

Ticker: IXR AU	Cash: A\$11m	Project: Makuutu
Market cap: A\$114m	Price: A\$0.03/sh	Country: Uganda
<i>REC. (unc): BUY</i>	<i>TARGET (unc): A\$0.05/sh</i>	<i>RISK RATING (unc): HIGH</i>

Yesterday's partnership with Less Common Metals (LCM), Ford, and the British Geological Survey (BGS) is an endorsement for IXR that illustrates the synergies between its recycling and mining strategies. In our view, recycling enables Ionic to integrate itself with high quality partners, develop technical know how in separation and product purification, and become eligible to access Government financial support (which is playing a major role in the sector), all of which help de-risk the larger production volumes that come with mining. Today's agreement accomplishes all of the above, partnering with LCM, one of very few western rare earth alloy and metal makers, Ford (a key downstream user) and the British Government through BGS as well as government grants. Stepping back, between i) the expected imminent Makuutu mining licence, ii) commenced demonstration plant works at Makuutu, and iii) good progress at Ionic Technologies (Belfast UK), which has commenced rare earth separation with a 50t stockpile of NdFeB magnet and swarf recycling feedstock, Ionic has set itself up to be an early mover when prices recover. **We reiterate our Buy rating and A\$0.05/sh fully funded/fully diluted price target based on 1% of in-situ value at our LT price estimates of US\$120-400-1500/kg NdPr-Dy-Tb.** Catalysts include Phase I of the demonstration plant (potential to reduce capex/opex), the Makuutu mining licence (imminent with the new law gazetted), ramp up of the Belfast recycling plant, and potential downstream/offtake, all of which further Ionic's plans to become an integrated rare earths supplier to the EV supply chain.

Partners with Ford, LCM and UK Govt on REE recycling; Ugandan Minister indicates MLA imminent

Ionic announced a partnership agreement with Ford, Less Common Metals (LCM) and the British Geological Survey to create a UK rare earth supply chain from recycled magnets. Ionic's subsidiary, Ionic Technologies, is to produce separated rare earths from end-of-life magnets and swarf for supply to LCM for alloy production. The alloy will be used by LCM to produce NdFeB magnets for use by Ford. The UK Government will support the partnership via a £1m project and is supporting a further £1m for a feasibility study into the construction and supply side dynamics of a magnet REE recycling plant in the UK. Ionic noted in the release that Ford's Halewood facility (~500k units per year by 2026, providing the majority of Ford's EU EV production) will require over 600tpa of magnet rare earths.

Mining License Application (MLA): The Ugandan Minister for Energy and Mineral Development has indicated her support for granting the MLA for IXR's Makuutu publicly at the 'Africa Down Under Mining' conference in Perth last week, commenting that 'Under this new framework, we look forward to granting approval of the mining license application to Ionic Rare Earths'.

Why we like Ionic

1. The largest ionic clay deposit available to directly supply HREEs to Western end users
2. Able to get into production by SCPe 2025
3. Excellent infrastructure including highway, hydropower and reagents
4. Opportunity to become an integrated upstream and midstream supplier

Catalysts

- 2023: SCPe pilot plant, trial mining
- 2024: SCPe first production and ramp up
- 2025: SCPe steady state production

Research

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Ticker: IXR AU	Price / mkt cap: A\$0.03/sh. A\$114m	Market P/NAV: 0.31x	Assets: Makuutu
Author: J Chan / E Magdzinski / K Komp Rec / PT:	BUY / A\$0.05	1xNAV FD: A\$0.07/sh	Country: Uganda

