

Industry Note

Equity Research

May 12, 2020

Metals & Minerals

Uranium Weekly: Consolidating The Spot Price Rally

Ux Consulting's (UxC) weekly price indicator declined for the first time in eight weeks to US\$33.40/lb (from US\$33.50/lb) this week, as reported on the evening of Monday, May 11. The spot price has rallied almost 35% year-to-date and a consolidation phase was probably inevitable, in our view. The April month-end term price is unchanged at US\$33.00/lb. UxC is currently estimating that the three-year forward price is US\$37.25/lb and the five-year forward price is US\$40.00/lb.

Spot market volume has been record setting. Year-to-date, 42.7mmlbs U3O8e has been transacted in the spot market under 252 transactions. On average, over the past decade, annual spot market volume has been 53.6mm lbs under 322 transactions. Over the first 4 1/2 months of 2020, spot market volume is running at ~80% of typical annual volume and 78% of the typical number of annual transactions (Exhibits 1 and 2). Spot volume year-to-date is well above the five-year average and tracking above the record volumes that were achieved in 2018 (Exhibit 7). 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. While there has been some churn in the spot market (i.e. traders selling to traders), we understand that as much as 75% of the volume has been fundamental in nature.

Term market activity has yet to pick-up. UxC is reporting that 18 transactions have been completed in term market so far in 2020 and below the 23 transactions reported for this time last year. However, term volume is moderate at a reported level of >20mmlbs U3O8e (23mmlbs in 2019). While we understand that utilities and producers are having off-market discussions (Cameco has noted that its pipeline of prospective term transactions is the strongest it has been in years), this has not yet translated into on-market activity.

We continue to believe that the timing of primary production restarting at Cigar Lake and well field development resuming in Kazakhstan 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, should continue to support a rising price trend. The catalyst that could support the next up-leg in the spot (and term) price would be the return of utilities to the term contract market, in our view.

Greg Barnes

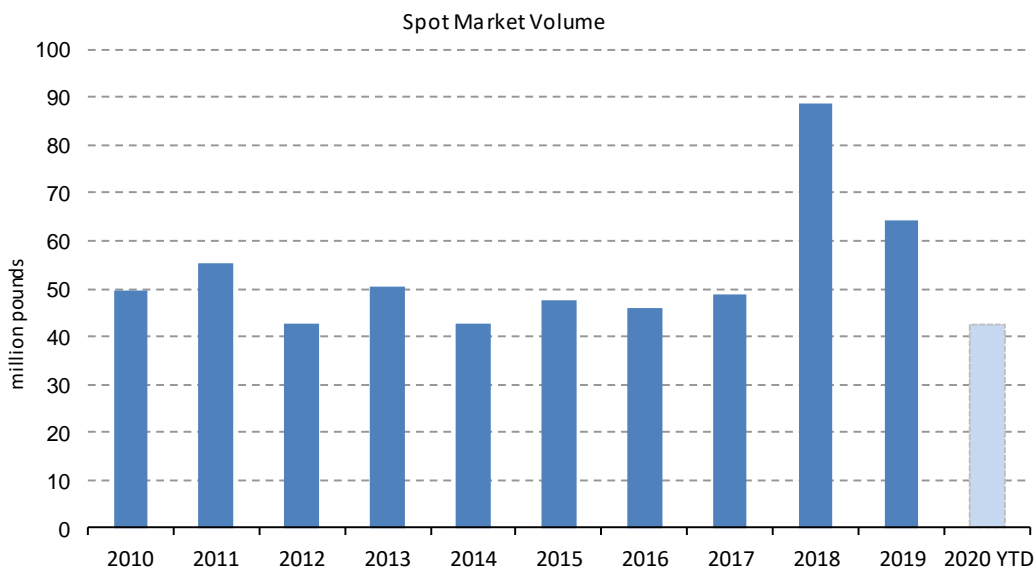
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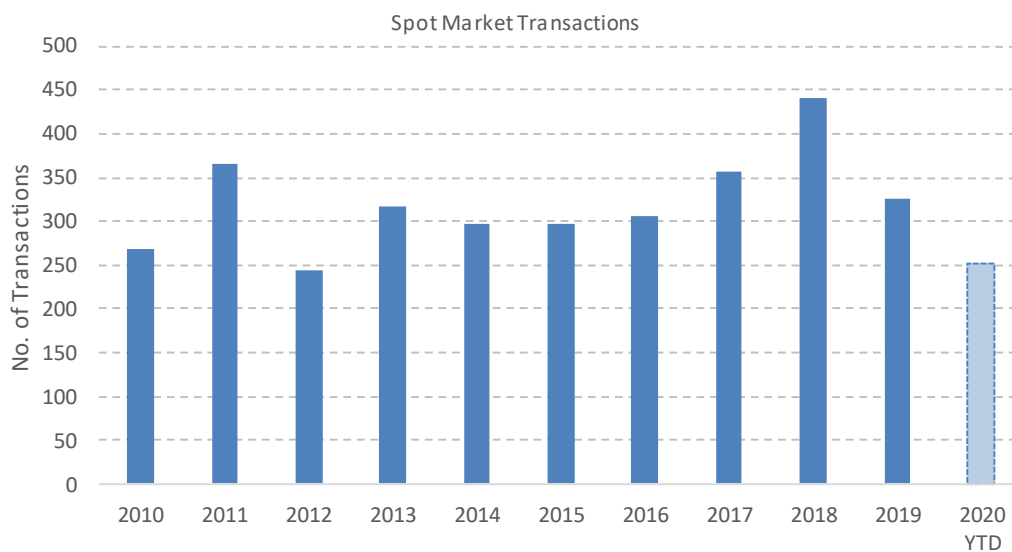
Laura Baker, (Associate)

