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& Sekuritas Indonesia

Indonesia Nickel

Crucial metal for low-carbon future

Indonesia – Well-positioned in global nickel trade

Indonesia has the largest laterite nickel reserves amounting 21 mn tonnes and its production represents 30% of the global supply in FY21. We believe with rich nickel reserves; Indonesia is well-poised to benefit from growing nickel demand (+7.9% CAGR in FY21-24F). Stainless steel will remain becoming nickel's demand driver going forward, with the global production is expected to rise by +4.4% CAGR over FY21-24F driven by China, India, Indonesia, and U.S. However, in terms of global demand usage for nickel, the portion of stainless steel in 2030F to reduce to around 57% (vs. 69.0% FY20). The key reason is that the growth of nickel consumption from EV batteries would outpace stainless steel. Nickel demand from EV is expected to grow by +28.0% CAGR within FY20-30F to 1.3 mn tonnes.

Aim to be EV production hub and focus on downstream

Indonesia aims to the Electric Vehicle (EV) production hub in the region, targeting 300k EV cars and 2.5mn electric motorcycle by 2030. Indonesia already has a robust nickel industry, complete with operational smelters and processing infrastructure, as well as international partnerships with major players, such as Tsingshan Industrial from China. The government has also introduced IBH (Indonesia Battery Holding) in 2021 to focus on managing battery industry ecosystem. Furthermore, Indonesian government also has ambitious target to lift state revenue by banning exports nickel ore which stimulated investment in Indonesia nickel space, especially in downstream business. Currently, there are 2 Indonesian HPAL nickel projects with capacity of 87,000mt and several smelter constructions process are on-going (target operation in 2023-2024F).

Average nickel price to stay high in FY22-23F

We are bullish on the outlook of global nickel industry outlook and target average nickel price at USD22,500/tonne for FY22F and USD20,000/tonne for FY23F. For this year, most likely we will see robust nickel consumption of around 10.0% YoY, while the production potentially still at deficit, and sentiment remain positive. Another factor that would spice up nickel price is Russia's current attacks on Ukraine which leads to potential global supply chain disruption. As we hardly see that the conflict between both countries to end soon,hence we view average nickel price may sustain at high level this year given the current conflict that is not seem to end soon. In FY23F, we expect gradual normalization in nickel price underpinned by better production volume to meet robust nickel consumption.

Initiate sector coverage with a bullish view

We expect ANTM to benefit from its nickel ore operations and diversified revenue stream. Meanwhile, INCO is a more pure-nickel play company which more sensitive with movement in nickel price will poised to benefit from higher average nickel price this year. Our top pick for the sector is ANTM (Buy TP of IDR3,100/sh) and INCO (Buy TP of IDR6,400/sh). Downside risks include 1) Worse-than-expected decline in LME nickel prices, 2) Delayed smelter projects and 3) Unfavorable government regulations on nickel export.

Table 1. Peers valuation

Bbg. Ticker	Market Cap (USD mn)	PER 2022F	PER 2023F	EVEBITDA 2022F	EVEBITDA 2023F	PBV 2022F	PBV 2023F
ANTM IJ Equity	3,827.4	15.7	16.9	8.8	9.1	2.4	2.2
INCO IJ Equity	3,628.2	15.6	17.9	6.1	7.1	1.6	1.5

Source: Company, KISI

Sector
Initiation

Commodities

Mar 7, 2022

Overweight (Initiate)

Company	Rating	TP (IDR)
ANTM	BUY	3,100 (+26.5%)
INCO	BUY	6,400 (+18.5%)

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I. Investment Summary

Initiate ANTM and INCO with BUY

We initiate Indonesia nickel sector with an OVERWEIGHT call together with ANTM and INCO initiations. Our top pick for the sector is ANTM as it has the largest nickel reserves and exposures to other commodities. Meanwhile, INCO is a more pure-nickel play company which more sensitive with movement in nickel price will poised to benefit from higher average nickel price this year, despite of flattish production outlook.

We expect ANTM to generate +27.7% CAGR of earnings in FY21-24F mainly on the back of expanding nickel contribution which should lead to higher margins and stable gold business. We initiate coverage with BUY rating and TP of IDR3,100/share derived through equally blended EV/EBITDA and DCF, implying 10.4x FY22F EVEBITDA, or around its 5-year mean. Its diversified business means ANTM's earnings are less sensitive to LME nickel price, thus providing buffer when nickel price reverted from current all time high.

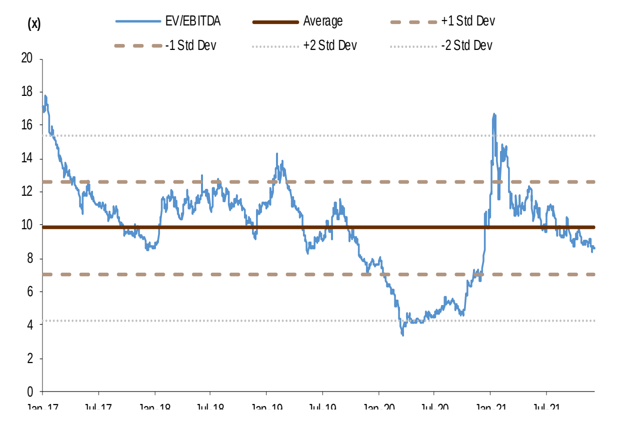
For INCO, we estimate that the company's top-line should rise by 16.6% YoY in FY22F given our average assumption of nickel price in FY22F which potentially increase by 21.8% YoY, in spite flattish nickel matte volumes. However, we project a lower revenue in FY23F as we believe a gradual decline in nickel prices. We use SOTP valuation and arrive at TP of IDR6,400/sh, implying 7.5x FY22F EVEBITDA.

Fig 1. Comparable peers valuation

No.	Bbg. Ticker	Market cap (USDm)	2022F					
			EPS growth (%)	PER (x)	EVEBITDA (x)	PBV (x)	ROE (%)	Dvd yield (%)
1	HRUM IJ EQUITY	2,181	192.0	12.0	9.3	3.8	34.9	1.3
2	ANTM IJ EQUITY	3,827	62.2	15.7	8.8	2.4	15.4	1.4
3	INCO IJ EQUITY	3,628	45.1	15.6	6.1	1.6	10.2	1.3
4	NIKL PM EQUITY	2,077	23.5	12.4	6.4	2.7	24.6	2.9
5	600489 CH Equity	6,679	(18.7)	28.0	11.3	1.7	5.0	1.6
6	2059 TT Equity	1,511	20.1	N/A	10.0	3.0	18.8	2.9
		19,904	38.9	17.9	9.1	2.2	14.3	1.7

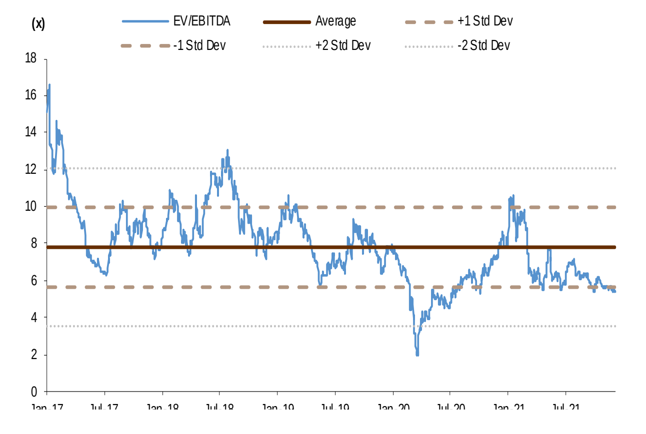
Source: Bloomberg, KISI

Fig 2. ANTM EV/EBITDA (x)



Source: Bloomberg, KISI

Fig 3. INCO EV/EBITDA (x)



Source: Bloomberg, KISI

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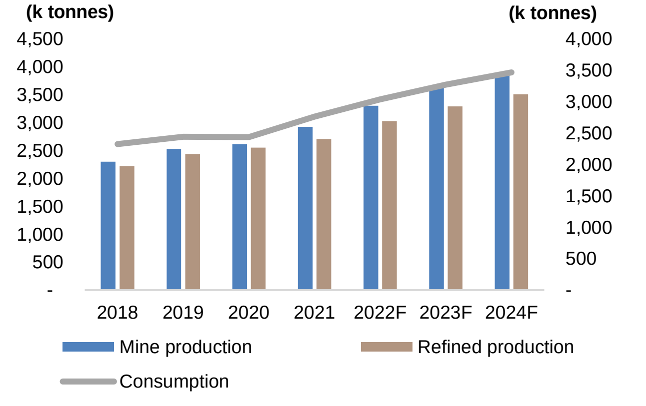
II. Well-positioned in global nickel trade

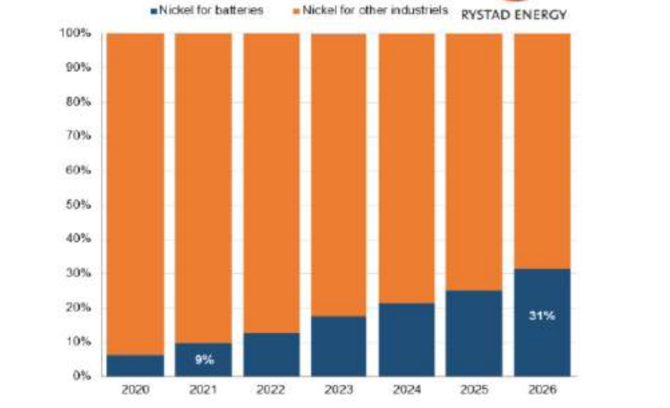
Global nickel consumption stood at ~2.4mn tonnes in 2020, a slight contraction by 1.3% YoY as lockdown measures due to COVID-19 pandemic resulted in lower end-user demand for nickel products. In 2021, global nickel demand growth recovered around 13.0% YoY to 2.8mn tonnes. Currently, most of the nickel consumption (60-70%) remains from stainless steel production, but this proportion is expected to change drastically by the rapid uptake of Lithium Ion (LiOn) batteries used in EV. Rystad Energy expects nickel consumption for batteries will hit 31% of total nickel demand in 2026 (from current 9%). Going forward, global nickel demand is expected to grow by +7.9% CAGR over FY21-24F, reaching 3.5mn tonnes by 2024F (Fig 4).

Fig 4. Global nickel production and consumption



Source: Various sources, KISI

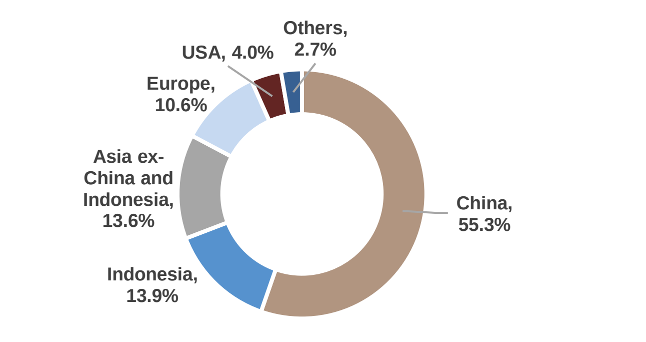
Fig 5. Nickel demand from EV (mn tonnes)



Source: Rystad Energy, KISI

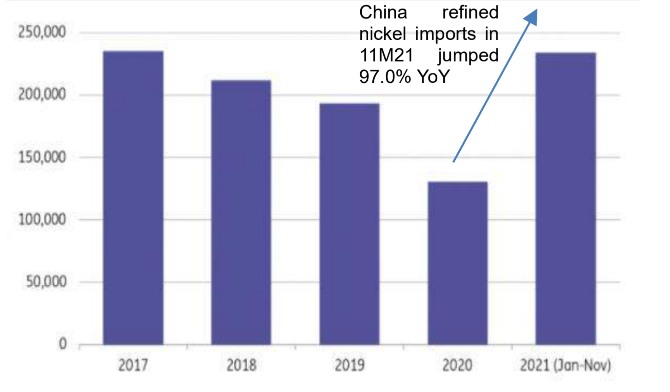
China still dominates nickel consumption so far (55.3% of global consumption in FY21), representing more than half of world's nickel primary use. One of the major drivers are solid Chinese stainless steel demand. China's nickel production increased by 1.6% YoY in 2021, but, it is worth mentioning that Chinese refined nickel imports remained strong as of 11M21, soaring by 97.0% YoY; back to above 200k (significantly higher than FY19 & FY20 volume).

Fig 6. China dominates nickel demand



Source: Wood Mackenzie, KISI

Fig 7. China's refined nickel imports



Source: China customs, ING (2021)

Stainless steel is the primary nickel's demand driver

More than two-thirds of global nickel production is used to produce stainless steel. The presence of nickel in stainless steel made it a versatile alloy, and usually, nickel-containing grades make up ~75% of stainless steel production. We expect global stainless steel production to grow by +4.4% CAGR over FY21-24F, driven by China, India, Indonesia, and U.S.

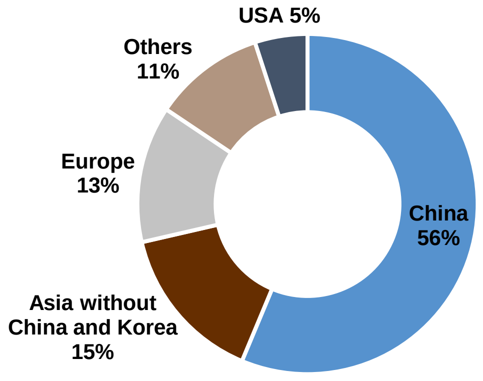
Moreover, until 2020, Indonesia was the 3rd largest stainless steel producer, but in 2021-2022F, Indonesia will most likely displace India and become the 2nd largest stainless steel producer with 5.7 mn tonnes production target (+13.6% YoY). We view China and Indonesia to continue becoming the key players in global stainless steel space, with a market share (based on production volumes) of up to 65% in FY22F (vs. 56.3% in FY18).

