> "Excessive speculation is having a two-pronged effect on the market; the first is reflected in increased volatility characterized by acute price run-ups and the second is to apply sustained long-term upward pressure on prices."
> *—Delta Air Lines Senior Vice President Richard B. Hirst (2011)*

III. Evisceration of Commodities Trading Rules Caused Price Spikes for Vital Products

Taylor Lincoln[1]

The rules governing commodities trading were largely eliminated at the end of the last century, allowing speculators to become dominant players in markets that were traditionally controlled primarily by businesses that create and use commodities.

At a minimum, the influx of speculators into the commodities markets has caused prices to whipsaw in ways that cannot be explained by the fundamentals of supply and demand. Such volatility, alone, is harmful to the economy because it causes uncertainty and unrest.

Worse, many experts believe that the activities of speculators—middlemen who neither produce nor consume goods—are elevating prices on the whole.

This theory is based on the nature of index funds, the primary means through which new speculators have entered the commodities markets.[2] Because index funds typically only take "long" positions, expressing an intent to buy[3]—compared with traditional speculators, who take both long and short positions—such funds' activities have been blamed for creating an illusion of scarcity that has driven prices up for sustained periods.

> "The very large trader by himself may cause important fluctuations in the market…If he is large enough, he can cause disturbances in the market which impair its proper functioning and are harmful to producers and consumers."
>
> —*Federal Trade Commission (1926)*

Perhaps the most compelling evidence that speculators are altering prices can be found in testimonials of principals in the industries that produce or rely on commodities. Representatives of the petroleum, airline and trucking industries have each blamed speculators for warping prices.

Distortions in commodities' prices hurt people who are completely uninvolved in the markets. Unlike stock market bubbles, for which the victims are largely limited to investors, commodity bubbles hurt everyone who purchases food, fuel or other goods made from everyday staples.[4]

Many experts blame speculation-driven spikes in the prices of food commodities that occurred late in the last decade for causing starvation in the developing world. What's more, the surge in the price of oil to $147 a barrel in the summer of 2008 may have acted as the tipping point in the chain of events that caused the financial crash and ensuing Great Recession. At a minimum, the surge did not help matters.

The Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 instructed the Commodity Futures Trading Commission, or CFTC, to create rules, "as appropriate," to limit speculators' market share.[5] The CFTC finalized a position-limits rule in November 2011, but the rule was tossed out by a federal judge in September 2012, just before it was scheduled to take effect.[6]

Regulation of Commodities Was Increased During the New Deal but Steadily Reduced in Recent Decades

Since the early 1920s, U.S. policy has acknowledged the potential for speculators to alter the prices of commodities in ways that belie normal market fundamentals.

"Future boards on commodity exchanges handling butter and eggs will practically become useless."
—New York Mercantile Exchange president upon the passage of the Commodities Exchange Act (1936)

The Grain Futures Act of 1922, passed in response to allegations that speculators were artificially depressing prices, required grain futures contracts to be traded on regulated exchanges.[7] But it did not include a controversial proposal to limit the number of contracts that speculators could hold.

In 1926, the Federal Trade Commission issued a major study concluding that speculation was skewing grain prices. "The very large trader by himself may cause important fluctuations in the market," the FTC study concluded. "If he is large enough, he can cause disturbances in the market which impair its proper functioning and are harmful to producers and consumers."[8]

A 1935 report by the House Agriculture Committee said that proposed legislation to regulate commodities markets was intended to "provide a measure of control over those forms of speculative activity which too often demoralize the markets to the injury of producers and consumers and the exchanges themselves."[9]

The 1936 Commodities Exchange Act, or CEA, finally limited the share of certain markets—including those for grain, cotton, butter and eggs—that individual speculators could control.[10] The CEA also required that designated commodities be traded on licensed exchanges. The law exempted traders who engaged in *bona fide* hedging transactions, referring to those conducted by commodity producers and end-users.

