

# Industry Note

Equity Research

July 29, 2020

## Metals & Minerals

### Uranium Weekly - Possibly The First Sign of Improved Term Demand

**Ux Consulting's (UxC) weekly price indicator rose this week to US\$32.20/lb (from US\$32.00/lb).** The weekly price indicator has declined from its most recent peak of US\$34/lb in late-May on softer activity in the spot market, which is not unusual over the summer months. We remain encouraged that despite weaker activity in the spot market, the spot price has remained at US\$32/lb or higher since late-April, possibly indicating that a new higher range is being established.

**UxC noted that "the term uranium market is starting to see a significant uptrend in buying interest".** On the back of the increased interest, the July month-end term price increased to US\$33/lb, up \$1/lb from the June month-end term price. UxC indicated that new term demand has entered the market with a couple of utilities submitting RFPs over the past week. In addition, off-market discussions have been continuing between utilities and producers. In our view, a sustained up-leg in term prices will require increased engagement from utilities, which has been lacking for the past number of years.

**Reported term activity remains low compared with prior years.** Year-to-date, UxC is reporting that >25mm lbs of uranium has been contracted; this compares with average utility term contracting volumes over the past five years through to the end of July of ~36mm lbs. That being said, in recent years, term contracting volume has been very volatile with a peak of ~54mmlbs to the end of July in 2017 and low of just ~16mmlbs in 2018. During the peak term contracting years from 2006 through 2012, average annual term volume was ~176mmlbs.

**Uranium traders have been active in the uranium market over the past several years, providing material to utilities in the "mid-term" market (material for delivery in the 1-3-year time-frame) and reducing the need for term contracting.** We understand that the traders have been effectively supplying this material by way of a carry trade — committing to deliver material 1-3 years forward that they do not have on hand but will source from utilities/producers that are selling into the spot market. We believe that by reducing the material available in the spot market (via production cuts), producers are hoping to push utilities back into the term market - we may be seeing signs that this is starting to work.

**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.** The catalyst that could support the next up-leg in spot and term prices would be a meaningful return of utilities to the term contracting market, in our view.

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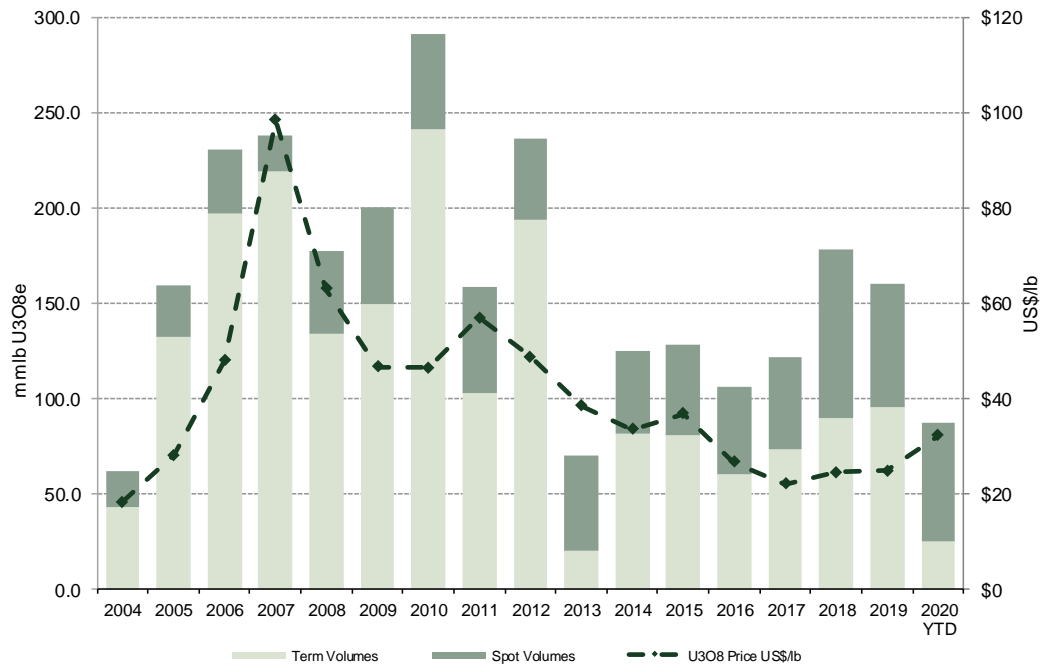


