral counterparty.

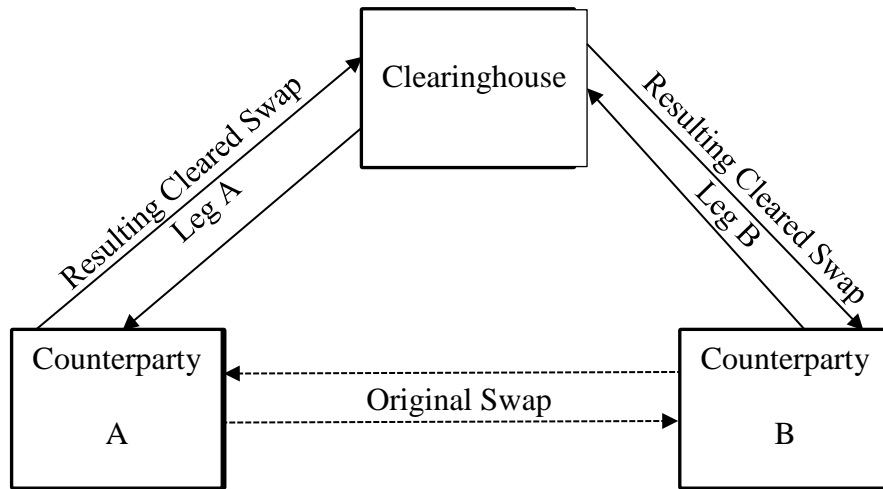


Figure 3: Clearing, simplified

(continued....)

well as other necessary risk controls and that customized OTC derivatives are not used solely as a means to avoid using a CCP. For example, if an OTC derivative is accepted for clearing by one or more fully regulated CCPs, it should create a presumption that it is a standardized contract and thus required to be cleared.” Department of the Treasury, “A New Foundation: Rebuilding Financial Supervision and Regulation” (June 2009). Similarly, the G-20 nations agreed at the Pittsburgh summit to work towards clearing by the end of 2012. “All standardized OTC derivative contracts should be traded on exchanges or electronic trading platforms, where appropriate, and cleared through central counterparties by end-2012 at the latest. OTC derivative contracts should be reported to trade repositories. Non-centrally cleared contracts should be subject to higher capital requirements.” G20, LEADERS’ STATEMENT: THE PITTSBURGH SUMMIT ¶ 13 (Sept. 2009), available at http://ec.europa.eu/commission_2010-2014/president/pdf/statement_20090826_en_2.pdf.

The central clearinghouse is required to carry out a number of credit mitigating functions to address the counterparty credit risk to which it is exposed under the cleared swaps, which impose additional costs on the counterparties to the cleared swap. First, counterparties to cleared swaps must post “initial margin” for the life of the trade, often in cash or other liquid financial instruments that could otherwise be invested. If a cleared swap counterparty defaults, the clearinghouse can foreclose on the initial margin collateral posted by that party to pay amounts owed under the swap to the other, non-defaulting counterparty. Second, counterparties to cleared swaps must post variation margin on a daily basis, which limits the potential losses upon the default of a counterparty to intraday movements, but imposes the same opportunity cost on the swap counterparties. Third, members of the clearinghouse take on the risk of default of their customers and of other clearing members through a guarantee default fund. Finally, counterparties to cleared swaps face a direct cost in the form of clearinghouse clearing charges.

The three costs listed above are internalizations of the externalities caused by swap market participants. Specifically, systemic risk is an externality caused when individual market participants add credit risk to the market that, in the event of their failure, will propagate through the financial system. Posting initial and variation margin, and contributing (directly or indirectly) to a guarantee fund forces market participants to internalize these costs, by requiring them to pay for a buffer that will stop the spread of credit risk in case of their default.

2. Aligning Perceived Absolute Costs

The financial crisis highlighted circumstances in which market participants arguably did not understand the risks of the complex swap transactions they entered into. The most prominent examples include municipalities that neared bankruptcy as a result of swap transactions that moved against them, including (most famously) Jefferson County, Alabama.⁵¹ In terms of our absolute/relative cost framework, these

⁵¹ See Gretchen Morgenson, *The Swaps That Swallowed Your Town*, N.Y. TIMES, at BU1, Mar. 6, 2010, available at <http://www.nytimes.com/2010/03/07/business/07gret.html> (“Imagine a homeowner who has a mortgage allowing her to refinance without a penalty if interest rates drop, as many do. Then she inexplicably agrees to give up that opportunity and not be compensated for doing so. Well, some towns did exactly that when they signed derivatives contracts that locked them in for 30 years. ... The prime example, of course, of a swap-imperiled issuer is Jefferson County, Ala. Its swaps were supposed to lower the county’s costs, but instead they wound up increasing its indebtedness. Groaning under a \$3 billion debt load, the county is facing the possibility of bankruptcy.”) (...continued)

counterparties misunderstood the absolute costs of entering into swap transactions, and perceived the cost of swaps as smaller than they truly were.

To address this problem, Title VII increases the perceived absolute cost of entering into swap transactions through the introduction of “external business conduct standards” that require swap dealers and major swap participants to provide potential swap counterparties with numerous disclosures, including disclosures regarding the risks of swaps, conflicts of interest of the swap dealer and payoffs under various loss scenarios. These requirements include heightened disclosure and conduct obligations for swap dealers and major swap participants when transacting with so-called “special entities,” which include U.S. state and municipal government counterparties.

B. Futurization as a Change in the Relative Costs of Swaps and Futures

For all of its seeming concern with the *absolute* cost of entering into swap transactions, Title VII ignores the change in *relative* costs that results from the increase in the absolute cost of swaps. This is not entirely surprising; as argued above, the fact that one regulator (here, the CFTC) governs two separate and different regulatory regimes for products that are economically similar (and in some cases identical) is an accident of history and relatively unique in the U.S. financial regulatory system.

In a world without significant regulatory costs, economic concerns would determine whether a specific transaction is transacted as a futures contract, as a swap or not transacted.

(continued....)

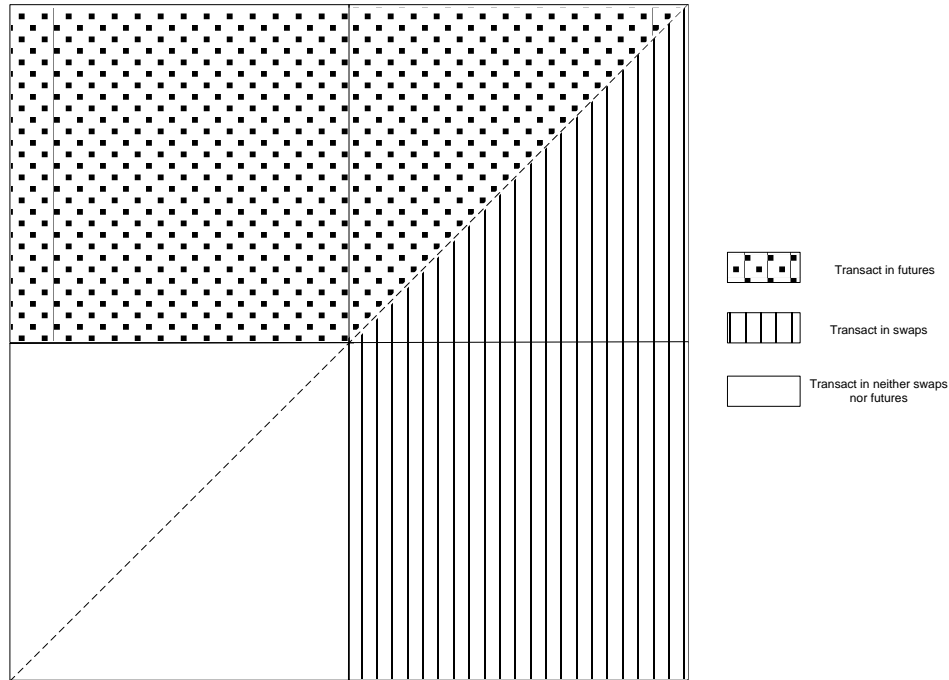


Figure 4: The choice between futures and swaps in the absence of regulation

In the decade between the enactment of the CFMA and Dodd-Frank, the regulatory cost of futures was significantly higher than the regulatory cost of swaps for those market participants eligible to enter into swaps. The result, as shown in the graph below, was a move away from the economic equilibrium absent regulation towards swaps and away from futures – the “swapification” of futures contracts.

