

Uranium Price Remains in Holding Pattern

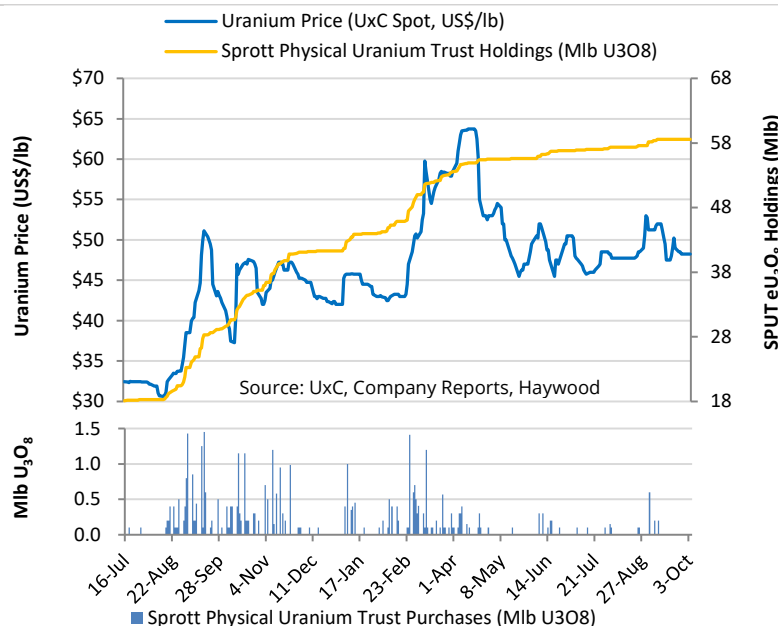
MARKET VOLATILITY EASES FROM LAST WEEK'S PEAK – URANIUM STOCKS NUDGE UP

Uranium Price Update & Sector Commentary: Close of October 5th, 2022

In last week's issue we talked about spiking broader market volatility playing a role in suppressing the value of the Sprott Physical Uranium Trust (aka SPUT, U.UN-T (C\$), U.U-T (US\$), Not Rated) relative to its NAV, and our expectation that, as broader market volatility relaxes, this discount will correct. With the VIX falling 17.3% from last Wednesday's peak, we saw SPUT fight its way all the way back to a small premium to NAV by Tuesday night this week, coincident with the first small issuance of new trust units in about 2 weeks. We continue to closely watch SPUT, since it has been so influential on uranium price movement and physical market volume over the last year (since inception). The frequency of uranium sector news reinforcing the fundamental factors driving our bullish thesis remains high and we see SPUT as an important probable accelerant when uranium price starts to build off the support levels we are seeing here. Many industry observers believe that utility buying/contracting will accelerate toward year-end and into 2023 and any price building that materializes will attract SPUT buyers, leading to competition for physical uranium in the spot market. Which is to say we like uranium and uranium stocks heading into year-end. Long-term enrichment services (SWU) are at a 47% premium to spot, as buyers seek to secure enrichment services, seeing risk in certain traditional suppliers. At the same time, the spot price for conversion services (from U₃O₈ to UF₆) is at a 43% premium to term price (the opposite condition of the enrichment market). These historically unusual premiums both materialized coincident with the Russia/ Ukraine conflict and make sense in the context. UF₆ in the enrichment queue in Russia is at elevated risk of becoming stranded, and thus the hedge is to hurry U₃O₈ into conversion, while locking down the future enrichment services for the resulting UF₆ to catch-up.

Uranium Equities - News

- ◆ **Trench Metals Corp. (TMC-V, Not Rated):** Received permit to commence exploration program on the Higginson Lake Uranium Property— [link to Oct. 3rd PR](#)
- ◆ **Consolidated Uranium Inc. (CUR-V, Not Rated):** Completed the acquisition of the Ben Lomond Uranium Project in Queensland, Australia— [link to Oct. 3rd PR](#)
- ◆ **IsoEnergy Ltd. (ISO-V, Rating: BUY, Target: \$7.00):** Provided an update on summer exploration results— [link to Oct. 5th PR](#)

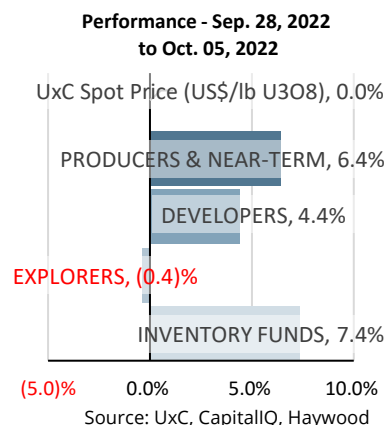


Uranium required and cost to make 1kg of EUP (4.5% U²³⁵): Mine/plant output of 26.7 lb U₃O₈ (\$1,288 cost) -> Conversion to UF₆ (\$388 cost) -> delivers 10.22 kgU as UF₆ (\$1,677 cumulative cost) -> enrichment: 6.23 SWU (\$573 cost) -> delivers 1kg EUP (\$2,250 cumulative cost). (US\$, spot U₃O₈, tails assay of 0.30% U²³⁵)

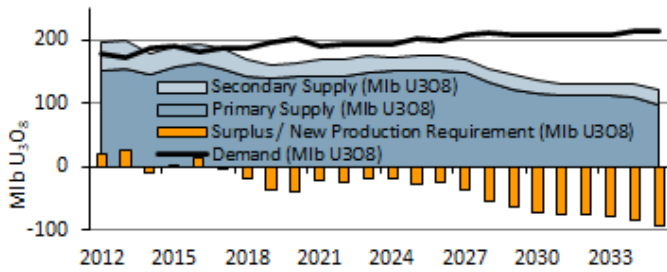
- ◆ **Miramar Resources (MR2-AU, Not Rated):** Identified diamond occurrence and large uranium anomalies at Bangemall Projects— [link to Oct. 3rd PR](#)
- ◆ **Uranium Energy Corp (UEC-US, BUY Rating, \$6.60 Target):** Results from recently acquired Christie Lake Project— [link to Oct. 4th PR](#) - [Haywood Note](#)
- ◆ **Forsys Metals Corp. (FSY-T, Not Rated):** Provided an update for its Namiblaas deposit— [link to Oct. 5th PR](#)

UxC U ₃ O ₈ Prices	(USD per pound)
SPOT (1-day Δ):	\$48.25 (unchanged)
(1-week Δ):	(unchanged)
(1-month Δ):	(-5.9%)
3-year (1-week Δ):	\$56.00 (+2.8%)
5-year (1-week Δ):	\$59.50 (+2.1%)
LT (@Sept. 26th, 1-mth Δ):	\$49.00 (-2.0%)

* UxC Spot Price published daily, 3y, 5y pricing published weekly on Monday. UxC Long-Term price published last Monday of month.