Exhibit 1. Annual Spot Market U3O8e Pounds Transacted (2010 – YTD 2020)



Source: UxC; TD Securities estimates

Exhibit 2. Annual Spot Market Transactions (2010 – YTD 2020)



Source: UxC; TD Securities estimates

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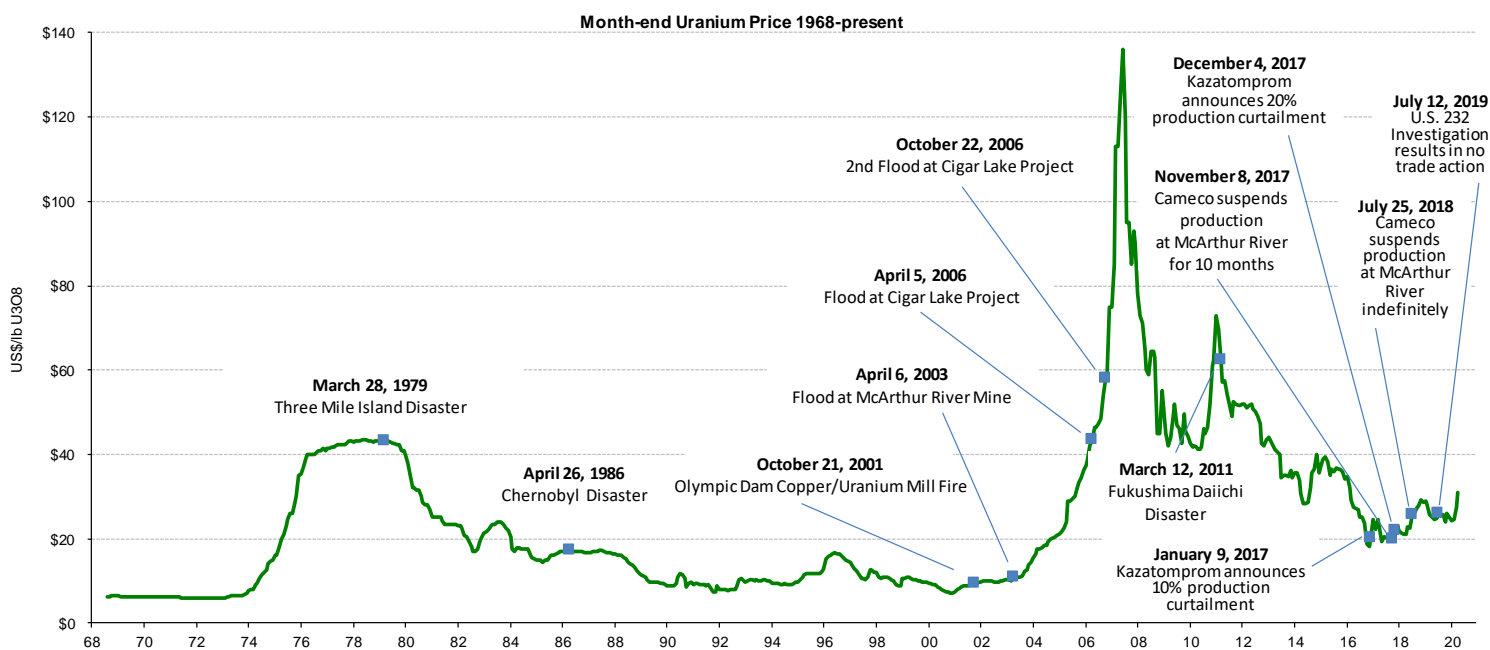
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Exhibit 3. Uranium Mine Suspension Tracker

