

Industry Note

Equity Research

April 23, 2020

Metals & Minerals

Uranium Weekly: Term Demand the Final Ingredient Still Missing

Ux Consulting's (UxC) weekly price indicator rose to US\$32/lb (+US\$2.50/lb) this week, as reported on the evening of Monday, April 20. Subsequently, the daily spot price increased to US\$32.88/lb. The spot price has now increased 32% year-to-date and is at its highest point since February 2016. The March month-end term price is unchanged at US\$31.00/lb - we expect this price indicator to increase at the end of April. We note that Ux is currently indicating that the three-year forward price is US\$35.75/lb and the five-year forward price is US\$39.00/lb (Exhibit 8).

Spot market volume has been strong - mostly from producers. So far in April, 10.8mmlbs U3O8e has been transacted in the spot market under 59 transactions. Total demand year-to-date is now at 29.9mmlbs U3O8e and total transactions are at 182. Spot volume year-to-date is well above the five-year average and tracking above the record volumes that were achieved in 2018 (Exhibit 6). We understand that producers have been the most active in the spot market this year (purchasing to meet contractual volumes); utilities to this point have been limited players in the spot market.

Term market activity has yet to pick-up. UxC is reporting that 18 transactions have been completed in term market so far in 2020, which is better than the 8-10 transactions reported for this time last year. However, term volume is low at a reported level of >12mmlbs U3O8e, which surprisingly, is below the reported volume last week of >19mmlbs U3O8e. While we understand that utilities and producers are having off-market discussions (and Cameco has noted that its pipeline of prospective term transactions is the strongest it has been in years), we believe that on-market RFPs from a number of utilities could be the catalyst needed to get the published term price moving in an upward trajectory.

Over the near term, the upward pressure on the spot uranium price is likely to continue, given the increased uncertainty about the timing of a resumption of production at Cigar Lake. We continue to believe that the timing of the restart will be influenced not only by the relaxation of COVID-19 restrictions, but also by commercial considerations (e.g. higher long-term contractual pricing). A faster-than expected return to production would likely reverse the current rally quickly; however, we believe that producer supply discipline, combined with utilities becoming more concerned about security of supply, could put some legs under the rally. The catalyst that would lead us to become more positive on the outlook would be the return of utilities to the term contract market and a meaningful move higher in the term price.

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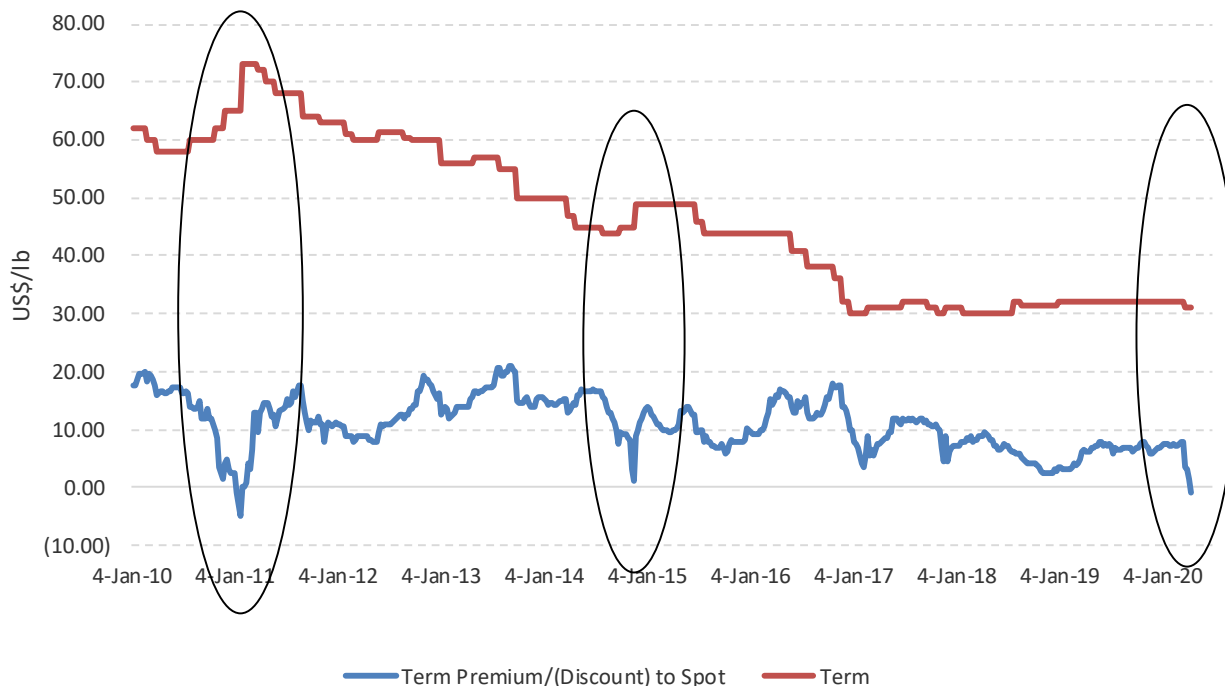
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Exhibit 1. Higher Spot Price Puts Upward Pressure on Term Price