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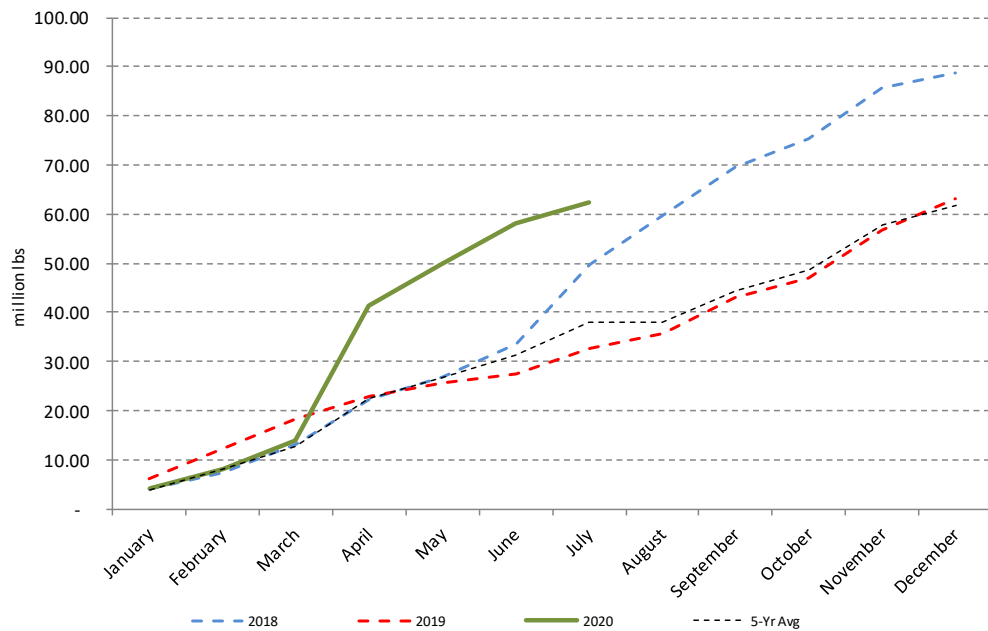
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**Exhibit 1. Term Contracting Volumes Lagging in 2020**



