

Recycling Market Update

Industry Specialty Team | Waste & Environmental Services | April 2024

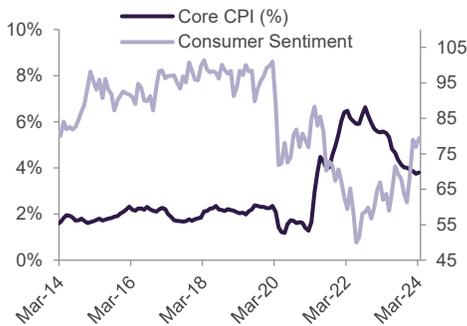
Highlights

- Domestic infrastructure development is carrying positive momentum into 2024
- Funding from federal initiatives has accelerated, leading to an uptick in domestic metal demand
- Scrap prices appear to be nearing cycle lows as domestic processors continue clearing through excess inventory stockpiles

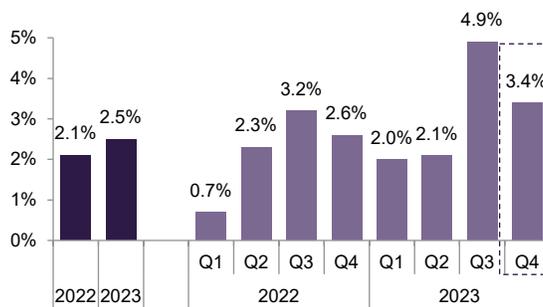
Economic Update

- While consumer sentiment remained below pre-pandemic levels and inflationary pressures persisted throughout 2023, the U.S. economy remained resilient. Real GDP increased at an annual rate of 3.4% in fourth quarter 2023 and 2.5% for full year 2023. Focusing on the first quarter of 2024, the **Consumer Sentiment Index increased 28% year-over-year in March** and **Core CPI declined to 3.8%** during the same period. While inflation remains elevated and the Federal Reserve seeks a soft landing to its target inflation, consumers are growingly optimistic on macroeconomic conditions.
- Domestic manufacturing slowed in 2023, but several indicators are pointing towards a possible turnaround in 2024. The ISM Manufacturing index expanded in March 2024 for the first time in 17 months. Further, **of the 3.4% 4Q23 increase in GDP, goods manufacturing contributed +0.85%, 25% of total**, (0.52% non-durable and 0.33% durable) and the construction sector +0.26% towards the change. This momentum has carried over from a strong third quarter, where manufacturing and construction added meaningful value to 4.9% GDP growth. While these areas were amongst the lowest contributing industries for full year 2023 real GDP, the recent turnaround points to increasing momentum in 2024.

Sentiment and Inflation



Real GDP

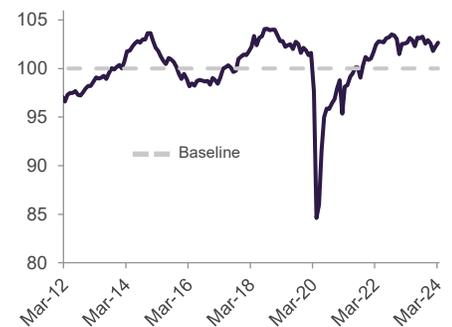


Largest Contribution to 4Q23 GDP

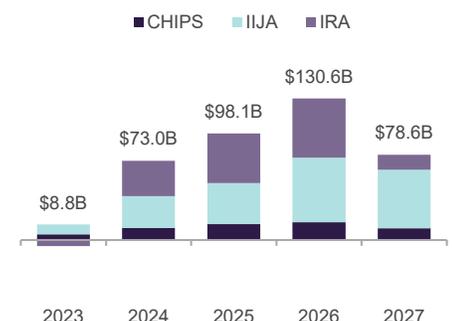


- The U.S. Industrial Production Index (IP Index) measures real output from manufacturing, mining, and utilities. **Total industrial production remains above the baseline level of 100, registering at 102.7 in the March reading.** While manufacturing specifically remains around baseline levels, areas reliant on recycled metals continue to show strength. For example, motor vehicles and parts along with electronic products and components are among the highest performing durable manufacturing groups. These groups use high-quality, secondary metals in production and are a critical source for scrap feedstock for steel, copper and aluminum recyclers.
- Over the last few years, major federal programs have been passed to stimulate the economy and bring manufacturing activity closer to the United States. The push to nearshore or reshore manufacturing activity has largely been driven by geopolitical instability, global supply chain disruptions during COVID-19, and record low water levels in the Panama Canal. While funding from the CHIPS and Science Act ("CHIPS"), the Infrastructure Investment and Jobs Act ("IIJA"), and Inflation Reduction Act ("IRA") has taken some time to circulate into projects, **these programs are expected to add approximately \$380 billion in fiscal spending over the next four years (2024 – 2027).** Beyond incentives to produce in and around the U.S., these programs have emphasized an increased focus in areas such as recycling, sustainability, and green technologies.

Industrial Production Index



Fiscal Spending Projections



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Market Drivers

Ferrous Scrap

Steel Scrap Demand



Domestic markets are limited in resources for raw steel and sentiment for imported material has waned in recent years. The U.S. has imposed aggressive tariffs on steel from notable producers, further limiting supply. With increasing metal demand for infrastructure projects and new environmental initiatives, steel scrap will become an essential commodity. Scrap currently makes up about 1/3rd of metallic inputs in steel production, but that's expected to increase to almost 50% over the next 20 – 30 years. While steel scrap prices have sharply declined in recent months due to decreasing demand and global trade dynamics, there is long-term upside for higher pricing levels.