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

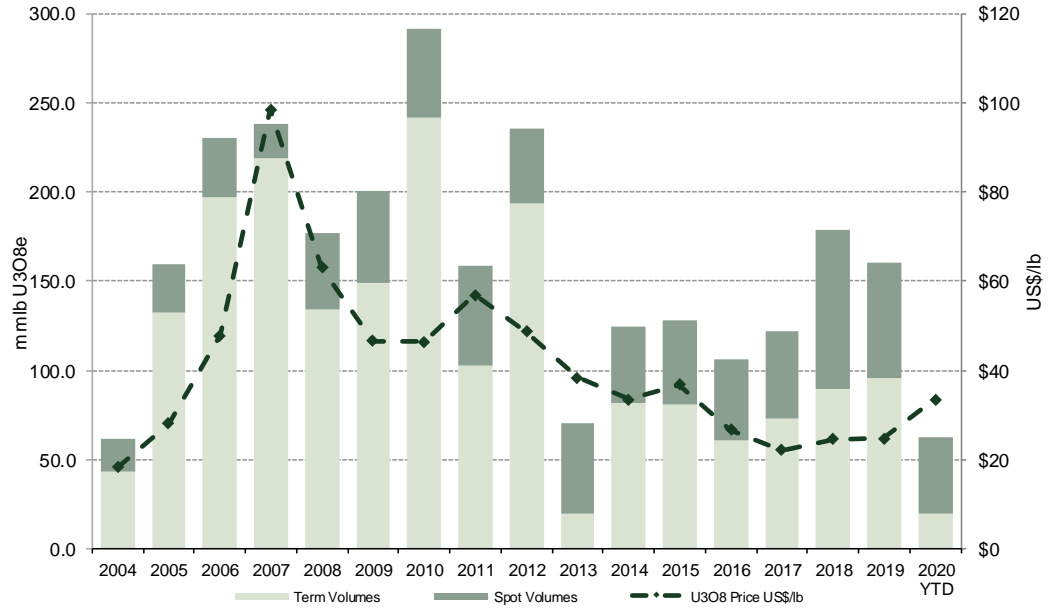
Notes:
 (1) ERA has maintained 2020 production guidance at 2.65-3.53 mm lbs U3O8, but travel restriction could impact production
 Source: Company reports; UxC; TD Securities estimates

Exhibit 4. Historical Spot Price and Market Impacting Events (US\$/lb)



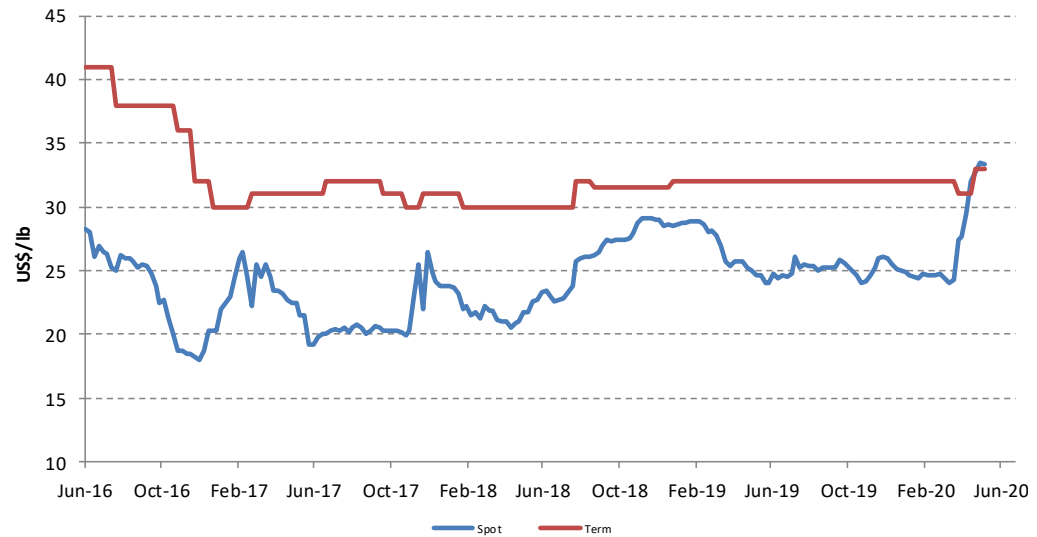
Source: UxC, Companies, TD Securities Inc.

