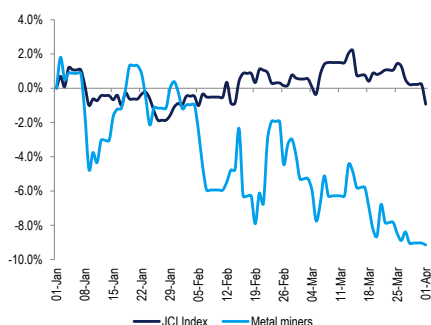


Sector Index Performance

	3M	6M	12M
Absolute	-9.2%	-22.1%	8.5%
Relative to JCI	-8.2%	-25.9%	-2.6%



Summary Valuation Metrics

P/E (x)	2023F	2024F	2025F
ADMR IJ	10.0	8.7	8.9
ANTM IJ	10.9	11.5	10.3
HRUM IJ	8.2	9.2	8.1
INCO IJ	9.8	32.7	123.7
MBMA IJ	488.7	37.3	16.1
MDKA IJ	N/A	163.9	68.5
NCKL IJ	9.9	8.4	6.8

EV/EBITDA (x)	2023F	2024F	2025F
ADMR IJ	7.7	7.8	7.2
ANTM IJ	6.9	6.3	5.6
HRUM IJ	3.0	6.8	5.8
INCO IJ	4.0	9.7	12.6
MBMA IJ	34.5	12.8	7.7
MDKA IJ	17.2	11.5	8.9
NCKL IJ	7.1	5.5	4.2

Div. Yield	2023F	2024F	2025F
ADMR IJ	N/A	N/A	N/A
ANTM IJ	5.0%	4.6%	4.4%
HRUM IJ	N/A	N/A	N/A
INCO IJ	2.2%	N/A	N/A
MBMA IJ	N/A	N/A	N/A
MDKA IJ	N/A	N/A	N/A
NCKL IJ	N/A	3.0%	3.6%

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Discussion KTA with Coordinating Ministry of Maritime & Investment

- We recently hosted Septian Hario Seto, Deputy Minister at Coordinating Ministry of Maritime & Investment affairs.
- All of HPAL supply-addition from down-streaming initiatives are well within our expectation and price forecast (Fig. 1).

Development in nickel down-streaming: OESBF and electrolytic nickel

One of the key interesting point during our meeting was the OESBF technology (oxygen enriched side blowing furnace), an innovation by CNGR and the electrolytic nickel product (c.99% pure Ni grade) from CNGR & Tsingshan JV, which is now in process of obtaining LME brand-approval. During our separate call with CNGR, such OESBF plant & technology is already up and running in Qinzhou (China) and there are 2 lines already running in IMIP in addition to 1 OESBF line in Bantaeng (JV with Huadi, CNGR owns minority stake) in Indonesia. The product from OESBF in Indonesia is still in the form of low-grade nickel matte (c.20-25% Ni content) vs. high-grade in China, but OESBF-matte has lower carbon emission due to less energy-intensive nature (Fig. 2) vs. matte via RKEF route and without tailing issues (unlike HPAL), which are more suitable for automakers that has further emphasis on environmental & ESG issues.

Class-1 nickel expansion to continue, moratorium in NPI/FeNi plant

In spite of the potential expansion from OESBF, HPAL plants in Indonesia would continue to be built, based on the discussion during the dinner, with players such as MBMA, HRUM, NCKL, among those that are already in the pipeline to build further HPAL capacity (Fig. 1). However, the permit will no longer be issued for additional NPI/FeNi plants, citing the current oversupply situation. Regarding the concern on LFP vs NMC, Mr. Seto thinks that the concern is overblown, as NMC has its own advantage: 1) better km range in during winter vs. LFP, 2) higher recycling efficiency (c.99% of contents could be recycled) and 3) costs as building LFP outside China is higher vs. NMC, in-line with our thinking that both chemistries are set to co-exists ([report](#)).

Further downstream in nickel and EV-ecosystems

There has been also a discussion regarding further downstream in nickel products (i.e. precursor, cathode, etc) along with EV-ecosystem supply chain (i.e. anode, electrolyte). So far, there is one precursor plant that is being constructed in Indonesia (by GEM), set to produce 9.5.5 NMC precursor (90% nickel, 5% manganese, 5% cobalt) by 4Q24F with BTR new energy in IMIP and lithium chemical plants owned by Chengxin is also set to commission by end-FY24F. However, investment in battery Gigafactory may not occur unless the domestic EV-demand is sizable enough. Further downstream in other commodities such as copper, bauxite or aluminium, silica sand, and petrochemicals are also set to continue.