Fig 8. Global stainless steel production (2018-2024F)

(in mn tonnes)	2018	2019	2020	2021	2022F	2023F	2024F
China	26.3	29.3	31.4	33.8	34.5	37.8	39.2
growth		*11.3%*	*7.5%*	*7.5%*	*2.1%*	*9.6%*	*3.7%*
South Korea	2.4	2.3	2.2	2.4	2.4	2.4	2.4
growth		*-3.1%*	*-8.1%*	*12.1%*	*0.8%*	*-1.6%*	*2.1%*
Indonesia	2.2	2.2	2.7	5.0	5.7	6.1	6.5
growth		*1.9%*	*20.2%*	*85.7%*	*13.6%*	*6.5%*	*6.7%*
Japan	3.3	3.0	2.4	2.9	2.9	2.9	2.9
growth		*-9.7%*	*-18.6%*	*19.4%*	*1.0%*	*0.9%*	*-0.2%*
India	3.7	3.9	3.2	4.0	4.1	4.4	4.8
growth		*5.2%*	*-19.8%*	*25.6%*	*3.4%*	*6.1%*	*10.3%*
United States	2.8	2.6	2.1	2.4	2.7	2.8	2.8
growth		*-7.7%*	*-17.3%*	*11.7%*	*11.9%*	*2.6%*	*2.4%*
Others	9.9	9.0	8.3	9.5	9.7	9.3	9.6
growth		*-9.0%*	*-7.6%*	*14.5%*	*2.1%*	*-3.5%*	*2.6%*
Global Production	**50.6**	**52.3**	**52.3**	**59.9**	**62.0**	**65.6**	**68.2**
growth		***3.4%***	***0.0%***	***14.6%***	***3.4%***	***5.9%***	***4.0%***

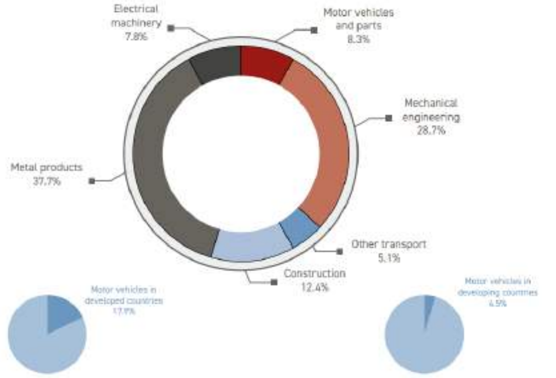
Source: ZLJ Steel, KISI

Fig 9. Stainless steel use by country (2020)



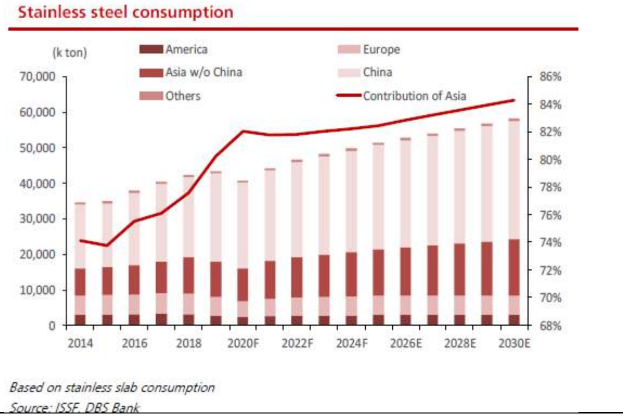
Source: ISSF, KISI

Fig 10. Stainless steel use per sector (2020)



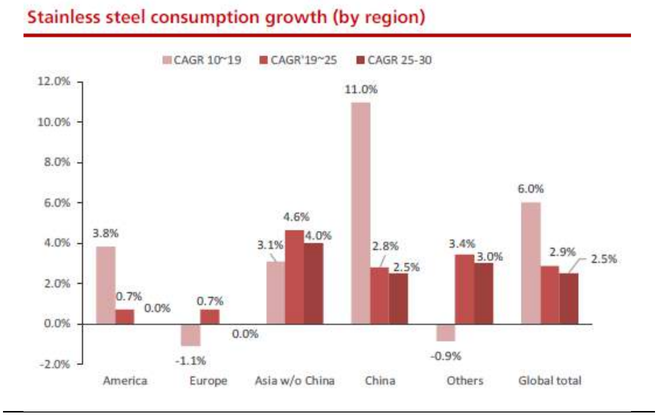
Source: ISSF, KISI

Fig 11. Stainless steel consumption



Source: ISSF, KISI

Fig 12. Stainless steel consumption growth

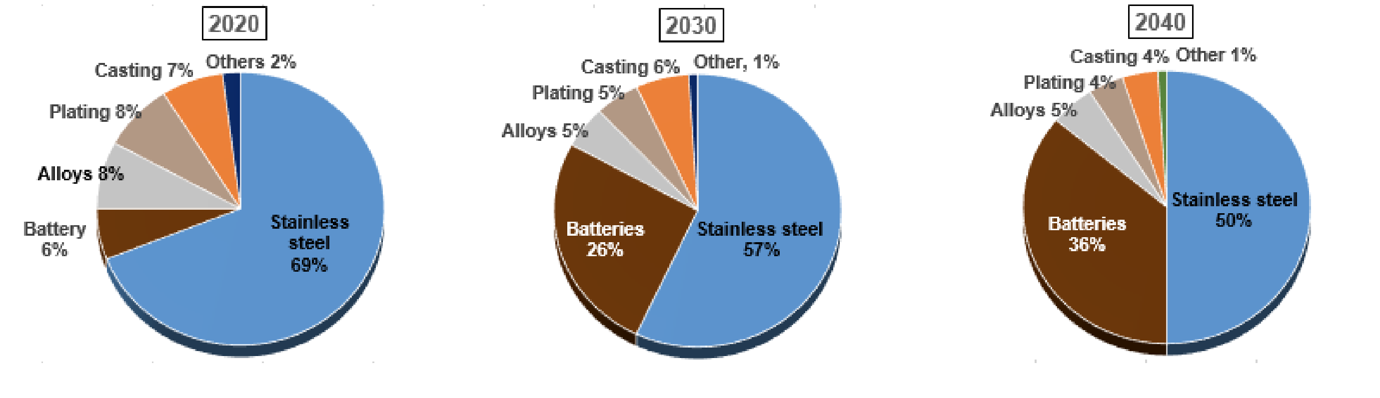


Source: ISSF, KISI

We foresee stainless steel industry to remain as the leading driver of nickel demand for the long haul, unless there is another shake-up in the form of technology advancement on alternative materials or integrated products like the ones happening back in 2007.

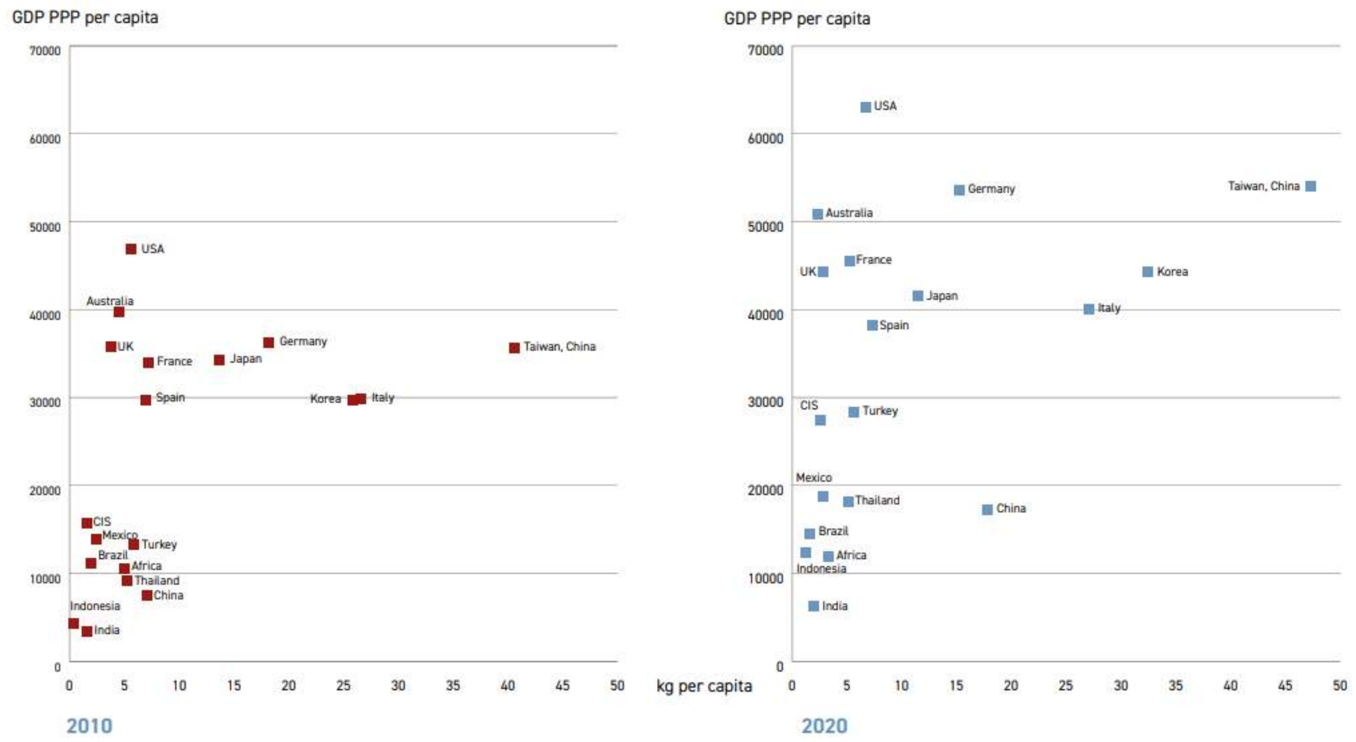
Historically, stainless steel producers used class I products (defined as containing 99.8% nickel or above) produced from sulfide ores as it is more economical and easier to produce than laterites. Laterites required more process flow and higher refining costs to be converted to class I products. During the surge of nickel price to USD50,000/ton in 2007, China's Tsingshan introduced Rotary Kiln Electric Furnace (RKEF) method with integrated production lines of Nickel Pig Iron (NPI) and stainless steel. The production of NPI using laterite ores provides cost advantages as compared to the conventional method as it consumed less energy than pure nickel production.

Fig 13. Global demand usage for nickel



Source: Roskill 2020, KISI

Fig 14. China's stainless steel consumption per capita more than doubled to 15kg/capita (2010-2020)



Source: ISSF, KISI

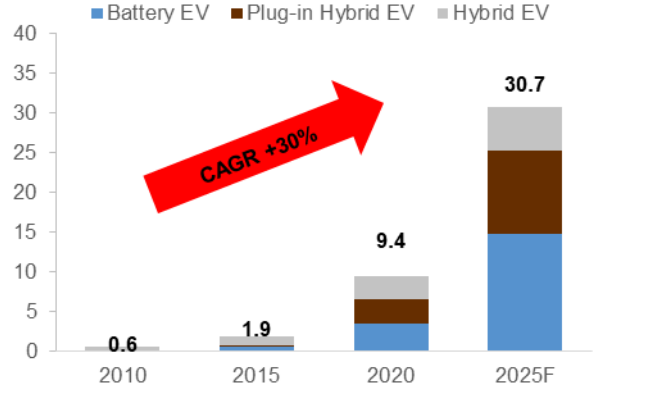
EV batteries to support future nickel demand

The emergence of EV (Electric Vehicle) pushes rising demand for batteries. Nickel is the primary material used in the production of EV batteries, most commonly in rechargeable batteries Nickel Cadmium (NiCd) and nickel-metal hydride (NiMH). The advantage of using nickel in batteries is that it helps deliver higher density and greater storage capacity at a lower cost.

Definitely, on the back of rising EV demand, it brings a positive catalyst for nickel outlook. According to the International Nickel Study Group (INSG), around 9% of nickel was consumed in rechargeable batteries in 2021 and it is projected to reach ~30% in 2030. More specifically, nickel consumption from EV batteries is expected to generate growth of +30% CAGR between 2010-2030F to hit 1.3 mn tonnes.

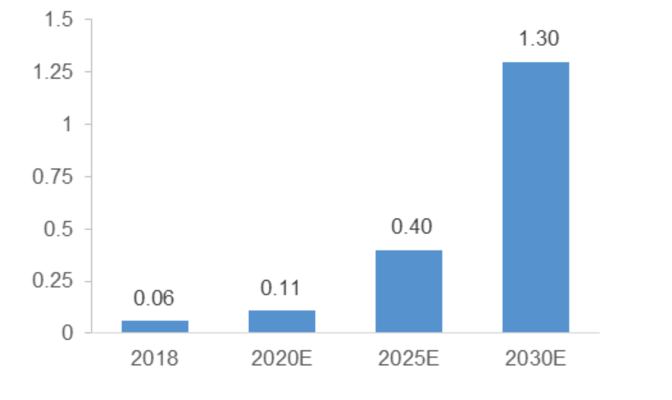
Moving forward, we view further advances in nickel-containing battery technology, especially in the role of energy storage systems. The EV market will be a source of growing demand as the use of nickel in Li-On battery compositions increases, underpinning steady global demand growth for refined nickel

Fig 15. Growth in EV from 2010-2025 (mn)



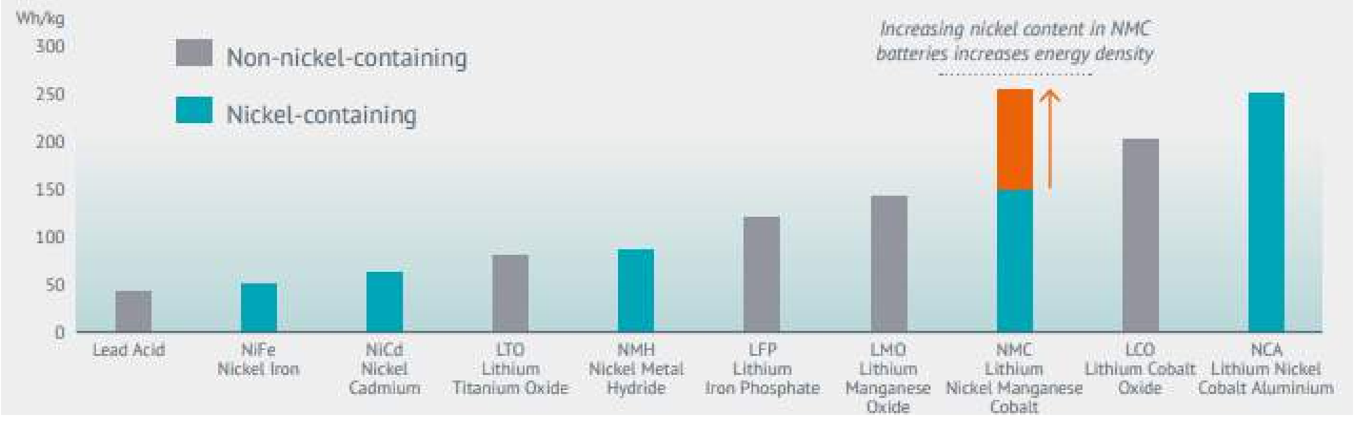
Source: McKinsey, KISI

Fig 16. Nickel demand from EV (mn tonnes)



Source: Glencore estimates, Wood Mackenzie, KISI

Fig 17. Nickel-containing batteries generally offer higher density



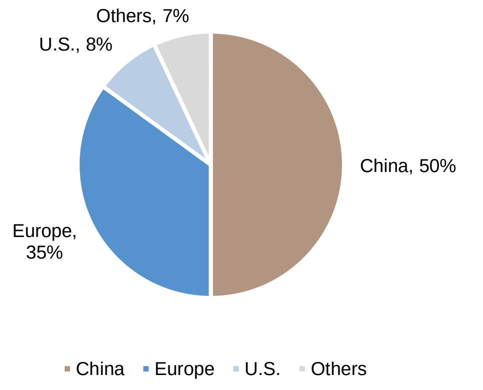
Source: Nickel Institute, KISI

As the world aims to achieve zero emission target in 2050, EV really plays pivotal role to accomplish the target. At the moment, China has the largest market for EV (50%) and followed by Europe (35%). In the previous years, U.S. was the 2nd largest market, but Europe surpassed it through heavy incentives on EV given by European government. As such, the demand for EV in Europe should remain strong going forward. Tesla is the leader in global EV market, with a 14% market share and Volkswagen group has a 12% market share.