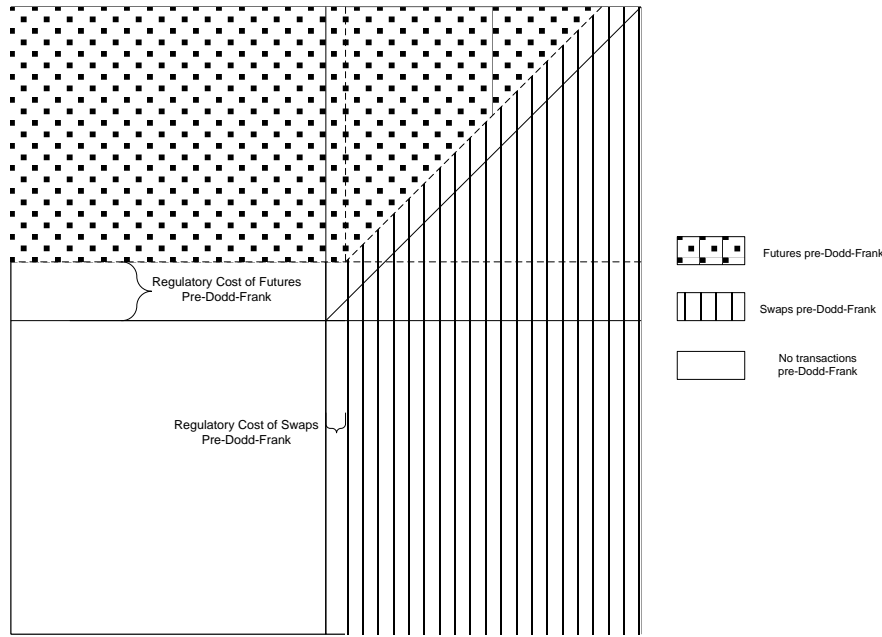


Figure 5: The choice between futures and swaps after the CFMA but before Dodd-Frank

By increasing the *absolute* cost of entering into swap transactions, Title VII of the Dodd-Frank Act does not only decrease the number of swap transactions entered into. Through changing the *relative* cost of swaps vs. futures, Title VII *increases* the number of futures transactions. Assuming that the increase in the absolute cost of swap transactions is not too large as to overshoot the initial regulatory equilibrium, all of the “futuraized” swaps are transactions that would have been transacted as swaps pre-Dodd-Frank but for the increased absolute cost of futures contracts. In other words, “futuraization” is really the restoration of contracts that were originally “swapified.”

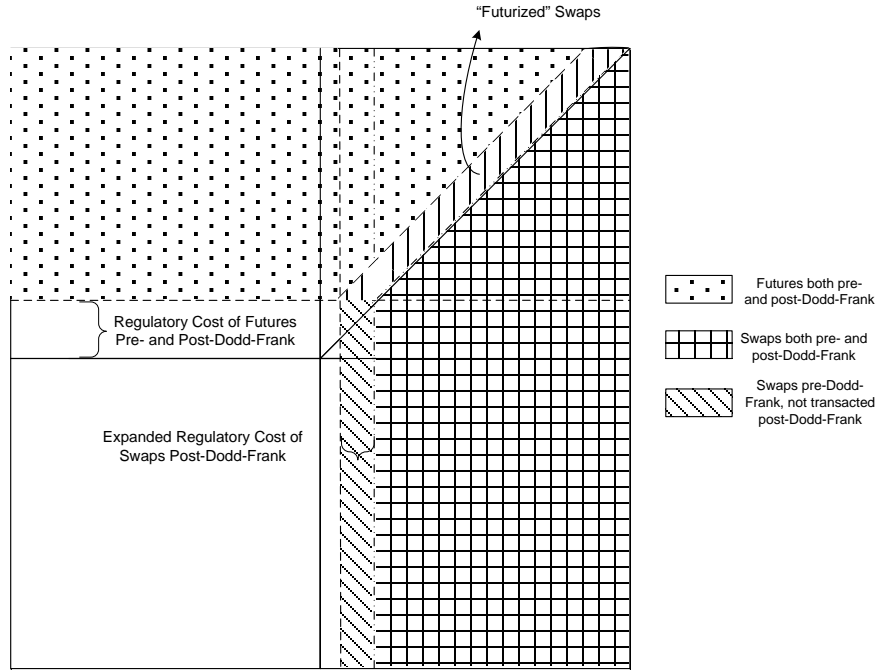


Figure 6: The choice between futures and swaps after Dodd-Frank and the resulting futurization

As a result, the question that market participants should be asking is not whether “futurization” is a good thing. Instead, to gauge the appropriateness of swap regulations, the CFTC and market participants should be asking whether the increase in absolute cost of swap transactions associated with any particular swap regulation is (i) whether the regulation is discouraging market participants from entering into transactions (either as swaps or as futures) that are overall beneficial for the market (taking into account externalities); or (ii) whether the swaps that the regulation is shifting to be futures transactions are those that the CFTC wants to be subject to the futures regime or to the swap regime. We begin to answer these questions in the final section of this Article, using three Title VII- related regulations as examples.

V. Deconstructing Futurization – The Differential Relative Cost Effects of Three Key Regulations

To this point, we have described Dodd-Frank Act swap regulations as increasing the absolute “cost” of swap transactions and, thereby, their relative “cost” compared to futures transactions. In doing so, consistent with most debate on the futurization issue to this point, we have treated “cost” as a single variable that the CFTC controlled directly. In reality, of course, the Title VII regulatory regime imposes a series of regulatory requirements on swaps, each of which have their own absolute cost effects. A market participant’s choice whether to use a swap or futures transaction, or neither, depends on the sum total of these absolute cost effects.

However, the effects of different regulations are not uniform on market participants. One regulation may significantly increase the cost of swaps to swap dealers, but not for end users of derivatives, while another regulation may significantly increase the cost of swaps to those that use credit derivatives, but not those that use interest rate derivatives. This is important to the normative implications for futurization as it implies that the CFTC (and other regulators in similar circumstances) can employ different choices, and closely tailored regulations, to further their regulatory goals.

Because of the very different origins and regulatory histories of the futures and swaps regulatory regimes, swaps are subject to requirements that are in some case significantly different from futures requirements. Some of these differences are due to differences in the statutory language of the Commodity Exchange Act that apply to swaps and futures. Others are due to decisions made by the CFTC in adopting regulations governing the markets. This section takes a closer look at three such regulatory differences, and examines them in light of the model set out in Parts III and IV.

In particular, in this Part, we discuss three significant regulatory requirements—margin, collateral protection and trade reporting—and describe their application to futures, cleared swaps and uncleared swaps. We focus on these three requirements as they are among those with the most direct impact on the cost of a transaction, and therefore are among the most relevant inputs to our model and determinants of whether a particular transaction will be structured as a future contract or a swap. After introducing each regulatory issue, we apply the model and describe which swaps, if any, are likely to be “futurized” under proposed or recently implemented changes for swaps resulting from the Dodd-Frank Act.

A. Margin Requirements for Swaps and Futures.

Margin refers to payments made by a one party to the other to serve as collateral for the first counterparty's obligations under a financial transaction. In this way, margin protects the counterparties to the transaction against the risk that the transaction will move in their favor but the counterparty will not be able to pay as promised – so called “credit risk.”

