

Waste & Environmental Services Market Update

Industry Consulting Team | Q3 2023

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Highlights

- Consolidation continues to occur in the US Scrap industry driven primarily by larger steel companies buying scrap companies and regional scrap companies consolidating
- Commodity pricing has started to normalize to pre-pandemic level as macroeconomic activity slows
- Long-term upside for scrap metals as ESG-focused projects will drive added demand

Recycling Trends: Ferrous Scrap

Economic Update:

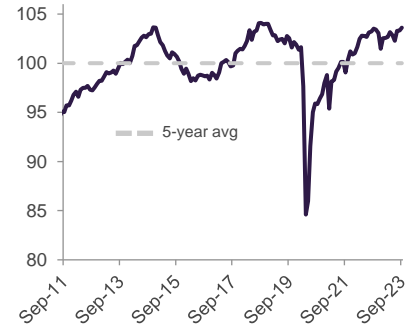
- The U.S. Industrial Production Index (IP Index) measures real output from manufacturing, mining, and utilities. Total industrial production has continued to increase in the second half of 2023 despite all the uncertainty across various markets. The September reading of 103.4 marked the third consecutive month of increased production. **Some volatility in total industrial production can be expected over the next 12 months** as elevated inflation, high borrowing costs and geopolitical tensions persist into next year. Delayed effects from the United Auto Workers strike is expected to negatively impact the IP index in the fourth quarter.

- U.S. domestic raw steel production was nearly 1.7 million net tons in the first week of October. **Year-to-date production is 1.2% below the same period last year** as steel hovers near historical averages following the post-COVID boost. Raw steel capacity utilization is currently at 74.7%, slightly below the 10-year average of 75.4%.

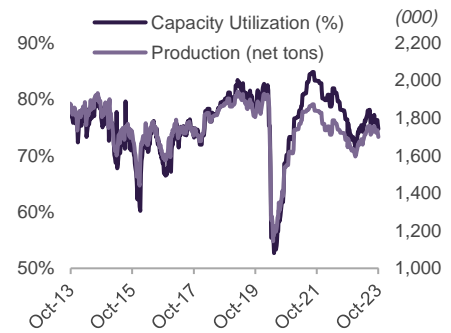
Steel Scrap Dynamics:

- In 2023, prices of steel scrap have declined year-over-year due to reduced demand. As a result, steel production is trending closer to historical levels after favorable macro conditions saw increasing demand in 2021 and early 2022. This in turn has caused margin pressures attributed to variables like higher energy costs.
- With added pressure on U.S. decarbonization, steel producers are shifting to modern electric arc furnaces (EAFs). This trend has continued into 2023 and is expected to accelerate in the coming years due to blast furnaces (BOFs) becoming more obsolete. New BOFs, which were widely used for decades, haven't been installed in North America for over forty years, and **since 2019, the U.S. has gone from 22 BOFs to just 12 today**. EAFs are much closer to carbon-neutral and are much cheaper to operate. EAFs also mainly use steel scrap and with continued investments from large companies, it is fair to discuss whether the U.S. will only use scrap steel in the long-term.
- Ongoing tightness is likely to continue due to low import volumes and lower domestic manufacturing activity. **Before the start of the war, Russia and Ukraine accounted for 60% of U.S. imports of No.1 busheling scrap**. As it drags on the U.S. has had to rely on limited supply from countries like Brazil and its own domestic supply.
- Rising interest rates and continued contraction of the U.S. Purchasing Managers Index highlight the downward pressure on commodity-driven assets, such as vehicles. The **(UAW) strike impacted the auto market** and caused longer-than-expected slowdowns in steel supply.
- As a result of falling scrap prices since March, mills and dealers have been reducing their inventories, stabilizing scrap prices from record-highs two years ago.
- Recent slowdowns in manufacturing and availability of end-of-life autos has caused further contractions in supply. **The average age of vehicles is currently at record highs**.