Fig 18. Tesla leads global EV market

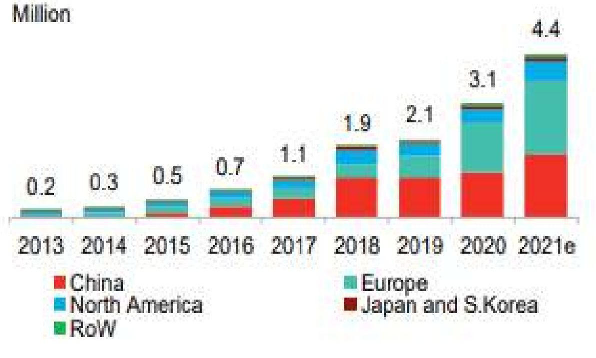
Source: Canalys, KISI

Fig 19. China is the largest market of EV



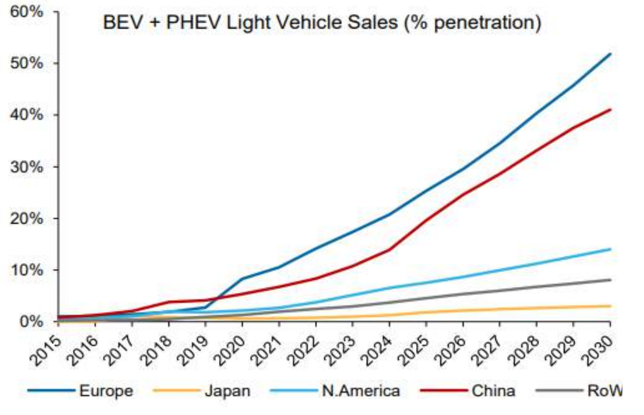
Source: Canalys, KISI

Fig 20. Global passenger EV sales per region



Source: Canalys, KISI

Fig 21. BEV+PHEV light vehicle sales (% penetration)

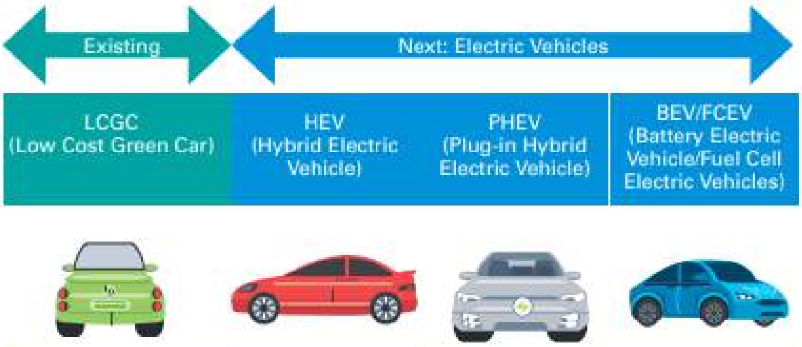


Source: Various sources, KISI

Indonesia – progressing to be an EV production hub

As stated before, the crucial component in EV industry is a nickel-based lithium-ion battery, accounting for ~35% of production cost. Indonesia, with ample nickel reserves, seeks to become an electric vehicle production hub in the region, aiming for an output of 600K electric cars and 2.5mn electric motorcycles by 2030. To solidify its support for the development of domestic EV industry, the government has issued several policies and regulations. The most notable regulation is Presidential Decree No.55/2019 which firmly cements the development of the domestic EV industry as a national priority.

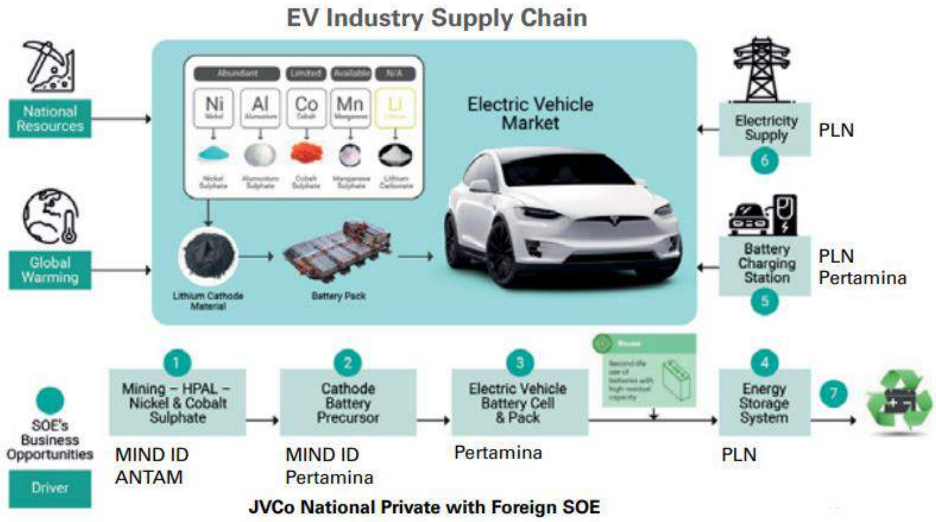
Fig 22. Existing LCGC vs. Future EV



	LCGC (Low Cost Green Car)	HEV (Hybrid Electric Vehicle)	PHEV (Plug-in Hybrid Electric Vehicle)	BEV/FCEV (Battery Electric Vehicle/Fuel Cell Electric Vehicles)
Overview	Low carbon emission vehicle	Mostly fuel-powered, but uses small battery packs to improve fuel efficiency	Optimize battery powered, but uses a fuel-powered generator (range extender)	Full-electric vehicles that are completely battery/ fuel cell powered
Energy Source	Gasoline/diesel	Gasoline/diesel	o Gasoline/diesel o Electricity	Electricity/ hydrogen
Infrastructure Requirements	Pump station (available)	Pump station (available)	Pump station + charging station (alternative)	Charging station/ hydrogen station (required)

Source: KPMG, Ministry of Industry, KISI

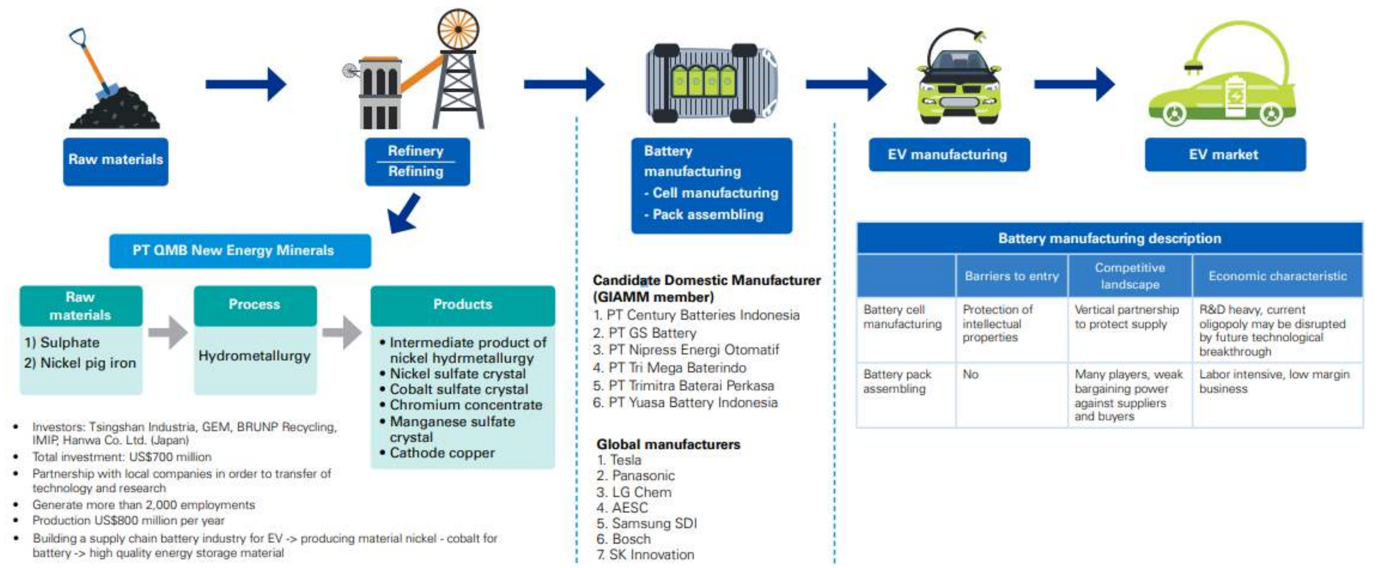
Fig 23. EV Industry supply chain



Source: KPMG, MoEMR, KISI

Indonesia already has a robust nickel industry, complete with operational smelters and processing infrastructure, as well as international partnerships with major players, such as Tsingshan Industrial from China. Below is an illustration of how Indonesia's existing nickel industry will support the planned EV battery manufacturing plants:

Fig 24. Indonesia infrastructure supporting EV industry



Source: KPMG, MoEMR, KISI

On 16Mar2021, four SOEs in the mining and energy sector – MIND ID, Aneka Tambang (ANTAM), PT Pertamina and PT PLN signed an agreement to form Indonesia Battery Corporation (IBC). Each of them hold 25% ownership in the holding company. IBC will function as a holding company to manage the battery industry ecosystem. Each of the SOEs is assigned different key roles from upstream to downstream:

1. Inalum & Antam (upstream) – mining and refining nickel
2. Pertamina (intermediate) – construction and operation of precursor plants, cathode plants, battery cells, and packs.
3. PLN (downstream) – distributing batteries and battery recycling with Pertamina

Fig 25. EV Roadmap in Indonesia

Year	Targets
2021	Construction of charging stations (SPLKU) and battery trade-in stations (SPBKLU) across Indonesia In Feb-21, PLN has completed 21 SPLKU and 22 pilot projects for SPBKLU in 33 cities across Indonesia
2022	Production of EV manufacturing companies begin to kick in
2024	EV battery companies to begin production in Indonesia ANTM's nickel refining/ high pressure acid leach (HPAL) plant is planned to begin operation in 2024, as well as Pertamina and Inalum's cathode and precusor manufacturing plant
2025	Pertamina and PLN's cell to pack manufacturing plant is targeted to begin operations in 2025
2026	The new capital city is planned for a 100% EV adoption rate

Source: KPMG, MoEMR, KISI

Indonesia – possesing world's largest nickel reserves

Referring to a report from Wood Mackenzie, Indonesia's FY21 nickel mines production was 1,111kt in 2021, the largest producer in the world representing 30% of the world's nickel production. Indonesia also has the largest nickel reserves amounting to 21 mn tonnes which are laterite ore. More of the reserves are located in Sulawesi and North Maluku. In regard to the specification of laterite ores, Indonesia laterite average grade is 1.6%, much better as compared to the Philippines (<1.3%).

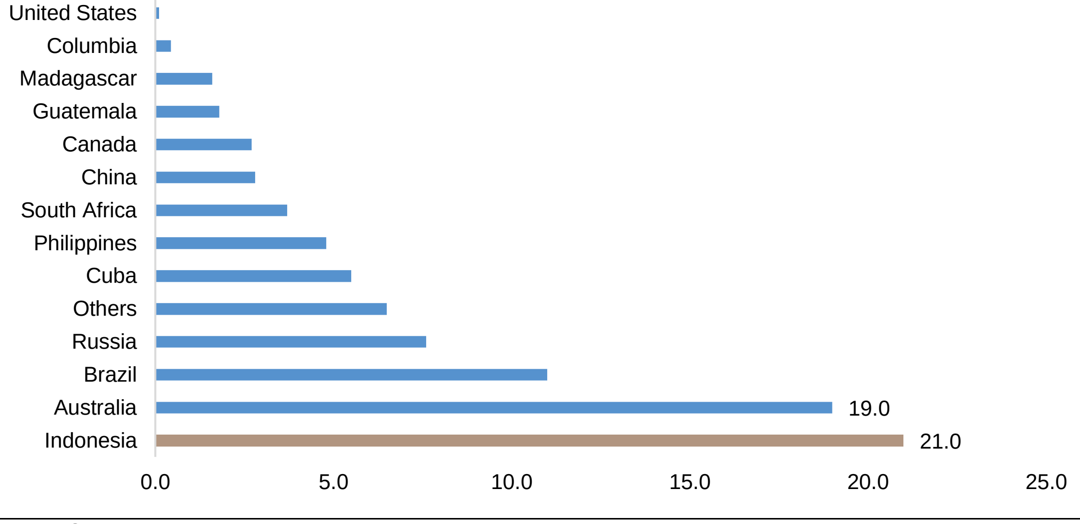
Apart from it, Indonesia also has an advantage such as low cost of production given low industrial electricity prices (subsidized by the Indonesian government), and cheap nickel ore. As of November-21, FOB prices estimated at USD40.59/wmt for Indonesia's 1.7% laterite nickel ore, USD45.37/wmt (1.8% nickel ore), USD50.41/wmt (1.9% nickel ore) and USD55.7/wmt (2.0% nickel ore). As a comparison, the Philippines 1.5% laterite nickel ore price ranges between USD87-91/mt. Furthermore, according to SMM report, NPI production cost in Indonesia with RKEF is at $5,300-7,100 per tonne, much cheaper than China's NPI cash production costs of around $7,380-9,660 per tonne.

