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**Speculative Boundaries:
Chicago and the regulatory history of U.S. financial derivative markets ***

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For final version, including additional images see:
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Abstract:

This paper considers the history of governance and speculation on US derivative markets from their emergence in the middle of the 19th century through their incursion into finance in the late 20th century. It explores the importance of derivatives' extended ancestry in agricultural markets before analyzing their entanglement with financial markets, which came much later in the 1970s and 1980s. The paper is particularly concerned with the institutional inheritance of a set of legal–regulatory boundaries that prioritized price making and the speculative trading that was necessary to produce a consistent flow of prices. This governance system for derivatives is set in contrast with the governance of securities markets, which during the 1930s became subject to more strict government oversight, particularly with regard to speculative trading. The legal boundaries between these two markets began to deteriorate in the 1970s when the Chicago derivative exchanges applied the speculative logic of agricultural derivative markets to financial instruments. The implications of this are twofold. First the paper argues that market mechanisms and market regulation are analytically inseparable, and ought to be studied as such. Second, employing this approach, the paper argues that US financial derivative markets are originally 'derivative' not of New York and the finance sector, but of Chicago and the agricultural sector.

Keywords: Chicago, markets, futures, derivatives, finance, regulation, legal geography, Commodity Futures Trading Commission

1. Introduction

The critical legal scholar, Lynn Stout, argues that the 2008 financial crisis was “caused, first and foremost, by changes in the law” (2011: 3), suggesting that “all significant markets, including financial markets, must be built on some underlying legal infrastructure” (37). Stout’s underlying argument is one I believe critical social scientists ought to take more seriously: the law and other “rule regimes” (Brenner, et al. 2010) are fundamentally constitutive of both markets and market

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failures. In geography, the scholarship on regulation is largely written by scholars interested in the neoliberal state, and it tends to assume an operational separation of markets from regulation. Furthermore, the sub-field of legal geography, while expanding in scope (Delaney 2014), has mostly ignored markets and market regulation. I argue that a close analysis of market “legalities” (Pollard and Samers 2013) demonstrates that in effect *markets and regulations are often one and the same*. As such, this article attempts to articulate a “geography of marketization” (Boeckler and Berndt 2012) by focusing on the legal-regulatory structures that “define” markets (Christophers forthcoming). Interrogating the constitutive relationship between markets and legal-regulatory structures is particularly important in light of recent work on the historical evolution and contradictions of (neo)liberal philosophy with regard to markets (Peck 2010, Harcourt 2011, Dardot and Laval 2013). It is increasingly clear that our current market society is in part the result of a long history of intellectual work that has framed the active construction and maintenance—or regulation—of market mechanisms by the state as outside the sphere of legitimate political contestation. This article contributes to the project of correcting that flawed perspective.

Law and regulation have been particularly important to the development of financial derivative markets. Originally designed in Chicago in the late 19th Century to coordinate geographically dispersed *agricultural markets*, in the late 20th Century the same legal and regulatory infrastructure became a constitutive element in the construction of a highly speculative U.S. financial market system. In agricultural commerce, law and government regulation were often explicitly employed to *produce* an “efficient” price mechanism, and in that regard speculation was accepted as a necessary evil, if not encouraged as virtuous. On the other hand, during the 1930s the U.S. government took a relatively adversarial stance towards the financial sector, particularly towards speculative trading. In this way, the market logics of agricultural commerce, and the governance structures that those logics depended upon were bounded off from finance. In the 1970s, however,

financial derivatives, or “futures” as they were then called, emerged not from the New York based financial sector, but from the Chicago-based agricultural sector. Although the commodities traded in this new market were financial, the market rules and thus the market structures were inherited directly from the distinctly speculative agricultural markets. As a result the boundary between these two market systems—a boundary that helped keep speculative finance in check—was fractured.

By analyzing the events that led to the collapse of this boundary, this article contributes to an “extended historical genealogy” (Christophers 2014a: 286) of the emergence of U.S. financial derivative markets as well as the 2008 financial collapse. In other words, I aim to help untangle the “pre-history” (Peck 2010) of the intense financial “deregulation” and neoliberal political maneuvers of the 1980s and 1990s as well as the massive, derivative-fueled speculative bubble of the mid-2000s. I trace this history by focusing on the key regulatory changes mandated by the courts and the U.S. Congress and enacted through government agencies, and privately through the U.S. derivatives exchanges and markets.

This article draws on a larger study investigating the relationship between the economic geography of Chicago and the emergence of financial derivatives as well as the uniquely speculative nature of those instruments, and how their emergence transformed the U.S. financial sector and contributed to the emergence of a crisis-prone financialized economy (see Muellerleile 2013). The methods employed in the larger project included 30 in depth interviews with actors involved in the development of these instruments including traders, exchange executives, derivatives lawyers, and federal regulators. I also conducted an archival and textual analysis of newspapers, trade magazines, and corporate and government reports.

Others have discussed the history of Chicago’s derivative markets (cf. Tamarkin 1993, Melamed 1996, Falloon 1998, Rodengen 2008), but much of this history is uncritical, if not celebratory. The construction of these markets is impressive, and I have made use of this history,

but I am interested in placing these markets in historical, geographic, and political-economic context, something much of this history fails to accomplish. My analysis does however build on a solid base of scholarly work on Chicago's derivatives exchanges. Most notably my work draws on William Cronon's (1991) analysis of Chicago's 19th Century role in the development of agricultural markets, Ann Fabian's (1999) analysis of the demonization of bucket shop gambling by the Chicago exchanges, Caitlin Zaloom's (2006) ethnographic study of Chicago pit traders, and Yuval Millo's (2003) analysis of the socio-technical networks of traders, regulators, and economists that constituted the first equity option markets (see also MacKenzie 2006). My analysis is unique from these in two main ways. First and most importantly, it comes after the 2008 crisis, which begs us to reconsider the political-economy of derivatives, particularly the importance of their speculative and price-making characteristics, both of which contributed—in their unravelling—to the crisis. Second, I privilege the geographic institutedness of the Chicago markets and their regulatory structures as a key variable in the development of a uniquely spatialized legal-regulatory-market regime.