Electric Arc Furnaces (EAF)



Over the last several years, steel production has been shifting towards using EAFs as they produce far less carbon emissions and are cheaper to operate. The U.S. is far ahead of the rest of the world with about 70% of steel being produced through EAFs today, compared to 44% in the EU and 10% in China. Scrap metals are the primary feedstock in EAFs and a primary driver for scrap demand is tied to final steel production. Most large steel companies are increasingly pursuing organic and inorganic opportunities to aggregate and solidify feedstock sourcing.

Capacity Outlook



Many domestic furnaces are going through maintenance-related, scheduled outages through 2Q24. While this coincides with slower demand, steelmaking will be limited, and scrap inventories can potentially increase in excess. While scrap volumes face capacity constraints, the potential for decreasing interest rates along with export market recovery, point to steel scrap prices nearing cycle lows.

Non-Ferrous Scrap

Critical Materials



Aluminum and copper are essential materials for the development of decarbonization initiatives. These metals are needed for solar panels, wind turbines, electric vehicles, and semiconductors. To further highlight their importance, the Department of Energy selected aluminum, copper, and 3 other metal industries to receive \$900MM+ in funding from its Industrial Demonstration Program (IDP) and both metals are now on their Critical Materials list. The IDP program aims to reduce 4MM tonnes of carbon dioxide emissions annually. Scrap material will have a growing role as both metals have strong secondary uses and raw material supply will be limited.

Copper Demand For Data Centers



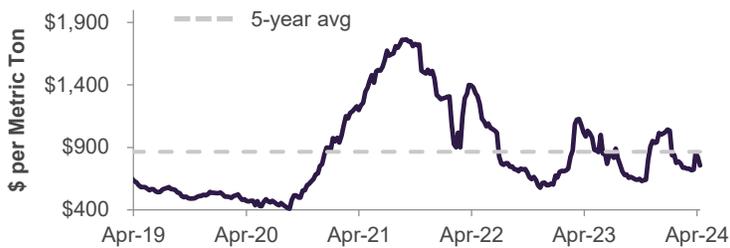
Further advancements in technology, especially in AI and power generation, will add to demand for data centers. The U.S. has the largest infrastructure of data centers, more than 10x the next country, and has plans for further expansion. Through ~5,000 data centers, the U.S. consumed 7.4 Gigawatts of power in 2023, a 55% increase from 2022. Copper is a critical component in developing data center infrastructure and demand is expected to increase ~50% over the next 20 years. Copper scrap will also be used for development as supply becomes limited.

Excess Aluminum Inventories

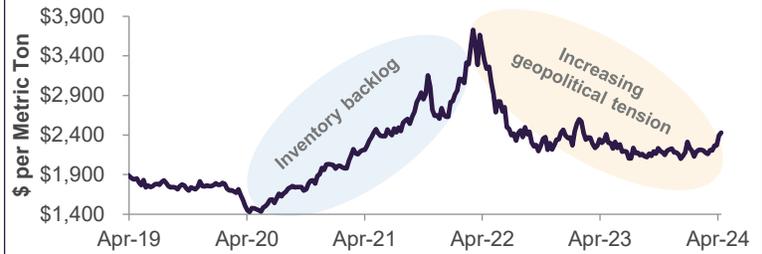


Share of Russian aluminum in London Mercantile Exchange ("LME") warehouses are now above 90%. The commodity exchange has continued to accept inventories despite several sanctions being placed on Russian-made metals. Coupled with reduced physical demand, raw aluminum prices have fallen off 2022 peaks, but remain above historical levels. As a result, scrap vendors are facing margin compressions in the short-term.

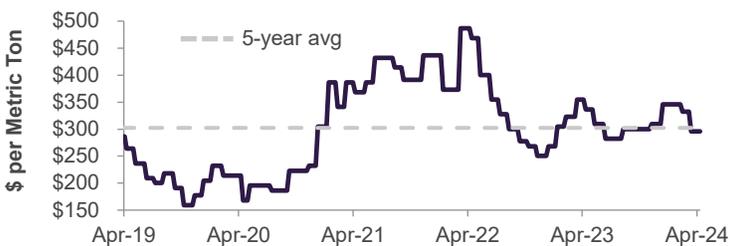
Hot Rolled Coil Steel Prices



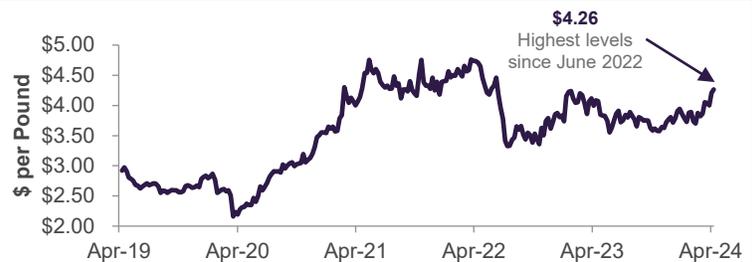
Aluminum Spot Prices (LME)



Steel Scrap #1 Prices



High Grade Copper Prices (COMEX)



Sources: Bloomberg, S&P Capital IQ, Fast Markets, American Iron and Steel Institute, Company Filings, Moody's, Equity Research Reports, Company Websites, Resource Recycling, Sector3 Appraisals, Associated Press, Copper Development Association Inc., Cushman and Wakefield, Reuters, U.S. Census Bureau, Bureau of Economic Analysis, Worldsteel
Data updated as of 4/16/2024