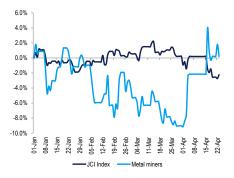
Sector Update | 23 April 2024

Sector Index Performance

| | 3M | 6M | 12M |
|-----------------|-------|-------|--------|
| Absolute | -0.6% | -4.3% | -23.4% |
| Relative to JCI | 1.3% | -9.8% | -26.3% |



Summary Valuation Metrics

| P/E (x) | 2023F | 2024F | 2025F | |
|---------------|-------|-------|-------|--|
| ADMR IJ | 9.3 | 9.0 | 7.1 | |
| ANTM IJ | 12.0 | 12.7 | N/A | |
| HRUM IJ | 9.0 | 9.5 | 7.6 | |
| INCO IJ | 35.0 | 132.2 | 135.0 | |
| MBMA IJ | 44.6 | 19.2 | 15.2 | |
| MDKA IJ | 183.2 | 76.6 | 51.0 | |
| NCKL IJ | 9.1 | 7.4 | N/A | |
| EV/EBITDA (x) | 2023F | 2024F | 2025F | |
| ADMR IJ | 7.8 | 8.5 | 7.6 | |
| ANTM IJ | 7.7 | 7.1 | N/A | |
| HRUM IJ | 6.9 | 6.4 | 4.4 | |
| INCO IJ | 10.4 | 13.2 | 10.9 | |
| MBMA IJ | 15.0 | 9.0 | 7.3 | |
| MDKA IJ | 12.5 | 9.6 | 8.0 | |
| NCKL IJ | 6.0 | 4.6 | N/A | |
| Div. Yield | 2023F | 2024F | 2025F | |
| ADMR IJ | N/A | N/A | N/A | |
| ANTM IJ | 4.6% | 4.2% | N/A | |
| HRUM IJ | N/A | N/A | N/A | |
| INCO IJ | N/A | N/A | N/A | |
| MBMA IJ | N/A | N/A | N/A | |
| MDKA IJ | N/A | N/A | N/A | |
| NCKL IJ | 2.8% | 3.3% | N/A | |

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Positive tailwinds amid geopolitical tension and Rp weakness; u/g to O/W

- Rupiah weakness (-6% YTD vs. US\$) have boosted preferences for commodity-equities under our coverage.
- But, aside from weak Rp and ongoing geopolitical tension, underlying commodity fundamental are robust, owing to favourable S-D balance.
- Metals should benefit amid geopolitical tensions despite elevated DXY; upgrade our sector rating to Overweight (from Neutral).

Rupiah weakness is positive for commodity equities

Indonesian Rupiah has depreciated by -6% YTD to Rp16.2k level against US\$, owing to recent bond outflow of around US\$2.2bn in mid Apr-24. This has shifted local funds' preference from typical big-cap banks, TLKM, and consumer names into commodity-equities – i.e. MDKA, ANTM, INCO, HRUM, MEDC, etc, boosted by light local fund position. We think such sector rotation would continue especially if Rp weakness concern persists. At the same time, underlying commodity prices (energy and metals) such as oil (+13% YTD), gold (+12% YTD), copper (+15% YTD), and nickel (+20% YTD) are on the uptrend and has positive medium-term outlook.

Commodity prices often surged amid heightened war tensions

Historically, commodity prices, incl. energy, metals, and soft-commodity (i.e. cooking-oil, food) were moving in tandem amid intensifying geopolitical tensions & wars such as the 2022's Russia-Ukraine conflicts, and recent Iran-Israel attacks (Fig. 1). Notable wars such as WW1 and WW2 for example, often triggered higher demand for energy and industrial metals (for artillery), whilst disrupting supply-chain, leading to tighter supply, and higher prices.

