



Alternative Investment Analyst Review

PERSPECTIVES

The Resiliency of the U.S. Futures Industry

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1. Introduction

Financial professionals are well-aware that the ongoing implementation of the Dodd-Frank Act could cause changes to market structure, including the structure of the futures markets. Should market participants be concerned? The short answer is not necessarily, given that the history of U.S. futures trading is one of responding to constant adversity through dynamic innovation.

2. How and Why U.S. Futures Trading Began

The story of U.S. futures markets has largely been one of innovation flowing from Chicago, with additional innovations taking place elsewhere. Chicago became a transportation hub and grain terminal in the mid-nineteenth century and, as its scale and influence grew, grain merchants had to figure out how to manage the price risk for their accumulating volume of grain inventories. The solution was the development of a formalized exchange: the Chicago Board of Trade (CBOT).

At the time, Chicago was already a well-established center of financial risk-taking, due to the land speculation that had occurred in Illinois in the 1830s prompted by the building of a significant canal that linked Illinois's productive farmland to major population centers. Exhibit 1 reproduces a historical painting of another seminal occasion in Chicago's commercial history: the establishment of the first grain elevator in 1838.

In a pattern that would repeat itself, the Chicago Board of Trade's founding was the "result of evolution, not intent or design," noted Stassen (1982), who explained, "The Chicago Board of Trade was created by businessmen as a commercial exchange for businessmen – grain merchants – who needed some order in a world of chaos, and some relief from a hostile judicial system which only reluctantly enforced businessmen's bargains..."

[T]he courts in Illinois, as in most states, adhered to old English precedent, which places damages for expected profits on a par with usury."

In spite of their illustrious history, grain merchants in Chicago were not the originators of futures trading. According to Teweles and Jones (1974), the first recorded case of organized futures trading occurred in Japan during the 1600s in the rice markets. Hieronymous (1971) went back even further, noting, "The concept of futurity in contractual arrangements is as old as commerce. The rules of futures trading certainly date back to the medieval fairs of France and England, which were large and complex by the 12th Century..." "[B]ut as a practical matter, we need look no further back than the frontier of the U.S. in the mid-19th century for the origin of modern futures trading." [Italics added.] "The circumstances of the frontier, particularly in the grain trade, were the catalyzing agent out of which futures trading grew." In describing the business conditions of the mid-nineteenth century, Hieronymous quoted Emery (1896), "Untrammled by business traditions

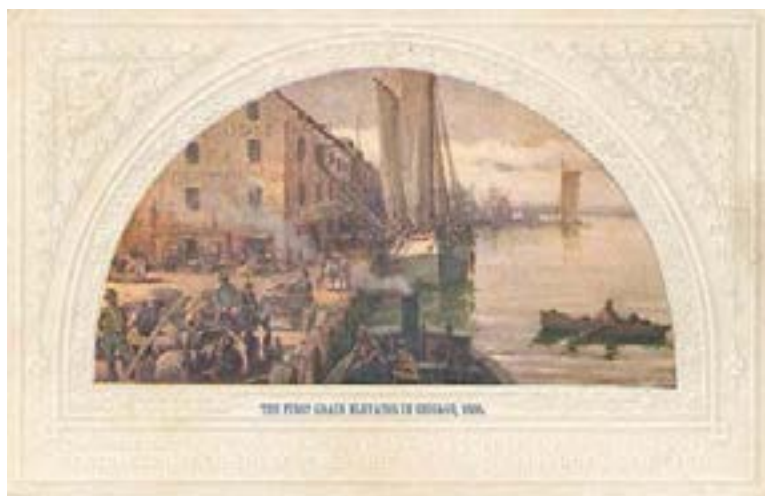


Exhibit 1 "The First Grain Elevator in Chicago, 1838" Postcard of a 1902 Painting By Lawrence C. Earle

Source: <http://www.lcearle.com/works/CH-grainelevator-1838.jpg>, retrieved on October 19, 2013.

Note: This 1902 painting is "one of 16 historical paintings by Lawrence C. Earle, [which were] originally located in the banking room of the Central Trust Company of Illinois, 152 Monroe Street, Chicago;" the paintings are "now stored within the Collection Services Department at the Chicago History Museum," according to <http://www.earlychicago.com>. This website, in turn, is based on Danckers and Meredith (1999).

of past centuries ... the trade of this country has unconsciously adopted new and direct means for attaining its ends. There has been little 'history' or 'evolution' about the process, for the practical mind of the business man has simply seized the most direct method of 'facilitating' business, a course forced on him by the constantly increasing size of transactions."