Source: UxC; TD Securities estimates

Exhibit 2. Uranium Mine Suspension Tracker

Operation	Company	Location	Annual Production (mm lbs)	Percent of Global Annual Mine Production	Suspension Duration	Potential Lost Production (mm lbs)
Cigar Lake	Cameco/Orano	Canada	18	12.5%	Undetermined	1.5/month
Rossing	CNNC/CGN	Namibia	4	2.8%	21 days	0.25
Husab	CNNC/CGN	Namibia	10	6.9%	21 days	0.6
Ranger (1)	ERA	Australia	3.1	2.2%	n/a	n/a
Kazakh ISR (2)	Kazatomprom	Kazakhstan	59	41.0%	3 months	10.4

Notes:

(1) ERA has maintained 2020 production guidance at 2.65-3.53 mm lbs U3O8, but travel restriction could impact production

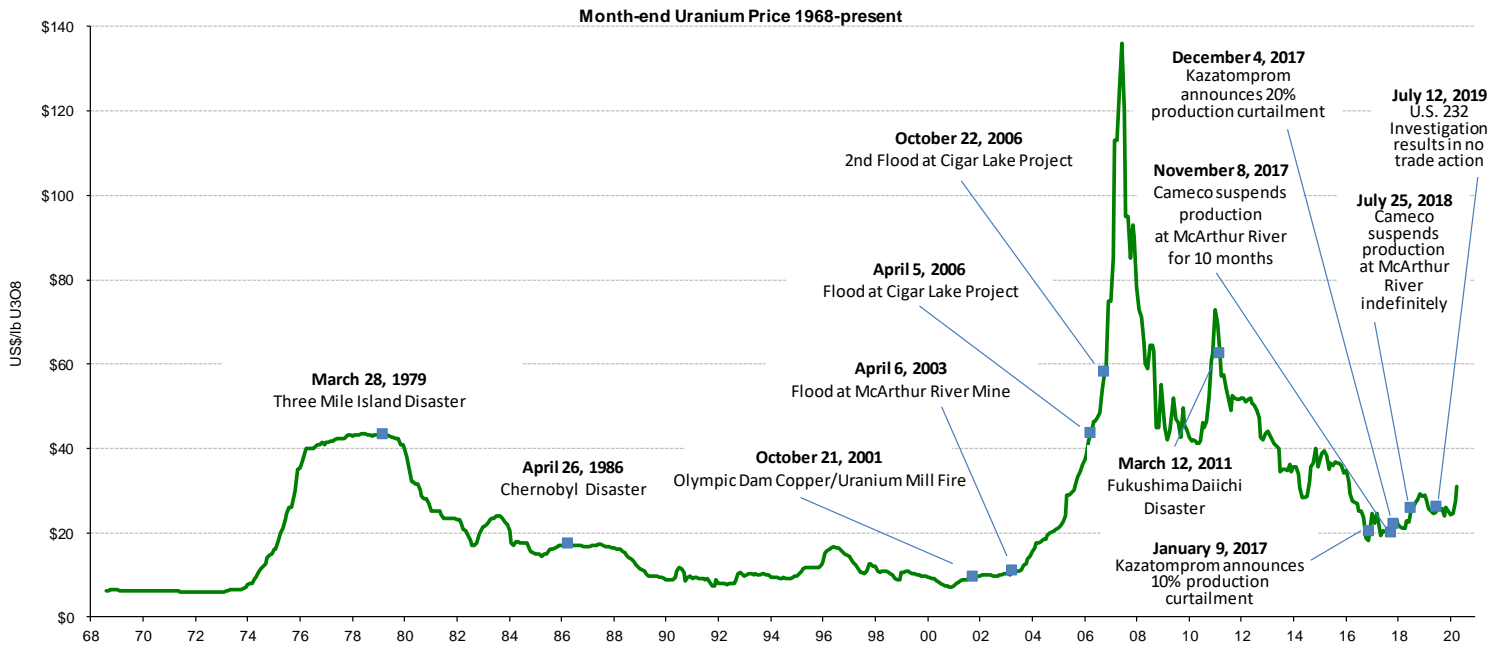
Source: Company reports; UxC; TD Securities estimates

