



Why Haven't Uranium Futures Contracts Succeeded?

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Why have some seemingly promising futures contracts not succeeded in the recent past? In this digest article, we examine one such example, the uranium futures market. Two related papers analyze additional futures market failures: namely, in the pulp market (in Till (2015a)) and in the weather derivatives market (in Till (2015b)).

The structure of this brief paper is as follows. First we provide some background on the uranium futures contract as well as a description of this contract, and then we note how the uranium market does not sufficiently match up against the criteria for the successful launch of a futures contract.

Background on the Uranium Futures Contract

Very helpfully, a report by the U.S. Senate in 2014 provides details on the uranium futures contract. According to U.S. Senate (2014):

- The uranium futures contract “was established and began trading for the first time on May 6, 2007.”
- “This financially-settled contract is traded on the CME Globex and CME ClearPort trading platforms, and is linked to prices provided by Ux Consulting Company, LLC.”
- “In recent years, the uranium futures market has had relatively few participants, the U308 contract has rarely traded, and open interest has generally remained relatively low.”
- “There are frequently zero reported trades per day.
- For example, for the week of September 9-September 16, 2014, only one trade was reported, involving 50 contracts.”

The specifications for the CME Group's uranium futures contract are provided in Exhibit 1 on the next page.



Exhibit 1

UxC Uranium U308 Futures Contract Specifications		
Product Symbol	UX	
Venue	CME Globex, CME ClearPort	
Trading Hours	CME Globex (Electronic Platform)	Sunday - Friday 6:00 p.m. - 5:15 p.m. (5:00 p.m. - 4:15 p.m. Chicago Time/CT) with a 45-minute break each day beginning at 5:15 p.m. (4:15 p.m. CT)
	CME ClearPort	Sunday - Friday 6:00 p.m. - 5:15 p.m. (5:00 p.m. - 4:15 p.m. Chicago Time/CT) with a 45-minute break each day beginning at 5:15 p.m. (4:15 p.m. CT)
Contract Size	250 pounds of U308	
Price Quotation	U.S. Dollars and Cents per pound	
Minimum Fluctuation	\$0.05	
Floating Price	The Floating Price for each contract month will be the month-end spot U308 price published in Ux Weekly for the contract month by Ux Consulting Company, LLC (UxC). For settlement of this contract, the month-end spot price provided by UxC will be considered final on the payment date stated in Rule 970.08 and will not be subject to any further adjustment.	

Source: http://www.cmegroup.com/trading/metals/other/uranium_contract_specifications.html, which was accessed on November 23, 2014.

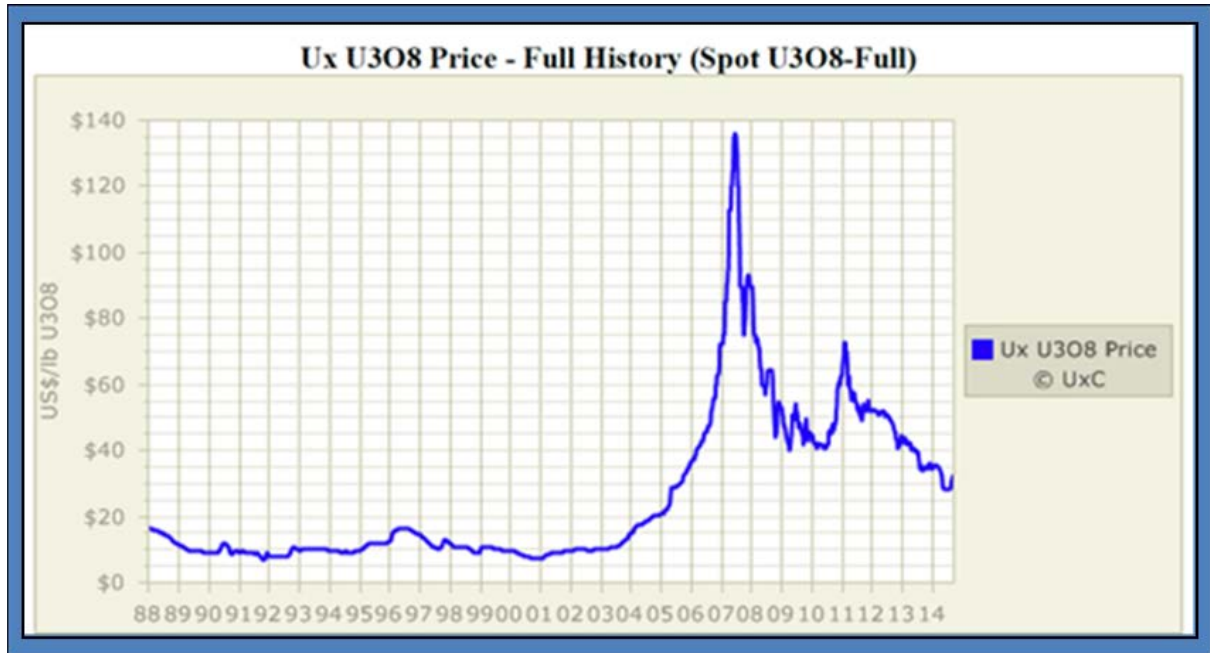
The Uranium Market versus the Criteria for the Successful Launch of a Futures Contract

Sandor's Criterion Met: There Should be Sufficient Volatility

Sandor (1973) notes that one criterion for a futures contract to be successful is that the price variability of the commodity must be sufficient. That would appear to be the case for uranium prices. Noted U.S. Senate (2014): "In recent years, the uranium market has experienced significant price fluctuations, based on massive swings in market sentiment towards nuclear power and technology changes for alternative sources of energy." This is illustrated in Figure 1 on the next page.