2. Market and Regulation—an inseparable pair

One of Philip Mirowski's (2013) main arguments in his recent extended screed against the neoliberal thought collective is that regulation has been misunderstood by both the political right and left. Particularly on the left, what he calls “team regulation” (pg. 16) has relied on the argument that *de-regulation* is to blame for the 2008 crisis, and what is needed is for the state to *re-regulate* financial markets the way it did during the golden years of Fordism. Relying on this “dichotomy between markets and governmentality” (ibid: 16), however, masks the ways in which neoliberal governance employs state power to construct markets (Dardot and Laval 2013), something Jamie Peck and other critics of neoliberalism have been pointing out for years (Peck 2010).

The imagined autonomy of regulation is not just an idiosyncrasy of neoliberal governance, however. The law, which is one of the main components of market regulation, has for centuries acquired its power and legitimacy by distinguishing itself from politics and economics (Barkan 2011). This dichotomy perpetuates the myth that a “free market” can exist if some market essence could only be released from its bane: regulation. In practice, no price mechanism can exist without rules, laws, boundaries and borders (Harcourt 2011). Consequently, the task at hand is not to imagine the extent to which any given market is free, but how any given market is “regulated”.

Despite economic geographers broad engagement with the state and state governance of economic activity (for a recent review see MacKinnon 2012), there is no coherent geographic literature on market regulation, per se. Regulation theory or the “regulation approach” (Jessop and Sum 2006) might be the one obvious framework to turn to, particularly because it emphasizes the extra-economic (i.e. political, social, institutional) constitution of the economic system. The regulation approach, however, is broadly concerned with the systemic regulation of capitalist accumulation, particularly regimes or temporary periods of accumulation (Jessop and Sum 2006), which makes it a bit of a “blunt” methodological instrument (see Peck and Tickell 2012). This is particularly true for analysis of what Clark (1992) called “real regulation”, or in other words, specific markets and their regulatory institutions (see Jessop and Sum 2006: 222). Nevertheless, the regulation approach broadly informs the arguments in this article, particularly in relation to my concern with the recent development of a highly speculative and crisis-prone financialized regime of accumulation.

One way to analyze market regulation at a more granular level is to examine how the law and legal institutions, or what Pollard and Samers (2013) call “legalities”, are entangled with market structures and price mechanisms. Geographers have argued that the law is by its very nature a spatial and material phenomenon often implicated in the construction of political and geographic

boundaries (Blandy and Sibley 2010, Barkan 2011), but they have rarely considered markets as part of this legal-spatial nexus. David Delaney (2014) has recently reviewed the “legal constitutivity” of various institutions, but markets are barely part of the story. Brett Christophers has, however, created an opening with two recent articles considering the importance of competition law to market constitution (2014b; forthcoming). He argues that the law is crucial to the process of “market definition” or the “drawing” of necessary boundaries around particular markets to define commodities and limit competition. In this way the law is less important as an object of state sovereignty and power, and more important as a constitutive and material “device” for market construction. Riles (2011) provides another glimpse of what this sort of work might look like in her analysis of the emergence of “global private law” which is used by international financial traders to manage their derivative trades which largely exist outside of the sphere of influence of any nation-state government. For Riles, it is the mundane and technical practices of the operation of the market (e.g. ticking boxes on paper forms), not a state or a sovereign, which constitute the regulatory law and thus the space of the global swaps market.

Considering regulatory legalities (boundaries) this way—as a technical practice or procedure, or as a performance of knowledge—largely decontextualized from state power, makes it easy to imagine the *mobility* of those legalities since they are theorized as *relatively* disentangled from socio-territorial context. There is not room here to properly engage the intersection of my arguments with the policy mobility literature (see Peck 2011), but by theorizing regulatory legalities as an integral and necessary part of markets as opposed to separate and outside of markets, we ought to be able to study the mobility of market mechanisms by studying the mobility of market regulation.

The challenge with imagining regulation as something technical and mobile, or as a system of knowledge, is that the approach tends to silence the historic and geographic entanglements of laws and regulations, particularly as they are embedded in institutions and places (Clark 1992, Pollard and

Samers 2013, Muellerleile 2013). It furthermore risks reinvigorating the argument that law is autonomous from political and economic context. This is of particular concern in the matter of financial regulation where the laws and legal-regulatory institutions have layered and path-dependent histories that matter for understanding markets in the present (Konings 2011). In other words, regardless of new technologies or path creating innovations in finance, geographic origins and path dependencies of market regulatory institutions influence how they play out in the contemporary economic environment. Government regulatory agencies in particular are products of “inherited institutional landscapes” (Brenner, et al. 2010: 184), many of them in the U.S. going back 80 or more years. One of the reasons this history must be unearthed is that many of the boundaries around and between financial markets, despite their oft-perceived naturalness, are products of a highly contingent political history. Reframing the financial system in this light is one necessary step in the larger project of “re-politicizing” (DeGoede 2005) the power of financial markets.

3. The Geography of Grain Prices

The legal boundaries around financial derivatives markets can only be properly understood in light of their historical entanglement with U.S. grain commerce, which has been centered in Chicago since the 1850s. And yet, prior to the 1970s, the trading of derivatives in the U.S. was quite distinct from trading in the financial sector. The trading of derivatives or what were called “futures”, was embedded in the trading of “commodities” or bulk agricultural goods, the most common of which were grains¹.

The *production* of grain commodities has always—and still is—dispersed over a vast landscape, and is unique to local soils and climates. But through the second half of the 19th Century

¹ A futures contract is an agreement to exchange a certain quantity and quality of a commodity at a set price, date and location. For thorough and authoritative overview of futures contracts see Hieronomys (1977); for a fascinating account of how they relate to 19th Century Chicago see Cronon (1991).

a sophisticated network of railroads and telegraphs emerged in the U.S. that centralized the *pricing* of grains in Chicago (Carey 1989). The Chicago Board of Trade (CBOT) played an important role in this process by creating rules that standardized both the classification and trading of grain (Cronon 1991). As a result of this early regulatory work, the CBOT was the first institution to develop a highly liquid market in futures contracts for grain.

Futures contracts were not historically unique to Chicago, but the volume of grain flowing through Chicago made that city's futures more consequential than ever before. Because of Chicago's connectedness with the rest of the continent, the prices "produced" as a result of CBOT futures trading became a standard reference point for the dispersed production and exchange of grain across the U.S. including on smaller futures exchanges (Federal Trade Commission (hereafter FTC) 1920). In effect the Chicago futures markets created a new relational economic geography not only as a node in the network of the material transportation and exchange of grain, but also through the less tangible transmission of *grain prices* first through word of mouth and newspapers, and later electronic telegraph signals.

