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## Uranium Pricing Evolves

A couple of months ago, we wrote a cover signaling that changes in the market would necessitate some change in our approach to reporting price indicators. With this issue, we introduce this evolution and provide additional discussion about the changes in the market as it affects price reporting. A much more detailed discussion of this subject will appear in the essay of our fourth quarter Uranium Market Outlook report, which is scheduled to be released later this month.

Throughout the history of our price reporting, the $\mathrm{Ux}_{3} \mathrm{U}_{8}$ Price has been offer-based, specifically as it relates to the most competitive offer of which we are aware. The rationale for this is simple: the most competitive offer is one that will beat out all others and thus is the one most likely to be met by a bid or be accepted by a buyer, leading to a transaction. As such, it is a good representation of the market price at any point in time. Also, by definition, a transaction cannot take place at a price below the most competitive offer, although it is possible that we are not reporting the most competitive offer, just the most competitive offer of which we are aware.

In recent years, we have seen the market change with the advent of commodities-style brokers in uranium and the appearance of a bid/offer system. In the past, bids were not posted or otherwise widely reported. Neither were offers. In fact, the emergence of this bid/offer information has helped support the price information that we report as the offers, which have always been made, have become more visible. More than that, the daily posting helps demonstrate that price can change quite dramatically on a daily basis, again supporting the dramatic and, to some, hard to believe weekly price changes that have been witnessed in the past.

Today, we routinely collect bid as well as offer information as part of our market tracking and price reporting function. (We also have been publishing bid information on a daily basis for over two years via the UxC Broker Average Price (BAP) and before that the bid/offer spreads of particular brokers.) Everyone making offers is acutely aware of the bid levels available in the market as they track the postings by brokers and others to get a sense of the market's position at any point in time.

Importantly, the advent of bids has changed the nature of offers that are made in market, in that the offers are made in relation to the outstanding bids. In this respect, the offers initially shown or posted are not necessarily the best ones, but ones made in opposition to the prevailing bids, with the expectation that the resulting gap between the two being bridged by counter-offers or counter-bids to get to the point where a deal is struck. It is also the case that sellers can hit outstanding bids and buyers can take outstanding offers, depending on the direction of the market and motivation of the participants. Thus, bids have become a more integral part of the pricing structure.

Our pricing to date has recognized this situation. Our reported prices are usually below the posted offer levels, sometimes well below. At times, they have been at the level of the bids, based on our knowledge that a particular supplier would be willing to sell at that level. In most cases, the offer information is sufficient to indicate the likely price level at which a transaction may take place, but in some cases additional judgments must be made to derive what would be a likely market-clearing price.

To better capture the current situation and provide additional flexibility to report prices in the future, we are modifying our spot price definition as follows, with the changes in italics:
"The Ux Spot Prices indicate, subject to the terms listed, the most competitive offers available for the respective product or service of which The Ux Consulting Company, LLC (UxC) is aware, taking into consideration information on bid prices for these products and services and the timing of bids and offers as well."

Note that this does not mean we will be taking the simple average of offers and bids to come up with a spot price, such as is done mathematically in the derivation of the UxC BAP. Rather, it is the recognition that offers are made relative to the bid levels shown or otherwise known, and the final and most competitive offer may be and usually is better than what is initially shown or otherwise revealed. Ultimately, what we want to come up with is the most competitive offer that would lead to a transaction.

In doing this, it may be necessary to apply a certain amount of judgment, but our intent is to keep this judgment, and certainly any subjectivity, to a minimum. We will continue to make price indicators as empirically-based as possible and will consider such items as observable patterns, the relative strength of the bid and offer sides, whether deals are done directly or through brokers, and other factors in the determination of price.

Our belief is that this change will not result in any appreciable impact on the reported price, but will give us additional flexibility to derive what would be the most competitive offer in the market during those times that this flexibility is needed. In fact, key features of our price reporting will remain unchanged, such as:

- We will continue to use the prices of recent transactions as a factor in determining price. Such transactions have implied or accepted offers in them and, as such, are very useful guides to where the price is, and, if very recently completed, usually the best guide.
- We will not use $\mathrm{UF}_{6}$ offers or transactions to derive a $\mathrm{U}_{3} \mathrm{O}_{8}$ price. While such transactions clearly affect the supply and demand for $\mathrm{U}_{3} \mathrm{O}_{8}$ since they contain $\mathrm{U}_{3} \mathrm{O}_{8}, \mathrm{U}_{3} \mathrm{O}_{8}$ and $\mathrm{UF}_{6}$ together are somewhat different products.
- We will continue to consider transaction size and delivery timing and location criteria. As before, note that specific benchmarks can change over time to reflect market trends in order to capture representative market activity.
- Our month-end price will be the price we report the last Monday of the month, as is the case now. However, this could change in the future.

A comment on timing is in order. We attempt to capture the state of the market as of the day we publish. Often, offers and bids change during the course of the day and we will consider new information as the day progresses. However, offers and bids issued late in the day, when these cannot be verified or acted upon, are excluded from consideration. In the future, a more concise window for considering price information may be instituted, but to do this we must be convinced that there will be sufficient activity to support it.

We have mentioned "flexibility" more than once in this piece. A major question facing price reporting is how the market will evolve in the future. Will it become more like well developed commodity markets such as the oil market, where there is considerable activity in both the physical and futures market, with price being settled in a short time span each day? Or, will it revert more to the market that existed prior to the entry of the commodities-style brokers and financial players? Certainly, Fukushima complicates the answer to this question somewhat, as what had been a growing and volatile market has become, at least for the time being, somewhat more subdued.

Our suspicion is that the market will continue to evolve and brokers and financial players will continue to be active. This market will likely never achieve the liquidity of the oil market, but it must be remembered that the oil market itself has undergone a tremendous transition over the past 30 years.

In the meantime, the brokerage market has met some external changes recently, as witnessed by what has happened to MF Global (see insert). It is interesting to note that none of the three original participants in the UxC BAP are still part of it, although in August 2010 we added Evolution Markets, which is, for now, the sole participant. Our intention is to add other contributors as this portion of the market experiences some turnover, just like other parts of the market. In any case, it is important to point out that MF Global's exit from uranium was due to the overall bankruptcy of the company, and not to a lack of that company's interest in the uranium sector or the uranium industry's lack of interest in their services.

Note that the above discussion refers primarily to the spot uranium market, as the spot conversion, enrichment, and $\mathrm{UF}_{6}$ markets are not as actively traded. In addition, our long-term prices will continue to be reported based on offer prices. Typically, buyers do not bid for material to be delivered under long-term contracts. This is another reason that our overall pricing approach is largely offer based.

Our goal is to provide information that is useful to the industry and that evolves with the inevitable changes in the market. We were the first to develop a weekly price indicator, the first to introduce a daily indicator, and, along with NYMEX (now CME), established the uranium futures contract. All of these represented important price developments in the evolution of the market. We will continue to consider changes that best meet the need of the market as we move forward. As always, we welcome industry feedback in response to our efforts.

## UxC Broker Average Price Update

The recent bankruptcy filing of MF Global, one of the original contributing sources to the UxC Broker Average Price (BAP), has forced us to consider what near-term actions need to be taken to continue the integrity of the pricing information. Because MF Global is now in administration and is not performing brokerage services, we have dropped their contribution from the calculation of the UxC BAP. While it is quite likely that the uranium brokerage function of MF Global will quickly re-emerge in the marketplace, during this interim period we will continue to publish the daily UxC BAP based on a single source of price information from Evolution Markets.

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