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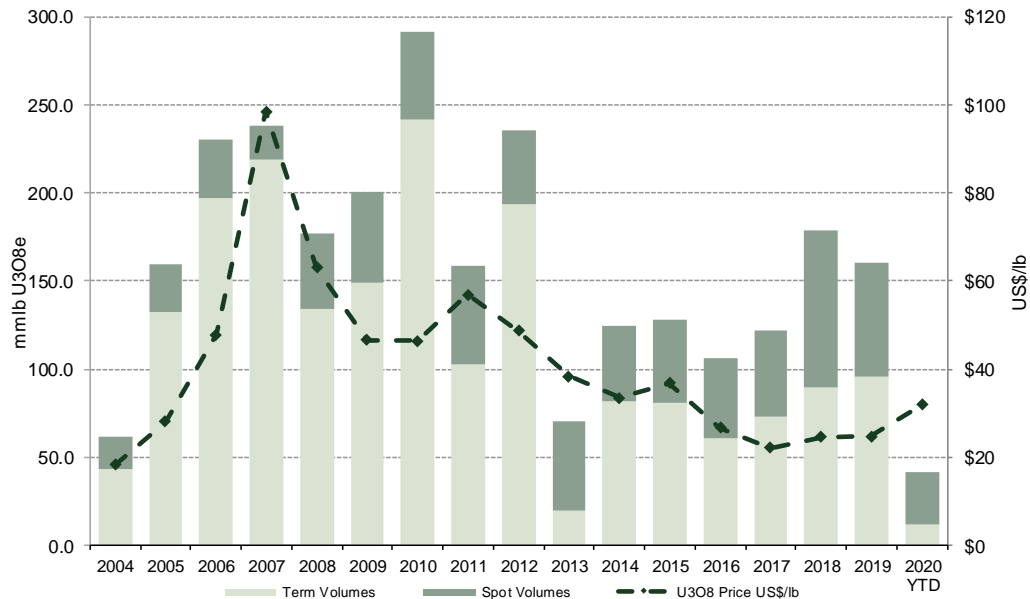
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Exhibit 3. Historical Spot Price and Market Impacting Events (US\$/lb)



Source: UxC, Companies, TD Securities Inc.

Exhibit 4. Term Contracting Volumes Still Low



Source: UxC; TD Securities Inc.