Critics predicted that setting position limits would have devastating consequences for the markets. The president of the New York Mercantile Exchange, for instance, said the bill would "undoubtedly curtail trading in futures to such an extent that future boards on commodity exchanges handling butter and eggs will practically become useless."[11] But the New York Mercantile Exchange remained useful enough to command $7.6 billion in a 2008 sale to CME Group, the world's largest futures exchange.[12]

As the 20th century progressed, additional agricultural products were added to the list of CEA-regulated commodities.[13] In 1974, a significant amendment to the CEA created the Commodity Futures Trading Commission, or CFTC. The amendment permitted the regulation of all commodities, not just agricultural products.

In response to the "Hunt Brothers silver manipulation" of the late-1970s and early 1980s, the CFTC required exchanges to adopt position limits for all futures markets.[14]

(In an attempt to corner the silver market, Nelson and William Hunt drove the price of silver from $1.95 to $54 an ounce between 1973 and 1980. Then, the Federal Reserve limited the brothers' ability to manipulate the market. The price of silver nosedived and the brothers were eventually forced to declare bankruptcy.[15])

But over time, in sync with the nation's deregulatory trend, the rules on position limits were loosened. In 1987, the CFTC exempted generalized "risk management" activities.[16] This opened the door for speculators to qualify for an exemption.

In 1991, J Aron & Company, the commodities affiliate of investment bank Goldman Sachs, sought to enable a pension fund to invest in an index tied to commodity prices. The pension fund would not own actual commodities' contracts. Instead, its investment would rise or fall based on prices of the commodities in the index.[17]

To eliminate its risk as the dealer, J Aron intended to purchase futures contracts that mirrored the pension fund's bet on the index. Because the contracts that J Aron planned to buy would exceed the position limits, it needed an exemption to go forward.

The CFTC granted J Aron's request to be classified as a *bona fide* hedger. Several other Wall Street firms were given position limits exemptions the same year.[18] In 1992, Congress passed the Futures Trading Act, which gave the CFTC discretion to exempt individual futures contracts from many of the CEA's provisions.[19]

Less than a month after the passage of the Futures Trading Act, nine businesses—including J Aron, BP Oil and Koch Industries—received an exemption from the CEA's exchange-trading requirement for certain energy contracts.[20]

> "If we are to rationalize exemptions from anti-fraud and other components of our regulatory scheme on the basis of the 'sophistication' of market users, we might as well close our doors tomorrow."
>
> *—CFTC Commissioner Sheila Bair (1993)*

In April 1993, the CFTC permitted "large commercial participants"—such as banks, trust companies and securities broker-dealers—to trade energy contracts off of regulated exchanges. The CFTC rule even exempted such trades from the anti-fraud provisions of the Commodities Exchange Act.[21]

Acting-CFTC Chairman William Albrecht justified the exemption because the commission was "not aware of fraudulent practices perpetrated against the general public by the participants in this market" and because the new rule applied only to "large sophisticated commercial entities."[22]

CFTC Commissioner (and future FDIC chairman) Sheila Bair dissented. "If we are to rationalize exemptions from anti-fraud and other components of our regulatory scheme on the basis of the 'sophistication' of market users, we might as well close our doors tomorrow, because approximately 98 percent of users of regulated, exchange-traded futures would meet the eligibility requirements of the exemption," Bair said.[23]

Late in 2000, Congress passed the Commodity Futures Modernization Act, or CFMA. Although the act has been primarily recognized for excluding financial derivatives trades from regulation, it also exempted energy trades. The exemption was dubbed the "Enron Loophole" after the now-disgraced Texas company, which lobbied heavily for the provision. Enron had established an exchange, Enron Online, in 1999.[24]

Congress's inclusion of the Enron Loophole in the CFMA went further than recommended by the otherwise deregulatory President's Working Group on Financial Markets, or PWG.[25]

The PWG in a 1999 report called for exempting financial derivatives from many provisions of the CEA.

The Intercontinental Exchange "distinguishes its OTC market from the regulated futures exchanges primarily by the absence of regulation."
—Senate Permanent Subcommittee on Investigations (2006)

But the PWG said that exemptions "should not extend to any swap agreement that involves a non-financial commodity with a finite supply,"[26] such as energy products.