Despite farmers' frustration that the fruits of their labor were priced hundreds of miles away in Chicago, these prices became crucial information for farmers, grain elevators and processors, and grain traders. Furthermore, as grain commerce became more integrated with circuits of credit and capital (see Henderson 1999), and more dependent upon risk management tools such as futures contracts, the flow of price information became a necessary prerequisite for cash crop farming (FTC 1920). As a result, *the smooth operation of the price mechanism itself* became a measurement of the health of commerce in grains (Lurie 1979), something that would be declared to be in "in the national interest" by the U.S. Congress in 1922 (Grain Futures Act 1922).

The leaders of the CBOT realized that their futures prices were important to the commerce in grain, and they worked to establish rules and standards to prevent disruptions in the supply of grain (Cronon 1991) and thus their steady *production of prices* (Fabian 1999). They also established internal exchange rules to facilitate the smooth operation of the price mechanism (Lurie 1979), which was occasionally subject to deliberate manipulations by speculators. But the CBOT was also an association of traders—people who made their livelihoods by trading on price movements. Speculative or “local” traders served the vital function of providing the market liquidity necessary to ensure that grain hedgers² could move in and out of the futures market without significantly impacting prices. Thus the CBOT vigorously defended speculation, particularly against those who sought to impose outside rules and regulations on their markets.

Speculation was, however, a controversial category of economic activity in the late 19th and early 20th Century. The reasons for this are complicated, and a detailed discussion is out of the scope of this article (see Fabian 1999, Stout 1999). But, generally speaking, speculation was assumed to divert capital from productive investment, distort prices, and morally corrupt both the speculator and society. Reflecting this, common law has generally prohibited purely speculative exchanges and markets. At a minimum, common law required potential speculators to incur the costs of transportation and storage of the goods speculated upon (Stout 1999: 712-721), which incentivized investment in actual commerce. Since the end of the 19th Century, however, there was an exception for trading on organized exchanges, where delivery of the commodity is at a minimum “contemplated” (Levy 2006) and the participants were subject to institutionalized trading rules

² Hedgers are those using futures as insurance against undesirable changes in price that might otherwise threaten their material stake in the underlying commerce.

(Stout 1999).³ In other words, the speculative market was only allowed to operate because it was bounded.

Nevertheless, the bias against speculation was particularly problematic for the CBOT. Even though an actual exchange of grain was immanent in every futures contract, the vast majority of the CBOT trades never resulted in an exchange because they were offset by opposite contracts prior to their expiration (FTC 1920). For this reason, the CBOT was regularly accused of being little more than a gambling hall. Making matters worse for the CBOT, informal gambling parlors or “bucketshops” began to pop up all over Chicago as well as across the rural landscape anywhere there was regular access to price quotations from Chicago. In a bucketshop anyone could place a bet on the changing price of grain futures, but they were notorious for disappearing overnight when too many bets went against the house (Fabian 1999, DeGoede 2005).

For the CBOT, bucketshops were a double threat. First, they lured away speculative dollars that might otherwise be spent in the formal futures market. Second, and more importantly, bucketshop “trades” were pure wagers with no possibility of a connection to actual commerce or the production of grain prices. As such, they drew undesirable comparisons to CBOT trading where 95% or more of grain futures contracts were offset by opposite trades prior to expiration (Hieronymus 1977). Consequently, the CBOT struggled to manage the contradiction between maintaining its image as a legitimate and virtuous economic *institution*, but at the same time leave space for its members to profit from speculation. In part it tried to accomplish this by demonizing

³ One further exception is important. Securities markets such as the New York Stock Exchange do require a speculator to take delivery of the good, but that good is typically little more than a piece of paper such as a stock certificate (or in the 21st Century, an electronic representation). The costs of holding such an inventory are low, which made securities markets ripe for speculation. This is exactly why, Stout (1999) argues, securities exchanges have high margin or collateral requirements and other rules designed to limit speculation (see below.)

and outlawing bucketshop gambling, which it struggled to frame as outside the boundaries of virtuous and rational commercial enterprise (Lurie 1979, Fabian 1999).

As both Jonathan Lurie (1979) and Ann Fabian (1999) point out, the CBOT attempted to establish a boundary around its trading by formalizing and rationalizing its operations to create the image of a formal, ordered, and rational institution. The CBOT formalized its rules and committee structure forcing its members to only trade at certain times so as to encourage the production of consistent prices, agree to arbitration in the case of disputes, and allow for fines and even expulsion from membership for breaking the rules. No doubt, what some might call a paradigmatic example of a free market was significantly framed by rules and regulations—they just happened to be controlled by the market itself as opposed to the state (Harcourt 2011).

When grain prices collapsed after World War I, however, CBOT speculators were blamed, and pressure from farmers was too much for even the politically powerful CBOT to resist. In 1922 the U.S. Congress enacted the first federal regulation of grain trading by passing the Grain Futures Act (1922). The farm lobby and their allies in Congress pushed for a total ban on futures trading, referring to speculators as “predatory parasites” (Romano 1997: 279), and to the CBOT as a “gambling hell” (Fabian 1999). On the other hand, the CBOT and other opponents of government regulation argued that speculative trading was a crucial component of grain commerce. Citing a recent study of the grain trade by the U.S. Federal Trade Commission (FTC 1920), they argued that speculation provided the liquid market that was necessary for commercial hedgers, as well as a constant flow of price information that improved the efficiency of commerce (see Romano 1997).

In the end, despite the rhetoric of many Members of Congress arguing that the legislation would limit the influence of market forces, particularly speculative price making, the Grain Futures Act had an almost opposite effect. Rather it was to control factors that would prevent the market mechanism from operating efficiently and producing accurate and consistent prices. The federal

government mandated that grain futures could only be traded on federally licensed “contract exchanges”, thus defining the market and limiting competition (see Christophers forthcoming 1&2). While this did not completely eliminate bucketshop activities, it funneled speculative trading onto the CBOT. The added legitimacy of being federally licensed meant that the CBOT, despite being highly dependent on speculation, became the institutionalized, productive, and rational *other* to informal, unproductive, and irrational gambling (Fabian 1999).

