

# Industry Note

Equity Research

September 8, 2021

Metals &amp; Minerals

## Uranium Weekly: The Cure For High Prices, Is High Prices

**The Ux Consulting (UxC) weekly spot price indicator, published earlier this week, increased to US\$39.00/lb (up \$5.25/lb), +15.6% versus the previous week.** Year-to-date, the spot price is up 29.8%. UxC's daily spot price indicator has continued to move higher and was quoted yesterday afternoon at US\$39.94/lb.

**The driver behind the meteoric rise in the spot price over the past week was (and continues to be) spot market purchasing by the Sprott Physical Uranium Trust (SPUT); we estimate that over the past week SPUT has purchased ~3.7 million pounds at ever higher prices.** Since the conversion of Uranium Participation Corp. to SPUT, we estimate that the Trust has purchased a total of ~6 million pounds of uranium in the spot market and that it has deployed >US\$200 million of its US\$300 million ATM. It should be noted we expect that SPUT has the ability to reset and expand its current ATM once it has deployed the initial US\$300 million - and this can be done as often as needed.

**Interestingly, UxC noted in its weekly report that despite significant buying in the spot market so far this year by producers, pre-development companies, SPUT and others (we estimate >20 million pounds), ample supply remains available for sale albeit higher prices are clearly needed to dislodge it.**

**From our discussions with various parties, we understand the utility fuel buyers are getting increasingly anxious about the price action in the spot market.** However, we also note that, in general, utilities globally are relatively well covered for the next several years for their uranium requirements. While it is too early to determine whether utilities will enter the term market in large numbers to lock in supply (and pricing), so far the term market remains very quiet.

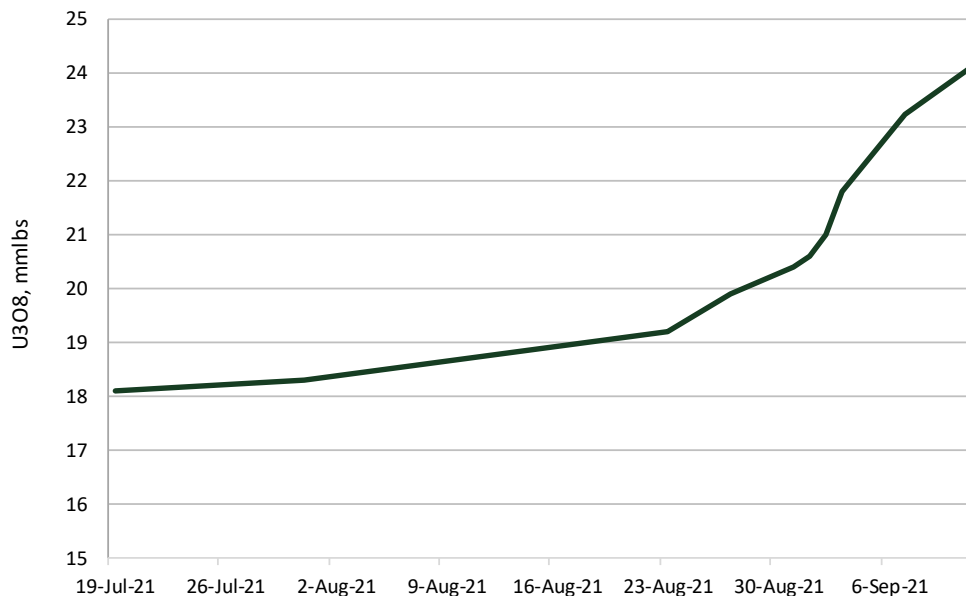
**SPUT has had a rapid and significant impact on the spot uranium market and while it is early days, the term price has also started to move higher.** The 5-year forward price is now quoted at US\$42/lb. Uranium pricing is moving into the range that producers have long suggested would be high enough to justify restarting curtailed production. We estimate that Cameco and Kazatomprom have combined curtailed annual production capacity of ~33 million pounds. Any supply response will take time to reenter the market, moreover Cameco has indicated that it would restart McArthur River only when production is committed to LT contracts. That being said, we believe that after 3+ years of sitting on the sidelines, a restart of idled capacity is starting to enter into view. We believe that an announcement by one of the parties that a restart of idled capacity is being contemplated could have a moderating influence on spot price action.