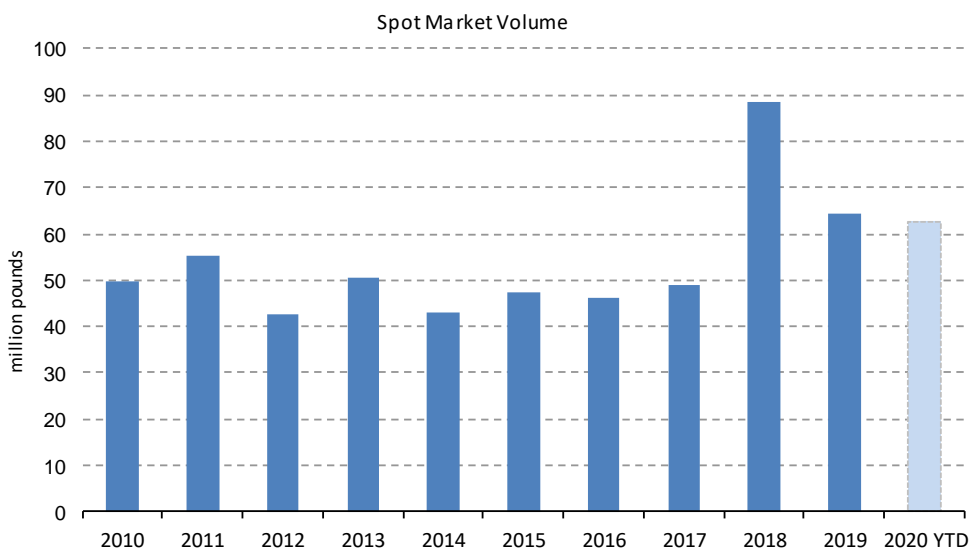
Source: UxC

**Exhibit 2. Historical vs. 2020 Cumulative Monthly Spot Volumes**



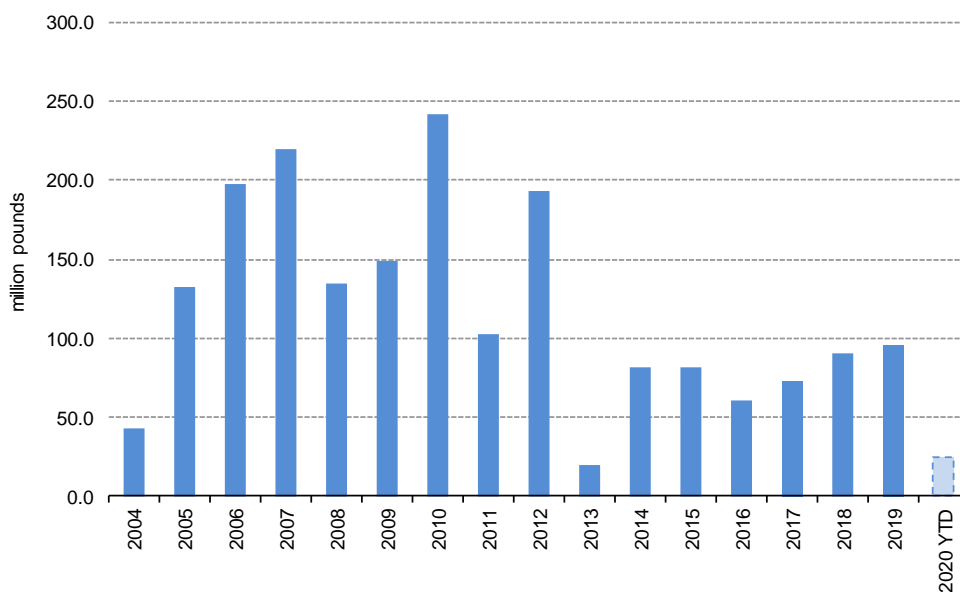
Source: UxC

**Exhibit 3. Historical vs. 2020 (YTD) Spot Volumes**



Source: UxC

**Exhibit 4. Historical vs. 2020 (YTD) Term Volumes**



Source: UxC

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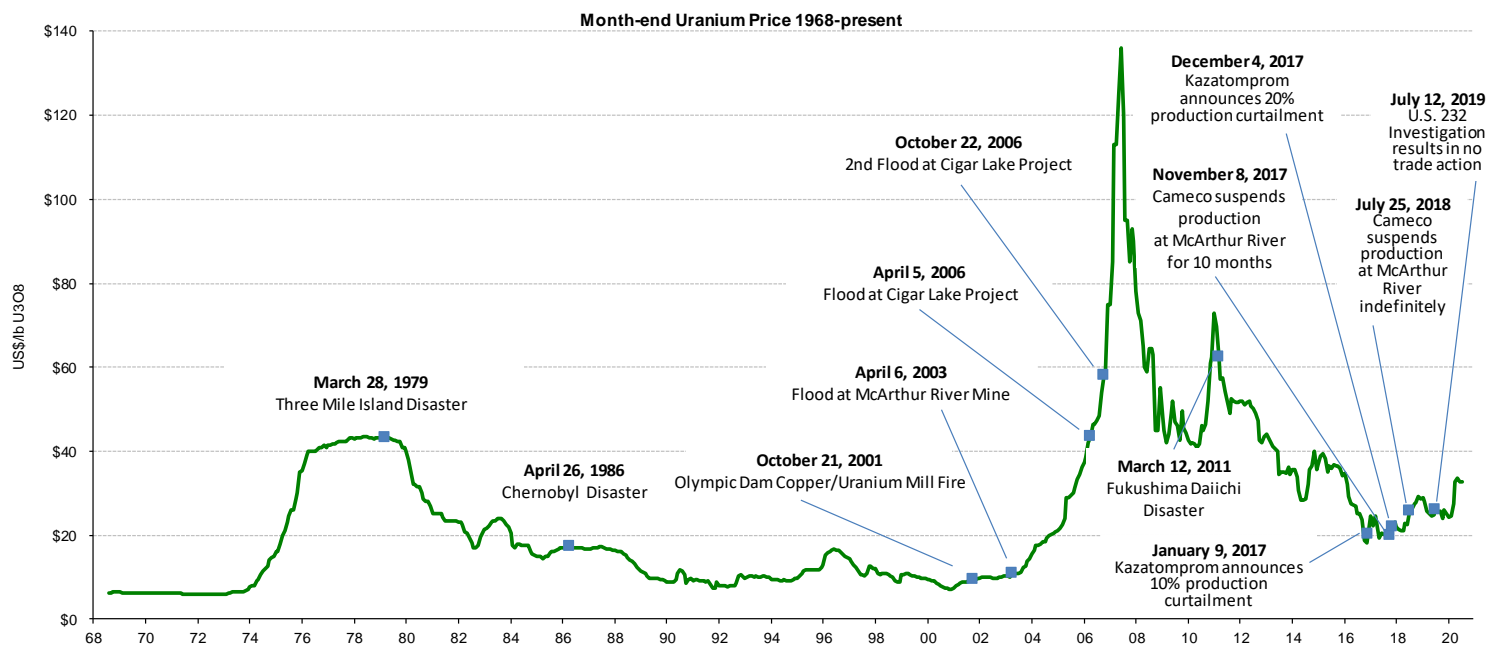
## Exhibit 5. Uranium Mine Suspension Tracker