Between 1922 and 1936, very little changed in federal regulation of grain exchanges, but this cannot be said for the political economic environment. The stock market crash, widespread bank failures, the Great Depression, The Dust Bowl, and the New Deal radically changed the context in which the federal government might intervene in the economy. In 1936 the Grain Futures Act was replaced by the Commodity Exchange Act, but despite the Keynesian ferment and legal realism that drove much of the New Deal, commodities/futures exchanges were again not significantly impacted (Markham 1987, Romano 1997). Congress created a new federal agency, the Commodity Exchange Authority (CEA), housed in the Agriculture Department, to take over responsibility for monitoring commodity exchanges. The CEA was given a number of new mandates to monitor speculation, but they rarely took any action, choosing instead to let the market sort it out (Markham 1987). Crucially, despite strong arguments otherwise, the commodity exchanges successfully argued in 1936 as they had for 50 years that speculation was in the economic and public benefit, and as such they were left to control their own collateral requirements.

4. Securities and Lawyers

The story of the federal regulation of speculation on securities markets stands in contrast to agricultural futures markets. In the shadow of the 1929 stock market crash, Franklin D. Roosevelt minced no words as he campaigned for U.S. President in 1932 accusing the Hoover administration

of “lining up with the stock market”⁴ repeatedly disparaging speculation and “paper profits”. In 1933 Roosevelt’s nascent administration immediately began work on new banking, investment banking, and securities regulations. Against the loud protest of Wall Street bankers, two bills were passed to regulate the securities industry: the 1933 Securities Act and the 1934 Securities Exchange Act (hereafter “1933/1934 Acts”). Together the two acts created a new independent agency, the Securities Exchange Commission (SEC), to supervise implementation and enforce rules over the issuance of new securities, as well as the authority to review and approve the operating rules of securities or stock exchanges. Most importantly, it gave the Federal Reserve the power to control collateral levels on stock exchanges with the specific intention to diminish opportunities for speculation with borrowed money (Seligman 2003, Stout 1999).

The 1933/1934 Acts and more importantly the SEC as a nascent institution stand in contrast with the federal commodity/futures legalities. First, the top priority of the SEC became protecting the public from fraud, and fraudulent securities, not producing efficient price mechanisms. For the most part this was accomplished not by mandating changes in the way securities were traded, but in how securities were issued and marketed to the public. All public companies were compelled to follow standardized accounting procedures as well as required to produce standardized annual reports including basic financial information. This reflected the guiding principal of the SEC— disclosure and transparency would protect the investing public, and in turn produce competitive markets (Khademian 1992).

Second, the SEC took from the 1933/34 Acts a direct interest in preventing excessive speculation on stock markets (Stout 1999, Thel 1990). There was widespread consensus at the time that excessive speculation caused the stock market bubble in 1927-29, the crash in Oct. 1929, and

⁴ FDR Campaign Address at Columbus, Ohio, August 20, 1932, accessed online here on 9-15-13: <http://www.presidency.ucsb.edu/ws/index.php?pid=88407>

the ensuing financial and economic collapse (Federal Reserve 1984). Unchecked speculation was therefore assumed to lead not just to personal or institutional bankruptcy, but to macro-economic trauma. For this reason FDR pushed legislation that installed collateral or “margin” limits high enough to curtail speculation on the stock exchanges (Seligman 2003: 76). Underlying this was a different philosophy from that of the rules governing commodities/futures. In 1984 the Federal Reserve explained the difference between securities and commodities/futures margins:

The differences in margin ratios appear traceable in part to the disparate history of federal regulation and in part to the nature of the markets. The futures exchanges, free of federal regulation, have established their margin ratios to achieve but one objective: to protect individual brokers and thus assure the integrity of the marketplace. The initial margin ratios in securities and options markets, on the other hand, are in place to achieve the public policy objectives reviewed above, and *protection of market integrity is seen as a beneficial by-product of these other objectives* (Federal Reserve 1984: 16, emphasis added).

Third, although the agency did not infringe much on the day to day operation of the New York Stock Exchange, the SEC was granted wide leeway to establish and maintain the emerging federal securities laws as it related to securities issuance, investment banking, and corporate governance. From the outset, the agency accomplished this by employing mostly lawyers. As many have argued (cf. Khademian 1992) a prosecutorial culture and combatant attitude toward “the street” emerged at the SEC. This was connected to a deep commitment to the principals of customer protection. To the extent that the SEC was concerned with efficient markets and efficient distribution of capital, which it was, these concerns were translated through the SEC’s top priority: employing the law to ensure a transparent investment environment for the public.

From the establishment of the SEC, it was an agency that the Chicago futures exchanges wanted to keep at arm’s length. It was a principal of the commodities/futures business that producing prices was the basis of their enterprise, and this depended on the kind of speculation that the SEC and the common law tradition were fundamentally suspicious of. Fortunately for the Chicagoans

there was a clear legal boundary between securities and commodities trading, but it would not last forever.

5. The Limits of the Agricultural Commodity

One must skip forward 30 to 40 years to identify the contemporary implications of these boundaries around speculation. In the early and mid-1970s the Chicago exchanges began to apply their institutional expertise in agricultural futures to financial instruments that were produced not across the vast U.S. rural landscapes, but in dense urban spaces, particularly New York. Seeing this, the federal government, not having made any major regulatory innovations with regard to commodities/futures speculation since 1936, played a key role (Millo 2003) in what would over the next 20 years become a revolution in finance.

In 1970, the business of futures was still deeply embedded in agricultural exchange. While there were small, decentralized inter-firm markets for foreign currencies and stock options in New York, there were no centralized or standardized markets or price mechanisms for futures or options on financial instruments. In the sphere of government regulation of centralized exchanges, there was a clear division of labor between what was considered the securities industry and the commodities/futures industry. The SEC was responsible for the securities industry that was centered in New York. The CEA, under the tutelage of the U.S. Agriculture Department, monitored the U.S. commodities/futures markets that were headquartered in Chicago. Between World War II and 1970 the CEA rarely took meaningful action to change those markets. In extreme cases of alleged market manipulation, they did prosecute individuals and impose speculative position limits, but for the most part the agency let the exchanges regulate the market, and they never interfered with collateral requirements.