Greg Barnes

Craig Hutchison, P. Eng

Nicholas Clarke, (Associate)

**Exhibit 1. Sprott Physical Uranium Trust – Uranium Holdings Since Inception (July 19, 2021)**



Source: Sprott Physical Uranium Trust; TD Securities estimates

**Exhibit 2. Sprott Physical Uranium Trust – Share Price Premium to NAV**



Inception date: July 19, 2021.

Source: Sprott Physical Uranium Trust

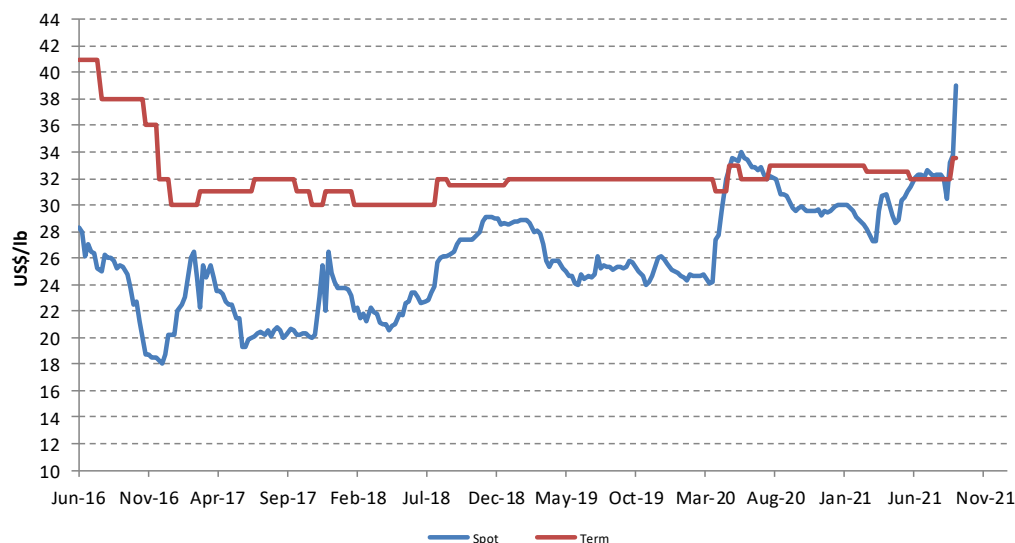
### Exhibit 3. Uranium company equity offerings and uranium purchases (excluding Sprott Physical Uranium Trust)

Company	Date Equity Offering and/or Uranium Purchase Announced	Equity Offering (US\$ millions)	Uranium Purchased or Planned to Purchase (million pounds)	Estimated Average Price of Uranium Purchases (Planned or Actual) (US\$/lb)
Yellow Cake	25-Feb-21	140.0	3.90	28.78
Denison Mines	15-Mar-21	86.3	2.50	29.61
Uranium Energy	17-Mar-21	30.5	1.40	29.00
Boss Energy	29-Mar-21	46.0	1.25	30.15
Uranium Energy	6-Apr-21	12.0	0.71	31.70
Uranium Participation Corp. <sup>1</sup>	3-May-21	66.4	1.78	30.50
Yellow Cake	11-May-21	n/a	0.34	29.15
Western Uranium & Vanadium	2-Jun-21	n/a	0.13	31.50
Yellow Cake	16-Jun-21	88.0	2.00	32.23
<b>Total/Average</b>		<b>381.2</b>	<b>14.00</b>	<b>29.97</b>