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

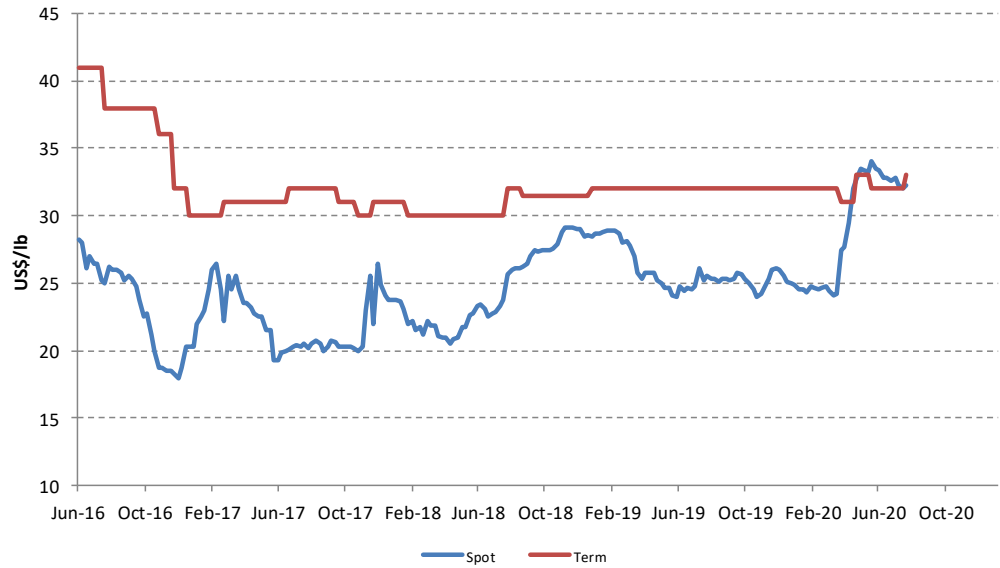
Source: Company reports; UxC; TD Securities Inc. estimates