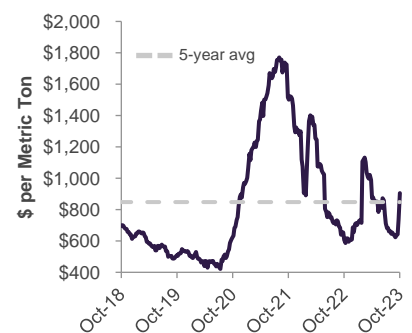
Industrial Production Index



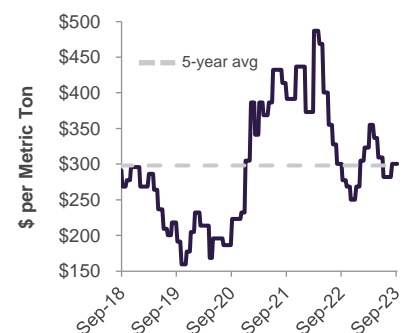
Raw Steel Market



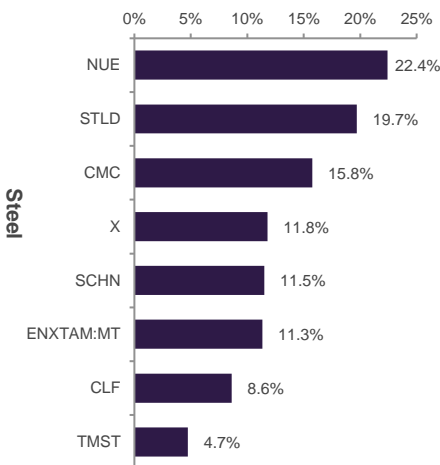
Hot Rolled Coil Steel



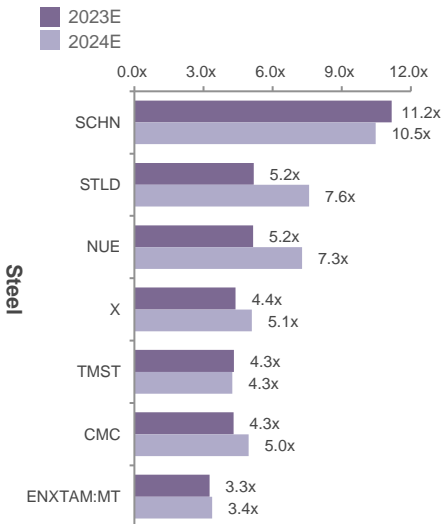
Steel Scrap #1



Public Comps EBITDA Margin



Public Comps EV/EBITDA



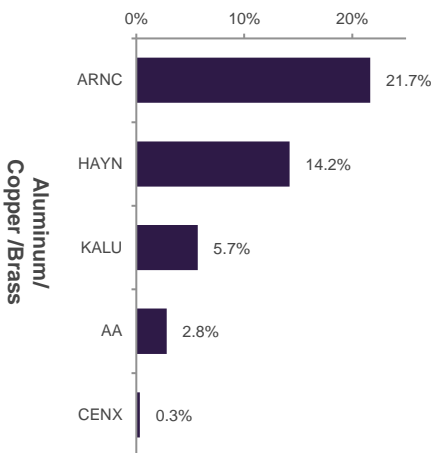
NUE – Nucor Corporation
ENXTAM:MT – ArcelorMittal S.A
STLD – Steel Dynamics, Inc.
CMC – Commercial Metals Company
X – United States Steel Corporation
SCHN – Schnitzer Steel Industries, Inc.
TMST – Timken Steel Corporation



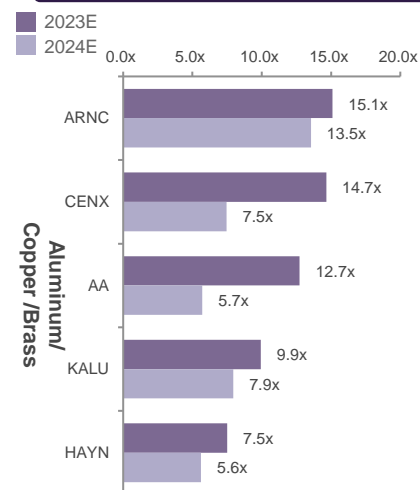
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Public Comps EBITDA Margin