1. TD estimate for pounds purchased and average price

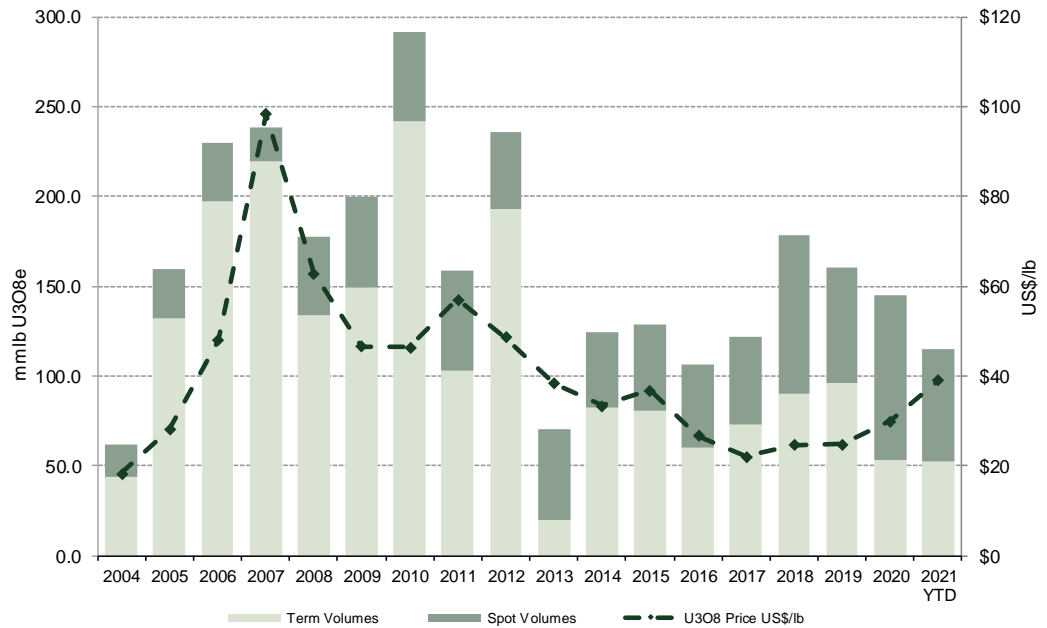
Source: Company reports; TD Securities estimates