Maintain our sector Neutral rating with ANTM & HRUM as our top pick

We maintain our nickel price forecast as we have taken into account the additional HPAL's project in Indonesia. We like miners with strong bottom-up story ([report](#)): ANTM (higher nickel ore & gold volume) and HRUM (coal to nickel transformation story). Downside risks include: lower industrial activity in China & EU, and hawkish Fed.

Other key takeaways from our call:

- Total nickel-ore consumption in Indonesia is set to reach 250mn wmt in FY24F. Note that only 150-160mn wmt of RKAB is already approved as of 20-Mar.
- Regarding the competition with sodium-ion (Na-Ion), around c.20% of the Na-Ion cathode is still using nickel, meaning the development of Na-Ion is beneficial to nickel-demand as it competes with LFP. Meanwhile, for solid-state battery (SSB), the actual costs on a factory-scale production is high, which may hinder its development
- Kaltara's 1.4GW capacity hydro power-plant remains on track.
- Copper concentrate export permit could be extended, depending on the physical progress of smelters currently under constructed (i.e. Freeport & AMMN). Note that initially Freeport & AMMN is only allowed to export their concentrate up until May-24.
- There could be mutual agreement with World Trade Organization (WTO) on nickel ore export ban.
- Discussion with the U.S on limited-FTA partnership is still ongoing.

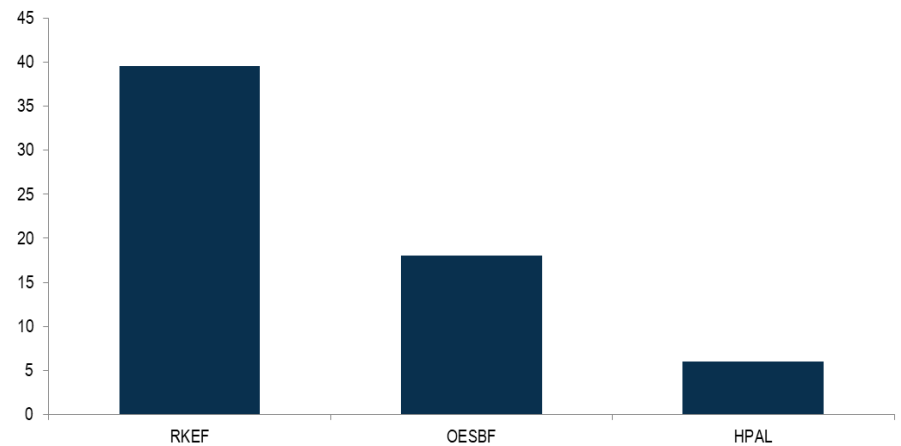
Fig. 1: HPAL project pipeline

Class-1 pipeline	Owner	Annual capacity	Timeline
Halmahera Persada Lygend (HPL)	Trimegah Bangun Persada (45.1%), Lygend (54.9%)	55,000	Operating
Huayue Nickel Cobalt (HNC)	Huayou, Nickel Industries (10% Interest), China Molybdenum	60,000	Operating
QMB New Materials	GEM, Tsingshan	50,000	Operating
PT Huafei	Tsingshan, EVE Battery, Huayou	120,000	Operating
Obi Nickel Cobalt (ONC)	Trimegah Bangun Persada (10%), Lygend (60%), Harita Group (30%)	65,000	2Q24
CATL-MBM HPAL	MBM (66%), Ningbo Brunp CATL (34%)	60,000	2025
GEM-MBM HPAL	MBM (55%), GEM (45%; option for Ecopro 21%)	30,000	2025
Blue Sparkling Energy (BSE)	Tsingshan, HRUM*	67,000	2026
Pomalaa	Zhejiang Huayou Cobalt, Vale Indonesia, Ford	120,000	2026
Excelsior Nickel Cobalt (ENC)	NIC, UNTR	67,000	2026
Sorowako	Zhejiang Huayou Cobalt, Vale Indonesia	60,000	2027
HKCBL - ANTM	HKCBL (70%), Aneka Tambang (30%)	55,000	2028
Sonic Bay	Eramet (51%), BASF (49%)	60,000	FID postponed
IKIP 2	MBMA	120,000	N/A
SNC	Zhejiang Huayou Cobalt, Morowali	60,000	N/A
Huashan	Zhejiang Huayou Cobalt	123,000	Construction halted
LG Energy - ANTM	LG Energy Solutions, Aneka Tambang	40,000-60,000	N/A
PT Ceria Kobalt Indotama	Ceria Nugraha Indotama	110,900	N/A
ANEM - Gotion	Anugrah New Energy Materials, Gotion	120,000	N/A