Fig 26. Nickel mine, smelter and finished nickel production

Global Nickel Mine production/capability (kt)	2018	2019	2020	2021	2022F	2023F	2024F
Indonesia	603	811	784	1,111	1,525	1,728	1,862
Philippines	345	323	424	489	362	368	382
Others	1,357	1,399	1,407	1,324	1,418	1,550	1,617
Total	**2,305**	**2,533**	**2,615**	**2,924**	**3,305**	**3,646**	**3,861**
Global Nickel Smelter production/capability (kt)	**2018**	**2019**	**2020**	**2021**	**2022F**	**2023F**	**2024F**
Indonesia	364	470	710	988	1,327	1,512	1,650
China	604	734	661	593	465	467	476
Others	1,218	1,200	1,163	1,088	1,179	1,249	1,299
Total	**2,186**	**2,404**	**2,534**	**2,669**	**2,971**	**3,228**	**3,425**
Global Finished Nickel production/capability (kt)	**2018**	**2019**	**2020**	**2021**	**2022F**	**2023F**	**2024F**
Indonesia	289	396	638	906	1,177	1,343	1,456
China	714	855	799	755	712	733	772
Others	1,218	1,186	1,120	1,049	1,139	1,213	1,278
Total	**2,221**	**2,437**	**2,557**	**2,710**	**3,028**	**3,289**	**3,506**

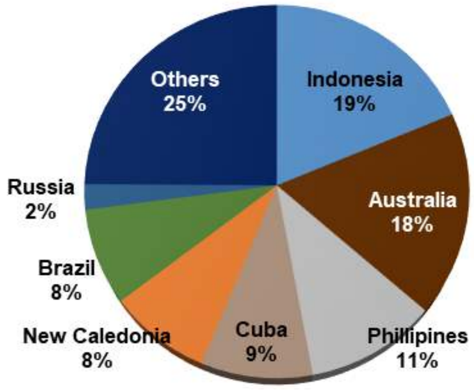
Source: Wood Mackenzie, KISI

Fig 27. Global nickel reserves



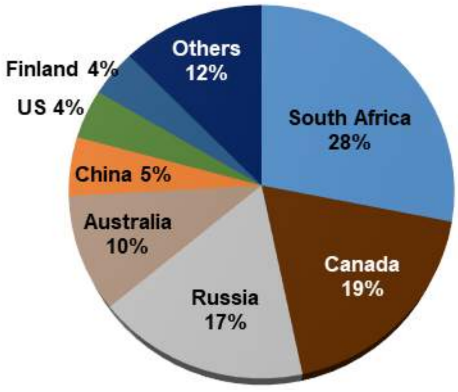
Source: Bloomberg, KISI

Fig 28. Global laterite reserves



Source: Nickel Institute, KISI

Fig 29. Global sulphide reserves



Source: Nickel Institute, KISI

By and large, on the back of accelerating battery demand for EV (class 1 product) and stainless steel industry (FeNi and NPI), we believe Indonesia will be poised to benefit. The reason behind it is 1) abundant nickel reserves 2) cheaper production costs 3) direct nautical trade routes to China and Japan (#1 & #3 nickel users in the world as of 2021). We view nickel miners in Indonesia under our coverage (ANTM and INCO) stand to benefit from this current situation compare to other nickel players in other regions.

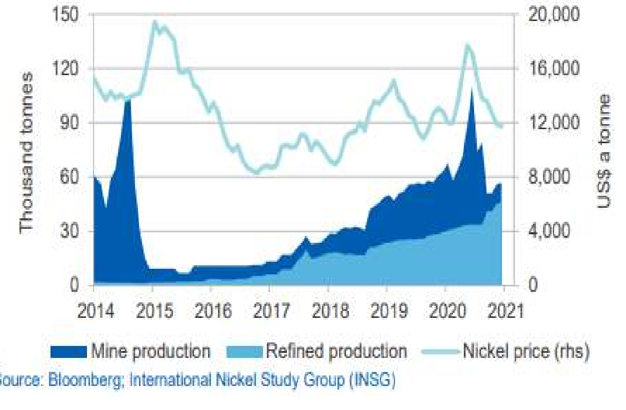
Indonesia - Steady progress on downstream

Indonesia nickel production has predominantly supplied its leading trading partner, China, with feedstock for its expanding stainless steel industry. In 2014, Indonesia government began to enforce an exports ban on unprocessed metalliferous ores, including nickel. The ban is to further encourage miners to develop downstream nickel processing ores. Indonesia's 2009 mining law requires companies to process ore locally before shipping it abroad. Indonesia has implemented this law through a series of regulations that ban the export of over 200 types of mineral ore including nickel.

Following the first nickel ore ban in 2014, Indonesia saw large investments in nickel space coming in droves, especially from Chinese companies. The investment continued during partial ore export relaxation over 2017-2019. In 2019-2020, the government reimposed the nickel export ban, but Indonesia refined products (NPI and stainless steel) has accelerated massively from 24,000 tonnes in FY14 to 636,000 tonnes in FY20

Indonesia's NPI production has also increased substantially, and it has become the leading supplier of NPI to China. According to World Bureau of Metal Statistics, Indonesia produced 513,314mt of NPI in 2020, over 100 times more than the 4,680mt produced in 2014 when the export ban was initially enforced. According to Indonesia's Ministry of Energy and Minerals, number of nickel smelters has increased from 3 in 2014 to 13 in 2020. In 2021, there are 3 more nickel smelters with combined 285K mt of capacity are coming online.

Fig 30. Indonesia's growing prod of refined nickel



Source: Bloomberg, KISI

Fig 31. Value-added relative to the ore price

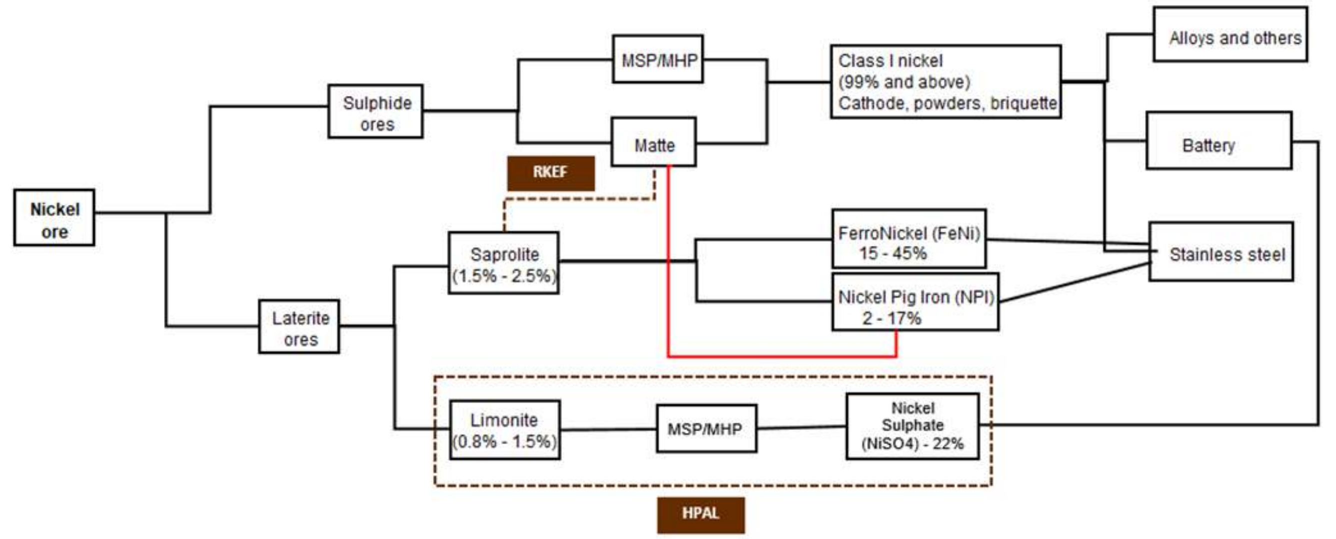
	Nickel Ore	MHP	NiSO4	Precursor	Cathode	Battery Cell
Increased added value (USD1,000/tonne Ni) Value-added relative to the ore price	1.1 to 1.7	up to 10	up to 14	25 to 30	45 to 55	90 to 150

Source: Various, KISI

Chinese investment has not stopped at processed nickel (i.e. FeNi, NPI, and nickel matte) but has continued into stainless steel with two large producers currently in operation. Going on from 2021, we see more value-added products to be produced in Indonesia such as nickel sulphates, raw material for batteries used in electric vehicles (EV). As of mid-2020, at least 5 plants were under construction in Indonesia to produce intermediates and battery-grade chemicals (nickel sulfate) for EVs.

However, this ambitious plan of being the main hub of battery production meet hurdles as Indonesia's nickel ore is found in laterite deposits. Note that, battery for EV and steel-related nickel products are different. Basically, Indonesia is rich with its laterite ore resources, whilst standing as a good feedstock for Class 2 products (for steel production). As battery cathode production needs Class 1 product (contain 99.8% of nickel), extracting nickel from Indonesian laterite ores requires High-Pressure Acid Leaching (HPAL) process. Yet, based on our understanding, HPAL process is historically complex, costly, and has mixed results.

Fig 32. Nickel production process



Source: Various sources, KISI

Nonetheless, with the forecast of demand battery growth by 12.3% CAGR from 2021 to 2030, there is still uncertainty over the actual conversion costs for NPI and laterite nickel to sulphates, with the refining process also being highly energy-intensive and polluting. Currently, there are two Indonesian HPAL nickel on-going projects with a total capacity of 87,000mt representing ~47% of planned Class I nickel production in the country.

Fig 33. Upcoming nickel projects in Indonesia

Project	Company	Capex est. (US$ bn)	Product & capacity	Progress
2021-2022 completion				
FeNi Haltim	Aneka Tambang	0.5	Ferronickel (FeNi) - 13.5kt	98% - power plant
Lygend Obi	Ningbo Lygend, Harita	1.5	NPI - 108kt	Construction
Huadi Phase 2	Huadi Nickel Alloy Indonesia	2.9-3.0	NPI - 30kt	Construction
Yinhai Wanxiang (IMIP)	Wanxiang Nickel Indonesia	N/A	NPI - 4 RKEF lines	N/A
Angel Nickel	Angel Nickel Indonesia (ANI)	1.4	NPI - 8 RKEF lines - 80kt	N/A
Huayue Nickel and Cobalt	Huaqing Nickel and Cobalt, Tsingshan	1.3-1.6	MHP (HPAL), NPI-matte	Jul-21 operation
QMB	GEM. China Brunp, Tsingshan, CATL	1.5	MHP - 20kt, Ni Sulphate 30kt	2021/2022 operation
Others				
Lapaopao (HPAL)	Ceria Nugraha Indotama	N/A	MHP - 40kt	FS
Ceria FeNi	Ceria Nugraha Indotama	0.4	FeNi - 28kt	Construction
Bahodopi FeNi	Vale Indonesia	1.5-2.0	Ferronickel (FeNi) - 72kt	FID progress
Pomalaa HPAL	Vale Indonesia	2.0-2.5	MSP - 40kt	FID progress
ANTM HPAL	Aneka Tambang/IBC	2.0-3.0	Nickel sulphate - 50-100kt	Partner-selection

Source: Wood Mackenzie, KISI

MoEMR projected Indonesia would need ~81mn tons nickel ore supply annually to feed 11 working smelters and another 25 under construction. The difference between the previous ban in 2018 is that Indonesia will stop exporting all quality of nickel, not just ore with 1.7% nickel, in order to accelerate the establishment of smelters so that Indonesia could sell value-added nickel products such as stainless steel slabs.

Furthermore, until 2021, on the back of IBC introduction to leverage nickel reserves, the Indonesia's government effort to attract the interest of automotive companies and battery makers seemed to bring a real benefit for the Indonesia EV market. Big companies have committed to making huge investments in Indonesia like 1) CATL with USD5.2 bn investment to build lithium battery plant and expected to go on-line in 2024 and 2) LG Chem with the total investment of USD9.8 bn aiming to set-up EV battery manufacturing plant within 4 years. In our view, these investments' potential would not stop, while nonetheless, we need to oversee whether the executions are on-time and successful.