Uranium Sector – Haywood Supply / Demand Model & Uranium Price History & Forecast (annual average)



Source: UxC, WNA, IAEA, IEA, Haywood

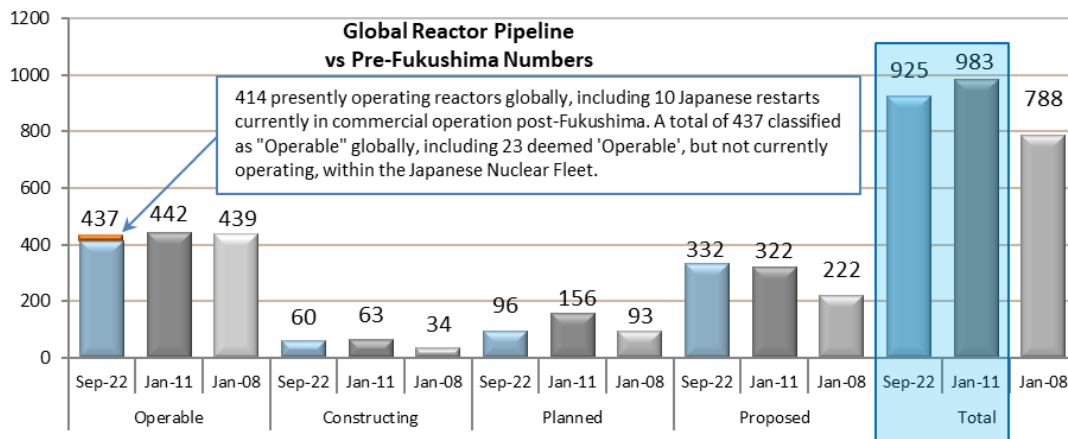
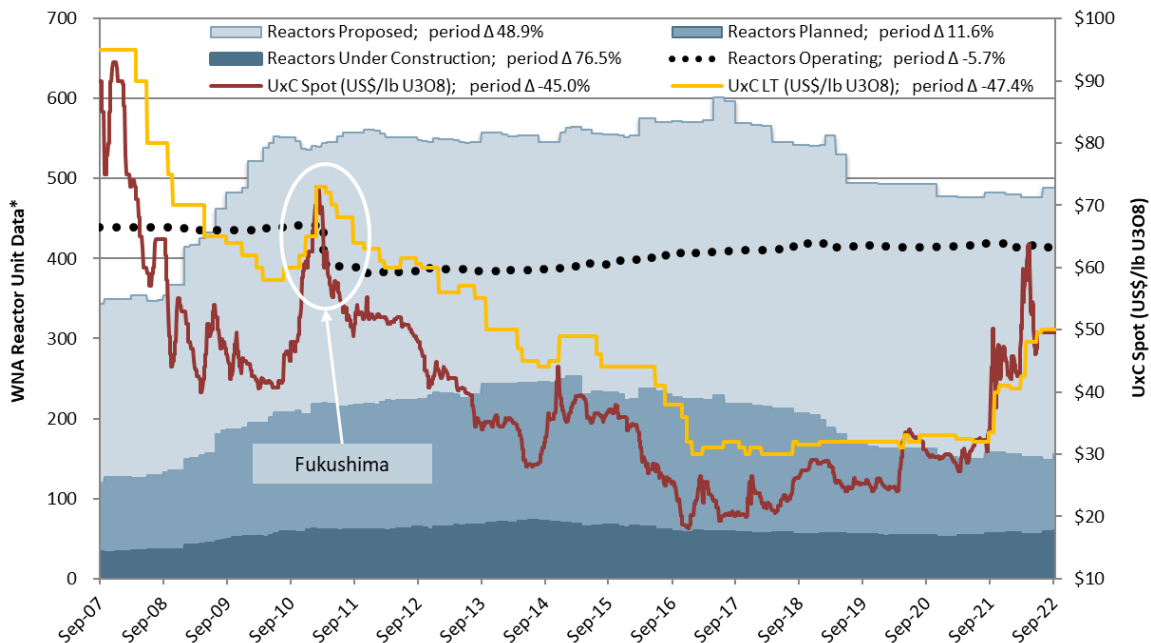
Commodity Price History	2015	2016	2017	2018	2019	2020	2021
Spot price (US\$/lb U ₃ O ₈)	\$37	\$26	\$22	\$25	\$26	\$29	\$40
Long Term price (US\$/lb U ₃ O ₈)	\$47	\$40	\$31	\$31	\$32	\$32	\$35

Commodity Price Forecast	2022	2023	2024	2025	2026	2027	2027
Spot price (US\$/lb U ₃ O ₈)	\$47	\$55	\$64	\$65	\$65	\$65	\$65
Long Term price (US\$/lb U ₃ O ₈)	\$55	\$63	\$70	\$65	\$65	\$65	\$65

Source: UxC history, Haywood Forecast

Global Civil Nuclear Reactor Pipeline Evolution

Figure 1. Upper: Global Nuclear Reactor Pipeline vs Uranium Price; Lower: Global Nuclear Reactor Pipeline – Current vs Pre-Fukushima



Source: WNA (September 2022 data), UxC, Haywood Securities



Uranium Sector Top Picks & Covered Names

NexGen (NXE-T, Rating: BUY, Target: \$7.50)

Our Take: NXE remains a top pick in the uranium space due to the disruptive potential of the Arrow deposit, with its massive scale and strong economics. [Link to Most Recent Report](#)

- ◆ **Top Asset:** We view the Arrow deposit as ‘the best undeveloped uranium asset globally and highly strategic’. The February 2021 Feasibility Study outlined a >21 Mlb U₃O₈ per year, 10-year mine operation with an after-tax NPV_{8%} of \$3.47B at US\$50/lb uranium.
- ◆ **Take-Out Candidate:** We believe that it is critical for major producers to control this deposit because of its disruptive potential and that this is the strategic key to preserving the value of existing deposits and maintaining the ability to affect price with output decisions.
- ◆ **Ultra Low-Cost:** The Feb. 2021 Arrow Feasibility Study suggests cash operating costs of US\$5.69/lb implying an industry leading margin for a tier 1 scale operation.
- ◆ **Catalysts:** H2/2022 results of field programs, including updates on FEED work and results of field and exploration activities.
- ◆ **Cash of \$164 million**

Denison Mines (DML-T, Rating: BUY, Target: \$2.90)

Our Take: The core strength of Denison remains its ability to leverage its technical team and knowledge gained in studying ISR and its applicability to unconformity-hosted uranium deposits in the Basin. Denison’s unique (to the Athabasca) plan to in-situ leach the Phoenix deposit is perceived as technically challenging, but with a very high potential reward, with a PFS-supported cost profile among the lowest in the world, due to the extremely high grades at Phoenix. [Link to Most Recent Report](#)

- ◆ **De-risking Phoenix with freeze-wall trade-off study.** Late 2020, Denison announced the results of a trade-off study examining the use of ‘freeze walls’ and sequential ISR mining phases to replace the ‘freeze dome’ outlined for the Phoenix deposit in the Wheeler River project Preliminary Feasibility Study (PFS). The proposed freeze wall approach is **simpler and offers more control in each mining cell/phase and improves the risk profile on the mine plan.**
- ◆ **New approach should mean lower CAPEX hurdle.** Mining of Phoenix via ISR was already a very attractive economic proposition, with initial CAPEX in the PFS at <\$325M and OPEX of US\$3.33/lb U₃O₈. The trade-off study is preliminary but **lower initial CAPEX is supportable as the phased freeze wall approach is simpler and less costly to initial production.**
- ◆ **Catalysts:** H1/2022 - **Further technical work** to de-risk the ISR mining approach to Phoenix at Wheeler River in support of a future full Feasibility Study (estimated late 2022 delivery) for Wheeler River integrating the extensive technical advancements made since the 2018 PFS. **2022 - Exploration results** - seeking satellite deposits at Wheeler River; and Studies for other potentially ISR amenable projects similar to THT/Waterbury.
- ◆ **Cash of ~\$56 million, plus 2.5 Mlb U₃O₈ as long-term investment.**

Other Covered Names

- ◆ **Energy Fuels Inc. (EFR-T, UUUU-US) – Rating: Buy; Target: US\$6.75 Target ([last report](#))**
- ◆ **IsoEnergy. (ISO-V) – Rating: Buy; Target: \$7.00 ([last report](#))**
- ◆ **Uranium Energy Corp. (UEC-US) – Rating: Buy; Target: US\$6.60 Target ([last report](#))**