For futures and swaps, margin generally takes two forms: variation margin and initial margin. Variation margin, sometimes known as “mark-to-market margin,” is collateral exchanged to reflect the actual price movements of a transaction.⁵² Variation margin is often calculated daily as the difference in the value of the transaction from the previous day. As such, variation margin can be thought of as protecting against the “current exposure” posed by one counterparty to another by virtue of accrued, but unrealized, gains or losses.⁵³

Initial margin, also known as a “performance bond,”⁵⁴ on the other hand, is meant to protect against “potential future exposure” that has not yet materialized, but may before the next variation margin payment is

⁵² CFTC Regulation 1.3(fff) defines variation margin as “a payment made by a party to a futures, option, or swap to cover the current exposure arising from changes in the market value of the position since the trade was executed or the previous time the position was marked to market.” 17 C.F.R. § 1.3 (fff) (2013).

⁵³ The concept of protecting against “current exposure” through daily mark-to-market payments is often used in regulatory discussion of margin. *See, e.g.*, Capital, Margin, and Segregation Requirements for Security-Based Swap Dealers and Major Security-Based Swap Participants and Capital Requirements for Broker-Dealers, 77 Fed. Reg. 70,214, 70241 n.257 (November 23, 2012) (to be codified at 17 C.F.R. pt. 240) (“The current exposure is the amount that the counterparty would be obligated to pay the nonbank [security-based swap dealer] if all the OTC derivatives contracts with the counterparty were terminated (i.e., the net positive value of the OTC contracts to the nonbank [security-based swap dealer] and the net negative value of the OTC contracts to the counterparty). The amount payable on the OTC derivatives contracts (the positive value) is determined by marking-to-market the OTC derivatives contracts and netting contracts with a positive value against contracts with a negative value. The market value of an OTC derivatives contract also is referred to as the *replacement value* of the contract as that is the amount the nonbank [security-based swap dealer] would need to pay to enter into an identical contract with a different counterparty.”)

⁵⁴ CFTC Regulation 1.3(ccc) defines “initial margin” as “money, securities, or property posted by a party to a futures, option, or swap as performance bond to cover potential future exposures arising from changes in the market value of the position.” 17 C.F.R. § 1.3(ccc) (2013).

made.⁵⁵ Initial margin is usually posted by one or both counterparties to a swap or futures contract at the initiation of the transaction. In the absence of regulation, initial margin is usually a function of the perceived creditworthiness of the counterparty.

The margin requirements under the Commodity Exchange Act and CFTC regulations differ for futures, cleared swaps, and uncleared swaps. We provide a brief summary of these requirements below.

1. The Regulatory Regime

Futures. All futures contracts must be cleared through a CFTC-registered clearinghouse. To protect the clearinghouse from the failure of its members, the Commodity Exchange Act⁵⁶ and the CFTC's rules governing clearinghouses⁵⁷ require a clearinghouse to collect both initial and variation margin for futures contracts cleared by the clearinghouse. More specifically, CFTC Regulation 39.13(g) requires clearinghouses to impose an initial margin requirement for futures contracts, so that they collect initial margin from each party to a futures contract sufficient to cover the party's potential future exposure under the contract over a one day "liquidation period," calculated based on a 99% confidence level.⁵⁸ The idea of a "liquidation period" is that the initial margin collected should, at a high level of confidence, cover all potential moves of a futures contract over the amount of time that it is likely to take the clearinghouse to be able to unwind the contract.

CFTC Regulation 39.14(b) requires the clearing house to calculate and collect variation margin on a daily basis, and more frequently in times of market stress.⁵⁹ Clearing members that clear futures for customers are

⁵⁵ See, e.g., Capital, Margin and Segregation Requirements for Security-Based Swap Dealers, 77 Fed. Reg. at 70,257 ("The potential future exposure is the amount that the current exposure may increase in favor of the dealer in the future. This form of credit risk arises from the potential that the counterparty may default before providing the dealer with additional collateral to cover the incremental increase in the current exposure or that the current exposure will increase after a default when the counterparty has ceased to provide additional collateral to cover such increases and before the dealer can liquidate the position.").

⁵⁶ Commodity Exchange Act § 5b, 7 U.S.C. § 7a-1.

⁵⁷ Derivatives Clearing Organization General Provisions and Core Principles, 76 Fed. Reg. 69,334 (Nov. 8, 2011).

⁵⁸ 17 C.F.R. § 39.13(g) (2013).

⁵⁹ *Id.* at § 39.14(b).

required to collect initial margin from customers in excess of the minimum levels set under Regulation 39.14, but have discretion to determine how much initial margin above the regulatory requirement to collect from each customer.⁶⁰

Cleared Swaps. Clearinghouses are subject to the same regulatory framework in connection with clearing swap transactions as for clearing futures contracts, and the margin requirements are the same except for the initial margin requirement for certain types of cleared swaps.⁶¹ A clearinghouse must collect initial margin sufficient to cover potential future exposure over a one-day liquidation period for agricultural, metals, and energy cleared swaps (the same as for futures contracts) and for a five-day liquidation period for all other cleared swaps. These “other” cleared swaps include the interest rate swaps and credit default swaps that constitute a substantial portion of the swaps market. That cleared swaps, regardless of whether they are cleared, have an initial margin liquidation period greater than for futures reflects the view of the CFTC that cleared swaps – other than agricultural, metals, and energy swaps – subject the clearinghouse to more risk than the analogous futures contracts as they will require a longer time to unwind, and thus should be subject to higher initial margin requirements. The view that unwind times are longer for swaps than futures is controversial, and indeed it is the subject of a lawsuit initiated by Bloomberg against the CFTC.⁶²

Uncleared swaps. Uncleared swaps are subject to a distinct margin regime from that for futures and cleared swaps. The Commodity Exchange Act, as amended by the Dodd-Frank Act, requires U.S. banking regulators and the CFTC to adopt rules that require swap dealers to collect a minimum amount of initial and variation margin from their uncleared swap counterparties.⁶³

⁶⁰ *Id.*

⁶¹ *Id.*

⁶² Complaint, *Bloomberg L.P. vs. U.S. Commodity Futures Trading Commission*, 13-cv-00523 (D.D.C. Apr. 16, 2013).

⁶³ Commodity Exchange Act § 4s(e), 7 U.S.C. § 6s(e). Specifically, the U.S. banking regulators are required to write rules imposing uncleared swap margin requirements on swap dealers and major swap participants that they oversee, while the CFTC is required to write rules imposing uncleared swap margin requirements on all other swap dealers and major swap participants. Both the U.S. banking regulators and the CFTC have imposed, but not finalized, such margin requirements. Margin Requirements for Uncleared Swaps for Swap Dealers and Major Swap Participants, 76 (...continued)

Although no final uncleared swap margin rules margin have yet been finalized, proposed rules from the CFTC and U.S. banking regulators would set initial margin requirements for uncleared swaps such that a swap dealer would need to collect initial margin sufficient to cover potential future exposure of a swap over a 10-day liquidation period, calculated based on a 99% confidence interval.⁶⁴ Swap dealers could, but would not be required to, collect initial margin in excess of that minimum requirement.

As proposed, both the banking regulators' and CFTC's margin requirements would require swap dealers and major swap participants to collect initial and variation from financial counterparties. Initial margin collected from other swap dealers or major swap participants would be required to be segregated and held with an independent third-party custodian,⁶⁵ locking up a significant portion of liquid collateral and thereby significant raising the cost of swaps. Swap dealers and major swap participants would be required to collect initial and variation margin from, but not post margin to, financial counterparties that are not swap dealers or major swap participants.⁶⁶ A subset of these financial "end-user" counterparties, known as "low-risk financial end users" would be allowed to post less than the full amount calculated under the rules.⁶⁷ In addition,

(continued...)