### Exhibit 4. Spot and Term Uranium Prices (US\$/lb)



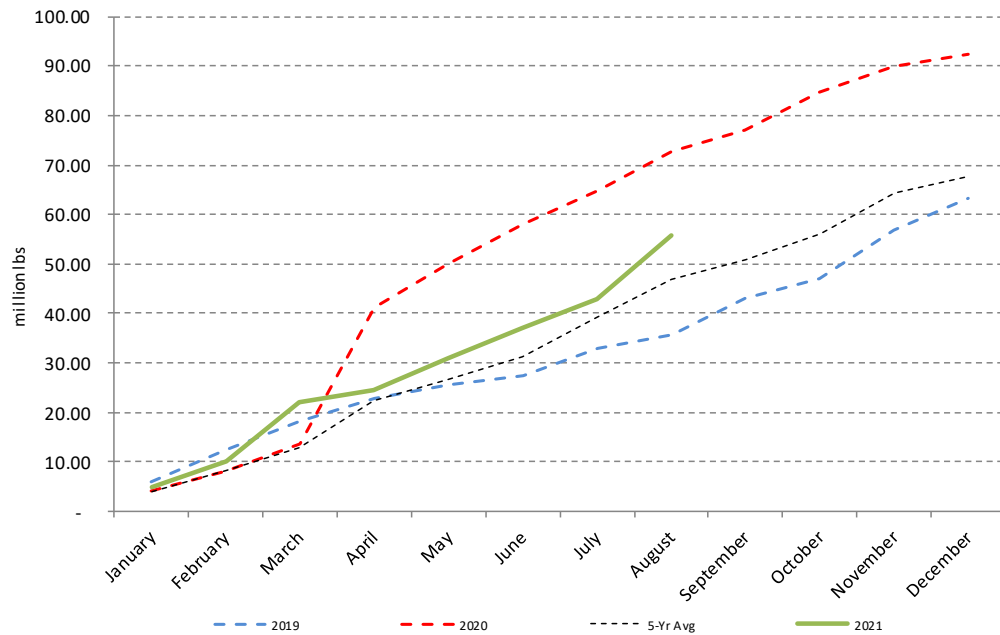
Source: UxC; TD Securities estimates

**Exhibit 5. Spot and Term Volumes**



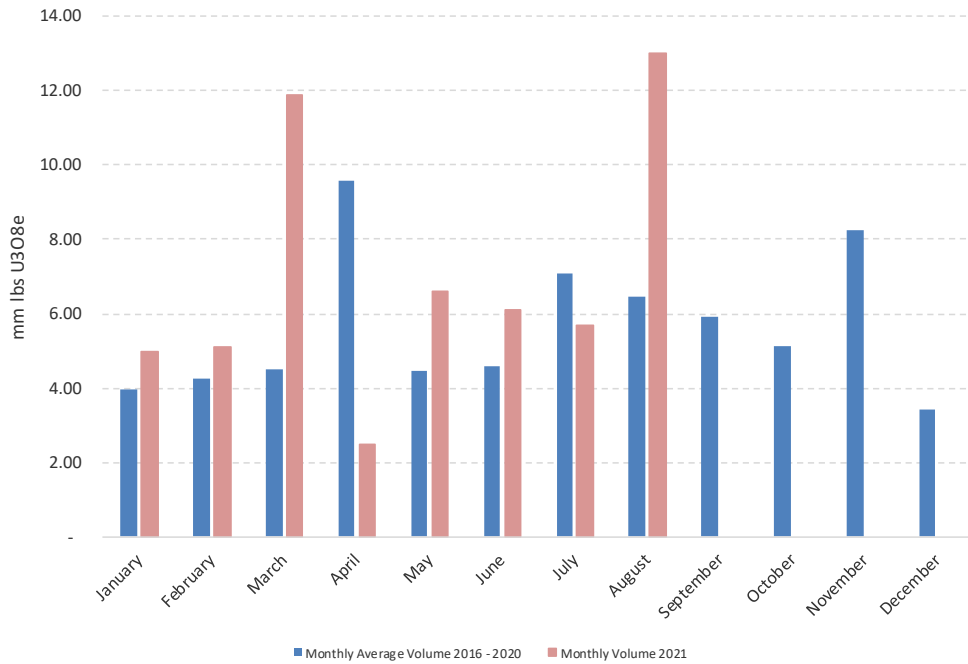
Source: UxC; TD Securities estimates

**Exhibit 6. Historical vs. 2021 Cumulative Monthly Spot Volumes**



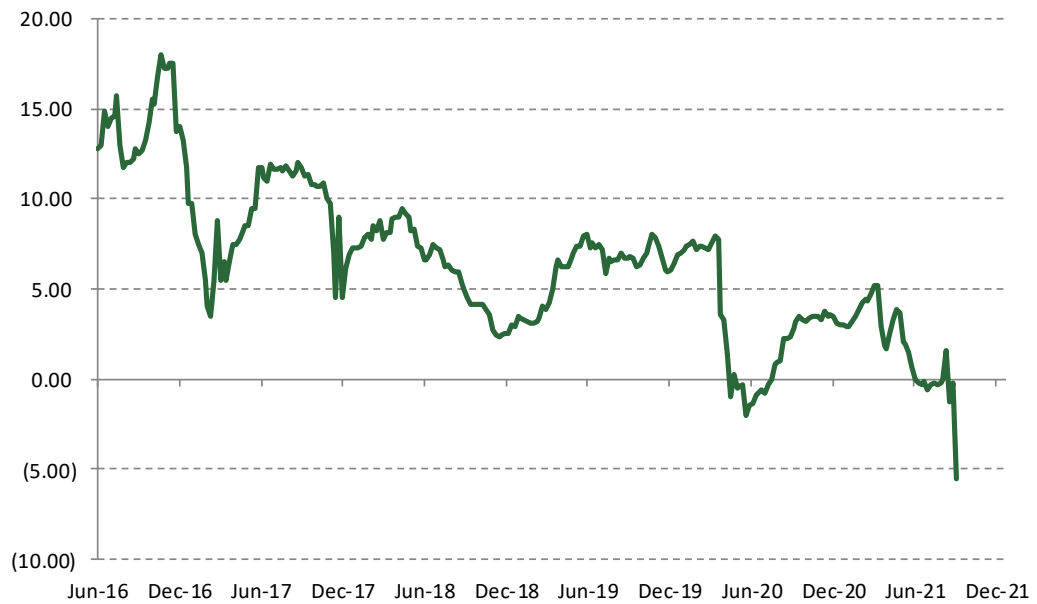
Source: UxC; TD Securities estimates

**Exhibit 7. Monthly Average Spot Volumes**



Source: UxC; TD Securities estimates

