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Asset Smarter

SMARTER PERSPECTIVE: METALS

Wait, My Steel Costs How Much?

By Michael Sullivan

In this article we take a look at the continued, historic rise in domestic steel prices, the reasons behind this phenomenon, and explore where the market is likely to go from here.

The Causes

In March 2018, the Trump administration imposed a 25% ad valorem tariff on steel products under Section 232 of the Trade Expansion Act of 1962. The tariffs remain in effect against certain countries and certain products, while other countries have agreed to quotas which limited how much they can sell into the U.S. market.

Regardless of President Biden's view of tariffs, they remain popular in the mid-western swing states and the Biden administration is likely in no hurry to rescind them. Meanwhile, the U.S. steel industry continues to consolidate–as detailed later in this report. The most significant consolidation was the acquisition of both AK Steel and the majority of the North American operations of ArcelorMittal by Cleveland-Cliffs, Inc. (Cliffs)

In March 2020, the COVID-19 pandemic brought the economy to a halt in the U.S., Canada and parts of Europe. Factory output, including auto manufacturing plummeted, reducing the need for steel products. Uncertain of future demand, buyers throughout the steel distribution chain reduced inventories. In response, steel producers cut back or idled major facilities, and by May 2020 as much as 50% of the U.S. blast furnace fleet was idle. According to Fastmarkets AMM, in the four months ended July 2020, domestic steel mills operated at only approximately 55% of capacity.

The economy slowly restarted with a significant portion of the U.S. workforce working remotely. Remote work spurred the need for automobiles as city workers who relied on mass transit moved to more distant locations and discovered they now needed vehicles. Home improvement products, office furniture, new housing, appliances and other goods also came into high demand. As the economy recovered, the associated demand for steel products increased. Inventories, however, had been depleted throughout the distribution chain, and steel mill production takes time to ramp up.

Limited supply and simultaneous increasing demand led to higher market prices for most steel products. As these prices rose, buyers were initially reluctant to increase their purchases, assuming market prices would eventually return to pre-pandemic levels. Instead, market prices have continued to increase. And while new steelmaking capacity came online during 2020 and 2021, with additional capacity still on the way as we near the start of 2022, that capacity was offset to some degree by planned and unplanned outages at various mills across the U.S.

Meanwhile, the rest of the world was also recovering from the pandemic shock, driving increased demand for steel products and increased market prices around the globe. The associated increase in international trade resulted in increased competition for shipping, significantly higher transport cost, and longer transport lead times. With the Section 232 tariffs, higher shipping cost and longer shipping lead times still in place, we have seen some reluctance among U.S. buyers to "go long" on foreign goods that may not arrive for four or five months, when domestic market prices might be lower and delivery timeframes more reasonable.

Historically, market prices for flat-rolled coils have demonstrated more volatility than other steel products. In February 2020, prior to the start of the pandemic, market prices for hot-rolled coils approximated $580 per ton. By August of that year, they had decreased to $460 per ton. Since that point, pricing for the coils has increased, almost continuously, reaching an all-time high of $1,900 per ton in August 2021.

Hot-rolled coils are the substrate used to create cold-rolled and galvanized coils. As hot roll prices increased, so have cold-rolled and galvanized, with pricing now at approximately $200 per ton and $280 per ton, respectively, above hot roll prices. Structural steel tubes, pipe and conduit are also produced from hot-rolled coils and as hot-rolled prices have increased, so have closed structural sections. As a result, tubing prices have become as volatile as coil prices.