The effect of the CFMA's green light to trade energy commodities off of regulated exchanges was enhanced because the new permission coincided with advances in over-the-counter markets that were enabled by the Internet. Although over-the-counter trading traditionally involved individually negotiated deals between two parties,[27] over-the-counter exchanges were now able to offer services similar to regulated exchanges with traditional trading floors.[28]

In 2000, a group of banks and oil companies—including Goldman Sachs and the company now known as BP plc—formed the Intercontinental Exchange, or ICE, an over-the-counter exchange for energy and metals commodities.[29] The ICE market proved to function just like regulated exchanges, minus the regulation.

"From a practical perspective, the only real difference between the two markets is the degree of regulation…Trading on [regulated] futures market is subject to CFTC oversight, while trading on the unregulated OTC exchanges is not," the Senate Permanent Subcommittee on Investigations concluded in 2006.[30] "ICE distinguishes its OTC market from the regulated futures exchanges primarily by the absence of regulation," the subcommittee noted.[31]

Speculators' Share of the Markets Soared After Deregulation

Speculators have long played an important role in the functioning of futures markets by providing a means for producers and end-users to lock in prices. But deregulation of commodities trading led to a dramatic increase in the share of markets that speculators control. Before the past decade, speculators held about 30 percent of most markets. Now, they typically control about 70 percent of markets, and sometimes up to 90 percent. For instance:

- Speculators' share of oil futures markets increased from 37 percent in 2000 to 71 percent in 2008, according to analysis by former Representative Bart Stupak (D-Mich.)[32]
- In May 2011, 88 percent of "long" oil contracts were held by speculators, CFTC Chairman Gary Gensler testified.[33]
- Purchases of wheat future contracts by index traders on the Chicago Mercantile Exchange grew from 30,000 a day in 2004 to 220,000 in mid-2008.[34]
- The volume of natural gas trades increased by 590 percent from 1995 to 2011, while U.S. consumption increased by only 6.5 percent.[35]
- As oil was soaring to an eventual peak of $147 a barrel in 2008, eight of the top ten holders of oil futures contracts were Wall Street banks, according to confidential CFTC data leaked by Senator Bernie Sanders (I-Vt.).[36]

Increased Speculation Has Caused Price Shocks

The surge in speculation coincided with soaring commodity prices. Between 2003 and 2008, energy and metal prices increased by 230 percent, according to the World Bank. Food and precious metal prices doubled, and fertilizer prices quadrupled.[37] The conventional explanation was that these price increases were caused primarily by increased demand, largely due to growth in developing countries.

Although rising demand was a factor, it does not tell the whole story. Overwhelming evidence suggests that increased speculation was also a significant factor. This conclusion can be justified by two key sets of evidence: the findings of in-depth investigations and the opinions of experts.

> "The large purchases of crude oil futures contracts by speculators have, in effect, created an additional demand for oil, driving up the price of oil to be delivered in the future"
>
> —*Senate Permanent Subcommittee on Investigations (2006)*

Studies Have Repeatedly Found That Speculation Is Influencing Prices

The Senate Permanent Subcommittee on Investigations conducted in-depth studies between 2006 and 2009 on the prices of oil, natural gas and wheat. It concluded in each case that sustained hikes in the price of these commodities could not be explained by supply and demand.[38]

As oil prices leapt from $25 to $75 a barrel between 2000 and 2006, the subcommittee found "compelling evidence that the oft-cited…factors do not fully explain the recent rise in energy prices."[39]

Instead, the subcommittee report said, "The large purchases of crude oil futures contracts by speculators have, in effect, created an additional demand for oil, driving up the price of oil to be delivered in the future in the same manner that additional demand for the immediate delivery of a physical barrel of oil drives up the price on the spot market."[40]

The subcommittee's researchers concluded: "There is substantial evidence that the large amount of speculation in the current market has significantly increased prices. Several analysts have estimated that speculative purchases of oil futures have added as much as $20-$25 per barrel."[41]

In a separate inquiry, the subcommittee found that a single hedge fund, Amaranth Advisors LLC, used its market position to manipulate natural gas prices. At one juncture, Amaranth controlled 75 percent of outstanding natural gas contracts for a single month.[42]