Group-level SOTP valuation	2Q23	3Q23	Resource / Reserve			Mt	ppm	TREO	000t REO	\$m insitu	EV/Insitu
		US\$m	O/ship	NAVx	A\$/sh						
Makuutu (60%) NPV 3Q23		-	60%	0.75x	-				21,656	0.31%	
Makuutu (1.0% insitu value at SCPe LT prices)		196	60%	0.75x	0.05				6,024	1.13%	
Makuutu valuation (1% insitu value)		196	60%	0.75x	0.05						
Downstream		68	100%	0.75x	0.02						
Central SG&A & fin costs 3Q23		(89)	-	0.75x	(0.02)						
Cash and restr. cash 2Q23		8	-	0.75x	0.00						
Cash from options		6	-	0.75x	0.00						
Debt 2Q23		-	-	0.75x	-						
1xNAV8% spot fully diluted, pre-funded		190			0.05						
Assumed equity raised		60		0.75x	0.01						
1xNAV8% spot fully funded		250			0.05						
1x fully funded NAVPS sensitivity to Dy price and discount / NAV multiple											
Valuation (A\$/sh)	Dy:	\$300/kg	\$400/kg	\$500/kg	\$600/kg	\$700/kg					
0.50xNAV		0.03	0.03	0.03	0.04	0.04					
0.60xNAV		0.03	0.04	0.04	0.05	0.05					
0.75xNAV		0.04	0.05	0.05	0.06	0.06					
1.00xNAV		0.06	0.06	0.07	0.08	0.08					
Makuutu NPV8% (US\$m)	Dy:	\$300/kg	\$400/kg	\$500/kg	\$600/kg	\$700/kg					
12% discount		-	-	-	-	10					
10% discount		-	-	-	7	20					
8% discount		-	-	2	17	32					
5% discount		-	-	17	38	59					
Makuutu 1xNAV sensitivity to recovery and payability											
Makuutu NPV8% (US\$m)	Recov.	20%	25%	27%	30%	35%					
Payability: 60%		-	-	-	-	-					
Payability: 70%		-	-	-	-	-					
Payability: 80%		49	36	34	32	33					
Payability: 90%		99	83	80	78	79					
Payability: 100%		148	130	126	124	125					
Valuation over time		44,742	45,107	45,473	45,838	46,203					
Makuutu NPV (US\$m)		(20.7)	(21.7)	16.4	58.2	58.1					
Downstream		57.5	62.1	67.1	72.4	78.2					
Exploration and in-situ tonnes		196.3	196.3	196.3	196.3	196.3					
Cntrl G&A & fin costs (US\$m)		(84.3)	(87.3)	(94.4)	(77.8)	(77.1)					
Net cash at 1Q (A\$m)		7.9	105.2	90.7	5.7	3.3					
1xNAV (US\$m)		157	255	276	255	259					
P/NAV (x):		0.43x	0.35x	0.37x	0.40x	0.40x					
1xNAV share px FD (A\$/sh)		0.07	0.08	0.08	0.07	0.07					
ROI to equity holder (% pa)		134%	69%	39%	25%	20%					
Sources and uses of cash											
SCPe evaluation costs	A\$10m										
SCPe capex (US\$121m @ 60%)	A\$103m										
SCPe contingency	A\$63m										
SCPe G&A + fin. cost to prodn	A\$16m										
SCPe working capital	A\$4m										
Total uses	A\$196m										
		Total proceeds	A\$196m								
Production (100%)											
		Jun '24	Jun '25	Jun '26	Jun '27	Jun '28					
Makuutu (t REE)		-	281	1,244	1,635	1,547					
Makuutu (t Nd+Pr)		-	50	196	437	414					
Makuutu (t Dy)		-	5	31	65	64					
Makuutu (t Tb)		-	1	5	10	10					
Makuutu revenue (US\$/kg REE)		-	55	55	59	60					
Makuutu cash cost (US\$/kg REE)		-	59	45	38	40					
Makuutu AISC (US\$/REE)		-	79	68	52	54					
Refinery (TREO produced)		-	-	-	-	-					
Refinery (t Nd+Pr)		-	-	-	-	-					
Refinery (t Dy)		-	-	-	-	-					
Refinery (t Tb)		-	-	-	-	-					
Refinery share of Makuutu feed (%)		-	-	-	-	-					
Refinery EBITDA margin (%)		-	-	-	-	-					
Refinery revenue (US\$/kg REO)		-	-	-	-	-					