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



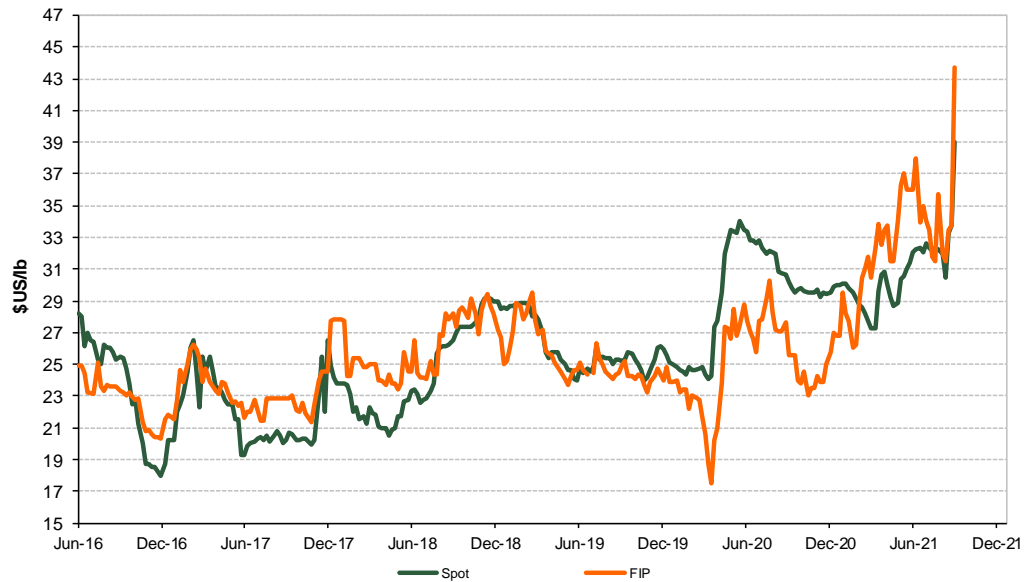
Source: UxC; TD Securities estimates

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



Source: UxC

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



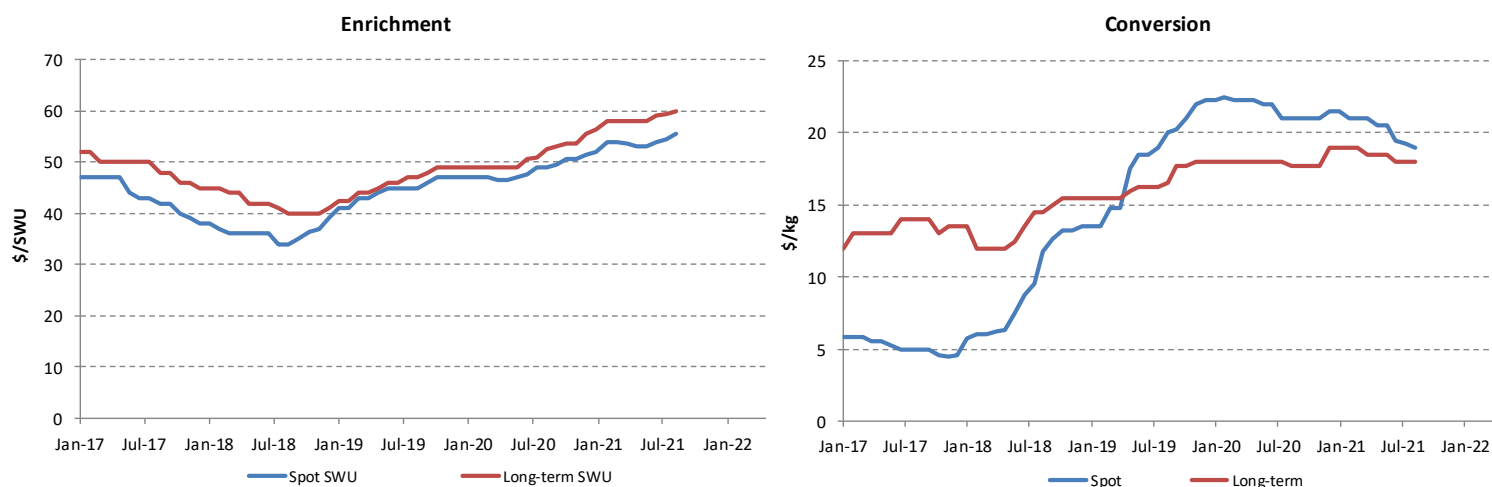
Source: UxC; TD Securities estimates

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## Exhibit 11. Monthly SWU and Conversion Pricing