Fed. Reg. 23,732 (Apr. 28, 2011) (to be codified at 17 C.F.R. pt. 23) [hereinafter "CFTC Margin Proposal"]; Margin and Capital Requirements for Covered Swap Entities, 76 Fed. Reg. 27,564 (proposed May 11, 2011) (to be codified at 12 C.F.R. pts. 45, 237, 324, 624, 1221) [hereinafter "Prudential Regulators Margin Proposal"]. Both proposals would require swap dealers and major swap participants to collect margin from, but not post margin to, swap counterparties, known as "unilateral margin."

⁶⁴ CFTC Margin Proposal, 76 Fed. REg. at 23,746 (to be codified at 17 C.F.R. § 23.155(b)(2)(vi)); Prudential Regulators Margin Proposal, 76 Fed. Reg. at 27,590 (to be codified at § __.8(d)(1)).

⁶⁵ CFTC Margin Proposal, 76 Fed. Reg. at 23,748 (to be codified at 17 C.F.R. § 23.158(a)(5)); Prudential Regulators Margin Proposal, 76 Fed. Reg. at 27,590 (to be codified at § __.7(d)).

⁶⁶ See CFTC Margin Proposal, 76 Fed. Reg. at 23,744 (to be codified at 17 C.F.R. §§ 23.152, .153 and .154); Prudential Regulators Margin Proposal, 76 Fed. Reg. at 27,588 (to be codified at §§ __.3, __.4).

⁶⁷ Prudential Regulator Margin Proposal, 76 Fed. Reg. at 27,588 (to be codified at § __.2). Specifically, in order to qualify as a "low-risk financial end user," a financial counterparty must be accurately described by the following:

- Its swaps or security-based swaps fall below a specified "significant swaps exposure" threshold;

(...continued)

the proposed regulations would not require swap dealers and major swap participants to collect initial margin from certain commercial entities that engage in the swaps to hedge commercial risk.⁶⁸

The following table summarizes the differences between the initial margin requirements for futures, cleared swaps, and uncleared swaps.

	Futures	Cleared Swaps	Uncleared Swaps
Liquidation Time Period	1 day	1 day for agricultural, metals and energy swaps 5 days for all other swaps	10 days (exceptions for commercial end users)
Parties Required to Post Margin	Both counterparties	Both counterparties	Only financial counterparties to a swap dealer / major swap participant

Figure 7: Comparison of Liquidation Time Periods for Initial Margin Calculation for Futures, Cleared Swaps and Uncleared Swaps

(continued....)

- It predominantly uses swaps to hedge or mitigate the risks of its business activities, including balance sheet, interest rate, or other risk arising from the business of the counterparty; and
- It is subject to capital requirements established by a prudential regulator or state insurance regulator.

Id. at 27,578 (to be codified at § __.1(n)).

⁶⁸ See CFTC Margin Proposal, 76 Fed. Reg. at 23,754 (to be codified at 17 C.F.R. § 23.154) (limiting the margin requirements for a non-financial entity to those terms established in a required credit support arrangement. Credit support arrangements must be in place in order for a swap dealer or major swap participant to engage in any uncleared swap transaction, and these arrangements may take into account any thresholds below which a party need not post initial or variation margin.) Prudential Regulators Proposal, 76 Fed. Reg. at 27,569–70 (explaining that although the plain language of Dodd-Frank requires agencies to establish margin requirements for all uncleared derivatives, because margin requirements must be formulated using a risk-based approach, swap dealers and major swap participants required to collect initial and variation margin may effectively exclude non-financial end users from the requirement to post initial and variation margin by establishing thresholds below which margin need not be posted or collected. This limitation would likely serve to exempt many commercial end users from the application of these proposed margin requirements.).

2. Futurization Implications

The Dodd-Frank Act, by requiring initial margin for swaps, reflects a policy judgment that market participants were not properly protecting themselves or the economy more generally from the risks associated with those swaps. These margin requirements increase the absolute cost of swaps for most market participants. As importantly, other than for certain types of cleared swaps, the relative costs of margin for swaps will be higher relative to those for futures, including where an economically identical futures contract is available.

As shown below, the result of the margin requirements overall is a push to futurization of swaps, other than for those cleared swaps for which margin requirements are the same as the equivalent futures contract. However, for some market participants, there will be no futurization effect. Commercial end users, and to a more limited extent low-risk financial end users, may be exempt from uncleared swap margin requirements or may be subject to lower uncleared swap margin requirements than before Dodd-Frank. Those types of market participants will experience no cost increase (and indeed may enjoy a cost decrease) for their uncleared swaps. They will have no reason to join the futurization trend otherwise spurred by the swap margin rules. From a policy perspective, this result is counterintuitive as, historically, swap markets were viewed as more appropriate for sophisticated market participants best able to understand the risks associated with swaps.

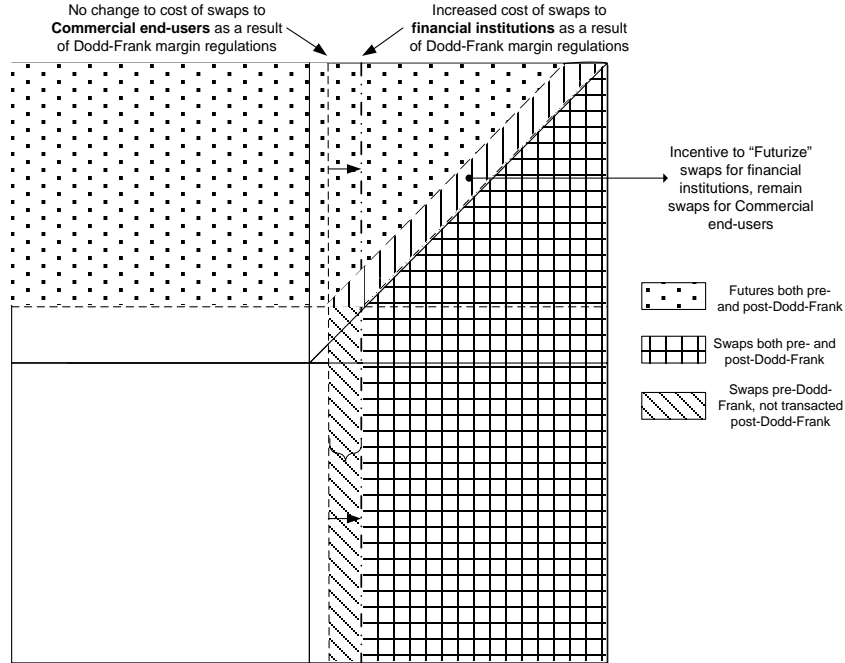


Figure 8: The futurization effects of swap margin rules

B. Protection of Cleared Customer Collateral

In order to clear a transaction at a clearinghouse, a market participant must be a “member” of that clearinghouse. To be admitted as a clearinghouse member, a market participant must meet strict capitalization and operational requirements, agree to contribute to the guarantee fund and agree to take on client positions of a defaulting member in certain circumstances.⁶⁹ As a result, only the largest and most sophisticated market participants are clearing members, while most other market

⁶⁹ See, for example, LCH.Clearnet Limited’s membership requirements, which mandate net capital requirements from £1 million to €400 million, depending on a member’s classification, impose additional margin requirements in the event of credit ratings downgrades and oblige members to establish connectivity with certain payment systems. LCH.Clearnet Ltd Rulebook, Rules 1.2.1, 1.2.2, 1.8.3, available at http://www.lchclearnet.com/Images/Section%201_tcm6-57514.pdf. Similarly, the Chicago Mercantile Exchange requires that its financial instrument clearing members maintain adjusted net capital of \$500,000, must have certain established systems in place to connect with the Clearing House, and must have written risk management policies and procedures in place to ensure a baseline of risk oversight. CME Rulebook, Rules 900.B, 903, 982, available at <http://www.cmegroup.com/rulebook/CME/I/9/9.pdf>.

participants access the clearinghouse through such a clearing member. For a clearing member to clear swaps and futures for customers, it must be registered with the CFTC as a futures commission merchant (“FCM”).⁷⁰

When a customer accesses a clearinghouse through an FCM clearing member, the FCM clearing member collects initial and variation margin from the customer and passes it on to the clearinghouse. This margin is generally held at the clearinghouse in a “customer account” of the clearing member, which is separated from the “proprietary account” through which the clearing member clears its own trades.⁷¹ The FCM may also require the customer to post “excess margin” above and beyond the amount required by the clearinghouse, which serves to protect the FCM against late payments by or default of the customer.⁷²

Under the Commodity Exchange Act, amounts held as collateral for initial margin for both futures and cleared swaps customers are subject to provisions designed to protect that collateral.⁷³ Among other requirements, firms that hold customer collateral for cleared swaps and futures contracts must be registered with the CFTC as FCMs and are subject regulation as such. However, based on a difference of one letter in one word of the Commodity Exchange Act (and, of course, public policy considerations), the current regime for collateral posted to meet initial margin requirements for cleared swaps and futures differ.