Without the ongoing tensions, commodities are fundamentally sound

But, even without further geopolitical tensions, commodities under our coverage should benefit from S-D balance standpoint, with: gold prices benefitting from central bank buying (i.e. China) amid the concern in U.S fiscal & debt situation (report), copper prices benefitting from joint production-cuts among Chinese smelters, causing tight supply in the concentrate market – reflected in the low TC/RCs, and nickel, from potential demand tailwind due to higher military spending (up to ~10% addl. demand)

Upgrade to O/W with preference on metals over energy

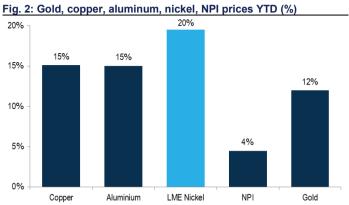
We upgraded our sector rating to Overweight (from Neutral) as we think prolonged conflicts between Iran-Israel coupled with persistent weakness in Rupiah would boosted preferences to US\$ earners such as metal miners under our coverage. We prefer metals over energy as we think crude-oil may not surpassed US\$95/bbl mark vs current level of US\$89/bbl, as higher production is likely to come after oil price surpassed beyond US\$95/bbl level, which may limit upside for natural gas and coal.

Gold > Copper > Nickel; MDKA & ANTM as our top pick

Our metals pecking order (in the order of preference): Gold > Copper > Nickel, with gold as our most preferred commodities owing to central bank buying as geopolitical tensions' safe-haven and in nickel, we prefer LME over NPI/sulfate (report) with MDKA (Buy) and ANTM (Buy) as our top picks. Downside risks are lower than expected economic growth.

Commodity & geopolitical tensions



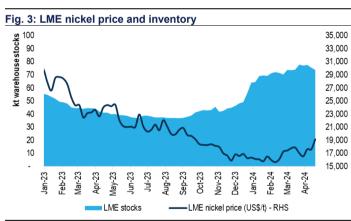


Source: Bloomberg, LME, Indo Premier

Source: Bloomberg, LME, Indo Premier

Nickel: higher military spending a positive demand tailwind

LME nickel price has risen by +20% YTD, which was underpinned by: 1) short-covering activities (now at COT position at a slight net-long, Fig. 4), mainly driven by US & UK sanctions on Russian metals, 2) higher non-nickel metals price (i.e. copper, aluminum), prompting a rally in LME nickel price as well, which is also driven by the recent geopolitical tensions. Several media outlets including Bloomberg and SMM had also previously mentioned issues on mining-quota/RKAB to have caused rally in LME nickel, but we think this should be reflected more on NPI/FeNi price – as c.90% of ore in Indonesia is used for NPI/FeNi production; albeit NPI price YTD has remained relatively flattish (+4%) in comparison to LME price.





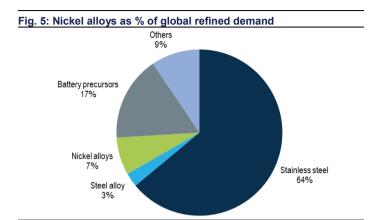
Source: Bloomberg, LME, Indo Premier

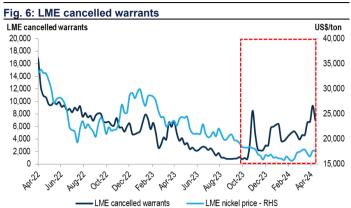
Source: Bloomberg, LME, Indo Premier

However, we think LME nickel price risk/reward is skewed to the upside as: 1) demand for nickel alloys (c.7% of global refined nickel demand/c.20% of LME-deliverables demand, Fig. 5 & 6) may increase amid higher defense spending, owing to c.30-year under-investment post 1980's cold-war (Fig. 10 & 11), in addition to intensifying geopolitical tensions in Middle-East area and prolonged Russia-Ukraine war, 2) US/UK sanctions dynamics in the LME system, which may prompt further speculations despite limited impact to the overall nickel physical demand/market, and 3) sentiment from other commodities (i.e. copper, aluminum, etc).