Fig 34. Several companies' investment in Indonesia EV and battery space

No.	Company	Investment (in USD)	Notes
1	CATL	5.2 bn	Build lithium battery plant in Indonesia and start production in 2024
2	LG Chem	9.8 bn	Set-up EV battery manufacturing plant in Indonesia
3	Toyota	2 bn	Manufacture EV in Indonesia in 4 years Production of 250,000 units/year EV factory in West Java town, Karawang
4	Hyundai	1.5 bn	Production of 150k units/year
5	Suzuki	83.36 mn	Develop mild hybrid vehicles and electrify its previous model
6	Mitsubishi	779 mn	Develop 2 EV
7	Honda	361 mn	Move factory from India to Indonesia and produce electic cars
8	Gojek	N/A	Provide service with EV on its platform by 2030 Competitive EV products at 30% lower than ICE costs
9	Transjakarta	N/A	Switching all bus to electrical and building own bus charging station fuel savings (diesel) of about 0.47L/km by switching from ICE to EV
10	PLN	3.7 bn	Provide 31,000 new private-owned EV charging stations by 2030
11	Starvo Global Energi	N/A	Provide 5,000 new private owned EV charging station by 2025
12	VW and BASF	N/A	to be part of EV battery downstream

Source: Asean Briefing, Autoindustriya, Cekindo, Gojek, Jakarta Globe, LMC Auto, Nikkei Asia, The Jakarta Post, The Strait Times

Dynamics of Nickel prices

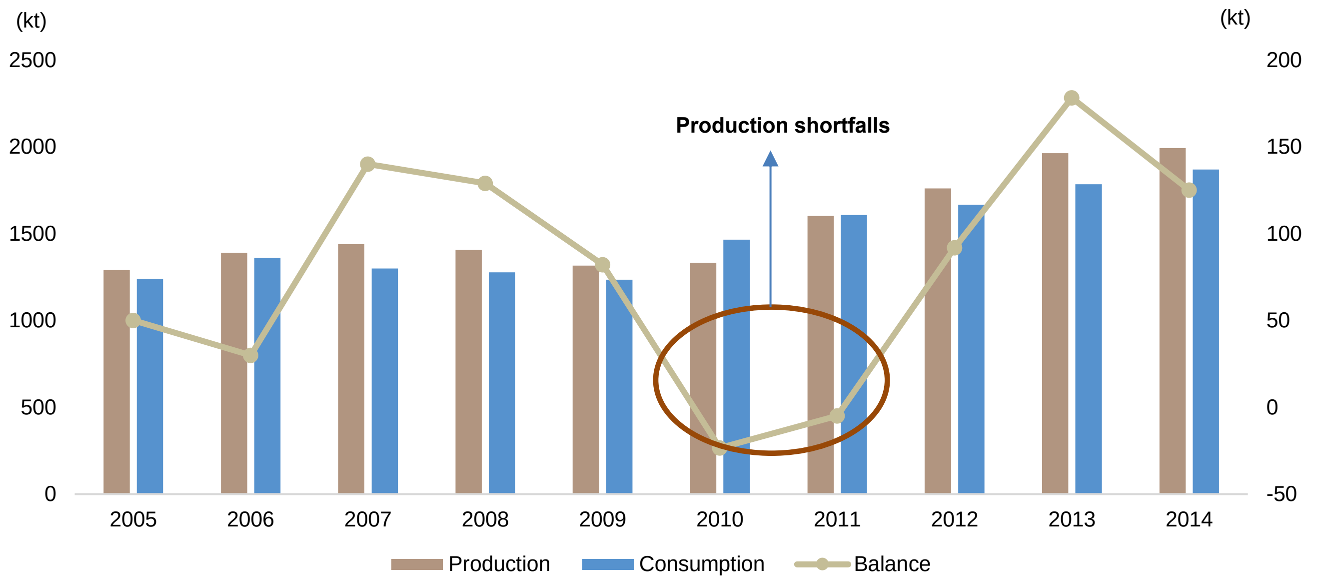
- **(2006-2007)** - Amidst falling inventories of nickel and strong demand underpinned by China's manufacturing boom, LME nickel price reached more than USD50,000/tonne for the first time ever. Nickel prices saw sustained rally since 2006. The key factor was supply disruptions.

- **(2008-2009) -** After reaching a record high in April-07, LME nickel prices retreated, hitting the bottom in 2008 Oct-08 at USD8,850/tonne on the brink of global financial crisis. Other metals like aluminium and copper were also experienced drop in prices during the time frame.

- **(2009-2011)** - LME nickel prices started uptrend. Again, China which represented 30% of worldwide usage of nickel saw potential 18.6% YoY growth in demand (2010). Global consumption grew by 18.7% YoY to 1,465.2 kt (Based on INSG) post slowing consumption in 2008-2009 of 1,277 kt and 1,234 kt , respectively. As such, global nickel industry had to experience production short-fall in 2010 and the trend to continued in 2011. In 2010, there was also a strikes at Vale SA's Sudbury and Voisey's Bay mines in Canada for about 1 year or more.

- **(2011-2013)** – Given the deficit of global nickel in 2009-2010, nickel prices melted again. The optimism of nickel prices started to fade away in 2H11. Based on our data, nickel production surplus stood at 92kt in 2012. It was the biggest glut compared to 2009-2011 level. In 2012-2013, Eurozone suffered from debt crisis and U.S. economic recovery was relatively slow, hence this led to lower export of stainless steel from China.

Fig 35. Global nickel production, consumption and balance (2005-2014)



Source: INSG Newsletter, KISI

- **(2014)** – Following Indonesian government's decision to implement the ban on exports of mineral ore in Jan-14 to increase state revenue and along with declining China's lower nickel reserves, nickel prices surged from USD13,500/tonne in late Nov-13 to peak at USD19,905/tonne in 2nd week of May-14. Nickel prices hovered around USD18,070/tonne – almost USD20,000/tonne up to Sept-14, even though at that time many assumed the prices to remain strong until Mid-2016. Apparently, it was just relatively short-lived.

- **(2015- 3Q2017)** – in 2015, despite of the different situation, somehow nickel prices traded like back in 2008-2009 when there was Global Financial Crisis. Between 3Q15-3Q17, LME nickel prices ranged between USD7,820-11,56/tonne. At that time, the condition was extraordinary. Unlike other metal that witnessed tightening supply, nickel apparently prices under pressure. Most people think that amid collapsing Chinese stock market, irrationality and panic become the major reasons of why nickel prices were under pressure. Well, actually inventory level in 2015-2017 also seemed higher compare to 2008-2010 period (higher than during GFC). China also faced trade sanction from Europe, as such the growth from Chinese indeed slowed down. Therefore, this become make sense, at the time of headwinds come for major stainless steel producer and biggest importer of nickel, prices will be negatively impacted.

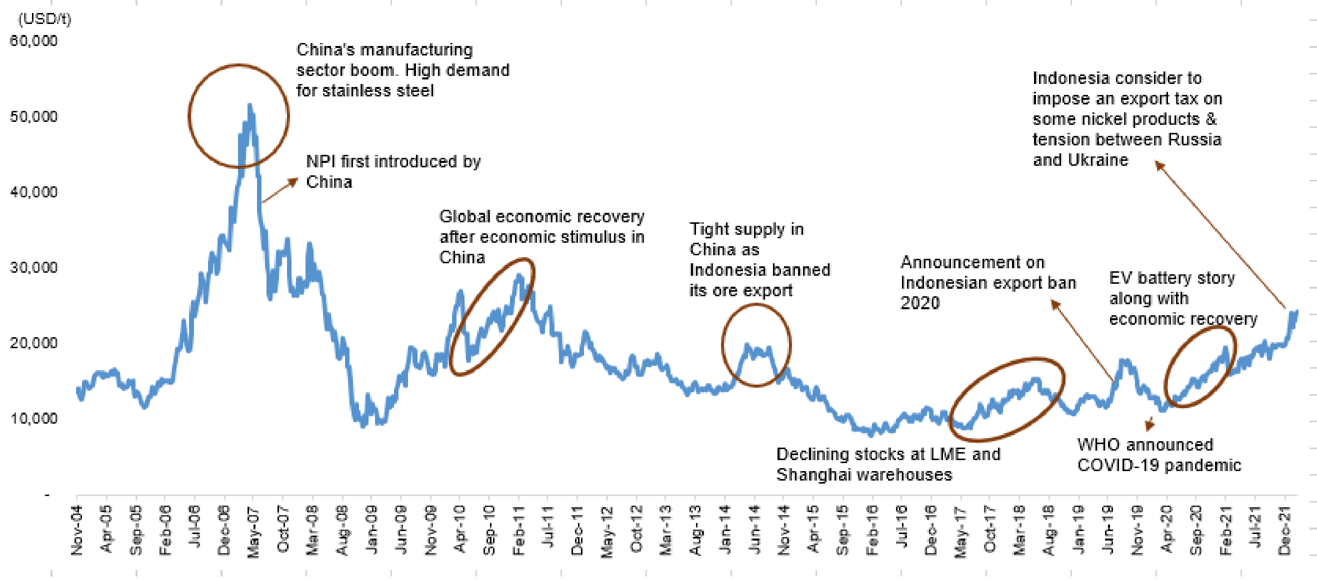
- **(Early to mid-2018)** – On the back of rising global nickel consumption by 7% in FY18, coupled with depleting stocks, nickel prices reached USD15,265/tonne in Jun-18. Demand from battery also started kicking-in after nickel become more important in the configurations relative to cobalt. Therefore, the battery story stood as icing on the cake at that time.

- **(2019-2021)** – In early-19 until end of Aug-19, nickel prices went up by 61.1%, from USD11,110/tonne to 17,900/tonne. There were several reasons 1) in 1Q19, U.S. Federal Reserves paused rate hikes 2) Around Jun-19, LME stocks have fallen to 6-year low of 145,056 tonnes and 3) Speculation of Indonesa ore export ban and eventually confirmed.

  In Mar-20, LME nickel spot price fell to ~USD10,800/tonne mainly buoyed by testing period of COVID-19 pandemic then recovered due to increasing use of stainless steel mills in China. Combined with supply concerns in Phillipines and New Caledonia, nickel price rose to USD17,800/tonne and USD20,110/tonne in Jan and Feb-21, highest price since May-14.

- **(Jan-Feb-22)** – In Feb-22, LME nickel prices reached above 24,000/tonne. Apart of strengthening demand from stainless steel and EV battery, soaring nickel prices in early 2022 was driven by Indonesia's plan to impose and export tax on some nickel products as well as war between Russia and Ukraine.

Fig 36. LME Nickel price movement

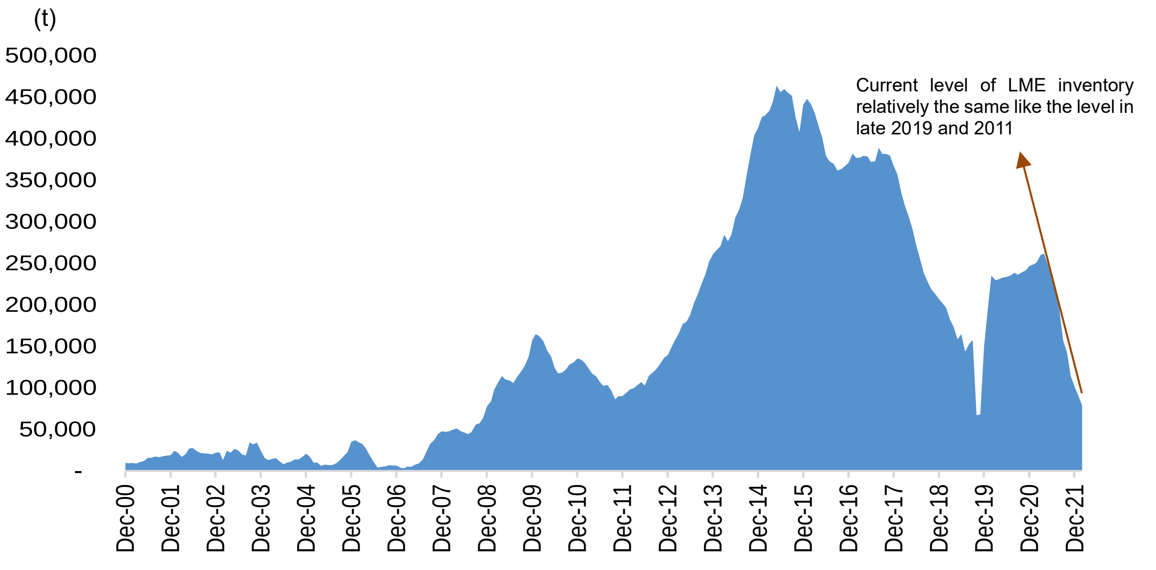


Source: Bloomberg, KISI

Fig 37. LME Nickel price movement on ore ban speculation

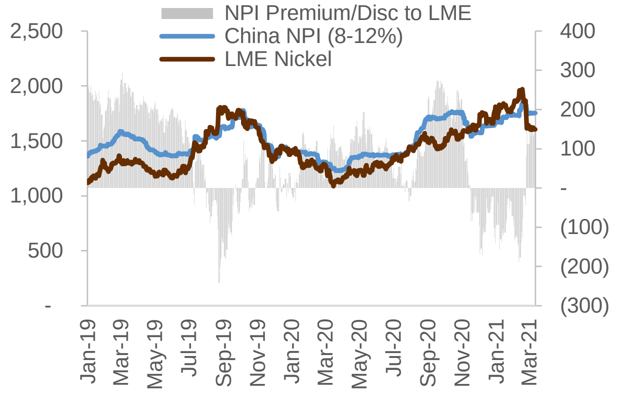
Source: Bloomberg, KISI

Fig 38. LME Nickel inventory



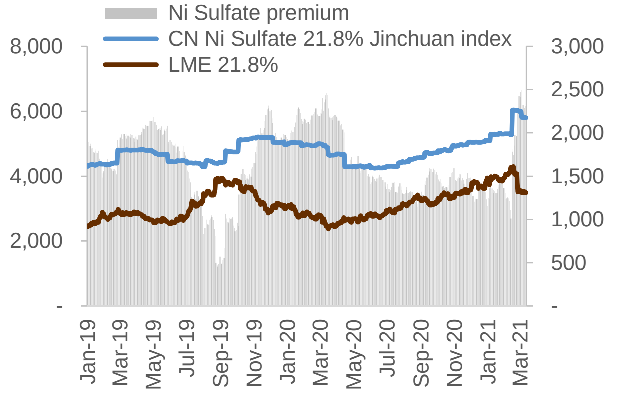
Source: Bloomberg, KISI

Fig 39. NPI Premium/Discount to LME (USD/t)



Source: Bloomberg, KISI

Fig 40. Nickel Sulphate premium to LME (USD/t)



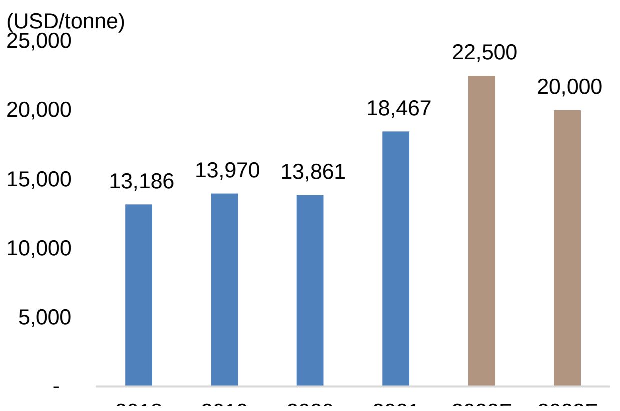
Source: Bloomberg, KISI

III. Bullish on long-term nickel story

We are bullish on the outlook of global nickel industry outlook and target average nickel price at USD22,500/tonne for FY22F and USD20,000/tonne for FY23F. By and large, based on our understanding, for foreseeable future, the catalyst consists of 1) stainless steel sector consumption still play a pivotal role in driving nickel price (especially Chinese demand which made up more than 50% of world demand), and 2) EV battery development with the intention of the world to achieve zero-carbon. More specifically, in the near-term stainless steel consumption growth is fundamental for nickel prices, and in the long term, EV-battery demand will fuel the growth of nickel production.