Exhibit 5. Term Contracting Volumes Still Low



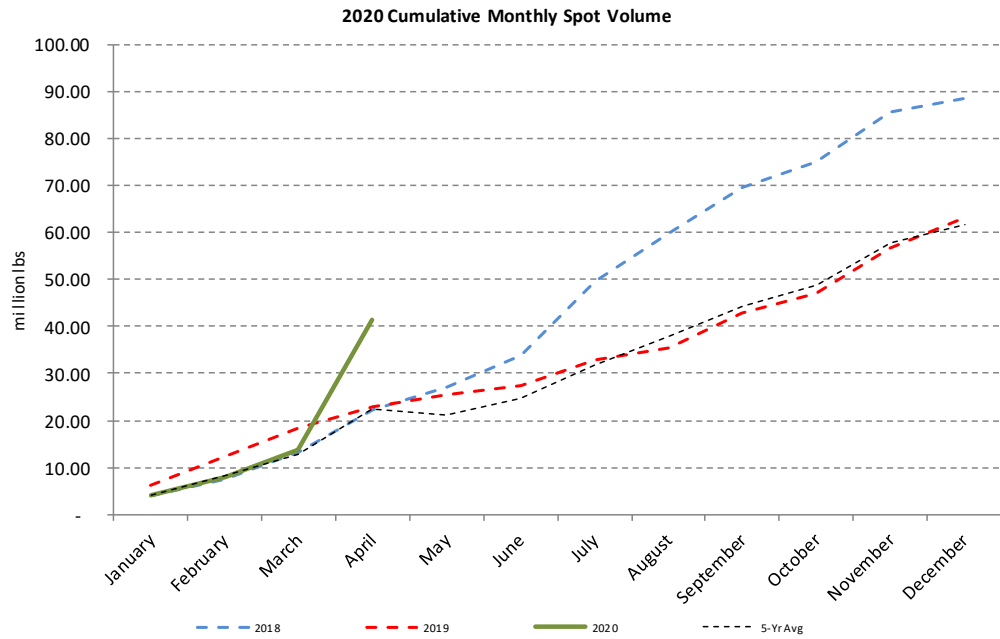
Source: UxC; TD Securities Inc.

Exhibit 6. Spot and Term Uranium Prices (US\$/lb)