Source: Company data, Bloomberg, Indo Premier

Fig. 2: Energy intensity across nickel processing route

Energy intensity to produce 1ton nickel products ('000 kWh)



Source: Bloomberg, Company data, Indo Premier estimates

Fig. 3: Nickel supply-demand (S-D) balance & price assumptions

Supply-demand balance (kt)	2019	2020	2021	2022	2023	2024F	2025F
LME Nickel							
Refined production	2,529	2,533	2,717	3,101	3,516	3,662	3,952
Supply growth yoy (%)		0.1%	7.3%	14.1%	13.4%	4.2%	7.9%
Refined consumption	2,451	2,445	2,804	2,938	3,162	3,585	3,880
Demand growth yoy (%)		-0.2%	14.7%	4.8%	7.6%	13.4%	8.2%
Market balance	78	88	(87)	163	354	77	72
Nickel sulphate							
Refined production				479	548	676	777
Supply growth yoy (%)					14.5%	23.3%	15.0%
Refined consumption				494	531	630	778
Demand growth yoy (%)					7.5%	18.8%	23.4%
Market balance				(15)	17	46	(1)
Class-2 nickel (NPI/FeNi)							
Refined production	1,446	1,493	1,681	1,884	1,928	1,925	2,034
Supply growth yoy (%)		3.3%	12.5%	12.1%	2.3%	-0.2%	5.7%
Refined consumption	1,615	1,714	1,894	1,877	1,839	1,913	2,009
Demand growth yoy (%)		6.1%	10.5%	-0.9%	-2.0%	4.0%	5.0%
Market balance	(169)	(221)	(213)	7	89	12	26
Price forecast							
LME nickel (US\$/t)	13,917	13,804	18,459	25,720	21,505	17,000	17,000
Nickel pig iron 8-12% (US\$/t)	13,256	13,020	17,293	18,761	14,226	12,500	13,250
Battery-grade nickel sulphate (US\$/t)					19,308	16,500	17,000
Mixed hydroxide precipitate (US\$/t)					15,287	13,200	13,600

Source: Company data, Shanghai Metal Market, Bloomberg, Indo Premier

Fig. 4: Peers comparison

Ticker	Company	Rating	Target price (Rp/share)	P/E			EV/EBITDA			Dividend yield (%)		
				23F	24F	25F	23F	24F	25F	23F	24F	25F
ADMRI IJ*	Adaro Minerals Indonesia	Buy	1,650	10.0	8.7	8.9	7.7	7.8	7.2	N/A	N/A	N/A
ANTM IJ*	Aneka Tambang	Buy	1,800	10.9	11.5	10.3	6.9	6.3	5.6	5.0%	4.6%	4.4%
HRUM IJ*	Harum Energy	Buy	1,800	8.2	9.2	8.1	3.0	6.8	5.8	N/A	N/A	N/A
INCO IJ*	Vale Indonesia	Hold	4,250	9.8	32.7	123.7	4.0	9.7	12.6	2.2%	N/A	N/A
MBMA IJ*	Merdeka Battery Materials	Buy	700	488.7	37.3	16.1	34.5	12.8	7.7	N/A	N/A	N/A
MDKA IJ*	Merdeka Copper Gold	Buy	3,100	N/A	163.9	68.5	17.2	11.5	8.9	N/A	N/A	N/A
NCKL IJ	Trimegah Bangun Persada	Buy	1,100	9.9	8.4	6.8	7.1	5.5	4.2	N/A	3.0%	3.6%

Source: Company data, Bloomberg, Indo Premier estimates

SECTOR RATINGS

- OVERWEIGHT** : An Overweight rating means stocks in the sector have, on a market cap-weighted basis, a positive absolute recommendation
- NEUTRAL** : A Neutral rating means stocks in the sector have, on a market cap-weighted basis, a neutral absolute recommendation
- UNDERWEIGHT** : An Underweight rating means stocks in the sector have, on a market cap-weighted basis, a negative absolute recommendation

COMPANY RATINGS

- BUY** : Expected total return of 10% or more within a 12-month period
- HOLD** : Expected total return between -10% and 10% within a 12-month period
- SELL** : Expected total return of -10% or worse within a 12-month period

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