Source: UxC; TD Securities estimates

## Exhibit 12. TD Securities Uranium Supply/Demand Model

	2017	2018	2019	2020	2021E	2022E	2023E	2024E	2025E
<b>Mine Supply - Western World (Mib U3O8)</b>									
Total Mine Supply - Western World	100	83	85	81	73	80	85	88	86
Net Eastern Mine Supply (lbs U3O8)	54	54	55	44	52	53	60	66	72
<b>Total World Mine Supply (Mib U3O8)</b>	<b>154</b>	<b>138</b>	<b>140</b>	<b>125</b>	<b>126</b>	<b>132</b>	<b>145</b>	<b>154</b>	<b>158</b>
YoY % change	-7.6%	-10.2%	1.7%	-10.9%	0.7%	5.3%	9.1%	6.8%	2.6%
<b>Secondary Supply</b>									
Global underfeeding and tails re-enrichment*	19	18	18	16	16	15	15	14	14
Mixed Oxide Fuel (MOX)*	5	5	6	6	6	6	6	7	8
US government sales (DOE Proposed)*	3	2	2	1	0	0	0	0	0
Additional Russian secondary supply*	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0
<b>Total Secondary Supply (Mib)</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>	<b>21</b>
Secondary supply as % of global reactor demand	16%	14%	15%	13%	12%	12%	12%	11%	11%
<b>Mobilization of Commercial Inventory</b>	<b>7</b>	<b>7</b>	<b>7</b>	<b>7</b>	<b>7</b>	<b>7</b>	<b>7</b>	<b>7</b>	<b>7</b>
<b>Total Supply</b>	<b>187</b>	<b>169</b>	<b>173</b>	<b>156</b>	<b>155</b>	<b>161</b>	<b>173</b>	<b>183</b>	<b>187</b>
<b>Total World Demand</b>									
Total World Nuclear Generating Capacity (MWe) *	358,819	368,571	372,978	374,420	384,508	385,211	389,242	394,906	398,885
Uranium requirements per MWe	472	472	472	472	472	472	472	472	472
Uranium demand (mmlb)	169	174	176	177	181	182	184	186	188
First Core Requirement (2 year lead)	-	-	-	-	-	-	-	-	-
<b>Total World Demand (Mib U3O8)</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>	<b>188</b>
YoY % change	1.7%	2.7%	1.2%	0.4%	2.7%	0.2%	1.0%	1.5%	1.0%
<b>Supply / Demand Balance (Mib)</b>	<b>18</b>	<b>-5</b>	<b>-3</b>	<b>-21</b>	<b>-27</b>	<b>-21</b>	<b>-11</b>	<b>-4</b>	<b>-2</b>
<b>Spot Uranium Price (US\$/lb U3O8)</b>	<b>\$22.12</b>	<b>\$24.82</b>	<b>\$25.94</b>	<b>\$29.52</b>	<b>\$31.94</b>	<b>\$36.00</b>	<b>\$38.00</b>	<b>\$40.00</b>	<b>\$45.00</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.

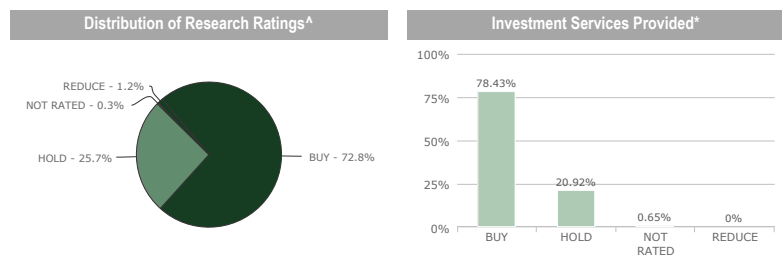
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Current as of: September 8, 2021

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