Source: UxC

Exhibit 7. Cumulative Monthly Spot Market Volume



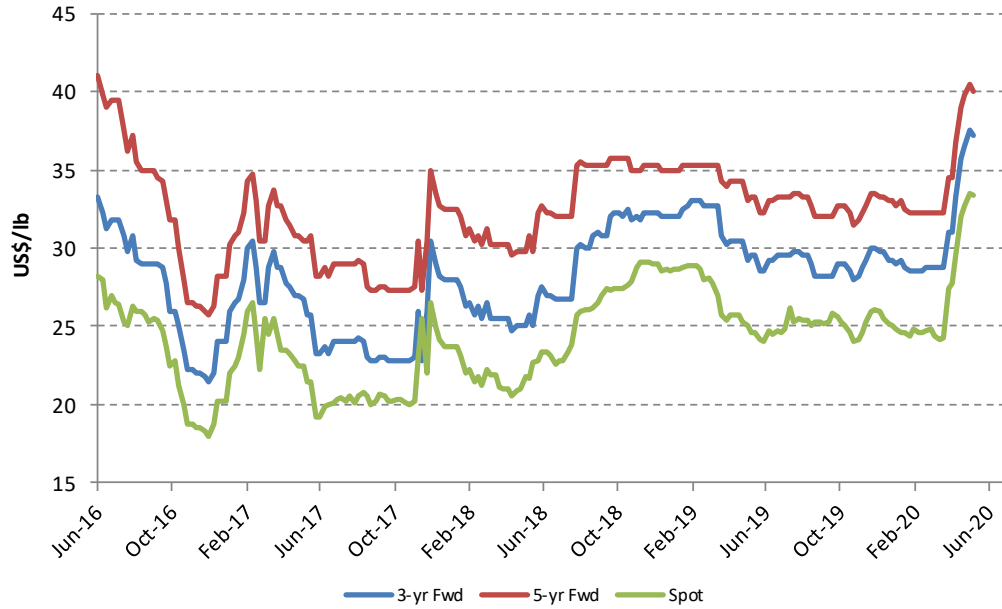
Source: UxC

Exhibit 8. Uranium Term Price Premium to Spot (US\$/lb)