Coverage Universe

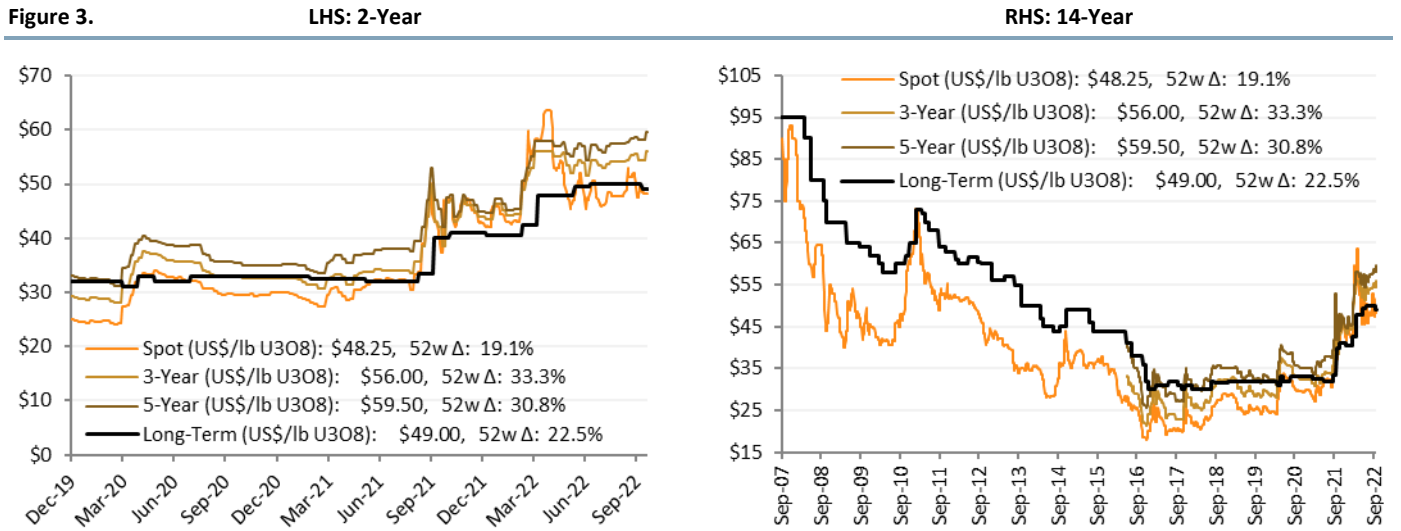
Figure 2. Uranium Sector Haywood Coverage

Company	Ticker	Analyst	Last Price (C\$)	Shares O/S (M)	MC (C\$M)	EV (C\$M)	Target (C\$)	Return (%)	Rating	NAVPS (US\$)	CFPS (US\$) 2022E	CFPS (US\$) 2023E
Denison Mines	DML-T	CH	\$1.72	818	\$1,407	\$1,340	\$2.90	69%	BUY	C\$2.85	(\$0.01)	(\$0.01)
Energy Fuels	UUUU-US	CH	US\$6.89	158	US\$1,086	US\$1,357	US\$6.75	-2%	BUY	\$6.73	(\$0.02)	\$0.20
IsoEnergy Ltd.	ISO-V	CH	\$3.91	107	\$418	\$427	\$7.00	79%	BUY	C\$7.02	(\$0.07)	(\$0.07)
NexGen Energy	NXE-T	CH	\$5.59	480	\$2,682	\$2,609	\$7.50	34%	BUY	C\$7.50	(\$0.03)	(\$0.03)
Uranium Energy	UEC-US	CH	US\$4.06	346	US\$1,404	US\$1,372	US\$6.60	63%	BUY	\$6.55	(\$0.08)	(\$0.08)

Source: Haywood Securities

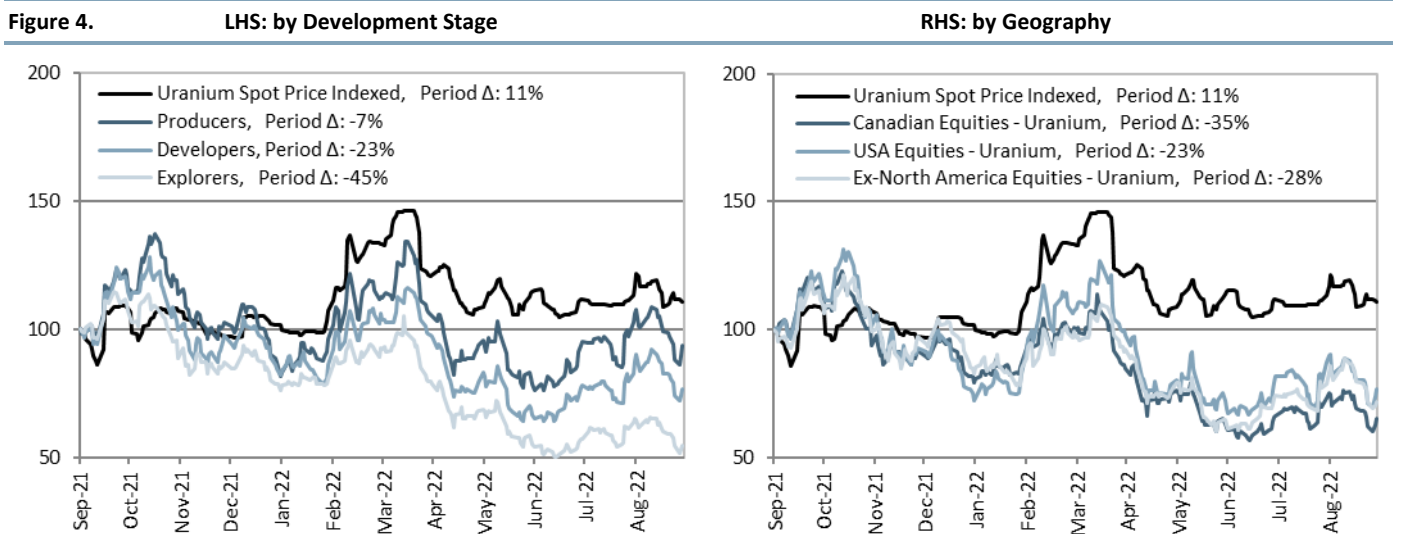


Uranium Price Charts



Source: UxC, Haywood Securities

Uranium Equity Relative Performance Charts (1-year, indexed to 100)