Eventually, Amaranth ran short of the capital it needed to manipulate prices, lost $2 billion in less than three weeks, and was liquidated at a significant loss to its investors—but not before wreaking havoc on the market.[43]

"The large number of wheat futures contracts…held by commodity index traders is a primary reason for the pricing problems in the wheat market."
—Senate Permanent Subcommittee on Investigations (2009)

"Traders interviewed by the subcommittee said that during the spring and summer of 2006 the differences between winter and summer [natural gas] prices were 'clearly out-of-whack,' at 'ridiculous' levels, and unjustified by supply or demand," the subcommittee reported.[44]

The subcommittee also concluded that speculation was to blame for soaring wheat prices in 2008. There was "significant and persuasive evidence that the large number of wheat futures contracts…held by commodity index traders is a primary reason for the pricing problems in the wheat market," the subcommittee found.[45]

The World Bank compared prices to supply in various commodities at the end of the last decade and, likewise, found that price increases could not be explained by normal fundamentals.

Petroleum production increased from 85.8 million barrels a day (mb/d) in the second half of 2007 to 86.5 mb/d in the first half of 2008, the Word Bank reported, while consumption declined from 86.5 mb/d to 86.3 mb/d.[46]

"Prices should have fallen," the World Bank's researchers concluded. Instead, the price of a barrel of oil rose from $90 to $132. Further, among key food commodities, the reserve supply was 20 percent higher in 2009 and 2010 than in 2007 and 2008, yet prices were an average of 23 percent higher.[47]

The Federal Reserve Bank of St. Louis in 2011 primarily attributed rising oil prices to increased demand, but also implicated speculators. "Speculation played a significant role in the oil price increase between 2004 and 2008 and its subsequent collapse," the bank's researchers wrote. "Our results support the view that the financialization process of commodity markets explains part of the recent increase in oil prices."[48]

> "It's kind of unarguable that financial actors and speculators aren't affecting prices. They are."
> *—CFTC Chairman Gary Gensler (March 2012)*

The Commodity Markets Oversight Coalition, an alliance of consumer groups and businesses, tabulated 81 studies which concluded that speculation is affecting the markets.[49]

In contrast, some studies—including one published in July 2008 by an interagency task force convened by the CFTC—have determined that the increase in speculation is not affecting prices. Although increases in trading activity in the oil market "broadly coincided with the run-up in crude oil prices," the CFTC task force wrote, "preliminary analysis to date does not support the proposition that speculative activity has systematically driven changes in oil prices."[50]

Experts Agree That Speculation Has Jolted Prices

But a wide spectrum of experts, including government regulators, oil industry officials and representatives of industries that depend on commodities, disagree with the findings of the CFTC study. They say the speculation is influencing prices.

For example, Gary Gensler, a former Goldman Sachs partner who became chairman of CFTC in 2009,[51] does not agree with the conclusion that the CFTC reached before he took over as its leader.

"I think with only roughly 15 percent of the positions in the oil market or natural gas futures markets being the producers, merchants, and end users, and 80 to 85 percent being financial actors and speculators, it's kind of unarguable that financial actors and speculators aren't affecting prices. They are," Gensler said in March 2012 Senate testimony.[52]

Former Federal Reserve Chairman Alan Greenspan testified in 2006 that "with the demand from the investment community, oil prices have moved up sooner than they would have otherwise."[53]

"Speculators bore significant responsibility for the sharp increase in oil prices in the last few years."
—Saudi Arabia Oil Minister Ali al Naim, cable to the State Department (2008)

Former Exxon chairman and CEO Lee Raymond said in 2005 testimony, "Senator, the facts are—and I've said this publicly for a long time—the oil prices have been moving steadily up for the last two years. And I think I have been very clear in saying that I don't think that the fundamentals of supply and demand—at least as we have traditionally looked at it—have supported the price structure that's there."[54]

Lord John Browne, then the CEO of BP, offered this assessment in 2006: "There has been no shortage and inventories of crude oil and products continue to rise. The increase in price has not been driven by supply and demand."[55]

The oil minister of Saudi Arabia, the world's largest petroleum producer, blamed speculators in 2008 for the soaring cost of oil. "Speculators bore significant responsibility for the sharp increase in oil prices in the last few years," Oil Minister Ali al Naim said in a 2008 State Department cable that was published by Wikileaks.[56]

Oil prices crashed after the financial meltdown of 2008, falling from a peak of $147 a barrel to a low of just over $30 a barrel.[57] But prices soon rose to historically high levels, again at odds with market fundamentals.