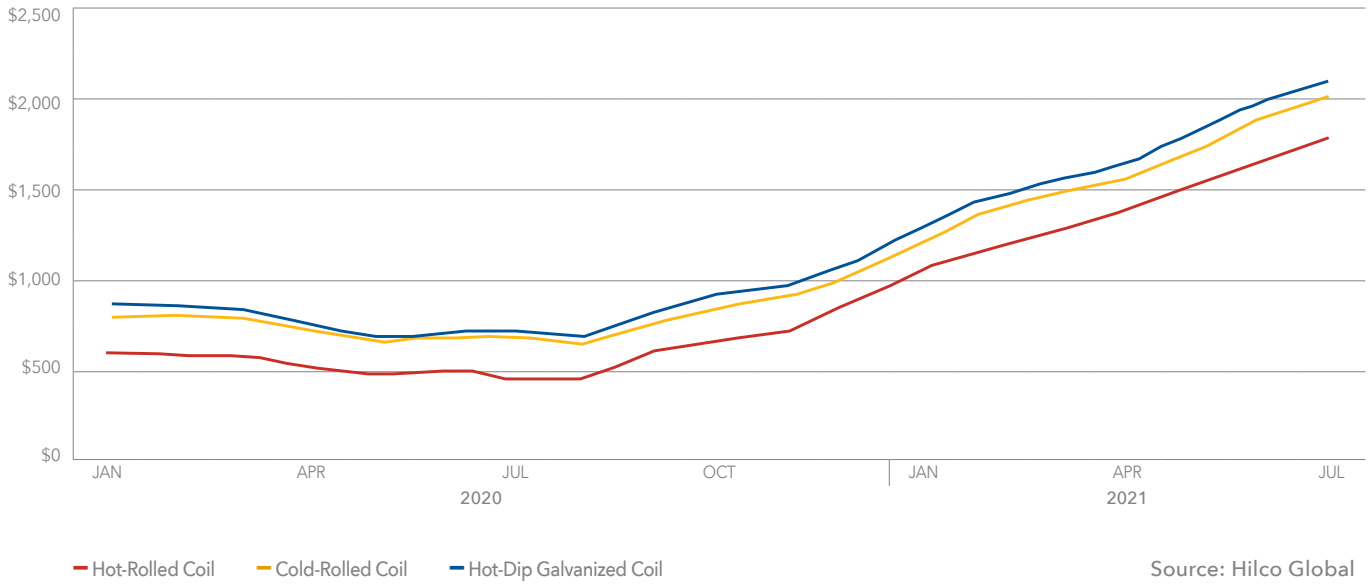
U.S. market price trends for various steel products are shown in the two charts below.

Consumption and Production

ArcelorMittal recently projected that steel consumption in the United States for 2021 would be 16% to 18% greater than that in 2020. That increase will be met by both increased domestic production and increased imports.

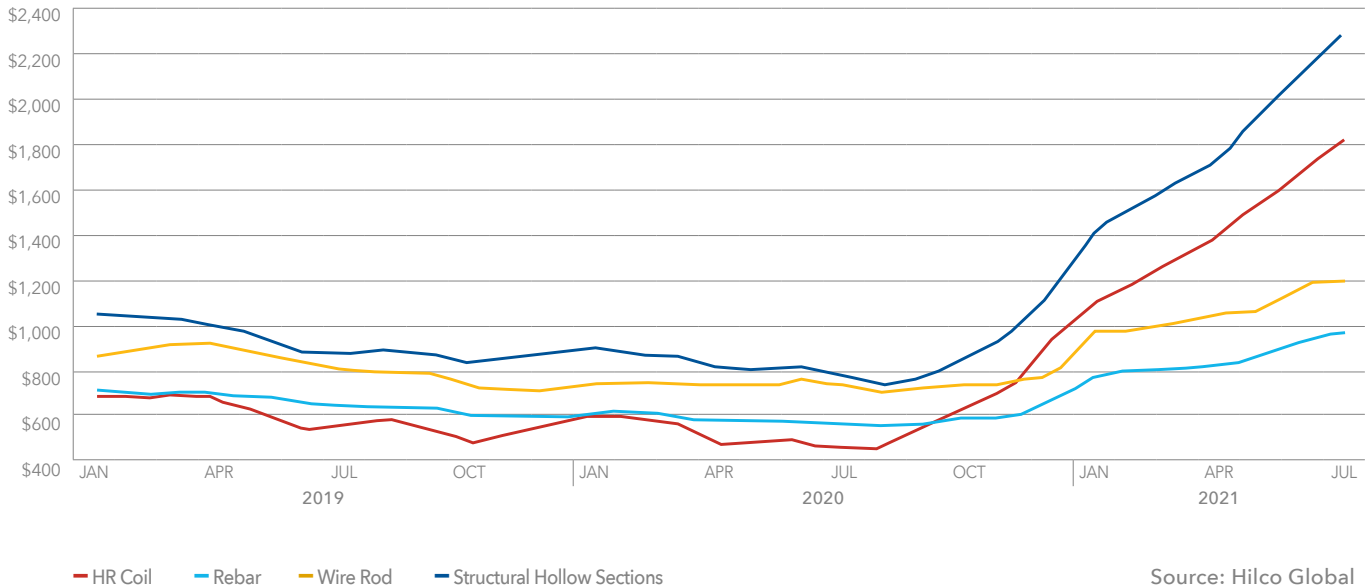
According to Fastmarkets AMM, crude steel production in the United States totaled 1.9 million tons for the week ended Saturday August 21 with mills operating at an average capacity utilization rate of 85%. Year-to-date 2021, the mills have produced an adjusted 60.1 million tons at an average capacity utilization rate of 80.4%, up by 19.8% from 50.2 million tons at an average capacity utilization rate of 66.6% during the same period last year.