Recent supply-responses from Australia & New Caledonia (Fig. 9) are unlikely to quickly-reversed in spite of LME nickel recent rally as several of

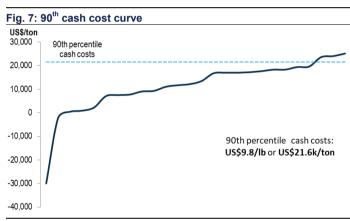
these mines/smelters would have only started to be economically-incentivized once LME nickel sustainably trades at above US $21k/t - 90^{th}$ cast cost curve (Fig. 8), at which it may take time to ramp-up their productions (c.6-9 months) after the smelter being left dormant.

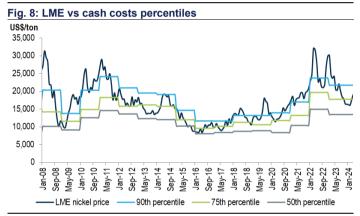




Source: Bloomberg, LME, Indo Premier

Source: Bloomberg, LME, Indo Premier





Source: Bloomberg, LME, Indo Premier

Source: Bloomberg, LME, Indo Premier

| Fig. 9: Supply-responses from Australia & New | Caledo | onia |
|---|--------|------|
| | | |

| Supply response | Assets | Im pacted supply (ton) | As % of supply | Location | Suspension |
|--|---------------------------|------------------------|----------------|------------------------------------|---|
| Bishi (Jingan) | FeNi/NPI | 10,000 | 0.3% | China | Ceased production |
| Savannah Nickel (Panoramic Resources) | Ni concentrate | 10,000 | 0.3% | Kimberley, Western Australia | Suspend operations |
| First Quantum Minerals (FQM), POSCO | HPAL | 16,000 | 0.4% | Ravensthorpe, Western Australia | Suspend mining operation for the next 18 to 24 months, but continue to sell from existing stockpile |
| Wyloo Metals & BHP | Nickel Mine & Refining | 16,000 | 0.4% | Kambalda, Western Australia | Kambalda mine w ill go into care and maintenance from May-31, w on't be able to fulfill off-take agreement w ith BHP |
| Cosmos (IGO) | Ni concentrate | 14,000 | 0.4% | Leinster, Western Australia | Transitioning into care and maintenance due to challenging market conditions |
| Koniambo (Glencore) | FeNi | 27,200 | 0.7% | New Caledonia | Would begin "w ithout delay" to suspend operation of FeNi. Plans to sell 49% stake in Koniambo |
| Onca Puma (Vale Brazil) | FeNi | 17,000 | 0.4% | Para, Brazil | Environmental license is suspended due to non-compliance of annual information reports and failing to mitigae impacts from mining activities |
| Total | | 110,200 | 2.9% | | |

Source: Company data, Bloomberg, Indo Premier

In addition to these aforementioned factors, we think there are several leading indicators that corroborated our thesis, including higher cancelled warrants in LME nickel – which indicated higher physical demand delivery (Fig. 12), backlogs in several artillery equipment producers such as Rheinmetall, Daussvult, Thales, and others, thanks to higher defense spending as % of GDP in several Eurozone countries (Fig. 11) – France, Germany, United Kingdom, etc.

Fig. 10: Under-investment in artillery equipment post-Cold War – inventory level in EU

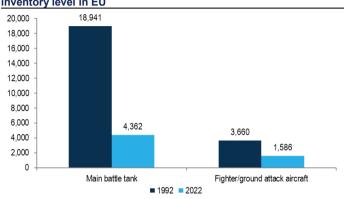
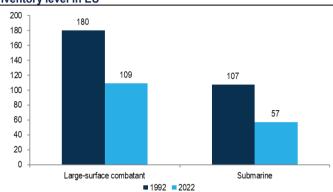


Fig. 11: Under-investment in artillery equipment post-Cold War – inventory level in EU



Source: McKinsey, Military Balance Sheet, Indo Premier

Source: McKinsey, Military Balance Sheet, Indo Premier

To quantify the impact of these potential dynamics, we assumed:

- Increase in defense spending closer to NATO guideline of 2% of GDP for countries that have lower defense spending as % of GDP lower than 2%.
- +10% equipment spending increase in countries that are already above NATO guideline, due to higher base of +25% increase in military equipment spending in 2023F, based on NATO data.
- Average historical equipment spending as % of defense spending of c.20-50%, depending on each particular country.
- Nickel alloys to contribute around c.3% of military equipment, equivalent to its use-case value in military equipment such as fighter-jet, tanks, and others.