1. The Regulatory Regime

Futures. The Commodity Exchange Act prohibits an FCM or clearinghouse that has received customer property, including as collateral

⁷⁰ Commodity Exchange Act § 4d(f)(1), 7 U.S.C. § 6d(f)(1).

⁷¹ See CME Rule 971, available at <http://www.cmegroup.com/rulebook/CME/I/9/9.pdf>; LCH Rule 4.2.2, available at http://www.lchclearnet.com/Images/Section4_tcm6-43748.pdf

⁷² Derivatives Clearing Organization 76 Fed. Reg. , 69,439 (to be codified at 17 C.F.R. § 39.13(g)(8)(ii)) (“A derivatives clearing organization shall require its clearing members to collect customer initial margin, as defined in § 1.3 of this chapter, from their customers, for non-hedge positions, at a level that is greater than 100 percent of the derivatives clearing organization’s initial margin requirements with respect to each product and swap portfolio.”)

⁷³ Commodity Exchange Act § 4d(f)(2), 7 U.S.C. § 6d(f)(2) (for treatment of cleared swap collateral by futures commission merchants); Commodity Exchange Act § 4s(l)(1), 7 U.S.C. § 6s(l)(1) (for the requirement to notify a counterparty to a non-cleared swap that segregation may be required for any funds posted as collateral),

to meet initial margin requirements, from treating that property as belonging to “the [FCM] or any person other than the *customers* of such [FCM].”⁷⁴ Under this statutory provision and CFTC regulations, an FCM may hold all of its customers’ collateral in a commingled customer account, but the customer account must be segregated from the FCM’s proprietary funds. In the event that one of the FCM’s customers defaults on a payment to the FCM, and the FCM cannot meet its obligation to guarantee that payment with its own funds (a “double default”), the clearinghouse can look to the funds of other customers of that FCM to satisfy its margin requirements. Thus, under the futures rules, customers of an FCM are exposed to “fellow customer” risk—the risk that the default of another customer of the FCM, coupled with the default of the FCM, will cause losses to the non-defaulting customers of the FCM.

Cleared swaps. In amending the Commodity Exchange Act to incorporate protections for cleared swaps customers, the Dodd-Frank Act⁷⁵ essentially copied the provisions relating to futures—with one small, but critical, change. For cleared swaps, while an FCM may hold assets of all its cleared swap customers in one cleared swap customer account, the Commodity Exchange Act prohibits an FCM and clearinghouse from treating those assets as belonging “to the depositing [FCM] or any person other than the swaps *customer* of the [FCM].”⁷⁶ The CFTC interpreted Congress’ change to the singular “customer” in the swaps context from the plural “customers” in the futures context to mean that a clearinghouse was restricted from looking to the collateral of non-defaulting customers of an FCM in the case of a double default.

After considering four potential alternative methods to protect customer collateral,⁷⁷ as a compromise position to manage the prohibitively high costs of individual customer accounts at clearinghouses with the perceived need to provide some protection against “fellow-customer risk,” the CFTC adopted regulations in January 2012 to implement this customer collateral protection regime, which is termed

⁷⁴ Commodity Exchange Act § 4d(b), 7 U.S.C. § 6d(b) (emphasis added).

⁷⁵ Dodd-Frank Act, *supra* note [x], § 724.

⁷⁶ Commodity Exchange Act § 4d(f)(6); 7 U.S.C. § 6d(f)(6) (emphasis added).

⁷⁷ Protection of Cleared Swaps Customers Before and After Commodity Broker Bankruptcies, 75 Fed. Reg. 75,162, 75,164 (December 2, 2010) (The four potential alternatives were described as follows: 1) “full physical segregation,” 2) “legal segregation with commingling,” 3) “moving customers to the back of the waterfall” and 4) “baseline model.”).

“Legally Separate, Operationally Commingled” or “LSOC.”⁷⁸ Under the LSOC model, an FCM may hold the collateral of all of its customers in a single cleared swaps customer account, but must, for legal purposes, be treated separately on a customer-by-customer basis.⁷⁹ In the case of a double default, the clearinghouse would only be permitted to use an amount of funds from the FCM’s customer account equal to the amount attributable to the defaulting customer, thereby protecting all other customers from “fellow-customer risk.” However, in the case of an FCM bankruptcy, because the bankruptcy code⁸⁰ and CFTC regulations⁸¹ require pro rata distribution of cleared swaps customer property to customers of the FCM, cleared swaps customers are nonetheless subject to some level of fellow-customer risk.

Uncleared swaps. Unlike for cleared swaps, collateral posted to meet bilateral margin requirements imposed by counterparties to an uncleared swap does not need to be held by an FCM or by a clearinghouse. Thus, uncleared swap collateral is not subject to the same type of fellow-customer risk as futures collateral held at a clearinghouse or with an FCM. As in the case of cleared swaps, however, counterparties would be subject to risk of losses upon the insolvency of their counterparty.

The chart below summarizes the level of fellow-customer risk for futures, cleared swaps, and uncleared swaps.

	Futures	Cleared Swaps	Uncleared Swaps
Exposure to “Fellow Customer” Default	Full	None, except in case of FCM bankruptcy	None, except in case of counterparty bankruptcy

Figure 9: Comparison of Exposure to Fellow Customer Default for Futures, Cleared Swaps and Uncleared Swaps

⁷⁸ Protection of Cleared Swaps Customer Contracts and Collateral and Conforming Amendments to the Commodity Broker Bankruptcy Provisions, 77 Fed. Reg. 6336 (Feb. 7, 2012) (amending 17 CFR Parts 22 and 190).

⁷⁹ *Id.*

⁸⁰ 11 U.S.C. § 766(h).

⁸¹ 17 C.F.R. § 190.08(c) (2013).

2. Futurization Implications

Due to the added protection from “fellow-customer risk” under LSOC, cleared swap customers currently enjoy greater protection for their cleared swaps collateral than do futures customers under the futures rules. Indeed, for those future market participants that qualify to trade swaps, the added protection afforded by LSOC may make a standardized, cleared swap transaction more appealing, even when balanced with potential higher margin costs.

In the context of our model, the protections afforded by LSOC to cleared swaps customers in effect lowers the absolute cost of cleared swap transaction. The absolute costs of futures transactions is unaffected by LSOC. Thus, LSOC would encourage the swapification of futures contracts for all market participants.