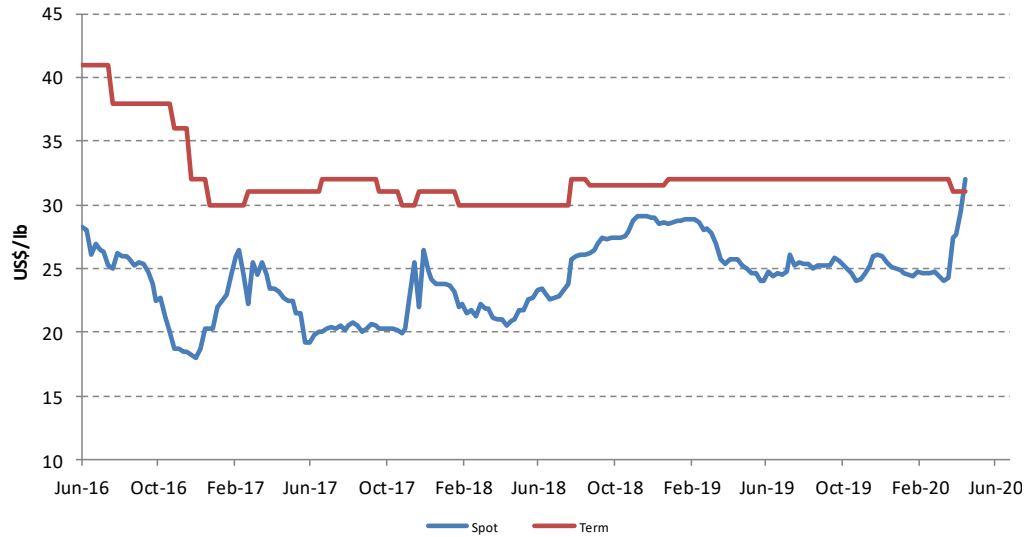


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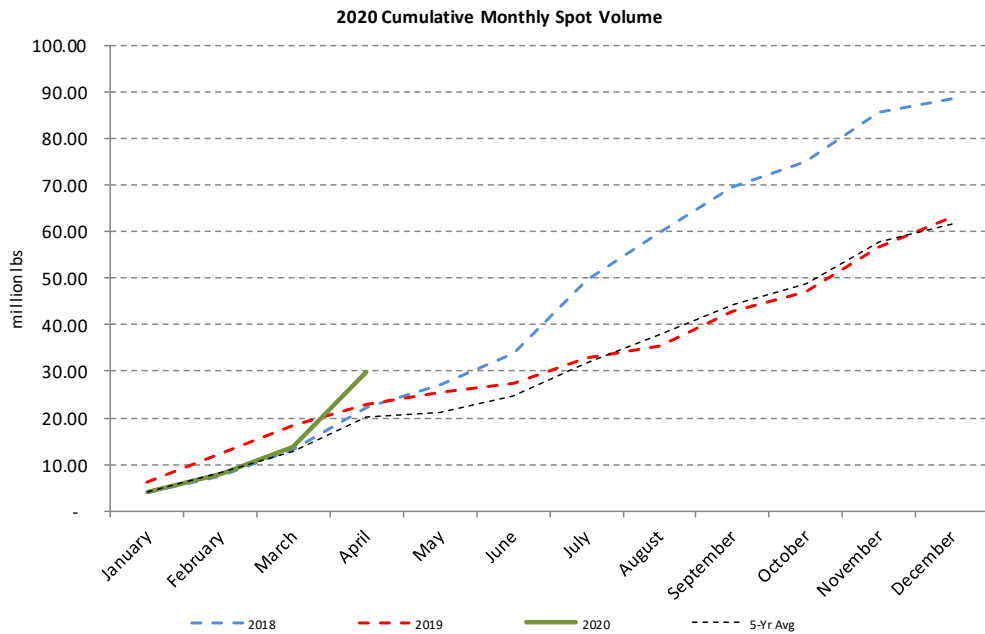
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Exhibit 5. Spot and Term Uranium Prices (US\$/lb)



Source: UxC

Exhibit 6. Cumulative Monthly Spot Market Volume



Source: UxC

Exhibit 7. Uranium Term Price Premium to Spot (US\$/lb)