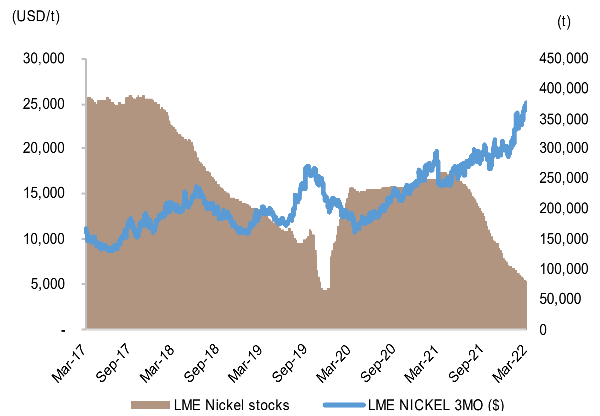
For this year, most likely we will see robust nickel consumption of around 10.0% YoY, while production is still limited, therefore the balance should remain at the deficit and inventories are to drive price sentiment. Another factor that would spice up nickel price is Russia's current attacks on Ukraine which leads to potential global supply chain disruption. As we hardly see that the conflict between both countries to end soon,hence we view average nickel price may sustain at high level this year given the current conflict that is not seem to end soon. In FY23F, we expect gradual normalization in nickel price underpinned by better production volume to meet robust nickel consumption.

Fig 41. Average nickel prices



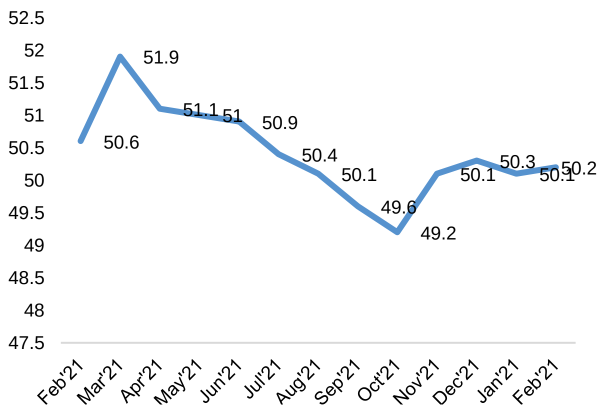
Source: Bloomberg, KISI

Fig 42. LME Nickel 3-month



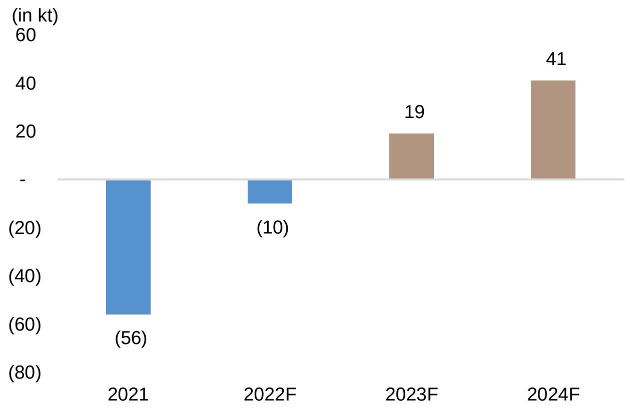
Source: Bloomberg, KISI

Fig 43. Chinese manufacturing PMI (still expansionary)



Source: National Bureau of Statistic, KISI

Fig 44. Nickel balance



Source: Company, KISI

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Aneka Tambang (ANTM)

Expanding nickel contribution

Company In-depth

Commodities

Mar 7, 2022

Settling in the right business segments

ANTM has three main business operations: 1) Gold mining and trading 2) Nickel – nickel ore and ferronickel with upcoming HPAL project and 3) Bauxite ore and Alumina (Smelter Grade. ANTM's gold segment contributed ~71% of its revenue in FY20 but provided a much lower margin (EBITDA & NPM at 7-9%) as compared to its nickel segment (29-41%). This is mainly because ANTM's gold business is mainly processing and refining. In addition, we believe that its high margin of nickel operation is mainly contributed from its nickel ore business; Indonesia's HPM for nickel is ranging around USD35-40/t while cash cost stood at ~USD20/t, translating into a cash margin of ~50% or higher.

Poised to benefit from domestic nickel expansion

ANTM's nickel ore production remarkably jumped in FY21 by 131.1% YoY to 11.0 mn wmt, following an unfavorable situation in FY20. We believe going forward, ANTM is going to be benefited from the nickel export ban. As we mentioned earlier in our nickel industry outlook, the vast capacity of downstream processing would need ore sourcing from third parties, and ANTM is best positioned to capitalize on this situation. We expect nickel ore production to grow by 5-15% in FY22-23F. ANTM also has an upcoming project in East Halmahera intended for FeNi expansion, adding annual capacity by ~13,5kt Ni (+50% YoY), bringing total capacity to 40,5kt Ni. Further, its involvement in IBC for the EV-Battery supply chain should provide a positive outlook as it will utilize limonite ore to feed into HPAL smelter. The project is expected to start construction in 2022.

All stars are aligning on its business segments – Initiate with BUY

We expect ANTM to generate +27.7% CAGR of earnings in FY21-24F mainly on the back of expanding nickel contribution which leads to higher margins and stable gold price at high-level FY21-22F. We initiate coverage with BUY rating and TP of IDR3,100/share derived through equally blended EVEBITDA and DCF, implying 10.4x FY22F EVEBITDA, or around its 5-year mean. Its diversified business means ANTM's earnings are less sensitive to LME nickel price, thus providing buffer when nickel price reverted from current all time high.

	2019A	2020A	2021F	2022F	2023F
Sales (IDR bn)	32,719	27,372	37,823	42,375	42,339
GP (IDR bn)	4,447	4,476	7,254	9,646	10,087
OP (IDR bn)	956	2,032	3,471	5,409	5,853
NP (IDR bn)	194	1,149	2,307	3,742	4,082
EBITDA (IDR bn)	2,066	3,132	4,657	6,698	7,247
Net debt (IDR bn)	4,921	3,608	2,289	394	(666)
OP margin (%)	2.9	7.4	9.2	12.8	13.8
ROE (%)	1.1	6.0	10.8	15.4	15.4
Dividend yield (%)	0.5	0.1	0.7	1.4	3.2
EPS (IDR)	8	48	96	156	170
chg. (%, YoY)		492.9	100.7	62.2	9.1
BPS (IDR)	755	792	888	1,010	1,102
DPS (IDR)	13	3	17	34	78
PE (x)	303.7	51.2	25.5	15.7	14.4
PB (x)	3.2	3.1	2.8	2.4	2.2
EV/EBITDA (x)	30.9	20.0	13.1	8.8	8.0

12M rating	**BUY (Initiate)**
12M TP	**IDR 3,100**
Upside	**+26.5%**

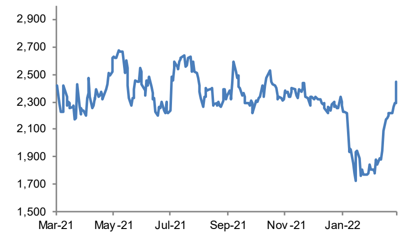
Stock Data

JCI (Mar 4)	6,928
Stock price (Mar 4, IDR)	2,450
Market cap (IDR bn)	58,875
Shares outstanding (m)	24,030
52-week high/low (IDR)	1,705/2,730
6M avg. daily turnover (IDR bn)	243.6
Free float (%)	34.95
Major shareholders (%)	
PT Indonesia Asahan Aluminium	65.0

Performance

	1M	6M	12M
Absolute (%)	28.7	(1.3)	(15.5)
Relative to JCI (%p)	32.9	(8.0)	(12.2)

ANTM stock price



Source: Bloomberg

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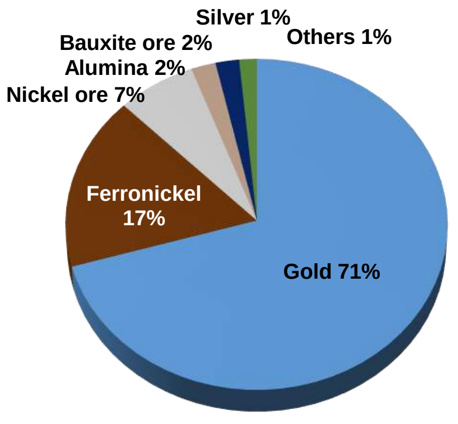
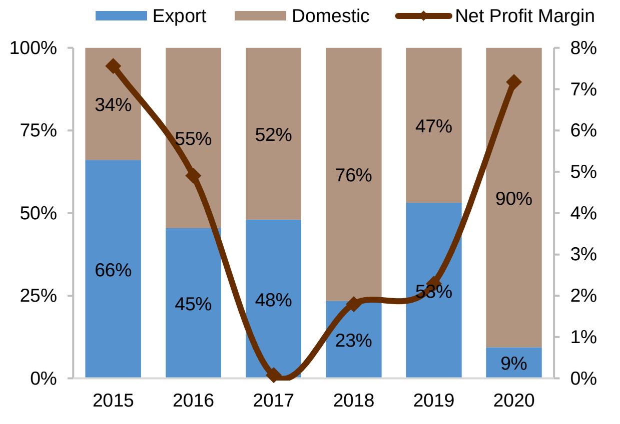
Fig 1. Revenue composition



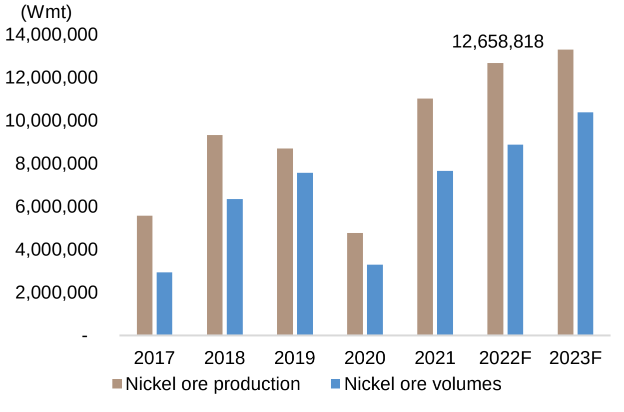
Source: Company, KISI

Fig 2. Export, Domestic, and NPM



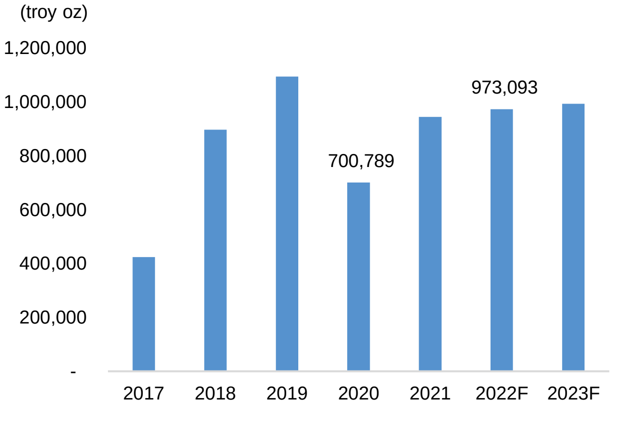
Source: Company, KISI

Fig 3. Nickel ore production and volumes



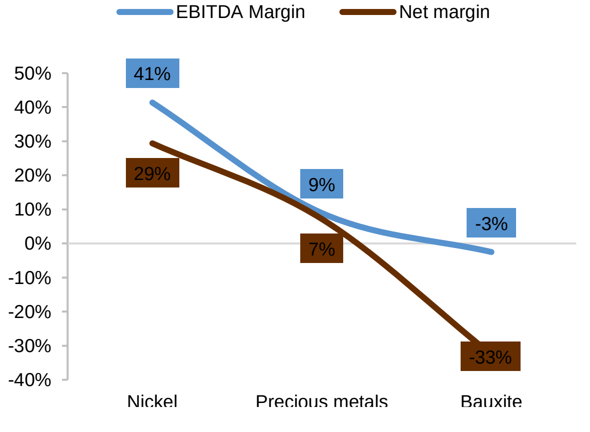
Source: Company, KISI

Fig 4. ANTM gold volumes



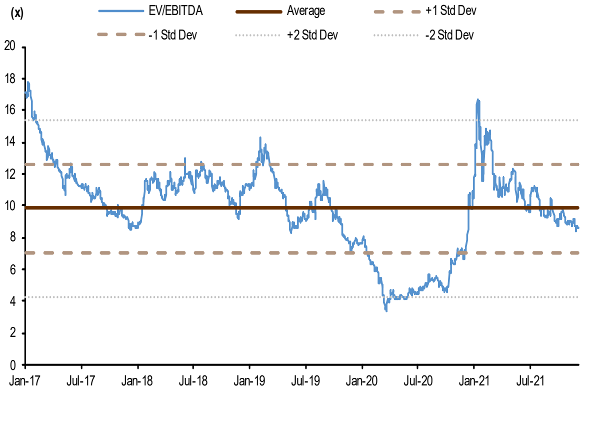
Source: Company, KISI

Fig 5. Nickel provides better margin



Source: Company, KISI

Fig 6. ANTM 5-year EVEBITDA band



Source: Company, KISI

Company Overview

In 1997, Aneka Tambang conducted its initial public offering (IPO) by listing 35% of its shares on the Indonesia Stock Exchange (IDX) in order to raise money for the expansion of its ferronickel business. In 1999, ANTM listed its shares in Australia as a foreign exempt entity but augmented its status to the more stringent ASX Listing in 2002.

Main business segments

1. **Nickel business** consists of ferronickel and nickel ore produced from the company's nickel mines in Southeast Sulawesi, North Maluku, and ferronickel plants in Southeast Sulawesi. Ferronickel is a processed product, which contains about 80 percent iron and 20 percent nickel. ANTM owns three ferronickel plants: FeNi I, FeNi II and FeNi III. Total capacity of the three plants is 26,000 TNi, with an assumption of a peak load of 42MW and using nickel ore with 2.38 percent content as feed. About 70 percent of nickel is consumed for the production of stainless steel, while the rest is used for various industrial purposes such as batteries, electronics, aerospace applications, and land-based gas turbines.