By April 2011, when Goldman Sachs issued a widely reported recommendation that investors withdraw from oil investments, the price of oil had rebounded to $109 a barrel. By a formula put forth by Goldman Sachs, speculators were responsible for elevating the price by $21 to $27.[58]

Exxon CEO Rex Tillerson estimated in Senate testimony in May 2011 that the price of oil would have been "somewhere in the $60 to $70 range" if it were dictated by the fundamentals of supply and demand.[59] The price of oil closed at more than $98 a barrel that day.[60]

"Index speculators' trading strategies amount to virtual hoarding via the commodities futures markets."
—*Hedge fund manager Michael Masters (2008)*

Perhaps the most telling evidence that speculation has affected prices can be found in the viewpoints of leaders of industries that rely on commodities for their livelihood.

"It is beyond debate that speculative activity affects prices in the futures markets," Delta Air Lines Senior Vice President Richard B. Hirst wrote in comments submitted in 2011 to the CFTC. "Excessive speculation is having a two-pronged effect on the market; the first is reflected in increased volatility characterized by acute price run-ups and the second is to apply sustained long-term upward pressure on prices."[61]

Hirst blamed speculation for creating "artificial price levels" that "have significantly increased Delta's fuel costs, hedging costs and overall business risk, reducing Delta's ability to make capital investments, to expand its business and to create jobs."[62]

The American Trucking Associations offered a similar view. "Excessive speculation is contributing to the rapid escalation of diesel fuel prices and is harming the trucking industry and consumers," the trade association wrote to the CFTC.[63]

Index Trading Has Exacerbated the Effects of Speculation

The primary manner in which speculators have increased their role in the commodities markets has been through their participation in commodities index markets, which were pioneered by Goldman Sachs affiliate J Aron & Company in 1991, and grew dramatically in the second half of the last decade.

Unlike typical speculators, which both buy and sell, index funds typically focus on purchasing commodities in a manner analogous to the buy-and-hold strategies used by many stock market investors.[64] This practice can create an illusion of scarcity.

"Index speculators' trading strategies amount to virtual hoarding via the commodities futures markets," hedge fund manager Michael Masters said in 2008 Senate testimony.[65]

Index funds "have often provided a negative yield due to the effects of rolling positions in futures markets."
—*The Wall Street Journal (2011)*

"Institutional investors are buying up essential items that exist in limited quantities for the sole purpose of reaping speculative profits," Masters said.[66]

The Senate Subcommittee on Permanent Investigations found that commodity index investing rose from about $2 billion in 2004 to more than $60 billion in 2011.[67]

Commodity speculation has been promoted as an alternative form of investment that, according to an influential 2004 academic paper, offers equivalent returns to equities and can perform well when the stock market is doing badly.[68]

But index funds' activities may be altering prices in ways that hurt their performance. Though their business models are predicated on buying, they must regularly sell expiring contracts, then use the proceeds to buy new contracts with more distant expiration dates. This process is known as the "roll." Evidence suggests that index funds' practice of selling near-term contracts and purchasing longer-term contracts in unison might be consigning investors to a pattern of selling low and buying high. For example, a fund specializing in petroleum lost nearly 25 percent of its value over five years in which oil prices soared.