U.S. Market Price for Steel Coils (USD per ton)



Source: Hilco Global

U.S. Market Price for Various Steel Products (USD per ton)



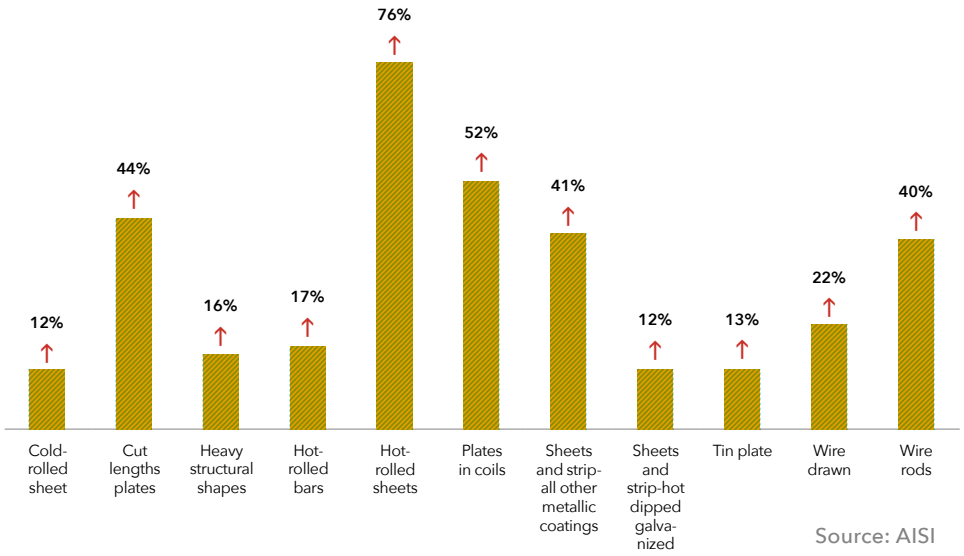
Source: Hilco Global

The American Iron and Steel Institute (AISI) estimated that the U.S. imported a total of 3.0 million net tons of steel in July 2021, including 2.6 million net tons of finished steel products and 400 thousand tons of semi-finished goods. In the seven months ended July 2021, total steel imports were 17.7 million tons, representing an increase of 17% year-on-year. Projected steel imports in 2021 would be 30.4 million tons representing a year-on-year increase of 38.0%. Imported finished steel products are estimated to represent approximately 20% of total finished product consumption in the first seven months of 2021.
The graph immediately below reflects product categories with a significant year-to-date YTD) increase vs. the same period in 2020, as reported by AISI:

The March to Oligopoly

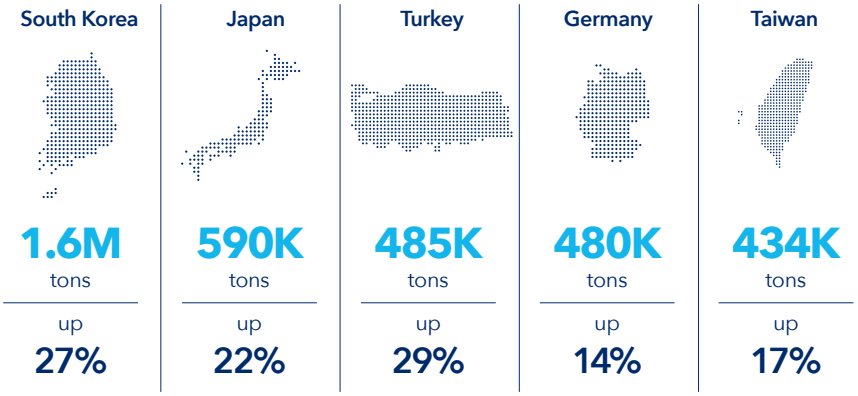
In previous Hilco updates we have explained that the U.S. steel industry is comprised of both fully integrated mills using iron ore and blast furnaces to produce steel as well as "mini-mills" using electric arc furnaces to melt steel scrap to produce new steel. The last "new" fully integrated mill began casting operations in 1975 at Bethlehem Steel's Burns Harbor, Indiana location, which later operated as part of ArcelorMittal USA and now is part of Cliffs. Prior to the recent Cliffs acquisition, the largest three steelmakers primarily producing steel through blast furnaces were U.S. Steel, AK Steel and ArcelorMittal North America.