Source: UxC, S&P Capital IQ, Haywood Securities



Figure 5. Uranium Sector Comps with 1-Week Performance Data

Company (Ticker)	Share Price	Consensus Targets		Shares Outst. (millions)	Market Capitalization (millions)	In-Situ Comps - EV/lb U3O8			NAV Comps		Cash Flow Comps			Performance Sep. 28, 2022 to Oct. 05, 2022
		Consensus Target	Implied Return			Enterprise Value (USD) (millions)	Total Reserves & Resources (M lb)	USD EV/lb Resource	IBES Consensus NAV	Price / Nav	2022 P/CFPS	2023 P/CFPS	2024 P/CFPS	
PRODUCERS & NEAR-TERM														
Haywood Covered Names bold														
Cameco Corporation (CCO-T)	\$37.93	\$44.08	16%	398	\$15,113	\$10,778	1078.5	\$9.99	\$28.91	1.31x	37.6x	20.1x	19.5x	2.1%
Kazatomprom (KAP-LSE)	\$29.00	\$38.95	34%	259	\$7,521	\$7,440	1339.5	\$5.55	\$40.15	0.72x	11.5x	7.3x	6.4x	2.0%
Paladin Energy (PDN-AU)	\$0.81	\$0.72	(10)%	2,978	\$2,397	\$1,395	381.7	\$3.66	\$1.24	0.65x	5031.3x			9.1%
Uranium Energy (UEC-US)	\$4.06	\$6.57	62%	346	\$1,404	\$1,372	306.7	\$4.47	\$5.98	0.68x				9.7%
Energy Fuels (UUUU-US)	\$6.89	\$9.70	41%	158	\$1,086	\$993	119.6	\$8.30	\$8.96	0.77x	23.4x	172.3x		10.2%
Boss Energy (BOE-AU)	\$2.66	\$3.30	24%	353	\$937.9	\$522.1	71.4	\$7.31	\$3.20	0.83x		29.1x		12.7%
EnergyResources (ERA-AU)	\$0.21			3,691	\$775.2	\$403.7	302.3	\$1.34						4.6%
Ur-Energy Inc. (URE-T)	\$1.70	\$4.08	140%	223	\$378.8	\$247.9	41.3	\$6.00	\$4.07	0.42x	21.3x			3.8%
Lotus Resources (LOT-AU)	\$0.23	\$0.31	35%	1,326	\$305.0	\$201.8	44.2	\$4.57	\$0.32	0.72x				4.1%
Peninsula Energy (PEN-AU)	\$0.17	\$0.35	109%	999	\$169.8	\$98.3	53.7	\$1.83	\$0.40	0.43x	119.7x			9.2%
Group Average - Producers								\$5.30		0.72x	56.3x	1020.7x	56.8x	6.5%
DEVELOPERS														
NexGen Energy (NXE-T)	\$5.59	\$9.47	69%	480	\$2,682	\$1,908	337.8	\$5.65	\$8.56	0.65x				2.7%
Denison Mines (DML-T)	\$1.72	\$2.15	25%	818	\$1,407	\$980	207.5	\$4.72	\$2.52	0.68x				6.3%
Global Atomic (GLO-T)	\$3.68	\$6.50	77%	180	\$664.0	\$475.2	161.1	\$2.95	\$6.47	0.57x				2.1%
Deep Yellow (DYL-AU)	\$0.86			732	\$626.9	\$362.0	392.2	\$0.92						8.0%
Fission Uranium (FCU-T)	\$0.73	\$1.28	75%	682	\$497.6	\$337.3	130.3	\$2.59	\$1.43	0.51x				0.1%
American Lithium (LI-V)	\$2.31	\$9.42	308%	208	\$480.7	\$340.0	123.4	\$2.75	\$11.00	0.21x				11.2%
IsoEnergy Ltd. (ISO-V)	\$3.91	\$6.50	66%	107	\$417.7	\$312.0	51.3	\$6.09	\$6.61	0.59x				10.6%
enCore Energy (EU-V)	\$3.82	\$7.60	99%	108	\$411.1	\$278.0	129.6	\$2.15	\$7.55	0.51x				10.2%
Bannerman Energy (BMN-AU)	\$2.00	\$2.96	48%	150	\$299.2	\$159.6	238.8	\$0.67						10.6%
GovEx Uranium (GXU-V)	\$0.23	\$0.70	206%	593	\$136.4	\$103.2	201.7	\$0.51	\$0.89	0.26x				(9.7)%
Forsys Metals (FSY-T)	\$0.68			195	\$132.7	\$84.0	127.0	\$0.66						13.5%
Laramide Resources (LAM-T)	\$0.54	\$0.80	48%	208	\$112.4	\$79.7	122.7	\$0.65						10.3%
A-Cap Energy (ACB-AU)	\$0.07			1,232	\$87.5	\$49.4	190.6	\$0.26						(0.4)%
Berkeley Energia (BKY-AU)	\$0.27			446	\$120.4	\$26.1	89.4	\$0.29						(4.0)%
Western Uranium (WUC-L)	\$1.65			44	\$71.9	\$42.0	52.4	\$0.80						(6.7)%
Toro Energy (TOE-AU)	\$0.02			3,897	\$66.3	\$38.0	90.9	\$0.42						(0.4)%
Anfield Energy (AEC-V)	\$0.08	\$0.25	233%	624	\$46.8	\$28.3	22.5	\$1.26	\$0.42	0.18x				25.2%
Energy Metals (EME-AU)	\$0.14			210	\$28.3	\$8.9	57.6	\$0.15						(10.4)%
Group Average - Developers								\$1.86		0.46x				4.4%
EXPLORERS														
Alligator Energy (AGE-AU)	\$0.06			3,303	\$185.0	\$101.9								11.5%
Consolidated Uranium (CUR-V)	\$2.02	\$4.15	105%	77	\$153.3	\$95.2	89.6	\$1.06						5.9%
Elevate Uranium (EL8-AU)	\$0.49			275	\$135.5	\$77.0	137.5	\$0.56						13.9%
DevEx Resources (DEV-AU)	\$0.31			360	\$109.7	\$67.1								(3.6)%
Mega Uranium (MGA-T)	\$0.24			359	\$84.3	\$50.9								2.3%
Skyharbour Resources (SYH-V)	\$0.46	\$0.98	114%	144	\$65.7	\$44.9	7.0	\$6.45	\$1.01	0.45x				(1.0)%
Baselode Energy (FIND-V)	\$0.74			87	\$64.0	\$38.9								7.4%
VaiOre Metals (VO-V)	\$0.37	\$1.05	184%	154	\$56.9	\$39.5	43.5	\$0.91						10.6%
Appia Rare (APL)	\$0.53			123	\$65.3	\$42.0	55.8	\$0.75						4.1%
Azimut Exploration (AZM-V)	\$0.58	\$2.65	357%	79	\$46.0	\$19.0			\$2.66	0.22				0.1%
92 Energy (92E-AU)	\$0.54			88	\$47.5	\$22.0								9.7%
Aurania Resources (ARU-V)	\$0.44			54	\$23.5	\$21.2								(12.0)%
CanAlaska Uranium (CWV-V)	\$0.48			102	\$48.5	\$26.6								(4.9)%
Blue Sky (BSK-V)	\$0.16			200	\$32.0	\$21.5	22.7	\$0.95						10.5%
Okapi Resources (OKR-AU)	\$0.26			136	\$35.3	\$21.2								10.2%
Purepoint Uranium (PTU-V)	\$0.07			369	\$25.8	\$15.7								0.1%
Globex Mining (GMX-T)	\$0.72			56	\$40.1	\$14.9								1.5%
GTI Energy (GTR-AU)	\$0.02			1,505	\$24.1	\$10.1								(6.3)%
Forum Energy (FMC-V)	\$0.13			172	\$22.4	\$13.9	0.6	\$23.45						8.5%
Standard Uranium (STND-V)	\$0.11			148	\$15.5	\$11.2								16.8%
Fission 3.0 (FUU-V)	\$0.09			302	\$25.7	\$5.7								(14.9)%
Azincourt Energy (AAZ-V)	\$0.06			227	\$12.5	\$1.4								0.1%
ALX Resources (AL-V)	\$0.04			208	\$8.3	\$4.4								0.1%
Cauldron Energy (CXU-AU)	\$0.01			535	\$6.4	\$4.3	30.9	\$0.14						(0.4)%
Tarku Resources (TKU-V)	\$0.04			86	\$3.2	\$2.4								(26.9)%
Northern Uranium (UNOH-V)	\$0.02			162	\$2.4	\$1.8								(24.9)%
X-Terra Resources (XTT-V)	\$0.03			99	\$2.5	\$1.6								0.1%
Avrupa Minerals (AVU-V)	\$0.03			55	\$1.4	\$0.7								0.1%
International Prospect (IZZ-V)	\$0.05			40	\$1.8	\$1.2	0.6	\$2.03						(9.9)%
Vanadian Energy (VEC-V)	\$0.03			42	\$1.1	\$1.0								(16.6)%
Uravan Minerals (UVN-V)	\$0.16			5	\$0.8	\$0.3								0.1%
Eros Resources (ERC-V)	\$0.06			98	\$5.4	(\$4.8)								0.1%
Group Average - Explorers								\$4.03						(0.2)%
INVENTORY FUNDS														
Sprott Physical (U.UN-T)	\$16.89	\$23.50	39%	235	\$2,897	\$2,829	58.6	\$48.30						4.9%
Yellow Cake (YCALN)	£4.18	£5.30	27%	183	£765.4	\$729.9	19.8	\$36.81						9.8%
														7.4%
ROYALTY COMPANIES														
Uranium Royalty (URC-V)	\$3.53	\$7.13	102%	97	\$343.6	\$180.6			\$5.08	0.70x				5.5%