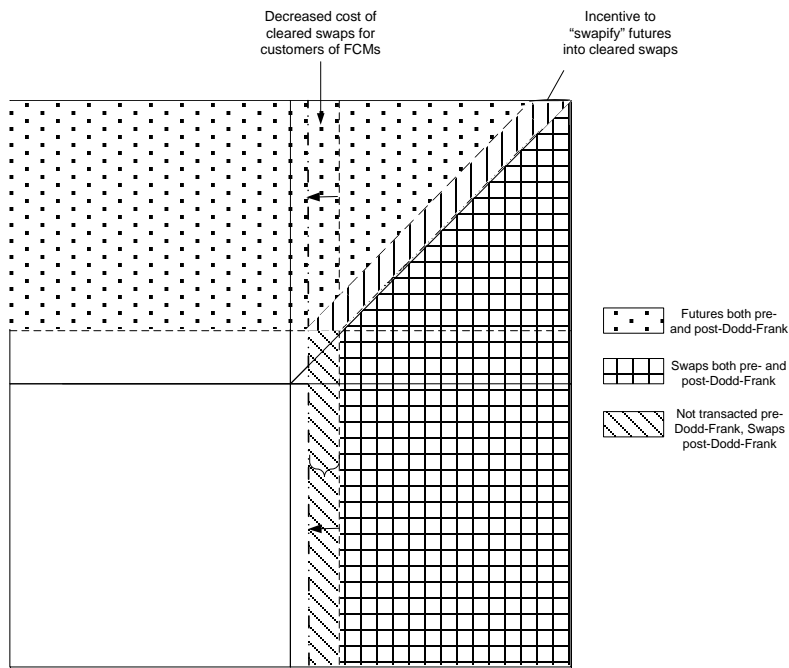


Figure 10: The swapification effects of LSOC

This result is, at first blush, puzzling from a policy perspective. It is inconsistent with the premise that futures market participants are less sophisticated and less able to absorb losses, and thus need more protections, than their counterparts in the swaps markets. This inconsistency, however, can be at least in part by the focus of the Dodd-Frank Act on absolute protections for swaps, and little focus on relative protections across the swaps and futures market.

The CFTC and futures market participants are well aware of the issues—and inconsistency—resulting from LSOC being applied to cleared swaps customers but not futures customers. In February 2012, the CFTC held a roundtable discussion to explore, among other things, expanding LSOC treatment to futures. While efforts to expand LSOC to futures have been slowed by the considerable technical difficulties in implementing LSOC, we fully expect that the CFTC will continue to work to move towards LSOC for futures.

C. Post-Trade Transparency of Transaction Data

One of the primary critiques of the post-CFMA and pre-Dodd-Frank swaps market was its extremely opacity.⁸² A market participant that wished to enter into swaps for hedging or other purposes would call a number of dealers, find the best price and enter into a swap at that price. The fact that a swap was entered into, the price of that swap and the other quotes provided were never available to the public as they would be, for example, for a securities transaction executed on a national securities exchange. As a result, post-trade transparency for swaps was among the cornerstones of the Dodd-Frank Act's swap market reforms.⁸³

⁸² See, e.g., Gary Gensler, Chairman, Commodity Futures Trading Comm'n, The New Era of Swaps Market Reform, Keynote Address before the George Washington University Center for Law, Economics and Finance Conference (Oct. 12, 2012) available at <http://www.cftc.gov/PressRoom/SpeechesTestimony/opagensler-124> (“When the financial crisis hit, the swaps market was the largest dark pool in our financial markets. Think about this for a moment. At \$300 trillion – or \$20 for every \$1 of goods and services in our economy – the swaps market lacked any transparency except for that which the financial sector was willing to share.”); Gretchen Morgenson, *Slipping Backwards on Swaps*, N.Y. TIMES, Nov. 27, 2011 at BU1, available at <http://www.nytimes.com/2011/11/27/business/slipping-backward-on-transparency-for-swaps.html> (“When markets are opaque, the risks grow that problematic positions, like those that felled the American International Group in 2008, might once again create financial turmoil and spread through the system. Dodd-Frank sensibly asked that market participants provide trade and position details to regulators so this arena could be monitored better.”).

⁸³ Gary Gensler, Chairman, Commodity Futures Trading Comm'n, Bringing Transparency to the Swaps Market, Remarks at the National Association of Corporate Treasurers Conference, available at <http://www.cftc.gov/PressRoom/SpeechesTestimony/opagensler-83> (“First, [the Dodd-Frank Act] brings transparency to the time immediately before the transaction is completed, which is called pre-trade transparency Second, the Dodd-Frank Act brings real-time transparency to the pricing immediately after a swaps transaction takes place. This post-trade transparency provides all end-users and market participants with important pricing information as they consider their investments and whether to lower (....continued)

Of course, the real story is more complex. While there are benefits to transparency, it is not without cost; transparency allows opportunistic market participants to learn about their competitors' trading strategies, which increases the cost to the trader of a swap. In the extreme, a dealer may be unwilling to provide a customer with a large "block" trade at a viable price if the dealer believes that knowledge about that trade will be disseminated to the public before the trader has a chance to hedge. As a result, transparency is most useful where the markets are liquid—that is, where a specific transaction is traded frequently and, thus, the information that is made transparent can be put to good use rather than only opportunistic use.

1. The Regulatory Regime

Futures. As described above, all futures contracts must be executed on a CFTC-registered DCM,⁸⁴ also known as "futures exchanges." Futures exchanges must publicly report futures transaction data by the end of each trading day,⁸⁵ but are not required as a regulatory matter to publicly disseminate transaction information in real time. Futures exchanges do, however, license with market data service firms to provide real-time dissemination of futures transaction data, subject to delays for block transactions.⁸⁶

Cleared Swaps. The Dodd-Frank Act amended the Commodity Exchange Act to put in place new requirements for the real-time

(continued....)

their risk through similar transactions. . . . Third, the Dodd-Frank Act brings transparency to swaps over the lifetime of the contracts.")

⁸⁴ Commodity Exchange Act § 4d(a), 7 U.S.C. § 6d(a).

⁸⁵ DCM Core Principle 7, Appendix B to Part 36 of the CFTC's Regulations.

⁸⁶ Gary Gensler, Chairman, Commodity Futures Trading Commission, CFTC Roundtable, *supra* note [x], at 17 ("The time delays [for real-time reporting] are still between 30 minutes long and sometimes up to two days for end user to end user transactions, but generally if it's a swap dealer, it's on a platform that will come down to 15 minutes this October for interest rates and credit index swaps and for the other asset classes the following January. That 15 minute delay is something very similar to TRACE. . . . The futures marketplace has a time delay for blocks for about five minutes. So after we complete the block rule for swaps, trades smaller than a block will be reported as soon as technologically practicable. Those are the words that Congress has in its statute.") The regulations governing real-time reporting have been codified in Part 43 of the CFTC's regulations.

publication of swap transaction data.⁸⁷ The CFTC’s rules implementing this provision, which are already effective,⁸⁸ require that information about all swap transactions be transmitted to a swap data repository “as soon as technologically practicable” after execution of the swap.⁸⁹ For exchange-traded swaps—the significant majority of which will ultimately be subject to the mandatory clearing requirement⁹⁰—the DCM or SEF on which the swap is executed is responsible for reporting this information to the swap data repository, which, in turn, must publicly disseminate some of the information.⁹¹ For swaps that are not exchange traded, one of the counterparties, known as the “reporting counterparty,” must do so.⁹² Publicly disseminated information includes the rounded notional value of a swap, the price of the swap, the underlying asset, and other information necessary for market participants to understand the price of the swap.⁹³

In general, the swap data repository must publicly disseminate the information received “as soon as technologically practicable” after receiving the information.⁹⁴ However, information for some large swap transactions, known as “block” transactions, will be subject to a delay between the time that the swap data repository receives the information and the time that it is disseminated to the public.⁹⁵ Though the CFTC has not yet defined what transactions constitute block transactions, public dissemination of information about block transactions in cleared swaps

⁸⁷ Commodity Exchange Act § 2(a)(13), 7 U.S.C. § 2(a)(13)..

⁸⁸ Press Release, Commodity Future Trading Commission, CFTC Announces Real-Time Public Reporting of Swap Transactions and Swap Dealer Registration Began December 31, 2012, <http://www.cftc.gov/PressRoom/PressReleases/pr6489-13> (Jan. 2, 2013).

⁸⁹ 17 C.F.R. § 43.3(a) (2013).