2021 Year-to-date (YTD) increase vs. the same period in 2020



Source: AISI

For the first seven months of 2021, the largest offshore suppliers were South Korea 1.6 million tons, up 27% vs. the same period in 2020), Japan (590 thousand tons, up 22%), Turkey (485 thousand tons, up 29%), Germany (480 thousand tons, up 14%) and Taiwan (434 thousand tons, up 17%).



Source: AISI

In 1989 Nucor Steel established the first "mini-mill" in the U.S. in Crawfordsville, Indiana using electric arc furnaces and thin-slab casting equipment to process liquid steel directly into coiled products, eliminating many of the intermediate processing steps required by the older integrated mills. Nucor's success brought about a string of similar companies; Steel Dynamics, Inc., North Star Bluescope Steel LLC, Gallatin Steel Co, and Big River Steel. Russia-based steel maker Severstal North America established a greenfield mini-mill in Columbus, Mississippi in 2007.

As in any industry, the greater the number of competitors, the greater the need for price competition. Here, these upstart mini-mills began to directly compete with the older integrated mills, contributing to decades of suppressed market prices. In recent years, the industry has consolidated into fewer, stronger competitors, with mergers and acquisition including:

- **2014 -** Mini-mill based Steel Dynamics purchased Severstal North America's Columbus, Mississippi mini-mill and AK Steel purchased Severstal's fully integrated steel mill in Dearborn, Michigan – which formerly operated as Rouge Steel.
- **2014 -** Nucor Steel Purchased Gallatin Steel.
- **2019 -** U.S. Steel purchased 50% of Big River Steel in 2019 and the company used that investment to double its capacity to 3.3 million tons of flat rolled coil. U.S. Steel purchased the remainder of the company in 2021-the first major acquisition of a mini-mill by one of the blast furnace-based steel producers.
- **2020 -** Cleveland Cliffs, an iron ore mining company, purchased AK Steel.
- **2020 -** Cleveland Cliffs purchased most of the north American locations of ArcelorMittal Steel making the mining company the largest flat rolled steel producer in North America.

Cleveland Cliffs has been a mining company for more than 100 years, and in less than one year became the largest flat rolled steel producer in North America. So why did it suddenly become a steel maker?

Since 1995, integrated steelmakers have been losing their dominant share of U.S. raw steel production to mini mills. According to a report published by ArcelorMittal, the movement of U.S. raw steel production from integrated mills to mini-mills continues, with blast furnace production share decreasing from 72% in 1980 to 60% in 1995, and down to 32% by 2018. As of this report, U.S. steel producers have started or announced capital projects that will add 13.5 million tons of EAF flat-rolled steelmaking capacity at a cost of at least $6.3 billion by 2022.

AK Steel and ArcelorMittal were Cleveland Cliffs' two biggest customers, and both operated numerous older facilities and competed with each other as well as with scrap-based producers. While those entities continue to operate independently under their new ownership, it is likely that the future will bring certain reorganization and optimization opportunities that provide economies of scale to make both steel entities and the mining entity more sustainable and profitable. The fact that these acquisitions occurred one year before the recent record high market prices for steel coils was no doubt a combination of both brilliance and luck.

On the mini-mill side of the equation, vertical integration has been the focus. Case in point, Nucor 1) recently announced the construction of a new tube mill near its Gallatin Sheet Mill, 2) purchased both a producer of metal building panels and a producer of steel racking, and 3) announced other expansions and upgrades. As the company continues to expand its offering of finished products, it may have less tons available to sell into its traditional customer base.

Why Should We Expect Steel Prices to Collapse?

Simply put, they always do. Steel prices have risen and fallen multiple times over the past two decades. Each period of increasing prices has been followed by one of decreasing prices. As market prices increased, domestic output increased and higher domestic prices made imports more attractive. The increase in supply drove prices down. In periods of decreasing market prices, service centers and other distributors find themselves upside down, with little choice other than to sell high-cost steel coils goods purchased in prior periods at lower market prices.