Source: S&P Capital IQ, Bloomberg, Haywood Securities, Company Reports



Figure 6. Uranium Equities β to Uranium price, plus $\beta_{\text{equity/uranium}}/\sigma_{\text{equity}}$

Ticker	Company	β_{uranium} (Last 1-year, Weekly Simple Returns)	$\beta_{\text{uranium}}/\sigma_{\text{equity}}$	Absolute Return (%)	Rank Beta	Rank $\beta_{\text{uranium}}/\sigma_{\text{equity}}$	Rank Absolute Return
ASX:EL8	Elevate Uranium Ltd	1.67	12.456	(1%)	1	4	10
TSXV:AEC	Anfield Energy Inc.	1.59	11.511	(42%)	2	7	41
US:UEC	Uranium Energy Corp.	1.53	10.036	33%	3	15	3
ASX:TOE	Toro Energy Limited	1.51	11.610	(43%)	4	5	43
ASX:PEN	Peninsula Energy Limited	1.45	13.871	(24%)	5	1	28
ASX:BMN	Bannerman Energy Ltd	1.42	11.282	(26%)	6	9	31
TSXV:FMC	Forum Energy Metals Corp.	1.42	9.687	(73%)	7	20	63
ASX:DYL	Deep Yellow Limited	1.38	11.515	(7%)	8	6	15
ASX:AGE	Alligator Energy Limited	1.38	10.185	(7%)	9	14	14
TSX:FSY	Forsys Metals Corp.	1.33	9.688	(24%)	10	19	28
ASX:92E	92 Energy Limited	1.30	10.229	(25%)	11	13	30
CNSX:WUC	Western Uranium & Vanadium I	1.28	9.680	(48%)	12	21	47
ASX:LOT	Lotus Resources Limited	1.27	11.509	(13%)	13	8	19
TSXV:URC	Uranium Royalty Corp.	1.26	10.658	(30%)	14	12	36
ASX:OKR	Okapi Resources Limited	1.24	9.864	(47%)	15	17	45
ASX:GTR	GTI Energy Ltd	1.22	9.085	(43%)	16	24	42
TSX:URE	Ur-Energy Inc.	1.21	10.991	(22%)	17	11	27
TSXV:FIND	Baselode Energy Corp.	1.20	9.905	(20%)	18	16	25
TSXV:ISO	IsoEnergy Ltd.	1.14	8.265	(16%)	19	33	20
TSXV:GXU	GoviEx Uranium Inc.	1.09	8.111	(39%)	20	35	39
TSX:EFR	Energy Fuels Inc.	1.07	8.859	6%	21	28	9
ASX:BOE	Boss Energy Limited	1.06	11.262	40%	22	10	1
ASX:BKY	Berkeley Energia Limited	1.05	8.424	(13%)	23	32	18
TSX:MGA	Mega Uranium Ltd.	1.04	8.236	(20%)	24	34	24
ASX:ACB	A-Cap Energy Limited	0.99	5.864	(3%)	25	47	12
TSXV:EU	enCore Energy Corp.	0.99	9.228	(27%)	26	23	34
TSXV:SYH	Skyharbour Resources Ltd.	0.95	7.669	(27%)	27	38	32
TSX:FCU	Fission Uranium Corp.	0.94	8.589	(16%)	28	30	21
TSXV:UNO.H	Northern Uranium Corp.	0.91	6.649	(63%)	29	43	54
TSXV:XTT	X-Terra Resources Inc.	0.89	5.392	(55%)	30	49	50
TSX:DML	Denison Mines Corp.	0.89	8.649	(5%)	31	29	13
TSXV:FUU	Fission 3.0 Corp.	0.89	7.200	(50%)	32	40	48
AIM:YCA	Yellow Cake plc	0.89	13.507	23%	33	2	4
ASX:PDN	Paladin Energy Ltd	0.89	9.694	7%	34	18	8
TSX:GLO	Global Atomic Corporation	0.87	8.933	12%	35	25	7
TSXV:CVV	CanAlaska Uranium Ltd.	0.85	5.536	(27%)	36	48	33
TSXV:AAZ	Azincourt Energy Corp.	0.84	7.914	(72%)	37	37	61
TSX:NXE	NexGen Energy Ltd.	0.84	8.882	(11%)	38	26	17
TSXV:PTU	Purepoint Uranium Group Inc.	0.82	7.437	(46%)	39	39	44
TSX:CCO	Cameco Corporation	0.78	9.523	37%	40	22	2
TSX:U.U	Sprott Physical Uranium Trust Fi	0.76	12.662	22%	41	3	5
ASX:EME	Energy Metals Limited	0.74	7.989	(61%)	42	36	53
TSXV:VEC	Vanadian Energy Corp.	0.73	3.666	(71%)	43	56	58
TSX:GMX	Globex Mining Enterprises Inc.	0.73	8.874	(22%)	44	27	26
ASX:DEV	DevEx Resources Limited	0.69	4.792	20%	45	50	6
TSXV:CUR	Consolidated Uranium Inc.	0.69	7.178	(18%)	46	41	23
TSXV:BSK	Blue Sky Uranium Corp.	0.68	6.316	(48%)	47	45	46
CNSX:API	Appia Rare Earths & Uranium Cc	0.63	4.682	(29%)	48	51	35
TSXV:VO	ValOre Metals Corp.	0.62	6.385	(3%)	49	44	11
TSXV:AVU	Avrupa Minerals Ltd.	0.61	4.063	(64%)	50	55	56
TSXV:STND	Standard Uranium Ltd.	0.57	4.613	(72%)	51	52	60
TSXV:AL	ALX Resources Corp.	0.56	6.054	(65%)	52	46	57
KAS:KZAP	JSC National Atomic Company K	0.52	8.425	(16%)	53	31	22
ASX:ERA	Energy Resources of Australia Li	0.46	6.922	(42%)	54	42	40
TSXV:UVN	Uravan Minerals Inc.	0.45	4.285	(57%)	55	53	51
TSXV:ERC	Eros Resources Corp.	0.39	4.159	(35%)	56	54	38
TSXV:IZZ	International Prospect Venture	0.37	3.312	(71%)	57	57	59
TSXV:LI	American Lithium Corp.	0.30	2.293	(10%)	58	59	16
ASX:LAM	Laramide Resources Ltd.	0.28	3.157	(35%)	59	58	37
ASX:CXU	Cauldron Energy Limited	0.23	1.603	(59%)	60	61	52
TSXV:AZM	Azimut Exploration Inc.	0.12	1.855	(63%)	61	60	55
TSXV:TKU	Tarku Resources Ltd.	0.10	0.434	(54%)	62	62	49
TSXV:ARU	Aurania Resources Ltd.	-0.06	-0.584	(72%)	63	63	62