⁹⁰ All swaps subject to the CFTC’s mandatory clearing requirement that are made available to trade on a DCM or swap execution facility (“SEF”) are required to be exchange traded. Commodity Exchange Act § 2(h)(8), 7 U.S.C. § 2(h)(8).

⁹¹ 17 C.F.R. § 43.3(b)(1) (2013).

⁹² 17 C.F.R. § 43.3(a)(3) (2013).

⁹³ Appendix A to Part 43 of the CFTC’s Regulations.

⁹⁴ *Id.* § 43.3(b)(2).

⁹⁵ *Id.* § 43.5(d). The CFTC rules provide for delays in disseminating information pertaining to large notional off-facility swaps as well. *Id.* §§ 43.5 (e)–(h).

will be delayed for 30 minutes through early January 2014, then the delay will be set at 15 minutes.⁹⁶ This delay is designed to mitigate concerns about rapid price movements that could be caused by block transactions, and the possibility that market participants could front-run or engage in other trading strategies to inappropriately take advantage the market impact of a large transaction.⁹⁷ Until the CFTC finalizes block trading rules, all swap transactions will be treated as block trades for purposes of public dissemination.⁹⁸

Uncleared swaps. The real-time reporting regime for uncleared, non-exchange-traded swaps is largely similar to that for cleared swaps. As with cleared swaps, key information about uncleared swaps will be disseminated to the public. For uncleared swaps, in nearly all cases, the swap information will be provided to the swap data repository by the “reporting counterparty,” which will generally be the more sophisticated market participant to minimize the overall burden (and cost) for the transaction resulting from the reporting requirements.⁹⁹ There are similar block trade delays for off-exchange swaps as for exchange-traded swaps.¹⁰⁰

⁹⁶ *Id.* § 43.5(d).

⁹⁷ See Real-Time Public Reporting of Swap Transaction Data, 77 Fed. Reg. 1182, 1239 (Jan. 9, 2012) (“The Commission believes that the time delay regime established in § 43.5 will enhance the competitiveness of swap markets by protecting market liquidity until appropriate minimum block sizes are adopted. Such time delays, which initially apply until a swap or group of swaps has an appropriate minimum block size, reduce the risk of large notional trade data being exposed to the market before the trade can be adequately hedged (*e.g.*, front-running or trading ahead).”

⁹⁸ [See *id.* at 1217 (“[U]ntil the Commission establishes an appropriate minimum block size for a swap or group of swaps, the time delays set forth in § 43.5(d) shall apply to all swaps executed on or pursuant to the rules of a SEF or DCM that do not have an appropriate minimum block size (including swaps that are not made available for trading on the SEF or DCM, but are executed on or pursuant to the rules of a SEF or DCM), so that all such swaps will be subject to a 30 minute time delay for public dissemination for Year 1 and a 15 minute time delay beginning on the first anniversary of the compliance date, as described in § 43.5(c)(2).”); see also 17 C.F.R. § 43.5(c)(1) (2013).

⁹⁹ For example, if the transaction is between a swap dealer and a non-swap dealer counterparty, the swap dealer will be the reporting counterparty. The CFTC’s rules establish a waterfall for the reporting counterparty, the details of which differ depending on which reporting rule is at issue. For the real-time reporting counterparty waterfall, see *id.*

¹⁰⁰ *Id.* §§ 43.5 (e)–(h).

2. Futurization Implications

The implications of the new reporting regime for swaps are different for different types of market participants and, furthermore, vary for each market participant depending on the type of transaction. Unlike the two previous cases discussed above, the net swapfication or futurization effect depends both on whether an individual market participant will enjoy a net benefit, or net cost from, additional transparency being injected into the market. As noted above, some market participants specifically sought to transact in swaps (before the reporting regime was in place) to avoid unwanted transparency for their transactions. Market participants that are large enough to have negotiated relatively favorable terms or that enter into transactions sufficiently large to move market prices may not enjoy a decrease in costs as a result of increased post-trade transparency and indeed may experience an increase in the absolute costs of their swaps. Small market participants and those whose transactions are small relative to the market, on the other hand, will likely enjoy decreased costs from the additional pricing information that will be available for swaps.

	Large Market Participant	Small Market Participant
Small Trade	Direction of absolute cost change unclear	Absolute cost of swap decreases
Block Trade	Absolute cost of swap increases	Direction of absolute cost change unclear

Figure 11: Comparison of Cost Effects Based on Size of Market Participant and Whether Trade is Block

The two charts below illustrate the futurization implications under two circumstances: where the absolute costs of a swap decrease for a particular market participant for a particular transaction and where the opposite is true. Where there is no clear absolute cost decrease or increase for a swap transaction, we would expect to see no futurization effect.

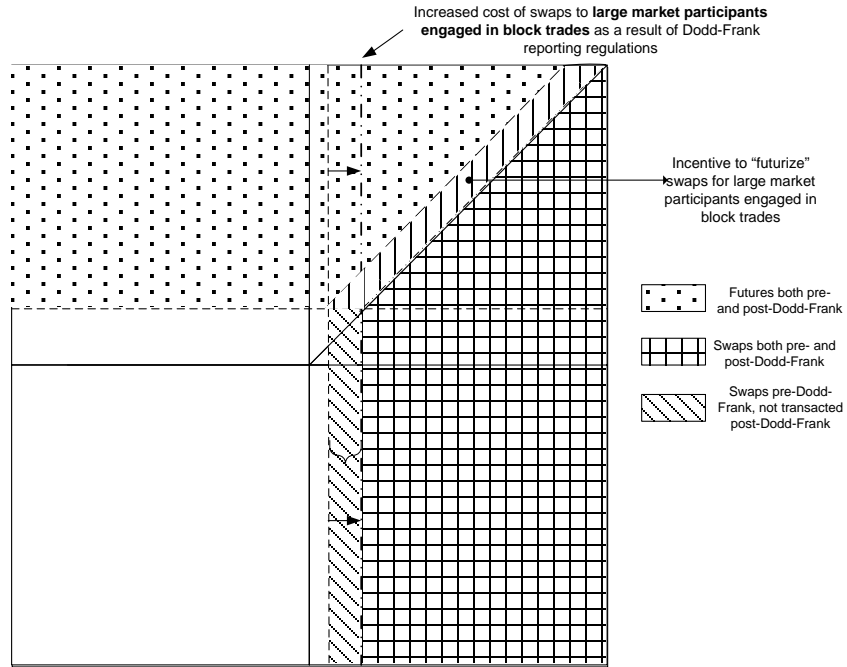


Figure 12: The futurization effects of transparency rules when absolute costs increase

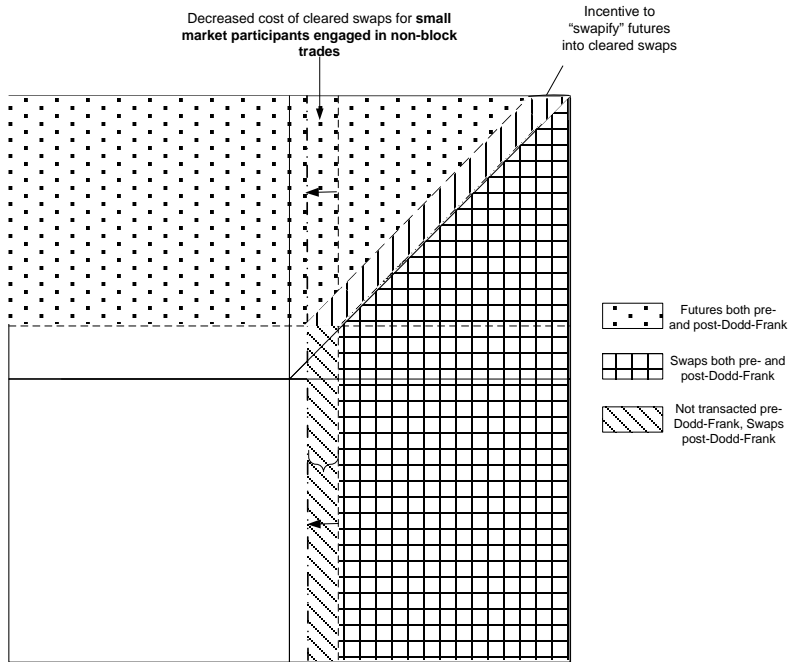


Figure 13: The swapification effects of transparency rules when absolute costs decrease

VI. Policy Implications

The “regulation through substitution” paradigm has policy implications for the CFTC, and other similarly-situated regulators, in developing a coherent approach towards regulatory regimes for similar financial products. In this section, we analyze two such implications. First, we suggest that the CFTC could improve its approach to swaps regulation by taking into consideration how new swaps regulations may cause market participants to transact in futures rather than swaps, or *vice versa*. Second, we suggest that the CFTC incorporate *relative* costs, in addition to *absolute* costs, in its cost-benefit analyses in connection with its rulemaking.