## Exhibit 6. Historical Spot Price and Market Impacting Events (US\$/lb)



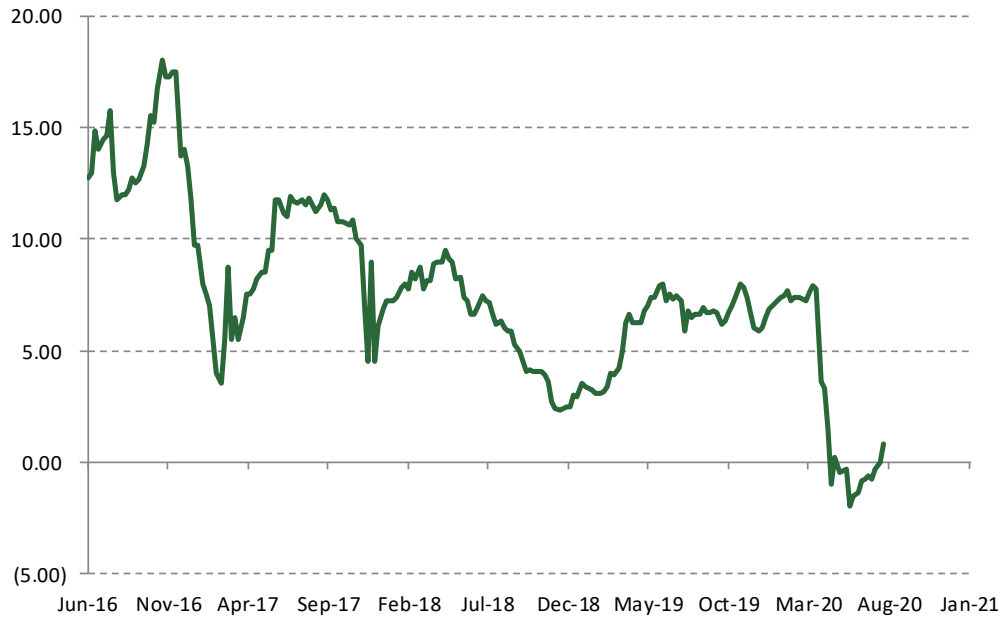
Source: UxC, Companies, TD Securities Inc.