Source: UxC

Exhibit 8. Uranium Prices – Spot, 3yr Fwd and 5yr Fwd



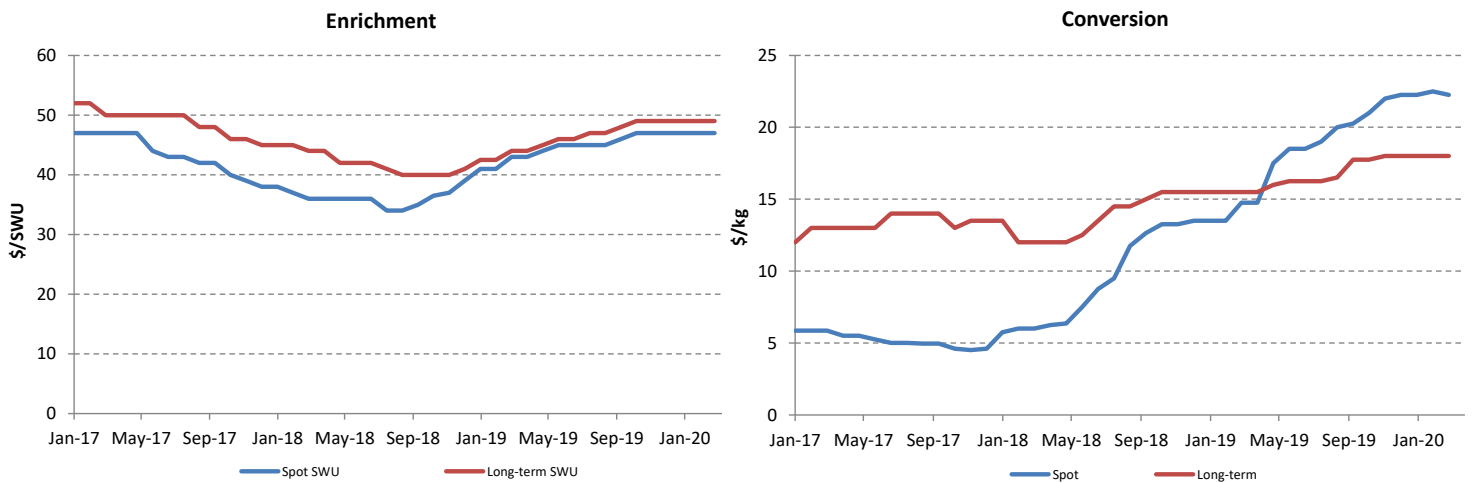
Source: UxC

Exhibit 9. Fund Implied Price (FIP) and Spot Price



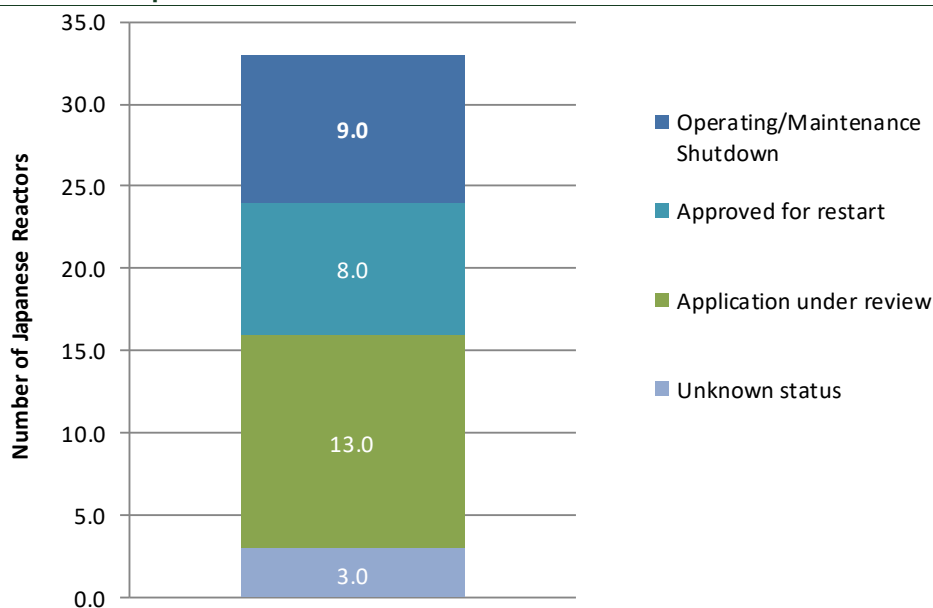
Source: UxC

Exhibit 10. Monthly SWU and Conversion Pricing



Source: UxC

Exhibit 11. Japanese Reactor Status



Source: UxC, Bloomberg, World Nuclear Association

Exhibit 12. TD Securities Uranium Supply/Demand Model

	2012	2013	2014	2015	2016	2017	2018	2019	2020E	2021E	2022E	2023E	2024E
Mine Supply - Western World (mm lbs U3O8)													
Total Mine Supply - Western World	90	93	85	106	104	100	83	85	80	82	82	86	88
Net Eastern Mine Supply (lbs U3O8)	59	60	60	57	62	54	54	55	44	55	60	60	66
Total World Mine Supply (mmlb U3O8)	150	153	145	163	166	154	138	140	124	137	142	146	154
YoY % change	5.9%	2.4%	-5.3%	12.2%	2.1%	-7.6%	-10.2%	1.7%	-11.6%	10.4%	3.8%	2.6%	5.9%
Secondary Supply													
Global underfeeding and tails re-enrichment*	5	15	20	20	18	19	18	18	16	16	15	15	14
Mixed Oxide Fuel (MOX)*	10	8	8	4	5	5	5	6	6	6	6	6	7
US government sales (DOE Proposed)*	5	8	8	7	4	3	2	2	1	0	0	0	0
Additional Russian secondary supply*	24	24	5	2	2	0	0	0	0	0	0	0	0
Other			0	0	0	0	0	0	0	0	0	0	0
Total Secondary Supply (mmlb)	43	55	41	34	29	27	24	26	24	22	21	21	21