By 1973, however, the boundaries between agricultural commodities/futures and finance were breaking down. The CBOT, in an effort to “open new vistas for commodity marketing, by applying the futures trading concept in new and untried areas”⁵, developed option contracts on NYSE traded corporate shares (see MacKenzie 2006, and Millo 2003 for thorough analyses of this innovation). In order to accomplish this they needed the blessing and the help of the SEC. Working with the SEC, however, was painstaking for the CBOT not least because of the ongoing skepticism of the SEC over the dangers of speculation and its status as gambling. Eventually, the SEC did allow the contracts to start trading in 1973, but the new options were broadly defined within the realm of securities law and therefore more strictly controlled than commodities/futures. In particular, the securities options had high collateral requirements, and at first were only available as options on upward market movements, not downward movements reflecting another longtime SEC bias against short selling, which was associated with speculation (Stout 1999). In other words, even though the SEC allowed option contracts, it remained true to its mission of keeping speculation to a minimum.

Furthermore, by the early 1970s, the Chicago Mercantile Exchange (CME), which for all of its 50+ year history was the second exchange in Chicago, had also branched out into new products. Crawling out of its “agricultural market cradle” (Melamed 1996: 313), the CME used its expertise in contract design and promotion to convince agricultural traders to trade a new contract on foreign currencies beginning in May of 1972. It was not all serendipity that the contract began trading right as the Bretton Woods fixed exchange rate system was breaking apart following U.S President Nixon’s decision to end U.S. dollar/gold convertibility in August of 1971. In a fascinating story on its own, the CME, with the assistance of Milton Friedman of the University of Chicago Economics

⁵ Chicago Board of Trade Annual Report, 1972, page 5

Department, convinced key members of the Nixon Administration and the Federal Reserve, that no new federal regulation was necessary for these contracts (see Melamed 1996). At the same time, the CBOT was working hard to develop the first interest rate futures contract on home mortgage securities (GNMA or “Ginnie Mae” securities). It seemed very possible, however, that a GNMA futures contract might be defined not as a commodity/future, but as a security which would have summoned the SEC yet again (Falloon 1998: 238-40).

6. Redefining commodities—redefining boundaries

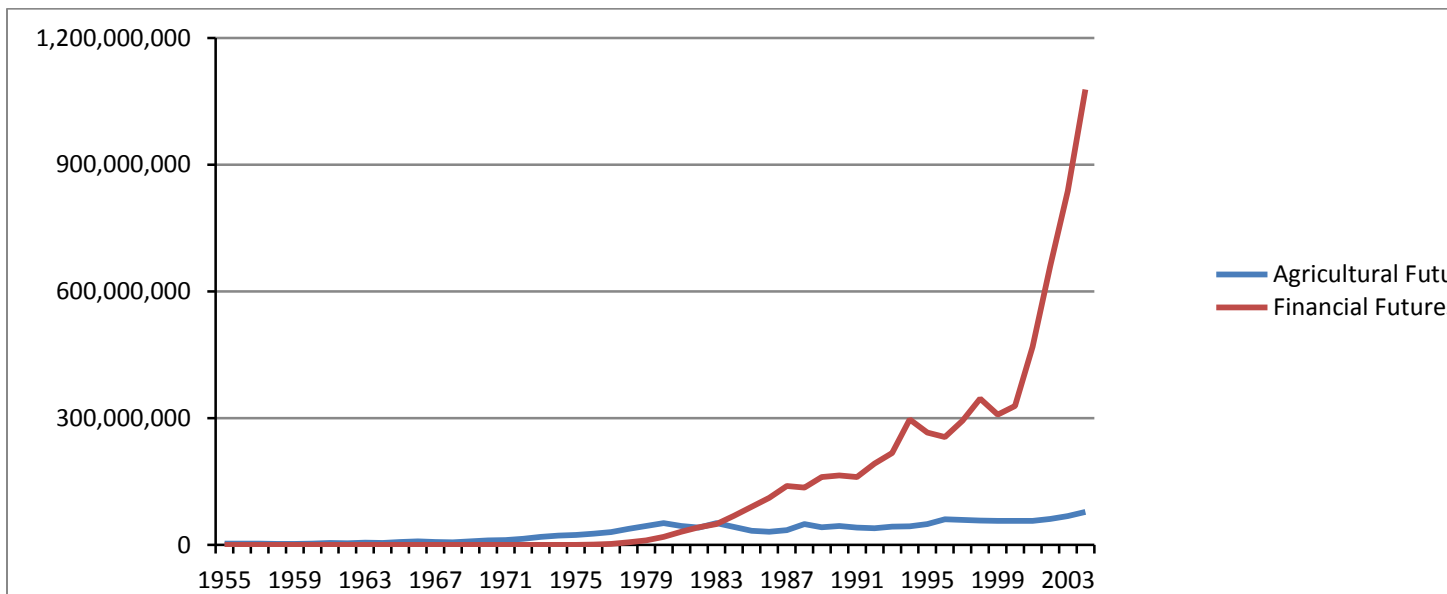
There is a wide range of reasons why the U.S. Congress became concerned with overhauling federal commodities regulation in 1973. There is not space to explain them all here, but in the face of new hybrid instruments that crossed the established boundaries between securities and commodities/futures, the existing system became incoherent and contradictory. Not least the commodities/futures business was in an “explosive growth stage” (Gold 1972: 11). This was fueled in part by aggressive marketing campaigns by the Chicago exchanges who ran clever advertisements in newspapers, *Commodities Magazine*, and even Chicago-based *Playboy* (Rodengen 2008: 50) encouraging individual and institutional speculators to play the markets in Chicago instead of New York. In 1971 the dollar value of futures contracts traded exceeded the value of all securities traded on the New York Stock Exchange (ibid)⁶. The volume of futures contracts traded on U.S. exchanges went from approximately 4 million in 1960, to 14 million in 1970, to 26 million in 1973 (see figure below).

⁶ Comparisons of dollar value are deceiving as futures contracts are measured by the value of the underlying commodities that would be traded if the contract expired, but at least 95% of the time, they are offset before expiration. This explains the reference that is common today of US\$600 to 700 trillion in outstanding derivatives contracts, which is ~10x global GDP.

