

COMMODITY INSIGHTS BULLETIN

Nickel (2Q, 2013 and 3Q, 2013)

Introduction

Difficult year for nickel industry

2013 has continued to be a very difficult year for nickel producers. Nickel prices have continued to slide and are now in the US\$6 range resulting in the worst performance of all base metals. Over supply, rising inventory levels, and continued increases in nickel pig iron (NPI) production are the top reasons for the price decline.

In the near-to-mid-term, the enforcement of the enacted ban on unprocessed ore from Indonesia starting on 1 January 2014 is

highly uncertain. Will the Indonesian government enforce, relax, delay, and/or introduce some alternative measure? Would an alternative measure, like a duty, be significant enough to reduce or curtail the production of NPI? In the longer-term, it is possible that NPI plants would be built in Indonesia.

In the meantime, nickel producers have continued to decrease production, decrease operating costs, and defer capital development. Many are also attempting to sell their nickel assets; albeit, there are unfortunately not many buyers at this time.

Commodity outlook^{1,2}

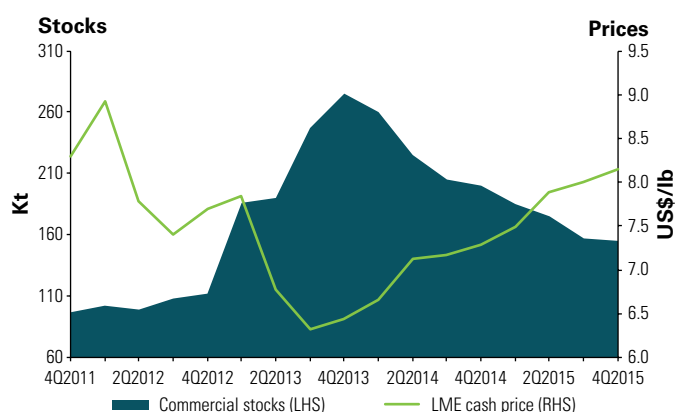
Benchmark refined nickel prices on the London Metal Exchange ("LME") have continued to decline in 2013, falling from US\$ 7.85/lb in 1Q, to US\$6.78/lb and US\$6.32/lb in 2Q and 3Q, respectively. This recent decline in refined nickel price is largely driven by the broad commodity sell-off in mid-April, and indications of oversupply.

Refined nickel stocks have continued to increase from their most-recent low in 2Q, 2012. Commercial stocks of refined nickel reached almost 190 KT in 2Q, 2013 and 247 KT in 3Q, 2013, levels not witnessed since the early 1990s. These are expected to reach equivalent of 7.9 weeks of consumption by the end of 2013 before declining in 1Q, 2014. This oversupply will continue to weigh in on short term refined nickel prices, which are expected to remain at lower levels into 2014.

In the medium-term, increased construction activity in emerging Asian economies and a rebound in European economic activity would increase demand and drive refined nickel prices upwards. Moreover, global stocks of nickel are expected to decline as the growth in refined production from Africa and South America is expected to be offset by

the increase in demand. Further influencing the outlook is Indonesia's enacted ban on unprocessed ore exports which may limit NPI production.

Figure 1: International refined nickel prices and stocks



Source: "World commodity forecasts: industrial raw materials", The Economist Intelligence Unit, December 2013

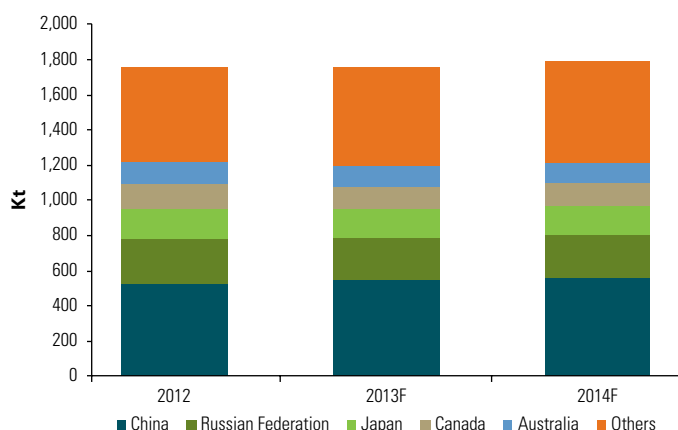
¹ "Resources and Energy Quarterly", Bureau of Resources & Energy Economics (BREE), Australian Government, September quarter 2013

² "World commodity forecast: Nickel", The Economist Intelligence Unit, December 2013

Supply and demand^{3,4}

Supply

Figure 2: Global nickel production, 2011–14F



Source: "Resources and Energy Quarterly," Bureau of Resources & Energy Economics (BREE), Australian Government, June quarter 2013