**Exhibit 7. Spot and Term Uranium Prices (US\$/lb)**



Source: UxC

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



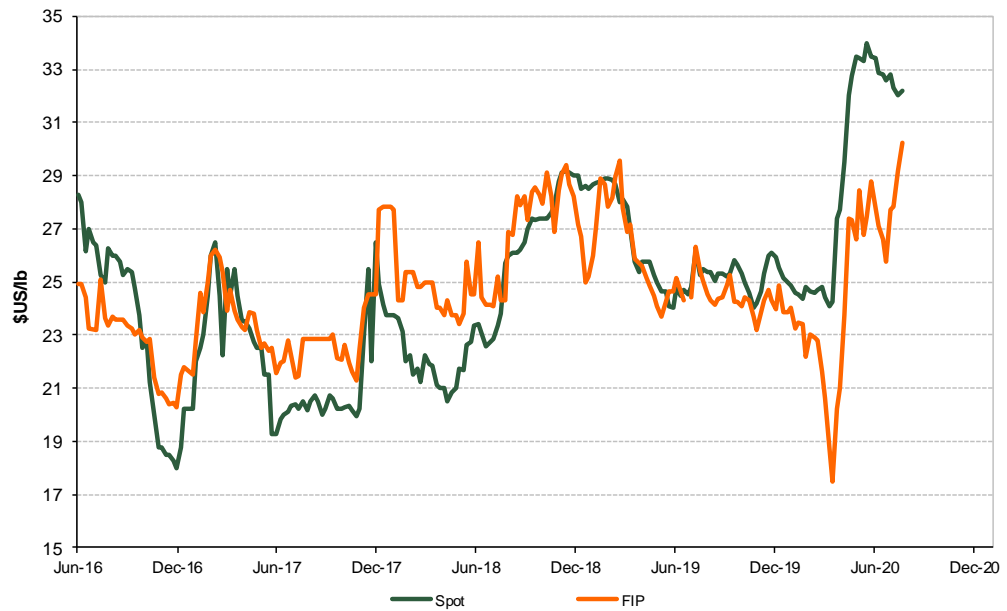
Source: UxC

**Exhibit 9. Uranium Prices – Spot, 3-year Forward and 5-year Forward**



Source: UxC

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



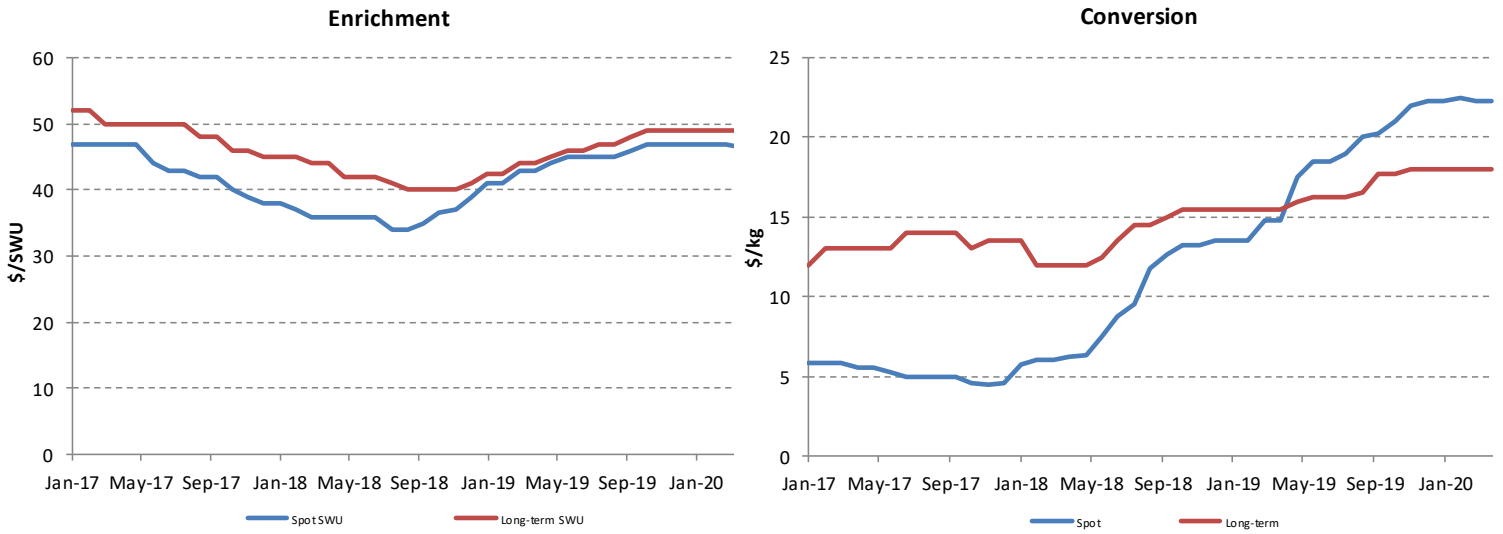
Source: UxC

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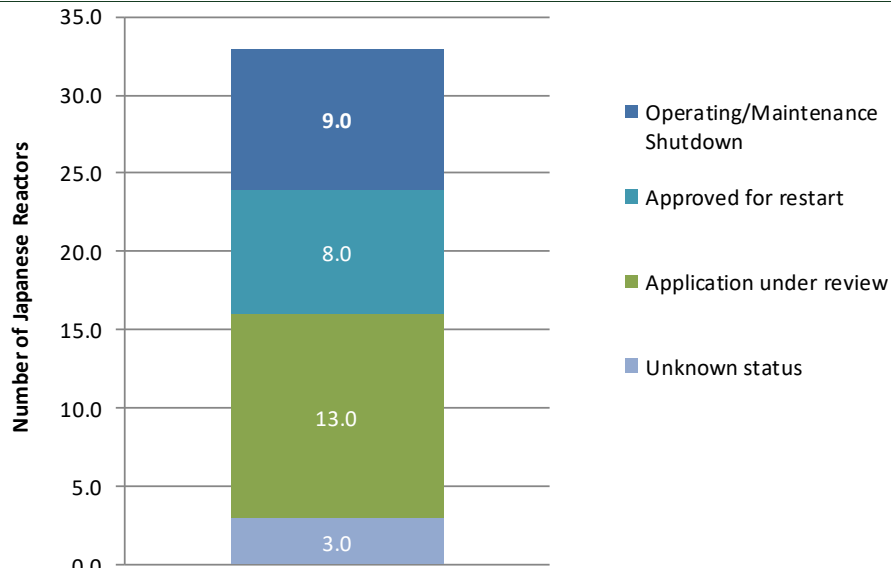
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**Exhibit 11. Monthly SWU and Conversion Pricing**