Annual U.S. Futures Contract Trade Volume⁷

	1970	1980	1990	2000
Chicago Agricultural	11,309,429	51,598,100	44,897,535	57,457,665
Chicago Financial	0	18,938,402	164,562,118	328,948,402
Chicago Total	11,309,429	70,536,502	209,459,653	386,406,067
U.S. Total	13,618,638	92,096,109	276,356,703	503,739,629

Growth in Chicago Futures Trading 1955-2004, Agricultural vs. Financial



Yet, the federal agency with presumed jurisdiction over this highly speculative industry was considered by many to be inept. The CEA was perceived to be lacking expertise, a sufficient staff and budget, and the will to act in the face of commodities fraud or market corners, which were still occasionally happening (*Des Moines Register* 1973). They were accused by many of being “captured”

⁷ Raw data provided by Financial Industry Association, calculations by author. I was only able to attain systematic data for 1955-2004.

by the Chicago commodity/futures exchanges (*ibid*). This became especially problematic for the CEA as the rate of inflation grew, causing prices for consumer goods to rise and generally become volatile in the early 1970s⁸. Some blamed speculation on the futures markets speculation for food price volatility, and many were frustrated with the CEA for not intervening.

Moreover, some members of the commodities/futures industry favored a new regulatory framework to provide more robust legitimacy and an alternative to the skeptical SEC for the nascent *financial* futures markets. Furthermore, a shadowy off-exchange industry for options controls on commodity futures had developed in the late 1960s and grown tremendously into the early 70s. Many of these were based on London-based commodity prices⁹. In what became known as the “London Options” market, U.S. commodity brokerage firms marketed these highly speculative contracts to customers across the U.S. The trouble was some of these firms used high pressure “boiler room” sales tactics and misrepresented the risks involved. Some brokerage firms solicited orders from customers but never executed the options trades on exchanges operating as private bookmakers. When the market turned against them, some firms went bankrupt having embezzled their customers’ money. The similarities with 19th and early 20th Century bucketshops were stark, and not just because of the conspicuous fraud. Legitimate commodities brokerage firms and the Chicago exchanges wanted the London options bounded off, if not shut down by the government because they competed for speculative dollars and gave the entire commodities/futures industry a bad reputation (Johnson 1976: 4). Furthermore, the key economic function, and thus legal legitimization of speculative trading—efficient price making—could only be demonstrated if the trades were connected to the actual markets for the underlying assets.

⁸ All of this must be considered in the context of U.S. President Nixon’s imposition of price controls on wages and many consumer goods in August of 1971.

⁹ See “Trading London commodity options”, *Commodities Magazine*, June 1972, ppg. 10-15; also Schneider, H. “Commodity Options: Ready for next major step”, *Commodities Magazine*, January 1978, ppg.60-61

Combined, these factors convinced a number of U.S. lawmakers that regulatory reform was needed. The most important outcome of the legislation, signed into law on October 23, 1974, was that the CEA was replaced by a new agency, independent of the Agriculture Department, called the Commodity Futures Trading Commission (CFTC). In bureaucratic hierarchy, it would be structured like the SEC. However, as had happened in 1922 and again in 1936, despite strong rhetoric by Members of Congress and others wary of speculation, as well as early calls to emulate the SEC, there were no radical changes to the agency's mission from that of its predecessor. The controversial commodities options would be allowed, but they could only be traded on federally licensed futures exchanges. Just as it had in 1922, speculative capital would be funneled into the centralized exchanges where it would contribute to the price making function, or otherwise be outlawed. The federal test of whether a new futures contract would be allowed became whether it provided hedging opportunities and/or improved "price discovery", which mirrored the 1920 declared national importance of *prices in and of themselves*.

On the other hand, a number of changes made to the jurisdiction of the agency were revolutionary in opening up opportunities for the commodities/futures business to cross the legal boundary into securities business. The Chicago exchanges heavily influenced the legislative process and as a result successfully inserted two key rules that institutionalized speculative trading on a much larger set of instruments. First, in a cunning stroke that reverberates today, the Chicagoans inserted a phrase in the legislation that changed the definition of a "commodity" from the 15 or so agricultural products enumerated in the 1936 Commodity Exchange Act, to "all other goods and articles...and all services, rights and interests in which contracts for future delivery are presently or in the future dealt" (Commodity Exchange Act 1974). Immediately upon passage, anything traded as part of a futures contract on a contract exchange was defined as a "commodity". In one fell swoop the definitions of both commodities and futures were transformed, and made largely *self-*

referential to the market itself. Richard Sandor, a key innovator of the first interest rate futures contracts, and today an active champion for derivatives markets for things like carbon (see Sandor 2012), explained the importance of the 1974 change this way:

The evolution of derivatives has been fast and furious, and it has redefined financial markets. To fully appreciate the extent of change, consider that in the early half of this century, commodities were defined as primary, sortable and bulk goods such as grains or precious metals...When a number of us were working on the act that resulted in the formation of the Commodity Futures Trading Commission, we ultimately persuaded legislators that a commodity ought to be defined as anything tangible or intangible for future delivery. Finally on October 20, 1975, after a great deal of lobbying, the Chicago Board of Trade began trading in interest rates and the word commodity disappeared from the definition! In a short period of 15 years, every single piece of accepted wisdom about exchange-traded markets was obliterated. (Quoted in Falloon 1998: 229)

Despite this sudden opening into finance for futures, few of the precautions that were convention in the securities business were enacted. Although the CFTC was separated from the U.S. Agriculture Department, the Congressional oversight of the new agency would remain with the House and Senate Agriculture Committees, while the SEC remained under the Congressional oversight of the Banking Committees, a distinction that remains today. This isolated the legislative authority over the growing field of commodities/futures, which allowed the Chicagoans to concentrate their lobbying efforts and avoid political entanglements with the financial committees.

Second, this definitional or boundary change was made even consequential because the Chicagoans also convinced Congress to grant the CFTC exclusive or “presumptive” jurisdiction (Johnson 1976) over all futures trading. No other Federal agency nor any state government entity or law could interfere with the ongoing development of futures markets. Among other things, no other agency could impose collateral limits on the commodities markets. The CFTC only had authority to do this during “market emergencies”, and they never used this power. Suddenly the legal boundaries limiting financial speculation established in the 1930s were under threat, and this was exacerbated by the market realities of futures: *they could not exist without speculators*, something that was repeatedly confirmed to me in interviews with industry experts.