To help illustrate these policy implications, we employ an analogy based in a tangible product market. Imagine that you own the only ice cream shop on an island, next to the only frozen yogurt shop on the island. Your ice cream is significantly cheaper to customers than your neighbor’s frozen yogurt. If you raise the cost of ice cream, you are likely to lose ice cream customers due to this absolute increase in the cost of ice cream. Some of these customers will go home without buying dessert. Others, however, may spend their money at the neighboring frozen yogurt shop due to the decreased *relative* price of frozen yogurt. If you own both the ice cream shop and the frozen yogurt shop, however, you could (questions of monopolization aside) alter customers’ purchasing behavior of ice cream and frozen yogurt through setting the absolute, and therefore relative, prices of the goods.

In the case of futurization, the CFTC owns the ice cream shop (swaps) and the frozen yogurt shop (futures). The Dodd-Frank Act increased the absolute cost of ice cream, which has, as in our example, moved market participants towards frozen yogurt. The CFTC differs from our frozen treat proprietor in a number of important respects, however. These differences highlight the need for the CFTC, and similarly situated financial regulators, to consider the substitution effects and relative costs (in addition to absolute costs) in engaging in rulemaking. We discuss each of these policy implications in the context of futurization in turn.

A. Consumer Protections for Different Types of Markets, and Different Types of Participants

The CFTC cares about market participants’ choices to transact in the swaps or futures markets for reasons not relevant to our proprietor with respect to customers’ choices between ice cream and frozen yogurt. The CFTC is not a private actor interested in profit maximization and instead has, as its goal, the protection of consumers in the markets it oversees. As

a result, the CFTC may have a view that the protections of one market, rather than another, are more appropriate for specific types of transactions entered into by specific types of market participants.

As demonstrated above, regulations will have different effects on varying market segments. For example, the CFTC has chosen to propose swap margin requirements that would raise the absolute cost of uncleared swaps for financial entities without changing their absolute cost for commercial entities; currently effective cleared customer collateral requirements decrease the absolute cost of cleared swaps for customers of FCMs; and swap data transparency rules increase the absolute cost of swaps for large market participants and those executing block trades, while decreasing the absolute cost of swaps for small market participants and those executing swaps with small notional sizes. Each of these choices has a corresponding effect on the relative price of futures versus swaps and will encourage varying levels of futurization or swapification based on the market segment—though not always in the direction one might expect based on the historical orientation of each regime.

While the CFTC, and other regulators in similar positions, may intuitively understand the absolute and relative cost effects of their regulatory actions, we think the analysis in this Article could be a useful tool for formalizing that intuition as a tool for conscious regulatory decisions. Rather than trying to assess *ex post* whether futurization as whole is desirable and regulating the trend in reaction to the market's views, the CFTC should *ex ante* decide on its policy goals and use its influence over the absolute cost of swaps and futures to achieve that goal. Specifically, the CFTC could encourage the futurization of swaps that fit better within the goals of the futures regulatory regime and, conversely, the swapification of futures contracts that fit better within the goals of the swap regulatory regime.

B. Considering Relative Costs as Part of Cost-Benefit Analysis

Under the Commodity Exchange Act, the CFTC must engage in a cost benefit analysis in connection with all new swaps and futures regulation. In particular, Section 15(a) of the Commodity Exchange Act provides that CFTC action, including rulemaking, must take into account “[t]he costs and benefits of the proposed action,” including “considerations of protection of market participants and the public” and

“considerations of the efficiency, competitiveness, and financial integrity of futures markets.”¹⁰¹

Since the passage of Dodd-Frank, the CFTC has faced claims that its cost-benefit analyses are insufficient, including lawsuits alleging that the CFTC has not met its statutory cost-benefit analysis obligations¹⁰² and even an internal report from the CFTC’s inspector general analyzing three particular rules stating that “the Office of General Counsel [in conducting the cost-benefit analyses] appeared to rely heavily on prior somewhat stripped down analysis” and “that similar approaches to economic analysis in the context of federal rulemaking have proved perilous for financial market regulators.”¹⁰³

We believe that the CFTC could improve its cost-benefit analysis using the tools introduced in this Article. Specifically, because the CFTC has regulatory authority over both the futures and swaps markets, it can—and we believe should—take into consideration both the absolute costs of new regulations and, perhaps as importantly, how rulemaking may affect relative costs of futures and swaps. Indeed, one could read the language of the Commodity Exchange Act to require that the CFTC undertake such considerations, as the relative costs of futures versus swaps most certainly has effects on the efficiency and competitiveness of both the futures and swap markets. Moreover, the relative costs (and benefits) of consumer protection provisions in the swaps versus futures markets are likely to underlie decisions made by market participant in deciding between these markets.

We fully acknowledge that the CFTC and other financial regulators face a difficult task in engaging in cost benefit analyses with respect to swap-related rulemaking. Among other reasons, currently there are relatively little data available about the swap markets on which to base a rigorous cost-benefit analysis. In this respect, we submit that assessing relative costs and benefits of new swaps or futures regulation may, at least in some circumstances be more straightforward than assessing absolute

¹⁰¹ 7 U.S.C. § 19(a)(2).

¹⁰² Complaint, *Bloomberg L.P. vs. U.S. Commodity Futures Trading Commission*, 13-cv-00523 (D.D.C. Apr. 16, 2013).

¹⁰³ See, e.g., Office of the Inspector General, CFTC, *A Review of Cost-Benefit Analyses Performed by the Commodity Futures Trading Commission in Connection with Rulemaking Undertaken Pursuant to the Dodd-Frank Act, June 13, 2011*, available at http://www.cftc.gov/ucm/groups/public/@aboutcftc/documents/file/oig_investigation_061311.pdf.

costs, in addition to being informative to market participants. Not only does the CFTC have significantly more data about the futures markets than the swap markets, and thus setting the baseline for an economic analysis with futures data may be easier. But also, even simple models, such as the one we have developed in this Article, can provide some instruction on the likely impacts of new regulation.

VII. Conclusion

The recent trend towards futurization of swaps is a predictable and understandable market reaction to an increase in absolute cost of one good (swaps) together with a smaller (if any) increase in the cost of a substitute good (futures). While this substitution effect may be present whenever a new regulation is adopted that increases the cost of one method of transacting, what distinguishes futurization from usual substitution cases is that, in the case of futurization, the same regulator (the CFTC) oversees both the swaps market—the market whose absolute cost is being increased—and the futures market—the substitute market whose relative cost is being decreased.

In developing a simple economic model of regulation through substitution, and applying that model to futurization, this Article seeks to inform ongoing debates about the benefits and costs of futurization for futures and swaps market participants. We believe that the CFTC and other regulators, in establishing new financial market regulations, should look not only to the *absolute* costs of that regulation but should also consider the *relative* costs compared to other regulatory regimes and how substitution effects might alter the behavior of market participants. Such an approach, in our view, would lead to increased consistency and coherence in the regulation of markets for similar financial products, in general, and could assist regulators in achieving their normative regulatory goals.