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
<b>Mine Supply - Western World (mm lbs U3O8)</b>													
Total Mine Supply - Western World	90	93	85	106	104	100	83	85	74	82	82	86	88
Net Eastern Mine Supply (lbs U3O8)	59	60	60	57	62	54	54	55	44	49	60	60	66
<b>Total World Mine Supply (mmlb U3O8)</b>	<b>150</b>	<b>153</b>	<b>145</b>	<b>163</b>	<b>166</b>	<b>154</b>	<b>138</b>	<b>140</b>	<b>118</b>	<b>131</b>	<b>142</b>	<b>146</b>	<b>154</b>
YoY % change	5.9%	2.4%	-5.3%	12.2%	2.1%	-7.6%	-10.2%	1.7%	-15.9%	10.9%	8.6%	2.6%	5.9%
<b>Secondary Supply</b>													
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
<b>Total Secondary Supply (mmlb)</b>	<b>43</b>	<b>55</b>	<b>41</b>	<b>34</b>	<b>29</b>	<b>27</b>	<b>24</b>	<b>26</b>	<b>24</b>	<b>22</b>	<b>21</b>	<b>21</b>	<b>21</b>
Secondary supply as % of global reactor demand	28%	32%	26%	21%	17%	16%	14%	15%	13%	12%	12%	12%	11%
<b>Mobilization of Commercial Inventory</b>			4	8	7	7	7	7	7	7	7	7	7
<b>Total Supply</b>	<b>193</b>	<b>208</b>	<b>190</b>	<b>205</b>	<b>202</b>	<b>187</b>	<b>169</b>	<b>173</b>	<b>149</b>	<b>160</b>	<b>170</b>	<b>174</b>	<b>183</b>
<b>Total World Demand</b>													
Total World Nuclear Generating Capacity (MWe) *				345,377	351,271	358,819	368,571	372,978	374,420	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	177	181	182	184	186
First Core Requirement (2 year lead)				-	-	-	-	-	-	-	-	-	-
<b>Total World Demand (mmlbs U3O8)</b>	<b>155</b>	<b>170</b>	<b>155</b>	<b>160</b>	<b>167</b>	<b>169</b>	<b>174</b>	<b>176</b>	<b>177</b>	<b>181</b>	<b>182</b>	<b>184</b>	<b>186</b>
YoY % change	0.0%	9.7%	-8.8%	3.4%	3.9%	1.7%	2.7%	1.2%	0.4%	2.7%	0.2%	1.0%	1.5%
<b>Supply / Demand Balance (mmlb)</b>	<b>38</b>	<b>38</b>	<b>35</b>	<b>44</b>	<b>35</b>	<b>18</b>	<b>-5</b>	<b>-3</b>	<b>-28</b>	<b>-22</b>	<b>-11</b>	<b>-10</b>	<b>-4</b>
<b>Spot Uranium Price (US\$/lb U3O8)</b>	<b>\$48.73</b>	<b>\$38.57</b>	<b>\$33.60</b>	<b>\$36.89</b>	<b>\$26.57</b>	<b>\$22.12</b>	<b>\$24.82</b>	<b>\$25.94</b>	<b>\$31.30</b>	<b>\$36.00</b>	<b>\$37.50</b>	<b>\$40.00</b>	<b>\$40.00</b>

\* 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, World Nuclear Association, TD Securities Inc.



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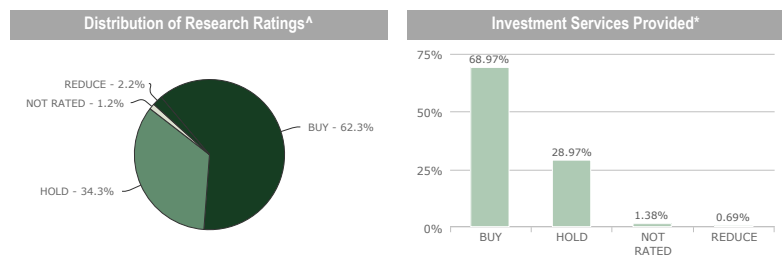
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