7. Institutional inheritances at the CFTC

The CFTC had a challenging first few years. The changes mandated by Congress came into effect in April 1975, six months after the law passed, but the commissioners were only confirmed by the Senate six days before the CFTC was to begin operating. The commissioners needed to hire 136 “high priority professional and non-professional staff”¹⁰, although some of them came from the defunct CEA. Office space had to be procured, not only in Washington, D.C., but also in the largest field office in Chicago where the CEA was renting space from the CBOT¹¹. The new agency was also rife with infighting. The former CEA staff, feeling that newcomers were “outsiders” attempting to impose new policy, fought with the new hires. The newly hired lawyers in the general counsel’s office struggled for autonomy from the rest of the agency and commission (personal interview with Mark Powers 12-12-12). Finally, the legislation required that the CFTC review and approve all operating rules and re-register the federally licensed exchanges, but this was an impossibly large task, so the agency decided to accept all existing rules without review.

All of this translated into a situation where the new agency supported the status quo operation of the Chicago exchanges, and relied on the industry to advise them how to go about implementing the Congressional mandates. For the most part the markets would continue to operate the way they had since the 1920s, albeit with many more product offerings, most of which were entangled with the financial markets, and all of them now recognized as legitimate and

¹⁰ House Agriculture Committee internal memo, provided to author by a member of the staff at the time—available from author.

¹¹ In a personal interview with William Bagley, the first Chairman of the CFTC, he said: “The CEA's office was in the basement of the Board of Trade. You were trying to regulate the big boys upstairs. And it's a hot day, and the air conditioning isn't working, so you have to go upstairs and bug the Chicago Board of Trade management to please fix the lights downstairs...”

economically valuable as price mechanisms by the federal government regardless how dependent they were on highly leveraged speculative trading.

Nevertheless, the new agency was larger than the CEA, and now being an independent regulator, separate from the Department of Agriculture, became more visible in Washington, D.C. Over the next few years the agency would struggle to establish itself, but it did become a formal institution with codified structures, rules, norms, and an organizational culture. Two key characteristics of the CFTC help explain its relationship to speculation during these formative years.

First, unlike the SEC that closely monitored its reputation as independent from the securities industry as well as elected politicians, the CFTC was from the start seen as a partner with the commodities markets. The revolving door between the CFTC and the Chicago exchanges was extensive, with both senior level and staff level officials moving between the Chicago-based industry and the Washington D.C.-based regulators. The first Chief Economist of the CFTC, Mark Powers, came from the CME where he had designed many of the first financial futures contracts, a move that Leo Melamed, a former CME chairman, called “an insurance policy to keep the CFTC on track” and “only the beginning of a pipeline that would deliver talent from the futures industry to government” (Melamed 1996: 222). Beverly Splane, who coordinated the nomination of the first CFTC commissioners for the Ford White House was appointed as the first Executive Director the CFTC, and nine months later hired by the CME as Executive Vice President (Melamed 1996). There are many other examples. This did not mean the exchanges got everything they wanted, but when they phoned the CFTC, they usually found a friend at the other end of the line. Contrast this with the SEC-securities industry relationship where there was more of a brick wall between the two than a revolving door.

The second important aspect of the relationship between the CFTC and the Chicago exchanges has to do with the rhetoric of expertise. Just as the derivatives markets are today, the

commodities/futures markets were discursively constructed as intensely complicated and nearly impossible to understand for the average layperson, which included virtually all Members of Congress. The dominant discourse suggested that commodities/futures markets were mainly employed by professional and sophisticated patrons who used the markets to hedge (or insure) their day to day business involving the underlying commodity. This meant that commodities/futures markets were never considered “public” in the same way that securities markets were. The CBOI and the CME spent a lot of time educating the CFTC¹², the Congress, and the public, how their markets worked, what the benefits of risk management were, and how speculators were crucial to reproducing the market conditions necessary to lubricate the gears of commerce, which now included the “commerce” of finance.

The expertise of the SEC was considered differently. From the perspective of the Chicagoans, the staff of the SEC was overburdened by legalistic “red tape”, if not tainted by an obsession with protecting the public. Many of my interviewees discussed the differences between the SEC and the CFTC. One common thread was that the SEC was focused on customer protection, while the CFTC was focused on “market integrity”. Another was that the SEC was generally focused on laws, while the CFTC was generally focused on economics, leaving the “laws” to the commodity/futures exchanges. Susan Phillips, who earned a Ph.D. in finance in 1973 and worked at the SEC in the mid-1970s and was later both a commissioner and Chairwoman of the CFTC, described the differences between the agencies this way:

In fact, I was the first economic fellow at the SEC...one of the things I did while I was at the SEC—I spent a lot of time just explaining to the lawyers how competition worked and how markets work. They don’t think that way. [...] It has to do with customer protection

¹² Mark Powers, the first Chief Economist of the CFTC, who was recruited from the CME, recalled to me arriving in Washington, D.C. to begin work at the CFTC and saying to himself “I decided this was a big mistake.” I asked him why? “Because I knew damn well it was a huge mass of people who didn't understand the first thing about futures trading...”

on the securities side. It's integrity of the markets on the commodities side...It's market protection, not customer protection (personal interview 9-19-12).

These differences were more than a matter of bureaucratic culture. They translated into different market rules, and increasingly the rules that supported the virtues of the commodities/futures market were encroaching on the financial markets.

8. Jurisdictional conflict

It was only months after the establishment of the CFTC when the SEC realized how far the CFTC might encroach on their assumed regulatory jurisdiction as a result of the new definition of commodity/futures. The definitions were, as one prominent derivatives lawyer said to me, “politically arbitrary” (personal interview 2-26-13). These politically constructed boundaries, coupled with the continued innovation of new financial futures in Chicago, translated into a serious concern for the SEC, who saw both an infringement on their regulatory jurisdiction, as well as potential threats to the stability of the securities markets.

The first inter-agency argument was over futures contracts on securitized mortgage securities issued by the Government National Mortgage Association (GNMA). The SEC argued that GNMA certificates were securities, and thus futures contracts on those securities were also potentially securities, and therefore ought to be regulated by the SEC and subject to strict limits on speculation. The staffs of the two agencies fought back and forth, but the statute passed by Congress in 1974 was clear—the CFTC had exclusive jurisdiction. The CFTC approved the contract, and it began trading at the CBOT in October of 1975. The staff of the SEC was frustrated (Johnson 1976, Markham 1987), but the CBOT with the help of a new federal agency had constructed the first contract that would allow hedging and speculating on interest rates.