With hindsight, we know that Chicago's century-plus heritage of financial risk-taking came to serve the city well. For example, Chicago futures traders responded to the dislocations that were caused by the collapse of the Bretton Woods system of fixed exchange rates successfully. Spurred on by changes in the currency markets, the Chicago exchanges developed financial hedging instruments in both currencies and interest rates in the 1970s and 1980s.

The launch of financial futures trading in Chicago became hugely successful and it is surprising to read about the early skepticism that greeted these efforts, as discussed by Leo Melamed, Chairman Emeritus of the Chicago Mercantile Exchange (CME) Group, Inc. According to Melamed (1994), "Some ... thought it ludicrous that [in the early 1970s] a 'bunch of pork belly crapsshooters' would dare" launch futures contracts on foreign exchange." Former CME Chairman Jack Sandner would later proudly explain, "Financial futures were spawned out of the belly of the hog," cited in Baeckelandt (2012).

3. How the Futures Exchanges Were Forced to Innovate Constantly

The maxim, "with crisis comes opportunity," has been a constant for the Chicago futures exchanges and predates the collapse of the Bretton Woods system. For example, in the 1960s, the CME had to develop new futures contracts because its mainstay futures contracts in eggs and butter had become obsolete. Technological changes had transformed the production, distribution, and storage of butter and eggs from seasonally produced commodities with classical production and price cycles to new and different products with regard to their production, price, and distribution patterns. "The economic necessity of hedging provided by a futures market had greatly diminished," recalled Everette Harris, the former president of the CME, in Harris (1970).

What was the response of the futures industry to this crisis? The answer was: "innovation." Starting in the

early 1960s, the CME began introducing livestock futures contracts. By 1980, the live cattle futures contract had become the largest contract on the exchange according to a speech made by Leo Melamed at the time.

Admittedly, Chicago has not been the only center of innovation in U.S. futures market development. In the 1970s, the New York Mercantile Exchange (NYMEX) had faced possible extinction when its mainstay contract, the Maine potato, lost credibility during scandals in 1976 and 1979. Fortunately, the NYMEX responded to an emerging opportunity instead. The structure of the oil industry had changed after numerous nationalizations of firms in oil-producing countries. This forced some oil companies to shift from long-term contracts to the spot oil market, according to Pulitzer Prize winner, Daniel Yergin, in his book, *The Prize*.

Verleger (2012) added that the U.K. government's taxation of North Sea oil contributed to the development of spot oil markets. "[T]he U.K. Treasury granted itself the right to decide the value of any oil processed by the company that produced it. Exxon, for example, would have been at the mercy of U.K. tax authorities had it processed crude from its fields. Rather than take such a risk, producers chose to sell their crude and then buy crude for processing from others. Their transactions created the first observable spot market for crude."

With the structure of the oil industry changing, an economic need for hedging volatile spot oil price risk emerged and the NYMEX responded to the opportunity with a suite of energy futures contracts, starting with the heating oil contract in 1981.

According to Yergin (1992), "The initial reaction to the futures market on the part of the established oil companies was one of skepticism and outright hostility. ... A senior executive of one of the ... [major oil companies] dismissed oil futures 'as a way for dentists to lose money.' But the practice ... [of] futures [trading] ... moved quickly in terms of acceptability and respectability. ... Price risk being what it was, ... no [commercial entity] ... could afford to stay out. As the volume of transactions built up astronomically, Maine potatoes became a distant ... and embarrassing memory" at the NYMEX.

Later, new challenges confronted the established U.S. exchanges. The CBOT, CME, and NYMEX were facing