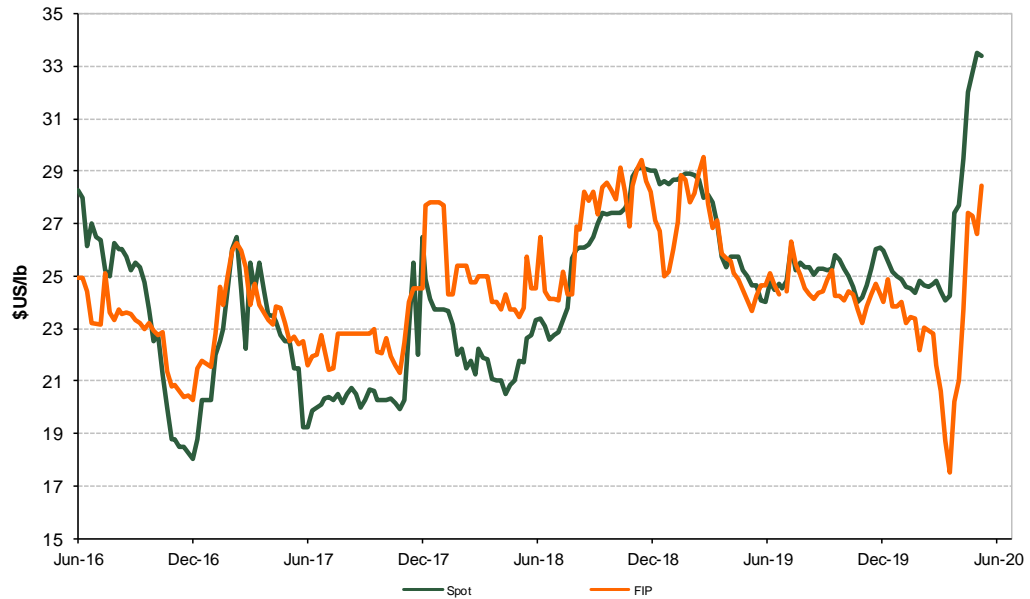
Source: UxC

Exhibit 9. Uranium Prices – Spot, 3yr Fwd and 5yr Fwd



Source: UxC

Exhibit 10. Fund Implied Price (FIP) and Spot Price



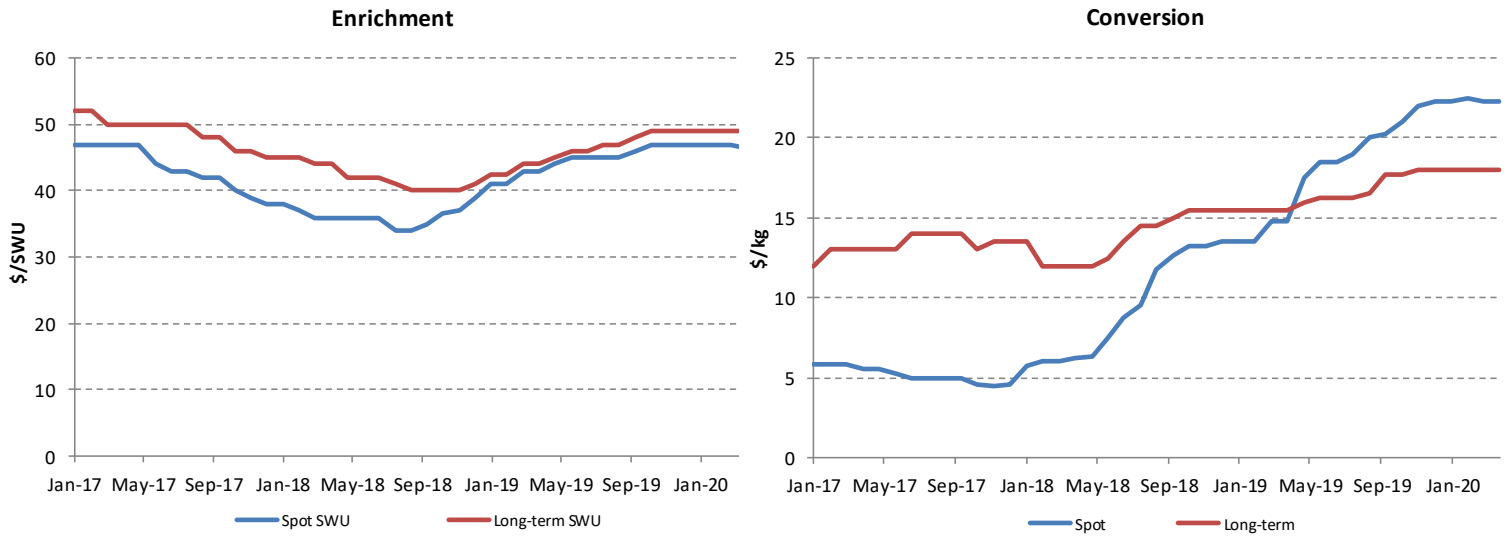
Source: UxC

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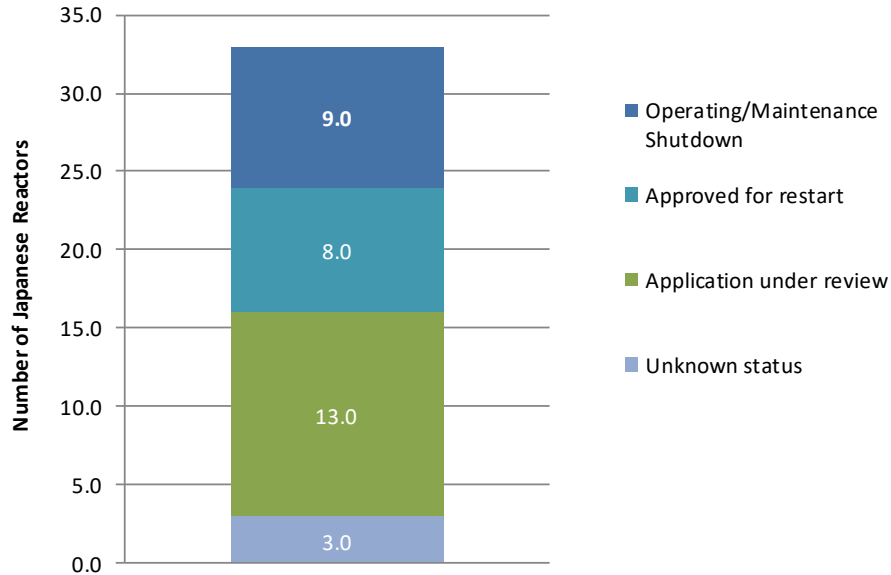
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Exhibit 11. Monthly SWU and Conversion Pricing



Source: UxC

Exhibit 12. Japanese Reactor Status



Source: UxC, Bloomberg, World Nuclear Association

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Exhibit 13. 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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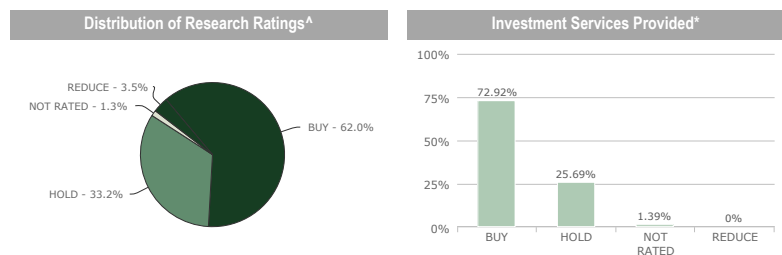
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