Two things are remarkable about the GNMA futures contract, which even though it only lasted 12 years, was initially hugely successful—it traded ~20,000 contracts in 1975, ~100,000 in

1978, and 2.3 million in 1981, but went downhill from there (see footnote 7). First, the people that designed the contract for the CBOT relied heavily on their knowledge of agricultural contracts to figure out how to rate, grade, categorize, and standardize mortgages. Above all else the CBOT knew from experience that they would need speculators to trade the futures if they wanted the market to survive. This assumption that speculators were a necessary part of the market was taken for granted at the CFTC, but would have been heavily scrutinized at the SEC. Second, the success of the GNMA contract taught the staff of the CBOT, but also the CME how to build interest rate contracts. And build them they did. Over the next few years the CBOT constructed contracts on Treasury Bonds, commercial paper, and municipal bonds.

The new interest rate contracts had an immediate effect on the U.S. economy. Since 1970 a number of Federal Home Loan Mortgage Corporation (“Freddie Mac”) officials had been working to develop a futures market in mortgages because they thought it would fuel the development of a secondary market in mortgages, something they believed would lower the cost of borrowing and thus increase the availability of loans for potential home buyers (Falloon 1998, Sandor 2012). In the mid-1970s the mortgage market was raising as much capital per year as the New York Stock Exchange was for corporations (Falloon 1998). In other words, mortgages, which were still largely “fixed”, or constituted by localized credit relations between small banks and borrowers, were a potentially enormous capital market waiting to be liquefied or opened up to investors across the U.S. and the world (Gotham 2009). The GNMA futures market helped facilitate this process by providing commercial home builders, mortgage banks, and anyone else in or out of the housing industry the opportunity to hedge or buy insurance on changing interest rates.

The 30 year Treasury Bond (T-bond) contract, started in 1977, would become the most heavily traded contract the CBOT would ever construct. The timing of interest rate contracts could

not have been better for Chicago. In 1979 the new Federal Reserve Chairman, Paul Volker, set out to end inflation by cutting off the money supply. The sudden increase and volatility in interest rates created an immediate demand for contracts that could hedge against rate changes. It quickly became common for corporate treasurers to buy and sell T-bond futures to protect their companies' debt from financial volatility. The underlying market for T-bonds also quickly became dependent on the prices produced in the futures market as evidenced by a request of the primary dealer banks to the U.S. Treasury Department in December of 1979 to change the date of bond issuance to ensure the Chicago markets were open when the bonds were released for auction (Falloon 1998).

As the scope and reach of futures markets expanded the jurisdictional battles between the SEC and the CFTC only intensified. The SEC fought quite hard in the early 1980s to regain control over the speculative futures activity that was clearly impacting the securities markets, but Congress, behind the heavy lobbying efforts of the Chicago exchanges as well as the intensifying neoliberal attitude of the Reagan administration, protected what had become the status quo. With only minor exceptions, the CFTC retained its jurisdiction over what were beginning to be called "derivatives". The Chicagoans continued to develop new markets, promote speculation, and rake in profits, all the while leaving New York financiers scratching their heads wondering how they had missed the financial futures boat, and what they could do to compete with Chicago. Eventually in the 1990s the New Yorkers would catch up and far outpace the Chicagoans in their development of "over-the-counter" or off-exchange derivatives but that is a story best left for another article.

All the while, between 1975 and 1987 the Chicago commodity/futures business was transformed from one almost exclusively focused on producing prices for food and raw material processors and producers, to one mostly focused on financial products and financial markets. By the late 1980s potential financial speculators no longer found any meaningful limits on the leverage they could create in financial markets something the 1933/1934 Acts were designed to prevent.

While the margin limits in the securities markets remained around 50% of an initial purchase, they remained around 5-10% in the commodities/futures markets. As a result the volumes of the new financial futures contracts increased at an exponential pace.

When the innovation of financial derivatives exploded in the late 1970s and 1980s, the rules and boundaries around these markets were already set from legislation passed in 1975, if not 1936 or 1922. Regardless how much the new derivatives instruments resembled securities, or impacted mortgage, interest rate, or securities markets—which they did—they were pre-defined as commodities/futures, a legacy of their deep embeddedness in the agricultural exchange industry that constituted the relational geography of Chicago. The innovations in the commodities markets for things such as futures on corporate bonds and futures on stock market indexes meant that capital flowing through these markets directly impacted the underlying securities markets, drawing Chicago into global financial circuits the way New York had been for a hundred years. But none of this could have happened without the rules that governed speculation in these markets, something the Chicagoans had worked for a century to perfect.

Conclusion

There is no direct path from the 1970s to the 2008 financial crisis, but during the 1980s and 1990s the speculative nature of Chicago style derivatives trading would transform Wall Street, in large part by importing the rule regime that was originally developed to produce prices for grain. Thus, the story of the development of speculative financial derivatives markets in the U.S. in the late 20th Century is largely the story of constructing legalities that prioritized the production of prices and set boundaries to eliminate factors—including other laws and rules—that could threaten the continued operation of those price mechanisms. It could be argued that the Chicago-based derivative exchanges, once entirely responsible to regulate themselves, “captured” the successive

federal agencies responsible for oversight of derivative markets. Undoubtedly, in the 1970s the Chicago exchanges heavily influenced the redrawing of the legal boundaries around derivatives markets. As such, they successfully broke out of their agricultural boundaries and integrated finance into their speculative markets. But this is only one part of the story. Just as important is that the regulatory structures for derivatives, whether controlled by the exchanges in the 19th Century or various government agencies throughout the 20th Century, all functioned with the same priority: to protect the smooth functioning of the market mechanism. In other words, at least in this case, the crucial point is that regulation is not external to the market mechanism, but integral to it.

In many if not most cases, social scientists would benefit by beginning from this assumption—that a market is in no meaningful way a market without rules defining its legal, regulatory, and spatial boundaries. Starting with this assumption, the researcher is immediately forced to ask different sets of questions about the role of regulation and the state. Most importantly the researcher must ask, in what ways are laws and regulations designed to *make markets work*; as opposed to limiting the way they work? Social scientists must do a better job of framing markets, particularly financial markets, this way as they both participate in, and critique the ongoing efforts to “re-regulate” the global financial system post-2008.

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