2. **Gold and refinery** business segment consists of gold, silver, and precious metals processing and refinery services. Gold and silver are produced through mining activities and gold ore smelting to dore bullion. The gold ore mining is produced at two mining sites; Pongkor (West Java) and Cibaliung (Banten), both being underground mines.

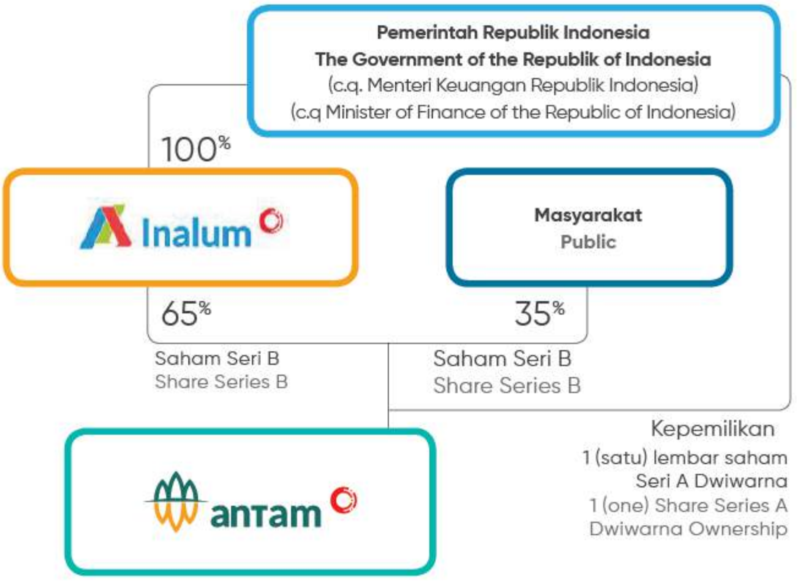
3. **Bauxite and coal**. Bauxite is produced from ANTM's bauxite mine in Tayan (West Kalimantan). In line with the company's strategy to enter the downstream business, ANTM will process bauxite ore in Tayan by establishing a Chemical Grade Alumina (CGA) plant. ANTM also plans to build a Smelter Grade Alumina (SGA) plant in Mempawah (West Kalimantan).

   Coal is produced from its coal mine in Sarolangun, Jambi (Sumatra), which is operated by its sub-subsidiary Citra Tobindo Sukses Perkasa (CTSP). CTSP is a subsidiary Indonesia Coal Resources (ICR) which is owned by ANTM. The Sarolangun coal mine has been in production since June 2010 with a production level of 607,606 tons in 2012. ICR targets the Sarolangun to produce about 1.2 million tons in 2013. Coal reserves (non-JORC) in the area reach 8.25 million tons, with an average coal quality between 5,300 to 5,500 Kcal/kg.

Fig 7. ANTM's main business

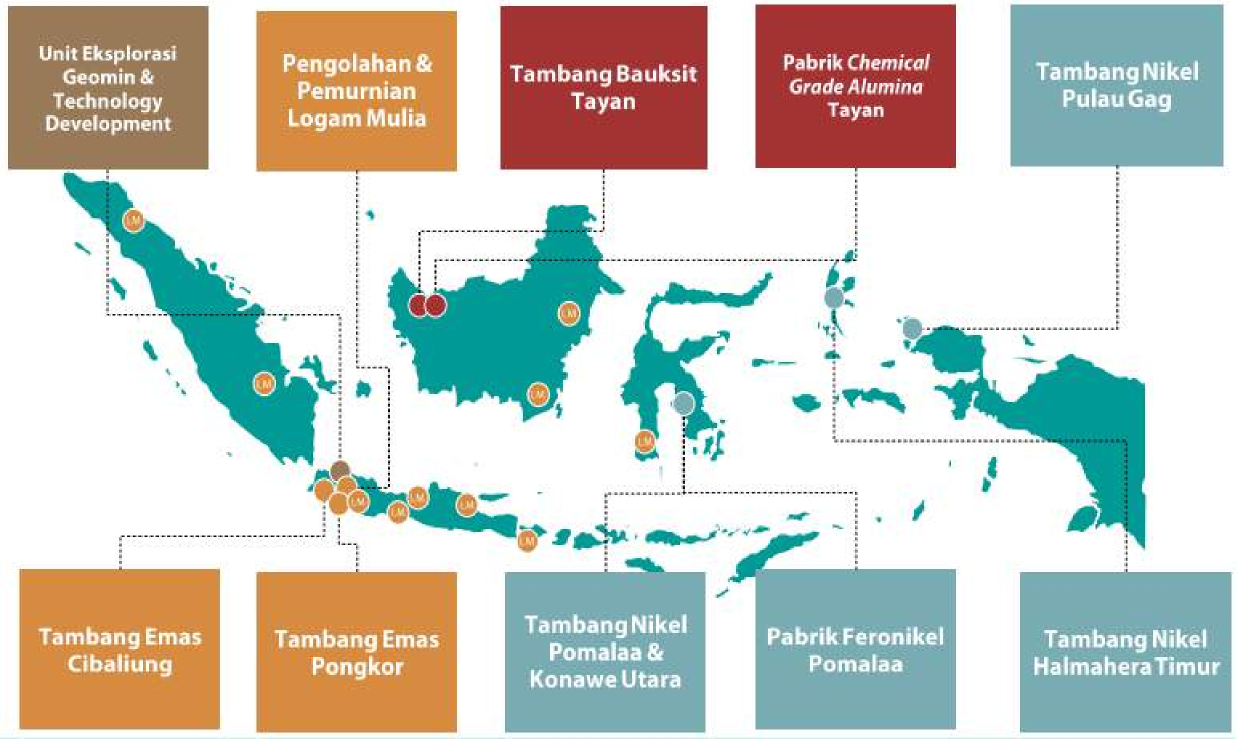
Source: Company, KISI

Fig 8. ANTM corporate structure



Source: Company, KISI

Fig 9. ANTM operational maps



Source: Company, KISI

Balance sheet (IDRbn)

FY-ending Dec.	2019A	2020A	2021F	2022F	2023F
Current assets					
Cash & cash equivalent	3,636	3,984	3,611	5,639	6,698
Accounts & other receivables	1,002	1,310	1,598	1,790	1,789
Inventories	1,796	2,626	2,952	3,056	3,138
Others	1,230	1,230	1,699	1,904	1,902
Non-current assets					
Fixed assets	20,278	19,638	20,840	22,186	23,376
Other non-current assets	2,252	2,941	3,631	3,951	3,983
Total assets	30,195	31,730	34,332	38,526	40,885
Current liabilities					
Accounts Payable	740	673	943	1,010	995
Accrued expense	442	624	833	892	879
Current portion of LT debt	-	2,099	-	-	-
Others	4,112	4,157	5,678	6,480	6,500
Non-current liabilities					
LT debt & financial liabilities	3,466	3,388	3,138	3,238	3,338
Deferred tax liabilities	7	110	153	171	171
Other non-current liabilities	3,296	1,639	2,241	2,456	2,510
Total liabilities	12,061	12,690	12,985	14,246	14,392
Controlling interest					
Capital stock	6,338	6,338	6,338	6,338	6,338
	-	-	-	-	-
Other Reserves	-	-	-	-	-
Retained earnings	7,913	8,786	11,093	14,027	16,239
Minority interest	0	0	0	0	0
Shareholders' equity	18,133	19,039	21,346	24,281	26,492

Cash flow (IDRbn)

FY-ending Dec.	2019A	2020A	2021F	2022F	2023F
C/F from operating	**1,127**	**2,242**	**3,486**	**5,310**	**5,493**
Net profit	194	1,149	2,307	3,742	4,082
Depreciation	1,110	1,099	1,185	1,290	1,394
Net incr. in W/C	(831)	53	252	391	16
Others	654	(59)	(259)	(113)	1
C/F from investing	**(1,000)**	**(775)**	**(2,724)**	**(3,048)**	**(3,086)**
CAPEX	(991)	(748)	(2,724)	(3,048)	(3,086)
Restricted cash	(9)	(27)	-	-	-
C/F from financing	**(1,608)**	**(1,112)**	**(1,440)**	**(613)**	**(1,817)**
Chg. in equity	(123)	(208)	402	-	-
Chg. in debts	(1,178)	(836)	(1,440)	195	54
Dividends	(306)	(68)	(402)	(807)	(1,871)
Others	-	-	-	-	-
C/F from others	-	-	-	-	-
Increase in cash	**(663)**	**348**	**(373)**	**2,027**	**1,059**

Income statement (IDRbn)

FY-ending Dec.	2019A	2020A	2021F	2022F	2023F
Sales	32,719	27,372	37,823	42,375	42,339
COGS	(28,271)	(22,897)	(30,570)	(32,729)	(32,252)
Gross profit	4,447	4,476	7,254	9,646	10,087
SG&A expense	(3,492)	(2,443)	(3,782)	(4,237)	(4,234)
Operating profit	956	2,032	3,471	5,409	5,853
Financial income	120	110	100	156	186
Financial expense	(233)	(565)	(460)	(471)	(470)
Other expense	168	70	97	108	108
Other non-operating profit	-	-	-	-	-
Income (loss) from JV	-	-	-	-	-
Earnings before tax	687	1,641	3,208	5,202	5,676
Income taxes	(493)	(492)	(901)	(1,461)	(1,594)
Net profit	194	1,149	2,307	3,742	4,082
Non-controlling interest	0	0	-	-	-
Other comprehensive profit	-	-	-	-	-
Total comprehensive profit	-	-	-	-	-
Total comprehensive profit of controlling interest	-	-	-	-	-
EBITDA	**2,066**	**3,132**	**4,657**	**6,698**	**7,247**

Key financial data

FY-ending Dec.	2019A	2020A	2021F	2022F	2023F
per share data (IDR)					
EPS	8	48	96	156	170
BPS	755	792	888	1,010	1,102
DPS	13	3	17	34	78
Growth (%)					
Sales growth	29	(16)	38	12	(0)
OP growth	(39)	113	71	56	8
NP growth	(88)	493	101	62	9
EBITDA growth	(14)	52	49	44	8
Profitability (%)					
OP margin	2.9	7.4	9.2	12.8	13.8
NP margin	0.6	4.2	6.1	8.8	9.6
EBITDA margin	6.3	11.4	12.3	15.8	17.1
ROA	0.6	3.6	6.7	9.7	10.0
ROE	1.1	6.0	10.8	15.4	15.4
Dividend yield	0.5	0.1	0.7	1.4	3.2
Dividend payout ratio	18.7	35.0	35.0	35.0	50.0
Stability					
Net debt (IDR bn)	4,921	3,608	2,289	394	(666)
Int.-bearing debt/equity (%)	47	40	28	25	23
Valuation (X)					
PE	303.7	51.2	25.5	15.7	14.4
PB	3.2	3.1	2.8	2.4	2.2
EV/EBITDA	30.9	20.0	13.1	8.8	8.0

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Company In-depth

Commodities

Mar 7, 2022

Vale Indonesia (INCO)

Pure nickel play

A safer nickel play with annual guaranteed volume

INCO has a long-term offtake agreement with VCL and SMM to sell 100% of its nickel matte to Japan. Pricing is based on ~78% LME nickel content and traces of its cobalt are sold using Fast Market cobalt index price. That being said, there will be no fluctuation in demand thus top-line growth is sensitive towards movement in LME nickel price. Our sensitivity analysis shows that every +1% change of nickel price resulted in +2.1% of EBITDA change.

Downstream projects still under development

INCO to become minority shareholders in two greenfield projects in Bahodopi (RKEF- FeNi) and Pomalaa (HPAL- MSP), which are expected to commence in 4-5 years after the final investment decision. Our discussion with management indicates that the construction plan could start at the end of 2022. The next project is to add ~10kt Ni p.a capacity to its Sorowako plant, to reach a total capacity of 90kt Ni p.a. by 2025 (CCoW license expiry). In the future, these projects might lead to debt issuance/ equity financing.

Riding on higher nickel prices - BUY

In FY22F, we expect revenue of INCO to rise by 16.6% YoY given our average assumption of nickel price in FY22F which potentially increase by 21.8% YoY, in spite flattish nickel matte volumes. However, we project a lower revenue in FY23F as we believe a gradual decline in nickel prices. We use SOTP valuation and arrive at TP of IDR6,400/sh, implying 7.5x FY22F EVEBITDA. We reiterate a Buy call on INCO and we are positive with the counter as its share price has always reacted positively towards EV-battery-related news. Additionally, INCO is also at debt-free position reflecting strong balance sheet. Downside risks include 1) overhang in Furnace-4 rebuild 2) decline in LME price and 3) delays on future project.