Secondary supply as % of global reactor demand	28%	32%	26%	21%	17%	16%	14%	15%	13%	12%	12%	12%	11%
Mobilization of Commercial Inventory			4	8	7	7	7	7	7	7	7	7	7
Total Supply	193	208	190	205	202	187	169	173	155	166	170	174	183
Total World Demand													
Total World Nuclear Generating Capacity (MWe) *				345,377	351,271	358,819	368,571	372,978	379,182	384,508	385,211	389,242	394,906
Uranium requirements per MWe				464	474	472	472	472	472	472	472	472	472
Uranium demand (mmlb)				160	167	169	174	176	179	181	182	184	186
First Core Requirement (2 year lead)				-	-	-	-	-	-	-	-	-	-
Total World Demand (mmlbs U3O8)	155	170	155	160	167	169	174	176	179	181	182	184	186
YoY % change	0.0%	9.7%	-8.8%	3.4%	3.9%	1.7%	2.7%	1.2%	1.7%	1.4%	0.2%	1.0%	1.5%
Supply / Demand Balance (mmlb)	38	38	35	44	35	18	-5	-3	-24	-16	-11	-10	-4
Spot Uranium Price (US\$/lb U3O8)	\$48.73	\$38.57	\$33.60	\$36.89	\$26.57	\$22.12	\$24.82	\$25.94	\$28.94	\$31.00	\$33.00	\$35.00	\$40.00

* Source: World Nuclear Association - Nuclear Fuel Report 2019-2040 Reference Case

Note - TD LT price assumption starts in 2025; a flat US\$45/lb price is assumed for 2025 and beyond.

Source: UxC, Bloomberg, TD Securities Inc.



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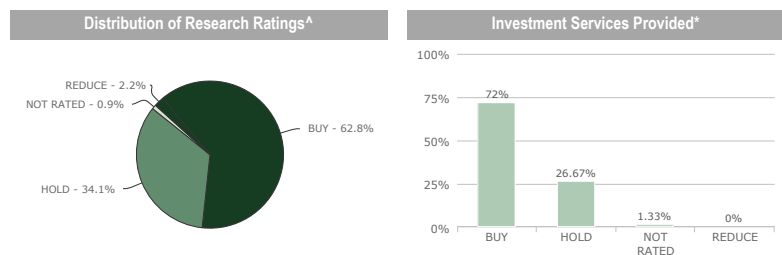
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