Mine Production

- World nickel mine production is forecasted to decline marginally from 2,154 KT in 2012 to 2,147 KT in 2013, representing a drop of approximately 0.3 percent. This decrease is mainly due to expected production curtailments at mines in response to the lower refined nickel prices and surplus market supply, and partially offset by new projects in 2013.
- Mine production in 2014 is expected to further decline by 2.5 percent to 2,093 KT. This decline in production is driven in part by declines in mine production from Indonesia which is forecast to fall by about 17 percent year-over-year ("y-o-y") to 368 KT in 2014 as a result of lower demand for Indonesian laterite ore which is used to produce NPI. Notwithstanding projected nickel prices, the Indonesian government's move to ban unprocessed ore exports will further drive production cutbacks.⁵ In addition, capacity reduction is anticipated from mines entering care and maintenance or reaching end-of-life in 2013 and are not being replaced.

Refined Production

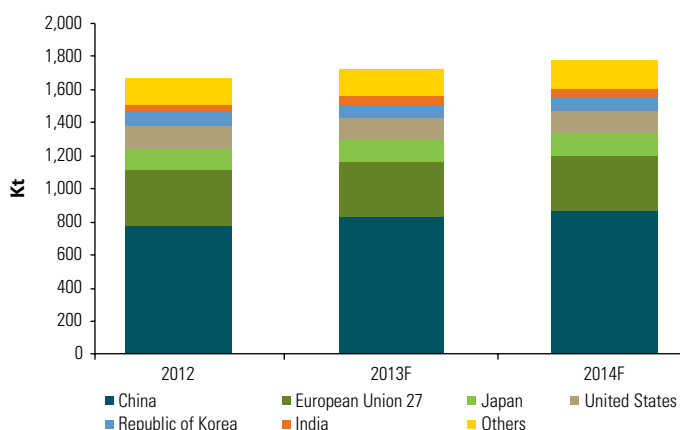
- Global refined nickel production is expected to increase by 4.6 percent to 1,832 KT in 2013. This increase is expected to be supported by production increases from China, predominantly in the Jilin province, and production ramp-up at the on-site refinery at the Ambatovy project in Madagascar.
- In 2014 global refined nickel production will decrease by 2.8 percent relative to 2013, to total 1,781 KT as a result of curtailments in response to the projected oversupply

and China's elimination of excess capacity to achieve energy saving and environmental goals.

- China is expected to continue as the world's largest producer of refined nickel in the medium term. However, Chinese production of NPI, which is produced from lower-grade nickel laterite ore, could decline in the medium term. Prices of NPI are sensitive to prevailing global prices of nickel, which are expected to increase as Indonesia, the world's top exporter plans to ban exports of unprocessed nickel ore starting 2014. This could affect Chinese production as ore exports from Indonesia account for 60 percent of its ore imports.⁶

Demand

Figure 3: Global refined nickel consumption, 2011–14F



Source: "Resources and Energy Quarterly," Bureau of Resources & Energy Economics (BREE), Australian Government, June quarter 2013

- World nickel consumption is expected to rise by approximately 7.3 percent to 1,780 KT in 2013. This growth is expected to be supported by increases in global stainless steel production to meet demand from the construction sector, particularly in emerging Asian economies.⁷ Specifically in China, nickel consumption is forecast to increase by approximately 13 percent to total 872 KT in 2013 as a growing middle class has fuelled the need for residential infrastructure developments.
- In 2014, global nickel consumption is forecast to further increase by 2.1 percent, to 1,817 KT as China's consumption grows by 2.4 percent to 893 KT supported by residential construction. As well, Europe is anticipated to witness a gradual demand recovery, with positive consumption growth expected in 2014 and 2015. However, stainless steel production in Europe is not expected to return to pre-crisis levels, as some austenitic steel capacity is being shut down permanently. Similarly, the US, which is the second largest consumer of nickel, is

³ "Resources and Energy Quarterly," BREE, June 2013

⁴ "Resources and Energy Quarterly," BREE, September 2013

⁵ "Nickel outlook lifts as Indonesian export ban looms over China," Reuters, 17 October 2013

⁶ "Nickel outlook lifts as Indonesian export ban looms over China," Reuters, 17 October 2013

⁷ Rakhi Mazumdar "Global steel output rises 3% in Jan-Sept' 2013," 22 November 2013, The Economic Times

expected to have solid growth in consumption in 2014 and 2015 if its economy maintains its growth trajectory.⁸

- Chinese firms operating nickel mines in Indonesia could set up NPI plants in Indonesia as the country could potentially ban nickel ore exports starting January next

year. This development could severely impact Japanese nickel smelters, as the country imports a major share of its nickel ores from Indonesia. In 2012, the country imported 43 percent of the total ferro-nickel ore import from Indonesia.⁹

Key developments

Ownership changes

There was limited deal activity in the nickel industry in the first three quarters of 2013. Two notable deals announced and disclosed in 2013 includes the acquisition of Rio Tinto

Eagle Mine, LLC by Lundin Mining which closed in July, and Beijing Wincapital's proposed acquisition of a 30 percent stake in S.E.A. Mineral Limited.