Source: UxC, CapitalIQ, Bloomberg, Haywood



Figure 7. Uranium Comps Performance with Short Interest / Days to Cover

Index	Ticker	Short Interest / Days to Cover	1-Day Δ (%)	5-Day Δ (%)	10-Day Δ (%)	30-Day Δ (%)	90-Day Δ (%)	YTD Δ (%)	12-Mth Δ (%)	2-year Δ (%)
S&P/TSX COMPOSITE INDEX	.TTT-T		(0.7)%	4.3%	4.1%	(0.2)%	0.9%	(9.4)%	(4.7)%	17.2%
S&P/TSX VENTURE COMPOSITE	.JX-T		(0.1)%	4.8%	7.7%	(1.5)%	1.4%	(33.7)%	(28.2)%	(12.7)%
S&P/TSX 60 INDEX	T.XLX-T		(0.7)%	4.1%	3.6%	(0.2)%	0.4%	(9.7)%	(4.0)%	18.2%
PRODUCERS										
CAMECO CORPORATION	CCO-T	5.5% / 2.5	0.3%	3.5%	10.4%	0.1%	31.3%	37.5%	37.1%	189.1%
KAZATOMPROM S	KAP-LN		2.6%	15.2%	6.8%	(4.5)%	18.4%	(21.1)%	(23.9)%	108.6%
PALADIN ENERGY L	PDN-AU	5.6% / 6.4	0.4%	5.7%	1.0%	1.7%	35.3%	(9.3)%	7.8%	554.1%
URANIUM ENERGY CORP	UEC-US	13.8% / 4.1	1.2%	16.0%	23.8%	(1.9)%	20.1%	21.2%	33.1%	306.0%
ENERGY FUELS INC	UUUU-US	18.4% / 7.4	1.0%	12.6%	23.3%	(4.8)%	27.8%	(9.7)%	(2.0)%	305.3%
BOSS EN FPO	BOE-AU	2.9% / 3.3	1.5%	0.8%	8.1%	5.6%	44.6%	18.2%	38.5%	396.3%
ENERGY RESOURCES	ERA-AU	0.0% / 0.1	2.4%	2.4%	(6.7)%	(19.2)%	5.0%	(38.2)%	(40.8)%	31.3%
UR ENERGY INC	URE-T	4.3% / 4.7	4.3%	11.1%	12.6%	(1.7)%	18.9%	10.4%	(22.4)%	178.7%
LOTUS RESOURCES	LOT-AU	1.0% / 1.1	(2.1)%	2.2%	(0.0)%	(6.1)%	12.2%	(25.8)%	(13.2)%	184.0%
PENINSULA ENERGY	PEN-AU	1.3% / 2.3	6.1%	6.1%	9.4%	2.9%	16.7%	(12.5)%	(22.2)%	169.2%
DEVELOPERS										
NEXGEN ENERGY LTD	NXE-T	6.1% / 4.2	(0.2)%	11.4%	16.7%	1.5%	11.4%	0.9%	(10.8)%	145.2%
DENISON MINES CORPORATION	DML-T	6.1% / 4.5	(0.6)%	6.8%	18.6%	(1.7)%	27.4%	(1.1)%	(5.5)%	212.7%
GLOBAL ATOMIC CORPORATION	GLO-T	1.1% / 2.3	(0.8)%	5.7%	7.6%	(2.4)%	27.8%	(12.2)%	11.5%	475.0%
DEEP YELLOW	DYL-AU	1.1% / 1.6	0.6%	5.6%	(7.1)%	(16.6)%	42.5%	(0.6)%	(7.1)%	175.8%
FISSION URANIUM CORP	FCU-T	1.2% / 2.3	(1.4)%	10.6%	7.4%	(6.4)%	14.1%	(6.4)%	(16.1)%	135.5%
AMERICAN LITHIUM CORP	LI-V	0.8% / 2.0	3.1%	13.2%	28.3%	4.5%	20.3%	(45.8)%	(10.5)%	50.0%
ISOENERGY LTD	ISO-V	1.5% / 2.8	(1.5)%	(1.0)%	16.7%	(4.9)%	38.7%	4.5%	(15.9)%	287.1%
ENCORE ENERGY CORP	EU-V	0.5% / 0.9	4.1%	7.0%	12.7%	(8.4)%	6.1%	(20.4)%	(27.2)%	218.3%
BANNERMAN ENERGY	BMN-AU	1.0% / 1.7	(1.0)%	(2.0)%	4.4%	(4.3)%	21.8%	(25.6)%	(25.6)%	443.2%
GOVIEK URANIUM INC	GXU-V	0.5% / 1.2	(0.0)%	(0.0)%	(2.1)%	(16.4)%	(9.8)%	(35.2)%	(39.5)%	64.3%
FORSYS METALS CORP	FSY-T	0.6% / 3.1	9.7%	25.9%	21.4%	(2.9)%	36.0%	(20.0)%	(24.4)%	
LARAMIDE RESOURCES LTD	LAM-T	1.8% / 5.2	5.9%	9.1%	14.9%	(8.5)%	17.4%	(23.9)%	(30.8)%	116.0%
A-CAP ENERGY	ACB-AU	0.1% / 0.2	(2.7)%	(4.1)%	(5.3)%	(15.5)%	26.8%	(51.0)%	(2.7)%	255.0%
BERKELEY ENERGIA	BKY-AU	0.0% / 0.0	0.0%		(8.5)%	(20.6)%	(28.0)%	17.4%	(12.9)%	(57.5)%
WESTERN URANIUM & VANADIUM CORP	WUC-L	0.1% / 0.3	1.2%	(6.8)%	19.6%	(0.0)%	37.5%	(11.8)%	(47.8)%	135.7%
TORO ENERGY	TOE-AU	0.1% / 0.2			(0.0)%	(0.0)%	21.4%	(22.7)%	(43.3)%	30.8%
ANFIELD ENERGY INC	AEC-V	0.2% / 0.3	7.1%	25.0%	15.4%		(6.3)%	(21.1)%	(42.3)%	66.7%
ENERGY MET FPO	EME-AU		3.7%	(6.7)%	(12.5)%	(20.0)%	16.7%	(48.1)%	(60.0)%	
EXPLORES										
ALLIGATOR ENERGY	AGE-AU	2.2% / 2.6	(0.0)%	(0.0)%	(9.7)%	(9.7)%	21.7%	1.8%	(6.7)%	1,020.0%
CONSOLIDATED URANIUM INC	CUR-V	0.4% / 1.2	(2.9)%	0.5%	10.4%	(13.7)%	11.0%	(29.6)%	(17.6)%	
ELEVATE URANIUM	ELB-AU	1.8% / 4.6	3.1%	2.1%	1.0%	(4.8)%	33.8%	6.5%	0.0%	482.4%
DEVEX RESOURCES	DEV-AU	0.1% / 1.9	(1.6)%	(1.6)%	(7.6)%	(20.8)%	41.9%	(37.8)%	19.6%	7.0%
MEGA URANIUM LTD	MGA-T	0.5% / 1.8	2.2%	6.8%	14.6%	(7.8)%	20.5%	(7.8)%	(20.3)%	74.1%
SKYHARBOR RESOURCES LTD	SYH-V	0.1% / 0.2	(6.2)%	(2.2)%	19.7%	(8.1)%	42.2%	(6.2)%	(26.6)%	127.5%
BASELODE ENERGY CORP	FIND-V	0.1% / 0.2	(0.7)%	(6.3)%	2.8%	(2.6)%	(7.5)%	(8.6)%	(20.4)%	(7.5)%
VALORE METALS CORP	VO-V	0.2% / 1.2	(1.3)%	2.8%	19.4%	0.0%	21.3%	(32.7)%	(2.6)%	34.5%
APIA RARE EARTHS & URANIUM CORP	API-L	0.1% / 0.2	3.9%	3.9%	26.2%	12.8%	73.8%	(8.6)%	(29.3)%	53.6%
AZIMUT EXPLORATION INC	AZM-V	0.1% / 0.8	(3.3)%	0.0%	(7.9)%	(29.3)%	(35.6)%	(64.8)%	(63.1)%	(45.3)%
92 ENERGY	92E-AU	8.3% / 7.8	0.0%	2.9%	(2.7)%	(4.4)%	18.7%	(20.6)%	(25.0)%	
AURANIA RESOURCES LTD	ARU-V	0.1% / 0.7	(6.4)%	(4.3)%	(20.0)%	(29.0)%	(38.9)%	(62.4)%	(71.8)%	(89.9)%
CANALASKA URANIUM LTD	CVV-V	0.1% / 0.3	1.1%	(8.7)%	10.5%	(8.7)%	66.7%	8.0%	(26.9)%	126.2%
BLUE SKY URANIUM CORP	BSK-V	2.1% / 11.4	6.7%	14.3%	14.3%	(15.8)%	28.0%	(17.9)%	(47.5)%	23.1%
OKAPI RESOURCES	OKR-AU	0.0% / 0.0	(9.4)%	0.0%	(11.1)%	(9.4)%	41.2%	(30.4)%	(48.9)%	
PUREPOINT URANIUM GRP INC	PTU-V	0.1% / 0.4	7.7%	(0.0)%	7.7%	(17.6)%	7.7%	(17.6)%	(46.2)%	
GLOBEX MINING ENTERPRISES INC	GMX-T	0.2% / 0.7	(2.7)%	(1.4)%	(1.4)%	(28.7)%	(28.7)%	(34.5)%	(21.7)%	4.3%
GTI ENERGY	GTR-AU	0.0% / 0.0	0.0%	0.0%	(11.1)%	(15.8)%	23.1%	(33.3)%	(42.9)%	(20.0)%
FORUM ENERGY METALS CORP	FMC-V	0.1% / 0.2	4.0%	4.0%	8.3%	(16.1)%	8.3%	(23.5)%	(73.5)%	(3.7)%
STANDARD URANIUM LTD	STND-V	2.6% / 9.6	5.0%	16.7%	16.7%	(16.0)%	10.5%	(51.2)%	(71.6)%	(43.2)%
FISSION 3.0 CORP	FUU-V	0.1% / 0.2	(0.0)%	(0.0)%	(0.0)%	(22.7)%	6.2%	(61.4)%	(50.0)%	13.3%
AZINCOURT ENERGY CORP	AAZ-V	0.1% / 0.1	10.0%	10.0%	(5.2)%	(26.7)%	10.0%	(68.6)%	(71.6)%	(12.7)%
ALX RESOURCES CORP	ALV	0.5% / 2.2	0.0%	0.0%	0.0%	0.0%	14.3%	(55.6)%	(65.2)%	(50.0)%
CAULDRON ENERGY	CXU-AU	0.0% / 0.0		0.0%	0.0%	0.0%	33.3%	(58.6)%	(58.6)%	
TARKU RESOURCES LTD	TKU-V	0.1% / 0.5	0.0%	50.0%				(43.8)%		(60.9)%
NORTHERN URANIUM CORP	UNO'H-V	0.1% / 4.0	0.0%		0.0%		(40.0)%	(57.1)%	(62.5)%	
X-TERRA RESOURCES INC	XTT-V	0.1% / 0.2	25.0%	0.0%	0.0%	(16.7)%		(16.7)%	(54.5)%	(83.3)%
AVRUPA MINERALS LTD	AVU-V	0.0% / 0.3	0.0%	0.0%		(50.0)%	(16.7)%			(84.4)%
INTERNATIONAL PROSPECT VENTURES LTD	IZZ-V	0.0% / 0.6	0.0%	(10.0)%	(10.0)%			(71.9)%	(71.0)%	
VANADIAN ENERGY CORP	VEC-V	0.0% / 0.0	0.0%	(16.7)%	(16.7)%		25.0%	(50.0)%	(70.6)%	(61.5)%
URAVAN MINERALS INC	UVN-V	0.10%							(57.3)%	
EROS RESOURCES CORP	ERC-V	0.0% / 0.0					(26.7)%		(35.3)%	(38.9)%
INVENTORY FUNDS										
SPROTT PHYSICAL URANIUM TRUST	U.UN-T	1.5% / 1.9	2.2%	3.6%	15.8%	5.3%	21.2%	21.2%	22.5%	
YELLOW CAKE PLC	YCA-LN	0.1% / 0.2	(1.2)%	2.2%	10.1%	0.3%	21.1%	22.0%	22.0%	108.5%
ROYALTY COMPANIES										
URANIUM ROYALTY CORP	URC-V	1.2% / 1.3	2.6%	12.8%	18.5%	(6.1)%	13.9%	(22.9)%	(29.7)%	212.4%