"Another headwind for tracker funds is that they have often provided a negative yield due to the effects of rolling positions in futures markets," the *Wall Street Journal* reported in 2012. "A classic example of this is the U.S. Oil Fund. This popular exchange-traded fund has delivered a negative return of 23.7 percent over the past five years, despite the…crude oil price rising almost 60 percent."[69]

Researchers David Frenk and Wallace Turbeville quantified the effects of the roll on commodities prices in a 2011 research paper. They compared prices of wheat and oil from 1983 through June 2011 in time periods when the "roll" normally occurs (the fifth to ninth days of the month) with prices in non-roll periods.[70]

> "Families used to buying kilos of food were only able to buy cups of the same food items. People went hungry. Children stopped growing for months at a time, others perished."
>
> *—Letter sent by 183 civil society groups to President Obama (2009)*

Typically, the price for futures contracts set to expire far in the future is less than the current, or spot, price. This stands to reason, as the seller is willing to accept less in exchange for a guaranteed future price. But since 2004, when the explosion of index trading began, Frenk and Turbeville found that there has been a far greater incidence of occurrences in which the prices of the longer-dated contracts are higher than shorter-dated contracts, a phenomenon known as contango.[71]

The Toll: Increased Prices Inflict Serious Harm on Families

The abnormal rise and fall of a dot-com stock might be perilous for investors, but consumers do not rely on stocks to fuel their cars, heat their houses or feed their families.[72] Commodities are different.

Price spikes in commodities have been blamed in recent years for causing food shortages resulting in starvation in the developing world and for contributing to the onset of the Great Recession in the United States.

In 2009, an alliance of 183 civil society groups sent a letter to President Obama charging that speculators' actions were a significant cause of the previous year's spike in wheat and corn costs.

They blamed those price increases for causing dire consequences.[73] "Families used to buying kilos of food were only able to buy cups of the same food items. People went hungry. Children stopped growing for months at a time, others perished," they wrote.[74]

Many observers have blamed the run-up in oil prices last decade for pushing the U.S. economy into recession. This hypothesis is dicey because other factors—such as the mortgage lending binge, massive investments in mortgage-backed securities and Wall Street's provision of billions of dollars of quasi-insurance (known as credit default swaps) on those securities—also put the economy in great peril

University of San Diego economist James D. Hamilton concluded that the run-up in oil prices caused the onset of a recession in late-2007, but he left open the question of whether high oil prices were the tipping point that led to the calamitous financial crisis and resulting Great Recession of 2008 and beyond. (Note: Hamilton disagrees with the thesis that speculation was to blame for rising oil prices.)

Whether we would have avoided or just postponed the "ferocious downturn" of late 2008 had the economy not gone into recession in late 2007 "is a matter of conjecture," Hamilton wrote. "Regardless of how we answer that question, the evidence to me is persuasive that, had there been no oil shock, we would have described the U.S. economy in 2007 quarter four through 2008 quarter three as growing slowly, but not in a recession."[75]

Recent Developments: Risks Posed by Speculation Remain Unaddressed

Dodd-Frank called on the CFTC to establish limits, "as appropriate," on the amount of commodities that could be held by speculators.[76] In October 2011, the CFTC issued a final rule pursuant to Dodd-Frank that limited the positions that speculators could hold on 28 commodities, including crude oil and natural gas.[77]

The rule called for eliminating the exemption from position limits for managers of index funds,[78] but the effectiveness of this prohibition was dubious. The power of index funds to influence prices derives from their cumulative positions, not the individual funds' bets, which may not exceed position limits.

A more promising approach would have been to limit the total holdings of speculators to about one-third of individual markets, which was the historical norm before the rules were lifted at the beginning of the last decade. Such a measure would return speculators to the role of serving markets, instead of distorting them.[79]

The rule was widely criticized for being insufficient.

"The CFTC was supposed to provide speed limits for Wall Street gambling on commodities. Today's overly broad rule is like setting the speed limit at 125 miles per hour," said Senator Maria Cantwell (D-Wash.) upon the rule's announcement. "This rule is simply too weak to meaningfully protect consumers."[80]

Trade associations representing airlines, truckers and bakers also criticized the rule as being too weak.

As it turned out, the CFTC's rule did not end up setting any speed limit. The rule was shot down by a federal judge in September 2012, shortly before it was scheduled to take effect.[81]

Chances are that some event, such as signs of an enduring economic recovery, will prompt speculators to send commodities' prices soaring again. That, in turn, will lead to renewed calls for better regulation.

When Congress revisits commodities speculation, it should take decisive action to return the markets to their intended purpose of serving buyers and sellers, not the middlemen who stand between them.