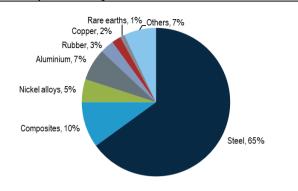
As a result, we think the <u>additional impact from higher defense spending could reach as big as US\$1.2bn in 2024</u>, or equivalent to c.5% in nickel non-stainless use-case market of around US\$22bn per annum. The percentage impact is higher at c.10% additional demand if we only take into account LME-deliverables product use-cases as majority of EV-batteries were made using nickel sulfate and/or other intermediates products (i.e. matte/MHP). Overall, we think the potential demand impact is positive to overall LME nickel price.

We think nickel S-D balance could be tilted at only a slight oversupply at 17kt vs. our initial 77kt surplus forecast in FY24F as the positive impact from higher military spending would be around c.60-70kt. As a result, we raised our LME nickel price assumptions to US\$17.5k/ton in FY24F (from US\$17k/t) and to US\$17k/ton in FY25F (from US\$16.5k/ton).

Further upside risks on the nickel market S-D balance are also the ongoing RKAB issues, which based on our channel-check, could ease in upcoming

months as more quotas are being approved, but would create similar orescarcity situation once we enter 4Q24F, with the potential tight quota approval re-occurrence for RKAB revision, +ve to overall prices.

Fig. 12: Example of military tanks raw material breakdown





Source: McKinsey, Military Balance Sheet, Indo Premier

Source: NATO, Indo Premier

| 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 | 3,645 | 3,912 |
| Demand growth yoy (%) | | -0.2% | 14.7% | 4.8% | 7.6% | 15.3% | 7.3% |
| Market balance | 78 | 88 | (87) | 163 | 354 | 17 | 40 |
| 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 |

13,804

13,020

18,459

17,293

25,720

18,761

21,505

14,226

19,308

15,287

17,500

12,500

16,500

13,200

13,917

13,256

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

LME nickel (US\$/t)

Nickel pig iron 8-12% (US\$/t)

Battery-grade nickel sulphate (US\$/t)

Mixed hydroxide precipitate (US\$/t)

17,000

13,250

17,000

13,600

Fig. 15: Peers comparison P/E **EV/EBITDA** Dividend yield (%) Target price Ticker Rating Company (Rp/share) 24F 25F 26F 24F 25F 26F 24F 25F 26F ADMR IJ Adaro Minerals Indonesia 1,650 9.3 9.0 7.1 7.8 8.5 7.6 N/Α N/Α N/A Buy 4.6% 4.2% 1,800 12.7 N/A 7.7 7.1 N/A N/A ANTM IJ Aneka Tambang 12.0 Buy HRUM IJ 1,800 9.0 9.5 7.6 6.9 N/A Harum Energy Buy 6.4 4.4 N/A N/A INCO IJ Vale Indonesia Hold 4,250 35.0 132.2 135.0 10.4 13.2 10.9 N/A N/Α N/A 700 N/A MBMA IJ Merdeka Battery Materials Buy 44.6 19.2 15.2 15.0 9.0 7.3 N/A N/A MDKA IJ 183.2 N/A Merdeka Copper Gold Buy 3,100 76.6 51.0 12.5 9.6 8.0 N/A N/A NCKL IJ Trimegah Bangun Persada 1,100 7.4 N/A 6.0 4.6 N/A 2.8% 3.3% N/A Buy 9.1

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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