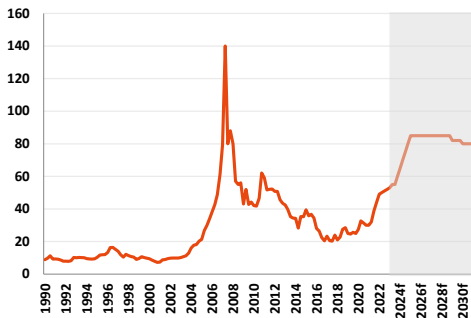


Uranium Sector

Shaw and Partners Sector Report

Uranium Sector Peer Comparisons

U₃O₈ price deck – we assume a **multi-year price spike at US\$85/lb**, before settling to our long-term U₃O₈ realised price assumption of **US\$67/lb (2023 Real) in 2030**.



Source: Tradetech, Shaw and Partners

Company price targets

	Current SP	Target Price	Δ	Rec'n
	A\$ps	A\$ps	%	
PDN	1.10	1.15	5%	Buy
SLX	3.26	5.80	78%	Buy
PEN	0.14	0.27	97%	Buy
LOT	0.27	0.53	102%	Buy
BMN	2.96	3.20	8%	Buy
BOE	4.76	3.40	-29%	Hold

Source: Factset, Shaw and Partners

Uranium at US\$70/lb

UxC is reporting that spot uranium is at US\$70/lb for the first time in over a decade. Cameco (CCO-TSE, not rated) is at all-time highs and the ASX stocks are also performing well. We continue to remain bullish the entire sector as outlined in our sector report from June this year. [Uranium Sector - Nuclear Renaissance – uranium price set to surge higher - 27 Jun 2023](#). Our forecast of uranium averaging US\$64/lb in FY24 with a peak uranium price of US\$85/lb by FY26 is now looking conservative.

Peer Comparisons

Figure 1 summarises the key valuation metrics for the major ASX listed uranium stocks. We have compared enterprise values per resource and per planned production target. We have also compared the enterprise values to company disclosed DFS valuations and to Shaw's valuations. We have also back-calculated what uranium price you would need (in perpetuity) in our financial model to equate our DCF valuation with the current enterprise valuation.

- Boss Energy (BOE)** is up 123% this year and is now trading at three times its own DFS valuation and a 50% premium to our valuation. Boss is trading at an implied uranium price of US\$115/lb. The market clearly believes that the Honeymoon project is just a starter project and that Boss will quickly expand. The company does have significant resource upside, but even so, it is trading at US\$13/lb of resource which is well above the peer average of ~US\$3/lb. [Boss Energy - Honeymoon uranium restart on-track for 4Q23 - 27 Jun 2023](#).
- Paladin (PDN)** at \$1.10ps is also now nearing our price target. It is trading at a 6% premium to our valuation and over twice our valuation of Langer Heinrich. The current market cap is pricing in the company's significant resource upside beyond Langer Heinrich. Our model suggests Paladin is pricing in US\$90/lb uranium in perpetuity. Nonetheless, we maintain our BUY recommendation on the view that this sector rally has a long way to run, and Paladin is the high-quality and most liquid way to play the sector. We expect to see another wave of interest in Paladin once it is in production in CY24. [Paladin Energy - Nuclear is all the buzz – Paladin getting ready for Langer Heinrich restart - 29 Aug 2023](#)
- Lotus (LOT)** and **Peninsula (PEN)** are now the standout valuation plays in the sector. Lotus and Peninsula are comparable in size to Boss but trading at substantial valuation discounts on all measures. Both are pricing in uranium at about US\$60/lb and are trading at ~40% discount to the Shaw valuation. [Lotus Resources Ltd - Kayelekera - the next uranium project to reach FID - 27 Jun 2023](#)
[Peninsula Energy - Lance project revamp – Peninsula cheap compared to Uranium Energy Corp. - 31 Aug 2023](#)
- Silex (SLX)** also appears very cheap in comparison to Paladin. One way to think about Silex is that the Paducah Laser Enrichment Facility (PLEF) project is a similar size project to Paladin's Langer Heinrich project. Both projects will be producing about 5Mlb of uranium at a cash cost of about US\$30/lb. Paladin has 75% of Langer Heinrich and Silex has 51% of PLEF. All else being equal, we could argue that Silex should trade at 2/3 the enterprise valuation of Paladin – it is trading at less than a quarter. Silex has further opportunities beyond PLEF1 and its laser uranium enrichment technology has the potential to become the global standard. [Silex Systems - Laser enrichment of uranium – breaking the Russian nexus - 27 Jun 2023](#)

Recommendation

We recommend an overweight exposure to the uranium sector with Paladin as the core holding. Other stocks where we have a positive view include Lotus, Peninsula, Silex and Bannerman.