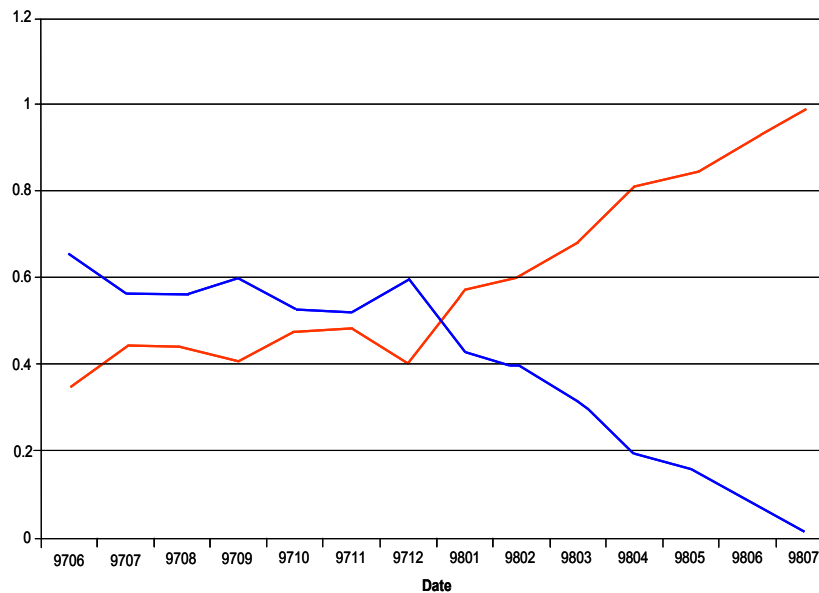


Exhibit 2 Eurex/DTB and LIFFE Bund Market Shares

Source: Pirrong (2005), Figure 1.

Note: The blue line is LIFFE's market share while the red line shows the Eurex/DTB's market share.

competitive threats from new forms of electronic trading. The starkest example came from Europe in 1998. At that time, the electronic exchange, the EUREX (DTB), successfully wrestled control of the 10-year German government bond futures contract, the Bund contract, from the (then) open-outcry LIFFE exchange in London by waging a “price war on fees.” Exhibit 2 illustrates how quickly LIFFE lost market share during this battle.

This unprecedented victory of an all-electronic venue over an established exchange accelerated the pace of change in Chicago. Soon after the Eurex coup, both the CBOT and CME embraced concurrent open-outcry and electronic trading. Under pressure from ICE Futures Europe, another innovative electronic futures exchange, the NYMEX listed its energy futures contracts on the CME's Globex electronic trading system in 2006.

In the late 1990s, worries about Chicago's competitiveness in the international arena continued unabated. According to Melamed (2009), “the only way to prepare ... [the CME] for the twenty-first century” was to demutualize; a member-driven organization was too slow in its decision-making processes. The result could be that the CME would lose the first-mover advantage that resulted from taking advantage of expected disruptive changes that were being stimulated by globalization and technological change. Therefore,

the CME went public in 2002, becoming the first U.S. financial exchange that was itself traded in the public markets..

By 2006, the Chicago Mercantile Exchange's trading volume “exceeded 2.2 billion contracts – worth more than \$1,000 trillion – with three-quarters of ... trades executed electronically,” according to CME (2007). In 2007, the CBOT merged with its historic cross-town rival CME; and in 2008, the NYMEX was merged into the combined Chicago exchange, CME Group, Inc.

Confirming Melamed's concern on how competitive the global environment could become, Acworth (2012) reported that as of 2011, two-thirds of all futures volume was being traded outside the United States, as illustrated in Exhibit 3.

4. Adversity Has Always Been an Essential Part of the Story

Given the dramatic narrative above, it is clear that adversity is an essential part of the story concerning the evolution of the futures industry. After all, adversity is the story of trading itself. As experts and market participants know, trading “requires discipline to tolerate and endure emotional pain to a level that 19 out of 20 people cannot bear. ... Anyone who claims to be intrigued by the ‘intellectual challenge of the markets is not a trader. The markets are as intellectually

Globalization

Two thirds of the industry's total volume is traded on exchanges outside the U.S.

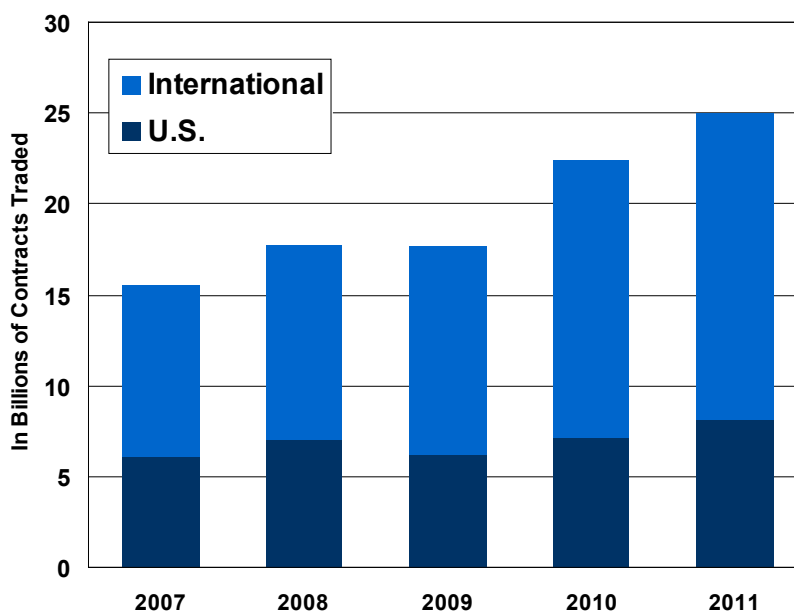


Exhibit 3

Source: Acworth (2012).

challenging as a fistfight. ... Ultimately, trading is an exercise in self-mastery and endurance,” as noted in Vince (1992). The same may be said about product development in the futures markets, where the history is largely one of overcoming failure and skepticism.