Public Comps EV/EBITDA



ARNC – Arconic Corporation
 HAYN – Haynes International, Inc.
 KALU – Kaiser Aluminum Corporation
 AA – Alcoa Corporation
 CENX – Century Aluminum Company

Recycling Trends: Non-Ferrous Scrap

Economic Update:

- Non-ferrous metals, like aluminum and copper, will be integral in global initiatives for a more sustainable future. Beyond the United States, Europe, China, and others continue to lay out aggressive measures to reduce their carbon outputs in a short period of time. Industries like automotives, consumer goods, and electronics will require significant supply as innovation continues.
- As a result of the Inflation Reduction Act, **aluminum supply has already seen funding in the form of manufacturing credits and federal grants amounting to \$126 billion.** Investments are expected to continue as decarbonization and the transition to electric vehicles (EV) occurs for aluminum-based products.

Aluminum Dynamics:

- The London Mercantile Exchange (LME) LME's decision to not ban Russian aluminum (**currently about 80% of LME inventory**) from its platform has resulted in an overbearing amount of discounted material, which is now weighing on pricing growth. After the post-COVID boost, aluminum prices are trending below the 6-year average and closer to pre-pandemic levels.
- LME aluminum inventories have risen over 50%** compared to last year, pointing to lighter demand for physical material.
- The ongoing conflict in Eastern Europe has limited aluminum imports into the U.S. As previously mentioned, inventory levels are elevated but accessible if industrial activity recovers in 2024.

Copper Dynamics:

- While most commodity-driven sectors have had softening demand, copper has benefited from areas like building wire for data centers which have been reporting growth this year.
- In the long term**, new opportunities and commodity globalization – especially in EV manufacturing will present added competition in copper markets, further driving prices up in the long-term.
- With increased spending in technology, U.S. agencies are reacting to the assets required for continued advancement. In response to expected need for copper, **the U.S. Department of Energy added copper to its Critical Materials list in August.** This is the first time a U.S. agency has added copper to any official list.
- In the short-term**, import limitations and a drop in new projects for raw copper due to declining prices, copper scrap has taken a growing role in time-sensitive requirements.
- Like aluminum but to a lesser extent, copper LME inventories have risen in comparison to last year.

Aluminum



Copper



M&A Update

Date	Acquiror	Target	Details
Aug			Sims Metal has agreed to acquire the assets of metal recycler, Baltimore Scrap Corp. The acquisition is expected to complete at a price of \$177MM, a value of 5.4x EV/EBITDA.
Aug			In August, Apollo Group completed its previously-announced purchase of Arconic Group in a take-private deal of \$5.2 billion. Arconic, which supplies large aerospace and auto companies, will receive significant investment for plant technology upgrades amongst other improvements.
Jul			Global metals leader, Rio Tinto has agreed to purchase a 50% equity stake in Giampaolo Group's Matalco for ~\$700 million. The transaction continues the company's continued investment in low-carbon North American aluminum.
Jun			Polymet Mining Corp (PMC) has accepted Glencore's offer to buy the last 18% of the company's stake for north of \$70 million. The purchase will give Glencore full ownership as it takes PMC private. PMC is currently developing a copper-nickel mine in Minnesota as Glencore looks to expand its footprint in North American mining operations.



Sources: Bloomberg, CapIQ, Waste Dive, Waste360, USGS, Ag Metal Miner, California Air Resource Board, IBIS World, Fast Markets, American Iron and Steel Institute, Company Filings, Moody's, Equity Research Reports, Company Websites, Resource Recycling, Sector3 Appraisals, Associated Press
 Data updated as of 11/1/2023