Figure 1



Source of Graph: U.S. Senate (2014), p. 122, which, in turn, accessed the graph from the Ux Consulting Company, LLC, <http://www.uxc.com>.

Pirrong's Criterion Not Met: There Should be Fragmented Marketing Chains

Pirrong (2014) notes that “futures contracts are most viable when ...” not only are there “large holdings of inventories to be hedged,” but also when “there are relatively fragmented marketing chains ...”

In contrast, there is a “lack of [trading] counterparties in the [uranium] market, [which] add[s] to the risk of holding uranium assets,” according to the 2014 U.S. Senate report, which, in turn, cited a December 2008 Goldman Sachs memorandum on uranium trading.

In explaining why pulp futures contracts have never become successful, Pirrong (2014) explained that there has been “a lot of *vertical integration* in pulp, and even freely traded pulp ... [has] not been traded in long chains like grain or oil is. [As a result, there are] few trader intermediaries [in the pulp markets].” (Italics added.)

Does this consideration apply to uranium? The short answer is yes.

According to the World Nuclear Association (2014), “With the main growth in uranium demand being in Russia and China, it is noteworthy that the vertically-integrated sovereign nuclear industries in these countries (and potentially India) have sought equity in uranium mines abroad, bypassing the market to some extent.”



Gray's and Silber's Criterion Not Met: There Should be a Level Playing Field Amongst Participants

Both Gray (1966) and Silber (1985) discuss how, in order to be willing to provide liquidity to a futures market, speculators should not be at a large informational disadvantage.

In contrast, the 2014 U.S. Senate report quoted a December 2008 Goldman Sachs memorandum as stating that the uranium "market was characterized by 'long-term physical participants trading with each other,' which could lead to significant informational disadvantages for new entrants ..."

Conclusion

While uranium prices have been sufficiently volatile to merit a futures contract, it appears that the industrial organization of the uranium industry has not been conducive to the success of a futures contract, analogous to other failed futures contracts.

GCARD readers whom are interested in a more in-depth discussion of what has separated successful futures contracts from failed contracts are encouraged to review the longer essay in Till (2016).

Endnotes

This article is excerpted from a seminar in Chicago on why some futures contracts have succeeded while others have failed, which was provided by the author to staff from the Shanghai Futures Exchange.

The information in this article has been assembled from sources believed to be reliable, but is not guaranteed by the author.

References

Gray, R., 1966, "Why Does Futures Trading Succeed or Fail: An Analysis of Selected Commodities," *Proceedings of the Futures Trading Seminar, Volume III*, Madison: Mimir Publishers, pp. 115-137.

Pirrong, C., 2014, private correspondence, October 8. [[C. Pirrong](#) is a Professor of Finance at the University of Houston.]

Sandor, R. L., 1973, "Innovation by an Exchange: A Case Study of the Development of the Plywood Futures Contract," *The Journal of Law and Economics*, Vol. 16, No. 1, April, pp. 119-136.

Silber, W., 1985, "The Economic Role of Financial Futures," in A. Peck (ed) *Futures Markets: Their Economic Role*, Washington D.C.: American Enterprise Institute for Public Policy Research, pp. 83-114.

Till, H., 2015a, "Why Haven't Pulp Futures Contracts Succeeded? A Case Study," *Journal of Governance and Regulation*, Vol. 4, Issue 4, pp. 515-523.

Till, H., 2015b, "Why Haven't Weather Derivatives Been More Successful as Futures Contracts? A Case Study," *Journal of Governance and Regulation*, Vol. 4, Issue 4, pp. 375-379.

Till, H., 2016, "Brief Case Studies on Futures Contract Successes and Failures," *Journal of Alternative Investments*, Vol. 18, No. 3, Winter, pp. 39-56.



U.S. Senate, 2014, "Wall Street Bank Involvement with Physical Commodities: Majority and Minority Staff Report," Permanent Subcommittee on Investigation, Committee on Homeland Security and Governmental Affairs, November 18.

Accessed via website:

<http://www.hsgac.senate.gov/download/report-wall-street-involvement-with-physical-commodities> on November 23, 2014.

World Nuclear Association, 2014, "Uranium Markets, April.

Accessed via website: <http://www.world-nuclear.org/info/nuclear-fuel-cycle/uranium-resources/uranium-markets/> on November 23, 2014.

Keywords

Futures, volatility, commodity, speculator, uranium