	2019A	2020A	2021A	2022F	2023F
Sales (USD mn)	782	765	953	1,111	1,086
GP (USD mn)	118	124	235	340	278
OP (USD mn)	104	117	231	329	267
NP (USD mn)	57	83	166	241	196
EBITDA (USD mn)	237	266	389	501	464
Net debt (USD mn)	(249)	(389)	(508)	(636)	(756)
OP margin (%)	13.3	15.3	24.3	29.6	24.6
ROE (%)	3.0	4.1	7.7	10.2	7.8
Dividend yield (%)	-	-	0.88	0.88	1.27
EPS (USD)	0.01	0.01	0.02	0.02	0.02
chg. (%, YoY)		44.3	100.2	45.1	(18.4)
BPS (USD)	0.20	0.20	0.22	0.24	0.25
DPS (USD)	-	-	0.00	0.00	0.00
PE (x)	66.1	44.6	22.7	15.6	19.3
PB (x)	2.0	1.8	1.7	1.6	1.5
EV/EBITDA (x)	14.6	12.4	8.2	6.1	6.3

12M rating	**BUY (Initiate)**
12M TP	**IDR 6,400**
Upside	**+18.5%**

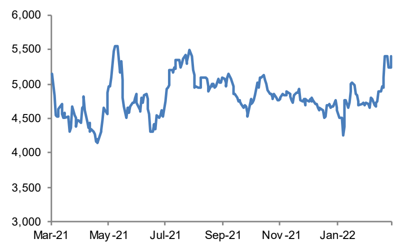
Stock Data

JCI (Mar 4)	6,928
Stock price (Mar 4, IDR)	5,400
Market cap (IDR bn)	53,656
Shares outstanding (m)	9,936
52-week high/low (IDR)	4,110/5,625
6M avg. daily turnover (IDR bn)	71.04
Free float (%)	20.5
Major shareholders (%)	
Vale SA	43.79
Indonesia Asahan Aluminium	20.0
Sumitomo Metal Mining Co Ltd.	15.03

Performance

	1M	6M	12M
Absolute (%)	11.0	4.5	(9.9)
Relative to JCI (%)	12.1	(6.6)	(11.7)

INCO stock price



Source: Bloomberg

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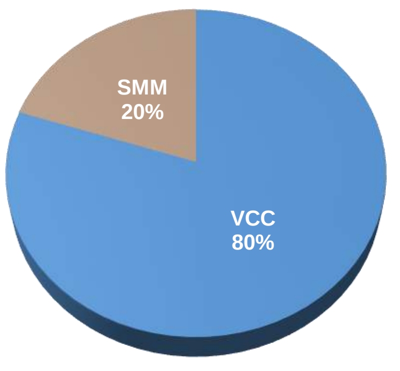
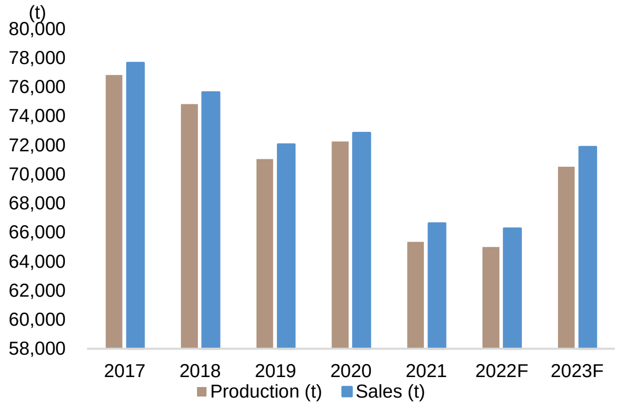
fahressi.f@kisi.co.id

Fig 1. Sales proportion – 100% to Japan



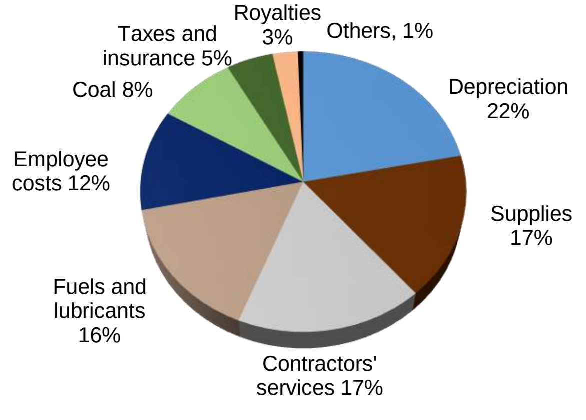
Source: Company, KISI

Fig 2. Production and sales



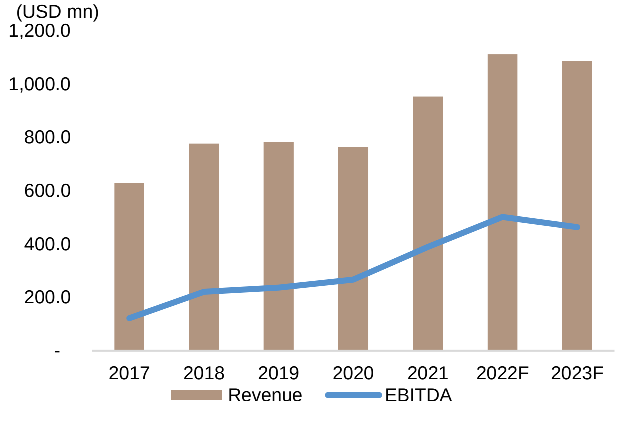
Source: Company, KISI

Fig 3. COGS breakdown



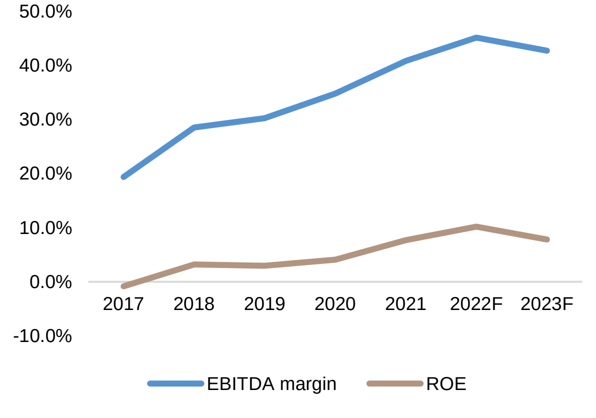
Source: Company, KISI

Fig 4. INCO revenue and EBITDA



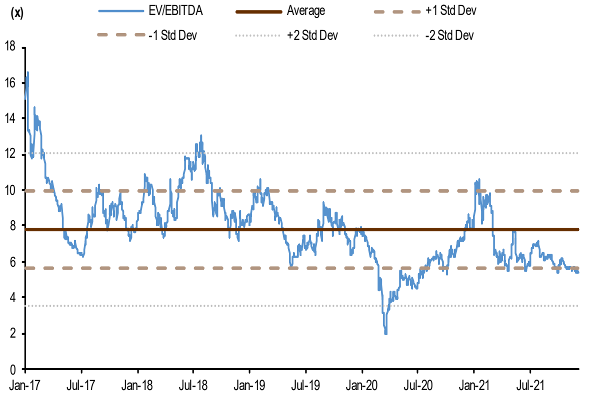
Source: Company, KISI

Fig 5. EBITDA margin and ROE of INCO



Source: Company, KISI

Fig 6. INCO 5-year EVEBITDA band



Source: Company, KISI

Company Overview

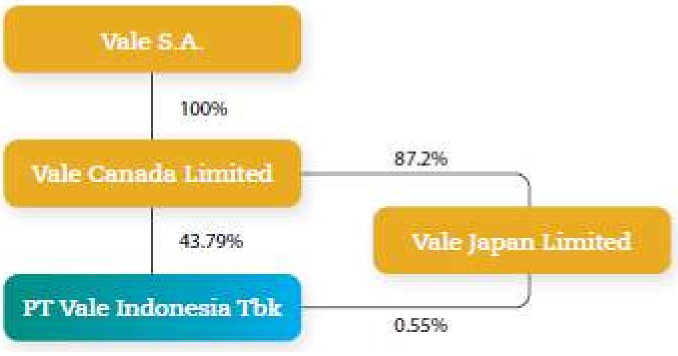
Established in 1968 under the name of PT International Nickel Indonesia (INCO), it started commercial production in 1978 in Sorowako and listed 20% of its stocks in IDX. In 2011, GMS approved the change of company name to PT Vale Indonesia Tbk (INCO)

Vale Indonesia (INCO) operates under the legal framework of Contract of Work which was amended on October 17, 2014 and is valid until December 28, 2025 with a concession area of 118,017 hectares covering South Sulawesi (70,566 hectares), Central Sulawesi (22,699 hectares) and Southeast Sulawesi (24,752 hectares).

INCO mines laterite nickel ore and processes it into the final product of nickel in matte. The average volume of nickel production per year reaches 75,000 metric tons. In producing nickel in the Sorowako Block, INCO uses pyrometallurgical technology (in melting the laterite nickel ore). Nickel product is exported entirely to Sumitomo Metal Mining Co., Ltd. (Japan) in a long-term special contract agreed

VCL, part of Vale Base Metals and the second-largest nickel producer in the world, currently has 43.79% of INCO shares. While SMM, one of the largest mining and smelting companies in Japan, owns 15.0% of INCO shares. On October 7, 2020, Inalum, now known as MIND ID has 20% of INCO shares. The remaining 21.18% of the shares are owned by public shareholders and others. As such, Vale S.A. is the Company's Controlling Shareholder, due to its direct and indirect control.

Fig 7. INCO company structure



Source: Company, KISI

Fig 8. INCO's operational area

Source: Company, KISI

1. **Sorowako (South Sulawesi)** – The production process in Sorowako processing facility is equipped with 4 electric furnaces, with an annual capacity of 75kt. INCO's Ni Matte products are of 78% Nickel, 1-2% cobalt, and 20-21% sulphur; all being shipped to Japan for further refining process). Currently, INCO is planning to add one more RKEF line with an annual capacity of ~10kt towards the expiration of CCoW mining license by 2025, aiming to reach a total capacity of ~90kt Ni p.a. (CoW amendment required INCO to increase production by 25%). According to management, the timeline is yet to be disclosed.

2. **Bahodopi (Morowali, Central Sulawesi)** – for a project in Bahodopi, INCO partnered with Taiyuan Iron & Steel Group and Shandong Xinhai Technology to establish a JV company, planning to build 8 lines of RKEF FeNi processing capacity with an estimated annual production of 73Kt of nickel, together with supporting facilities. INCO's shares in the JV is expected to be 49%, and the output will be fully absorbed by partners.

   The plant in Bahodopi will start its construction in 2022 and is estimated to come online in 3-4 years. Most of the reserves in Bahodopi are saprolite (fully reserved for the FeNi plant), with minimum limonite reserves.

3. **Pomala (Southeast Sulawesi)** – INCO plans to build an HPAL plant in partnership with Sumitomo Metal Mining (SMM), with an estimated capacity of about 40kt MSP (Mixed Sulphide Precipitation) intended for EV Battery production. Note that SMM has a proven track record in HPAL construction, namely in Coral Bay and Taganito.

   The HPAL construction is expected to start at the end of 2022 and will take 4-5 years to complete. Currently, INCO and SMM are working on the Final Investment Decision (FID). Meanwhile, INCO has an option to sell Saprolite ores in Pomala as they will not be fed to the HPAL plant.

Balance sheet

(USDmn)

FY-ending Dec.	2019A	2020F	2021A	2022F	2023F
Current assets					
Cash & cash equivalent	249	389	508	636	756
Accounts & other receivables	107	60	102	97	95
Inventories	148	144	162	159	169
Others	84	103	64	75	73
Non-current assets					
Fixed assets	1,467	1,479	1,519	1,524	1,502
Other non-current assets	167	140	117	160	209
Total assets	2,223	2,315	2,473	2,652	2,804
Current liabilities					
Accounts Payable	97	113	122	127	133
Accrued expense	16	22	20	21	22
Current portion of LT debt	-	-	-	-	-
Others	23	26	26	31	30
Non-current liabilities					
LT debt & financial liabilities	-	-	-	-	-
Deferred tax liabilities	80	50	43	50	49
Other non-current liabilities	64	83	107	61	60
Total liabilities	281	294	318	290	294
Controlling interest					
Capital stock and paid in capital	414	414	414	414	414
	-	-	-	-	-
Other Reserves	-	-	-	-	-
Retained earnings	1,528	1,606	1,740	1,948	2,096
Minority interest	-	-	-	-	-
Shareholders' equity	1,942	2,020	2,154	2,362	2,510

Cash flow

(USDmn)

FY-ending Dec.	2019A	2020F	2021A	2022F	2023F
C/F from operating	**128**	**307**	**347**	**422**	**393**
Net profit	57	83	166	241	196
Depreciation	133	149	158	172	196
Net incr. in W/C	(53)	106	31	2	1
Others	(9)	(30)	(8)	6	(1)
C/F from investing	**(167)**	**(176)**	**(217)**	**(209)**	**(225)**
CAPEX	(165)	(161)	(197)	(178)	(174)
Others	(1)	(15)	(19)	(31)	(51)
C/F from financing	**(29)**	**8**	**(11)**	**(84)**	**(49)**
Incr. in equity	1	(4)	1	0	-
Incr. in debts	(30)	12	21	(51)	(0)
Dividends	-	-	(33)	(33)	(48)
Others	-	-	-	-	-
C/F from others	-	-	-	-	-
Increase in cash	**(68)**	**140**	**120**	**128**	**119**

Income statement

(USDmn)

FY-ending Dec.	2019A	2020F	2021A	2022F	2023F
Sales	782	765	953	1,111	1,086
COGS	(664)	(640)	(718)	(771)	(807)
Gross profit	118	124	235	340	278
SG&A expense	(14)	(7)	(4)	(11)	(11)
Operating profit	104	117	231	329	267
Financial income	5	4	3	3	4
Financial expense	(5)	(4)	(5)	(4)	(2)
Other expense	(14)	(13)	(8)	(9)	(9)
Other non-operating profit	-	-	-	-	-
Income (loss) from JV	-	-	-	-	-
Earnings before tax	89	105	221	319	260
Income taxes	(32)	(22)	(55)	(78)	(64)
Net profit	57	83	166	241	196
Non-controlling interest	-	-	-	-	-
Other comprehensive profit	-	-	-	-	-
Total comprehensive profit	-	-	-	-	-
Total comprehensive profit of controlling interest	-	-	-	-	-
EBITDA	237	266	389	501	464

Key financial data

FY-ending Dec.	2019A	2020F	2021A	2022F	2023F
per share data (USD)					
EPS	0.01	0.01	0.02	0.02	0.02
BPS	0.20	0.20	0.22	0.24	0.25
DPS	-	-	0.00	0.00	0.00
Growth (%)					
Sales growth	1	(2)	25	17	(2)
OP growth	12	13	98	42	(19)
NP growth	(5)	44	100	45	(18)
EBITDA growth	7	12	46	29	(7)
Profitability (%)					
OP margin	13.3	15.3	24.3	29.6	24.6
NP margin	7.3	10.8	17.4	21.6	18.1
EBITDA margin	16.4	40.2	36.4	37.9	36.2
ROA	2.6	3.6	6.7	9.1	7.0
ROE	3.0	4.1	7.7	10.2	7.8
Dividend yield	-	-	0.9	0.9	1.3
Dividend payout ratio	-	40	20	20	20
Stability					
Net debt (USD mn)	(249)	(389)	(508)	(636)	(756)
Int.-bearing debt/equity (%)	-	-	-	-	-
Valuation (X)					
PE	66.1	44.6	22.7	15.6	19.3
PB	2.0	1.8	1.7	1.6	1.5
EV/EBITDA	14.6	12.4	8.2	6.1	6.3

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