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Action Items

- 1. Remain long uranium** – in our view this sector rally has a long way to go. We are only two years into what is likely to be a decade long upcycle after the decade long downcycle post Fukushima.
- 2. Paladin (PDN) remains a core holding** on the ASX – it has run hard recently and may need to consolidate at current levels, but we recommend trading around this stock as a core holding.
- 3. Buy Lotus** – there are three upcoming positive catalysts (Mine Development Agreement, power agreement, offtakes). Lotus is likely to announce FID on a restart at Kayelekera later this year and in our view the market is not factoring in the significant improvements that have been made to this project since it was last in production (ore sorting, mains power, onsite acid plant, improved acid recovery)
- 4. Buy Peninsula** – the stock was sold off post the disappointing news on the delayed start-up at Lance, but in our view the market reaction is overdone. The value remains intact and as a US asset Lance is well placed to receive strong support from the US Government.
- 5. Buy Silex** – Silex is only up 2% in CY23. That is partly explained by its strong performance in CY22 (up 141%) – but it now appears particularly cheap compared to Paladin with arguably more options for value creation than Paladin (PLEF II, PLEF III, Silicon etc). On our modelling Silex is only pricing in uranium at US\$52/lb.

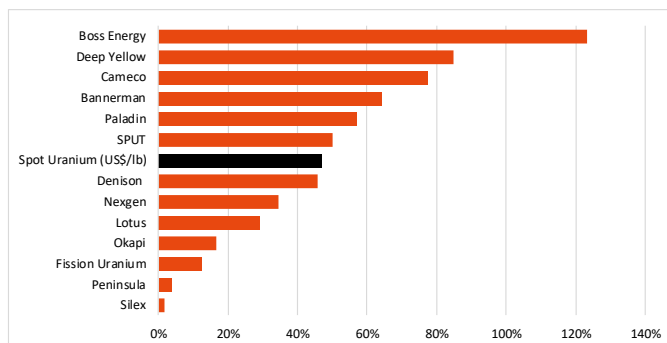
Figure 1: Selected ASX Listed uranium comparatives

Company	Paladin	Boss	Lotus	Peninsula	Bannerman	Silex	Deep Yellow
Ticker	PDN	BOE	LOT	PEN	BMN	SLX	DYL
Exchange	ASX	ASX	ASX	ASX	ASX	ASX	ASX
Main Asset	Langer-Heinrich	Honeymoon	Kayelekera	Lance	Etango	PLEF	Tumas
Jurisdiction	Namibia	South Aust.	Malawi	Wyoming, US	Namibia	US	Namibia
Share Price (A\$ps)	1.10	4.76	0.27	0.14	2.96	3.26	1.27
Recommendation	BUY	Hold	BUY	BUY	BUY	BUY	Not Rated
Price Target (A\$ps)	1.15	3.40	0.53	0.27	3.20	5.80	
Upside/downside (%)	5%	-29%	102%	97%	8%	78%	
Market Cap (US\$m)	2,099	1,075	229	109	285	492	629
Cash & equivalents (US\$m)	126	144	10	21	27	88	26
EV (US\$m)	1,973	931	219	87	258	404	602
Implied U3O8 price (US\$/lb)	90	115	60	58	69	52	
Resource (net Mlbs)	414	72	51	54	225	75	204
Grade (ppm)	686	620	648	480	197		398
EV / Resource (US\$/lb)	4.8	13.0	4.3	1.6	1.1	5.4	3.0
Attrib Prod'n target (Mlb/yr)	4.5	2.45	2.4	2	3.5	2.5	3.6
AISC (US\$/lb)	33	26	38	42	38	<30	39
EV / production forecast (US\$/lb)	438	380	91	44	74	162	167
DFS valuation (US\$m)		309		116	209		393
Premium to DFS (%)		201%		-25%	23%		53%
Shaw valuation main project (US\$m)	871	396	295	31	166	203	
Shaw total valuation (US\$m)	1,860	619	368	138	290	584	
Premium to Shaw main project val'n (%)	127%	135%	-26%	178%	55%	99%	
Premium to Shaw total valuation (%)	6%	50%	-40%	-37%	-11%	-31%	