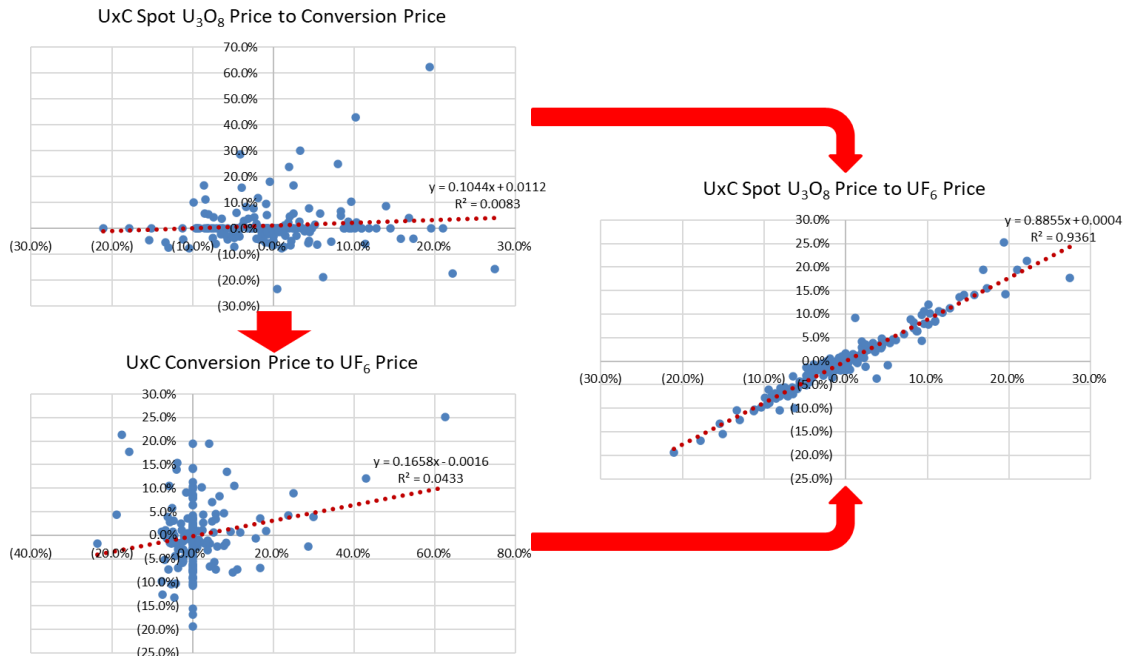
Source: UxC, CapitalIQ, Bloomberg, Haywood