In 1953, the eminent empirical economist Holbrook Working began distilling lessons from past futures contract failures. In Working (1953), for example, he discussed why past efforts to “provide good hedging facilities for Pacific Northwest wheat” had invariably failed.

As shown in Exhibit 4, Chicago wheat futures prices exhibited extreme changes when the Portland wheat spot price also exhibited extreme changes. This meant that Chicago wheat futures contracts could have plausibly protected commercials that had exposure to Portland wheat prices, albeit imperfectly.

Given that Chicago wheat futures contracts were very liquid, the cost of entering and exiting Chicago wheat contracts was small enough to make the cost of this type of “insurance” sufficiently small as to make Chicago wheat futures contracts attractive to these commercial market participants. This, in turn, meant that illiquid

contracts specifically designed for the Portland, and other Pacific Northwest wheat markets had trouble attracting enough business to succeed.

Later in 1970, Working summarized the four conditions “necessary for a futures market to survive and prosper.” These hard-won lessons are still relevant today:

1. The contract terms and commission charges must be such as to attract appreciable use of the futures contract for merchandising purposes.
2. There must exist a possibility of attracting enough speculation to provide at least a reasonably fluid market.
3. Handlers of the commodity must have reasons to make substantial use of the futures contracts as temporary substitutes for merchandising contracts that they will make later.
4. There must exist adequate public recognition of the economic usefulness of the futures market.

Furthermore, an enduring philosophy of the CME has been an acceptance of the possibility of failure in its new product ventures: “Necessity is the mother of invention. Beginning in the early fifties ... [CME] members have vigorously researched, tested, and promoted many new

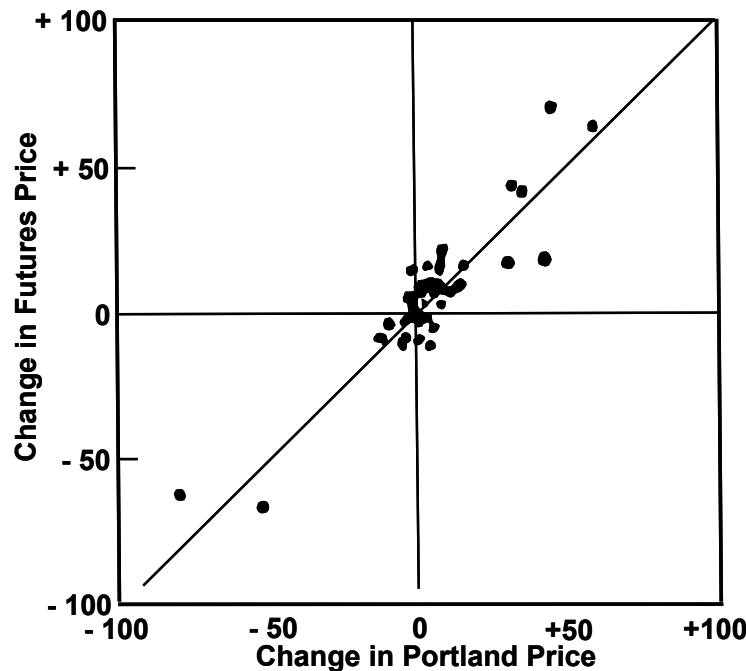


Exhibit 4 Relations of Two-Month Changes in Prices of Chicago Wheat Futures to Simultaneous Changes in Portland Spot Prices September 1946 to May 1952
Source: Excerpted from Working (1953), Chart 1.

contracts for futures trading. ... Some have succeeded and some have failed, but fear of failure has not impeded progress,” noted Harris (1970).

Conclusion

In reviewing the history of U.S. futures markets, one gets a sense of the resiliency of these institutions, in constantly responding to adversity from their earliest days and well into the modern times. Based on this history, one would expect that resiliency to continue, not through some “designing intelligence,” but rather through a willingness to continue to innovate through trial-and-error efforts. This insight may be one of the most important lessons for new and emerging financial centers as well.

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