Source: Company reports, Shaw and Partners analysis

Figure 2: Uranium sector performance – 2023 YTD

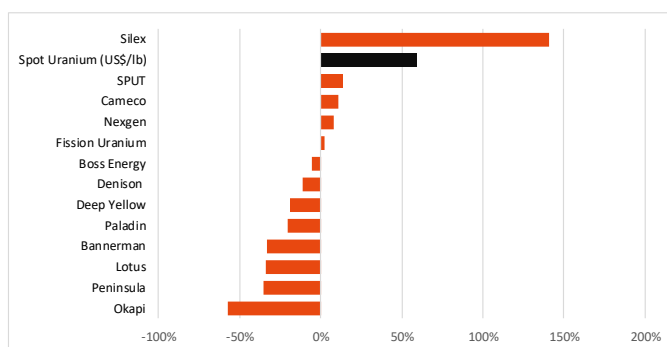
Company	Code	Mkt Cap A\$m/C\$m	Price at 1/1/23	Price at 28/9/23	2023 YTD Performance
Spot Uranium (US\$/lb)			48	70	47%
Paladin	PDN	3,279	0.700	1.100	57%
Boss Energy	BOE	1,680	2.130	4.760	123%
Peninsula	PEN	170	0.130	0.135	4%
Lotus	LOT	358	0.205	0.265	29%
Bannerman	BMN	446	1.800	2.960	64%
Silex	SLX	769	3.200	3.260	2%
Deep Yellow	DYL	982	0.700	1.295	85%
Okapi	OKR	37	0.150	0.175	17%
Cameco	CCO	23,611	30.690	54.490	78%
Nexgen	NXE	3,960	5.990	8.060	35%
Denison	DML	1,889	1.550	2.260	46%
Fission Uranium	FCU	656	0.800	0.900	13%
SPUT	U.UT	5,898	15.830	23.740	50%



Source: Factset, UxC, Shaw and Partners

Figure 3: Uranium sector performance – 2022

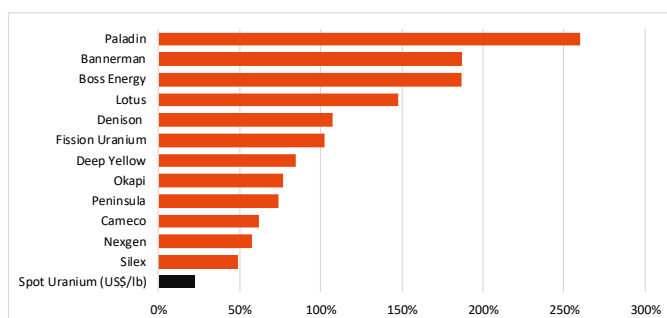
Company	Code	Mkt Cap A\$m/C\$m	Price at 1/1/22	Price at 31/12/22	2022 Performance
Spot Uranium (US\$/lb)			30	48	59%
Paladin	PDN	3,279	0.880	0.700	-20%
Boss Energy	BOE	1,680	2.250	2.130	-5%
Peninsula	PEN	170	0.200	0.130	-35%
Lotus	LOT	358	0.310	0.205	-34%
Bannerman	BMN	446	2.700	1.800	-33%
Silex	SLX	769	1.330	3.200	141%
Deep Yellow	DYL	982	0.860	0.700	-19%
Okapi	OKR	37	0.345	0.150	-57%
Cameco	CCO	23,611	27.580	30.690	11%
Nexgen	NXE	3,960	5.540	5.990	8%
Denison	DML	1,889	1.740	1.550	-11%
Fission Uranium	FCU	656	0.780	0.800	3%
SPUT	U.UT	5,898	13.930	15.830	14%



Source: Factset, UxC, Shaw and Partners

Figure 4: Uranium sector performance – 2021

Company	Code	Mkt Cap A\$m/C\$m	Price at 1/1/21	Price at 31/12/21	2021 Performance
Spot Uranium (US\$/lb)			25	30	22%
Paladin	PDN	3,279	0.245	0.880	260%
Boss Energy	BOE	1,680	0.784	2.250	187%
Peninsula	PEN	170	0.115	0.200	74%
Lotus	LOT	358	0.125	0.310	148%
Bannerman	BMN	446	0.940	2.700	187%
Silex	SLX	769	0.890	1.330	49%
Deep Yellow	DYL	982	0.465	0.860	85%
Okapi	OKR	37	0.195	0.345	77%
Cameco	CCO	23,611	17.050	27.580	62%
Nexgen	NXE	3,960	3.510	5.540	58%
Denison	DML	1,889	0.840	1.740	107%
Fission Uranium	FCU	656	0.385	0.780	103%
SPUT	U.UT	5,898		13.930	n/a



Source: Factset, UxC, Shaw and Partners

Rating Classification

Buy	Expected to outperform the overall market
Hold	Expected to perform in line with the overall market
Sell	Expected to underperform the overall market
Not Rated	Shaw has issued a factual note on the company but does not have a recommendation

Risk Rating

High	Higher risk than the overall market – investors should be aware this stock may be speculative
Medium	Risk broadly in line with the overall market
Low	Lower risk than the overall market

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Rating	Count	Recommendation Universe
Buy	74	96%
Hold	3	4%
Sell	0	0%

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