Uranium Fuel Cycle Price Relationships

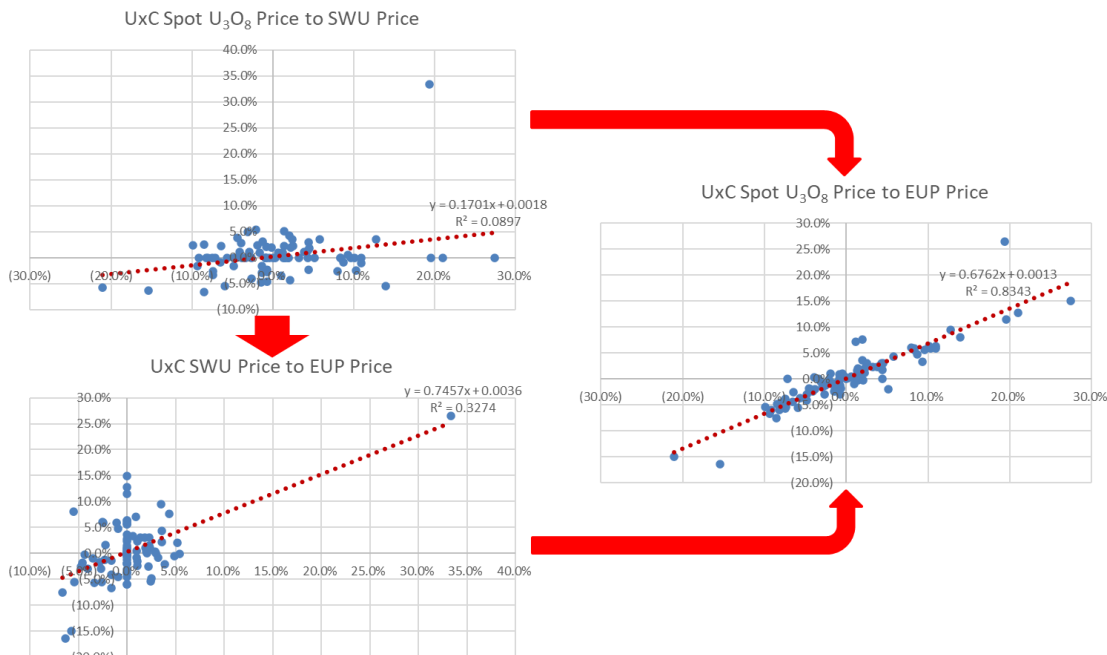
The charts below show that the price of uranium products (U_3O_8 , UF_6 and EUP) are tightly correlated (monthly % Δ) in the long term (RHS Figures 8 & 9). On the lower left chart of each Figure, we see that the cost of fuel services exhibit a much lower correlation with the monthly % change in uranium product (Conversion to UF_6 [$R^2=0.04$] or SWU to EUP [$R^2=0.33$]), owing to the fact that the uranium embedded in the product dominates value. Historically, conversion costs have made up an average of 10.5% of the cost of UF_6 (currently 23.2%), and SWU costs have made up an average of 26% of the price of EUP (currently 25.5%) (or, conversely, UF_6 historically makes up 74% of the cost of EUP).

Figure 8. U_3O_8 – Conversion – UF_6 Monthly Performance Correlations 2008 to August 31st, 2022 (at UxC spot prices)



Source: Haywood Securities Inc., UxC

Figure 9: U_3O_8 – SWU – EUP Monthly Performance Correlations – 2015 to August 31st, 2022



Source: Haywood Securities Inc., UxC



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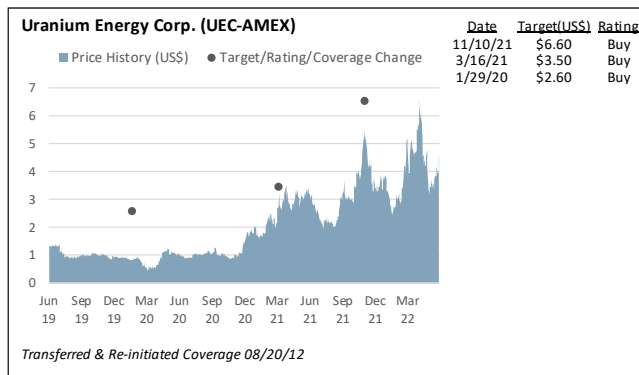
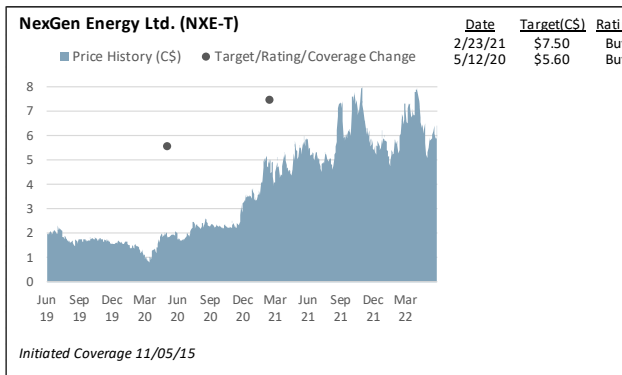
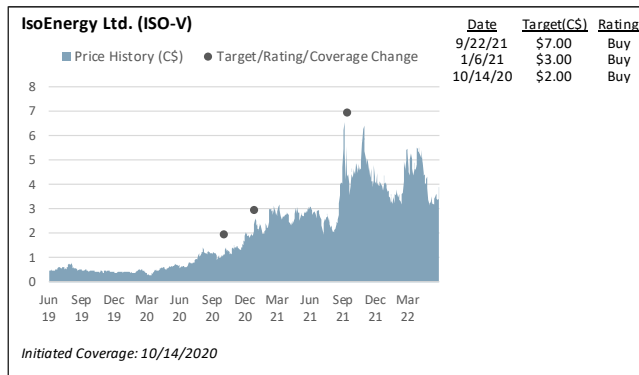
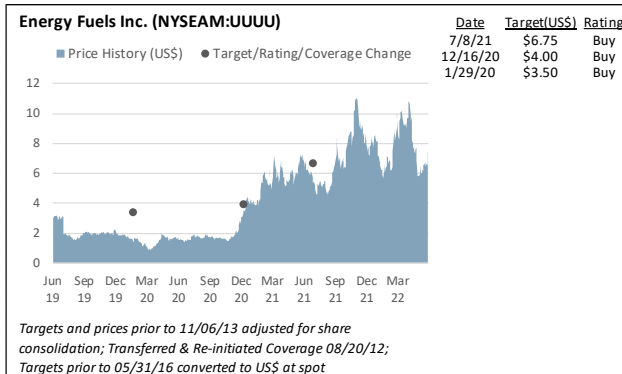
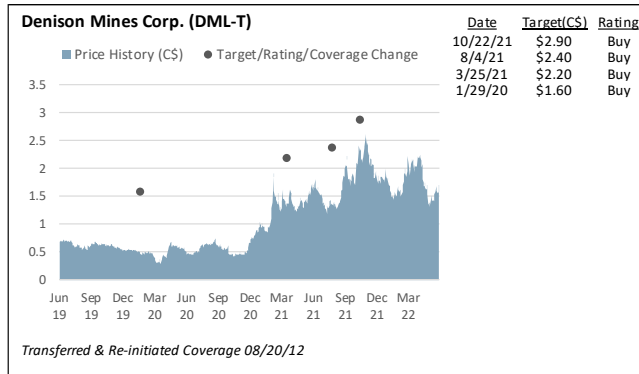
Ticker	Company	1	2	3	4	5	6	7	8	9
TSX:DML	Denison Mines Corp.			X			X			
TSX:EFR	Energy Fuels Inc.			X						
TSXV:ISO	IsoEnergy Ltd.			X						
TSX:NXE	NexGen Energy Ltd.			X						
US:UEC	Uranium Energy Corp.			X						
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	%	#	IB Clients (TTM)
Buy	75.0%	75	71.4%
Hold	11.0%	11	14.3%
Sell	0.0%	0	0.0%
Tender	1.0%	1	4.8%
UR (Buy)	0.0%	0	0.0%
UR (Hold)	0.0%	0	0.0%
UR (Sell)	0.0%	0	0.0%
Dropped (TTM)	13.0%	13	9.5%



Price Chart, Rating and Target Price History (as of October 6, 2022)



B: Buy; H: Hold; S: Sell; T: Tender; UR: Under Review
 Source: Capital IQ and Haywood Securities

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