Measured, ind. & inf.	532	640	340	21,656	0.31%
SCPe Mine Inventory	173	856	148	6,024	1.13%
Commodity price	Jun '22	Jun '23	Jun '24	Jun '25	Jun '26
NdPr price (US\$/kg)	143	113	120	120	120
Share data					
Basic shares (m): 3946.1	FD + options (m):	4,119.8	FD/FF	5,603.0	
Ratio analysis					
	Jun '22	Jun '23	Jun '24	Jun '25	Jun '26
FD shares out (m)	3,873	5,356	5,356	5,356	5,356
EPS (US\$/sh)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
CFPS before w/c (US\$/sh)	(0.00)	(0.00)	0.00	(0.01)	(0.00)
FCFPS pre growth (US\$/sh)	0.00	(0.00)	0.01	0.00	(0.00)
FCF/sh (US\$/sh)	(0.00)	(0.00)	(0.01)	(0.02)	(0.00)
FCF yield pre growth (US\$/sh)	2%	(3%)	22%	0%	(2%)
FCF yield (%)	(11%)	(4%)	(34%)	(55%)	(2%)
EBITDA margin (%)	-	-	-	(50%)	5%
FCF margin (%)	--	--	--	(647%)	(4%)
ROA (%)	(9%)	(4%)	(5%)	(7%)	(2%)
ROE (%)	(10%)	(4%)	(10%)	(14%)	(4%)
ROCE (%)	(10%)	(4%)	(2%)	(4%)	(0%)
PER (x)	(22x)	(27x)	(13x)	(10x)	(33x)
P/CF (x)	(34x)	(31x)	(13x)	(11x)	(125x)
EV/EBITDA (x)	(19x)	(10x)	(13x)	(23x)	52x
Income statement					
	Jun '22	Jun '23	Jun '24	Jun '25	Jun '26
Revenue (US\$m)	--	--	--	13	58
COGS (US\$m)	--	--	--	(15)	(50)
Gross profit (US\$m)	--	--	--	(2)	8
Expenses (US\$m)	(3)	(4)	(1)	(2)	(5)
Impairment & other (US\$m)	--	--	--	--	--
Net finance costs (US\$m)	0	--	(7)	(8)	(3)
Tax (US\$m)	--	--	--	--	(1)
Minority interest (US\$m)	--	--	--	--	--
Net income attr. (US\$m)	(3)	(4)	(9)	(12)	(1)
EBITDA (US\$m)	(5)	(5)	(5)	(7)	3
Cash flow					
	Jun '22	Jun '23	Jun '24	Jun '25	Jun '26
Profit/(loss) after tax (US\$m)	(5)	(5)	(12)	(16)	(5)
Add non-cash items (US\$m)	1	--	--	1	3
Less wkg cap / other (US\$m)	(0)	--	12	(19)	(1)
Cash flow ops (US\$m)	(4)	(5)	0	(34)	(2)
PP&E (US\$m)	--	(1)	(52)	(51)	(0)
Other (US\$m)	(2)	(1)	--	--	--
Cash flow inv. (US\$m)	(11)	(1)	(52)	(51)	(0)
Debt draw (repayment) (US\$m)	--	--	102	--	--
Equity issuance (US\$m)	30	85	8	--	--
Other (US\$m)	--	--	--	--	--
Cash flow fin. (US\$m)	30	85	110	--	--
Net change post forex (US\$m)	16	78	57	(85)	(2)
FCF (US\$m)	(13)	(6)	(52)	(85)	(2)
Balance sheet					
	Jun '22	Jun '23	Jun '24	Jun '25	Jun '26
Cash (US\$m)	27	105	163	78	75
Accounts receivable (US\$m)	1	1	1	5	7
Inventories (US\$m)	--	--	--	5	6
PPE & exploration (US\$m)	13	14	66	117	114
Other (US\$m)	9	9	9	9	9
Total assets (US\$m)	49	129	239	214	212
Debt (US\$m)	--	--	102	102	102
Other liabilities (US\$m)	1	1	13	4	6
Shareholders equity (US\$m)	77	162	170	170	170
Retained earnings (US\$m)	(29)	(34)	(46)	(61)	(66)
Minority int. & other (US\$m)	--	--	--	--	--
Liabilities+equity (US\$m)	49	129	239	214	212
Net cash (US\$m)	27	105	61	(24)	(27)
Net debt to NTM EBITDA (x)	5.4x	21.0x	9.2x	8.2x	1.3x

Source: SCP estimates

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Summary of Recommendations as of September 2023	
BUY:	53
HOLD:	0
SELL:	0
UNDER REVIEW:	0
TENDER:	0
NOT RATED:	0
TOTAL	53

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