Table 1: Notable nickel deals in first three quarters of 2013

Date announced	Target	Target nation	Acquirer	Acquirer nation	Status	Value of transaction (US\$ million)	Stake (%)
24-Jan-13	S.E.A. Mineral Limited	Indonesia	Beijing Wincapital	China	In Progress	150.0	30.0
20-Jun-13	Rio Tinto Eagle Mine, LLC	USA	Lundin Mining Corporation	Canada, Sweden	Closed	250.0	100.0

Source: Mergermarket, Capital IQ

Regulatory updates

The regulations introduced during 2Q and 3Q, 2013 aimed at conserving domestic ore reserves and promoting the local nickel mining and refining industry.

Table 2: Recent regulations in nickel industry

Country	Regulation	Description
Indonesia	Potential ban on nickel ore exports	<ul style="list-style-type: none"> Indonesia plans to bring in a potential ban on unprocessed nickel ore exports starting January 2014.
Brazil	Reforms in mining law	<ul style="list-style-type: none"> Brazil unveiled the reforms to be introduced to the country's mining law in June 2013. This includes a proposal to potentially double royalties to 4 percent.
Philippines	Temporary environment protection order (TEPO) against small-scale mines ¹⁰	<ul style="list-style-type: none"> The Supreme Court of the Philippines has issued a TEPO against 94 small-scale mines that extract nickel in Zambales, the Philippines and were allegedly operating outside the allowable area.

⁸ "World commodity forecasts: industrial raw materials," The Economist Intelligence Unit, December 2013

⁹ "Japan's nickel smelters to be hit hard by Indonesia export ban," Reuters, 21 November 2013

¹⁰ Jarius Bondoc "SC stops Zambales mines; Chinese 'invaders' socked," Philstar.com, 24 July 2013

Cross-section of global nickel projects

Table 3: Cross-section of global nickel projects*

Project	Country/ Region	Operators/Owners	Potential start year	Nickel production (ktpa)
Koniambo Laterite Nickel Mine	New Caledonia	Glencore Xstrata plc (Operator)	2014	60.0
Mindoro Laterite Nickel Project	Philippines	Intex Resources ASA (Operator)	NA	53.0
Long Harbour Hydrometallurgy Nickel Smelter	Canada	Vale S.A. (Operator)	2014	50.0
Minago Nickel Project	Canada	Victory Nickel Inc. (Operator)	2014	11.0
Honeymoon Well Nickel Project	Australia	MMC Norilsk Nickel OJSC (Operator)	2017	40.0
FeNi Haltim Nickel Project	Indonesia	PT Antam Tbk (Operator)	2015	27.0
Acoje Laterite Nickel Mine	Philippines	DMCI Holdings Inc (Operator)	2014	24.5
Fenix Laterite Nickel Operation	Guatemala	Solway Group (Operator)	2014	24.3
Agata Laterite Nickel Project	Philippines	TVI Pacific Inc (Operator)	NA	17.2
Decar Nickel Project	Canada	Cliffs Natural Resources Inc. (Operator)	NA	37.4
Dumont Nickel Project	Canada	Royal Nickel Corporation (Operator)	2016	47.0
Kalgoorlie Laterite Nickel Project	Australia	Heron Resources Limited (Operator)	NA	23.0
Marlborough Laterite Nickel Project	Australia	Gladstone Pacific Nickel Ltd (Operator)	2015	63.0
Mayaniquel Laterite Nickel Mine	Guatemala	Anfield Nickel Corp. (Operator)	NA	36.5
Ronnbacken Nickel/PGE Project	Sweden	IGE Resources AB (Operator)	2015	26.0
Turnagain Nickel Project	Canada	Hard Creek Nickel Corporation (Operator)	2016	39.5
Wingellina Laterite Nickel Deposit	Australia	Metals X Limited (Operator)	NA	40.0

Source: Company data accessed 18 November 2013; Intierra database accessed 18 November 2013

Note: Project names are hyperlinked to source links.

*The list is not exhaustive and contains only a limited number of projects.

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