Overall economic conditions also contribute to changing market prices. In slow economic periods the steel industry tends to destock. As the economy expands, demand increases to supply then-current consumption rates at the same time as market participants begin to restock the supply chain. The surge in demand results in longer lead times and higher prices. The mills expand capacity until supply is greater than demand and then prices once again decrease.

As referenced earlier, market prices for hot-rolled steel coils reached $1,900 per ton in August 2021. The previous high point was in 2008, just prior to the start of the Global Economic Crisis when hot roll prices peaked at $1,100 per ton. At $800 per ton greater than the previous highest prices ever, and $1,570 per ton greater than the fifteen-year average for the period ending December 2020, market prices most certainly must go down; the only questions are by how much and when? A better question to ask, at this point, is why the market price of hot-rolled steel coils was at only $580 per ton prior to the pandemic in February 2020.

In the fifteen years ended December 2020, hot-rolled steel coil prices averaged $630 per ton, had a minimum of $360 per ton and a maximum of $1100 per ton. Of the 180 months in that period, 99 months had values below the $630 per ton average. Can you think of another commodity that has remained at essentially the same sell price for 15 years? Was there no inflation over that period? Did salaries, energy and raw materials cost not increase? Certainly, this is not the case. The fact is that market prices for coils have been suppressed by multiple factors over the years including: excess domestic capacity, price competition from domestic competitors, subsidized offshore competitors that flood U.S. markets whenever prices increase, and a major industry (steel) that is a supplier to much larger and seemingly more powerful industries (automotive, pipe and tube, appliance) that have historically been able to play one company against another. The floor for market pricing may also be somewhat linked to the common thought that historically, most producers are actually breaking even or experiencing positive margins when hot roll pricing is in the $550-to-$600 range.

Additional factors to consider here include the following:

- The European Union reacted to the Trump era Section 232 Tariffs with retaliatory tariffs on non-steel goods. The EU is now exploring a quota system that would limit the quantity of goods it could export into the U.S. in exchange for the resolution of the various tariffs and counter-tariffs.

- The automotive chip shortage continues and will limit domestic production of automobiles, originally projected at more than 16 million units, to less than 13 million units. Less vehicles means less demand for steel, so the auto suppliers can shift production to other markets.

- Five million tons of electric arc furnace capacity will come online in 2022 at new or existing coil producing facilities.

- Steel products including coil, plate, tubes, and rebar purchased in prior periods are finally beginning to reach the U.S. after extended production and shipping delays.

So Why Won't Market Prices Decrease?

Certain segments of the economy remain depressed due to the Pandemic. As COVID-19 becomes less of a factor, we can expect to see those market segments expand. Additionally, the Biden administration's infrastructure bill, which was already passed by the Senate, is now on a likely path to final passage in the House before the end of September. Once signed into law, this should lead to more spending on roads, bridges and other public projects. The administration also hopes to implement further stimulus and entitlement program spending that should result in personal spending on steel-intensive vehicles, appliance and other residential and commercial goods.

The Rig Count is also expanding. Data published by Baker-Hughes indicates that the U.S. active rig count was at 790 in February 2020 at the start of the Pandemic, decreased to 244 by August 2020 and was back up to 503 in August 2021. The greater the number of active rigs, the more need there is for downhole and transmission pipe and steel intensive capital equipment. There are more than 275 million vehicles in the U.S., most of which still rely upon gasoline and diesel. As much as we hope to go green, these vehicles will remain in service for decades and it will be many years before electric vehicles become truly dominant.

Additionally, when the chip shortage is eventually resolved, auto production is expected to increase and with it the demand for steel coils. Additionally, more domestic capacity is coming online, even as older less-efficient capacity continues to be taken off-line. With discipline, the net increase will result in a reduction in the flow of imports rather than in price cutting. Cleveland-Cliffs, for example, has yet to play its cards. With significant blast furnace capacity, it is now a dominant player in the market. As such, will it take inefficient capacity offline and consolidate output from fewer, more efficient locations? Only time will tell.

What the Future Holds

Supply has improved but remains tight, and demand is strong, with the market expected to hold more or less steady until the traditional weaker period of December and January. Market prices for all steel products will decrease somewhat, likely in Q1 2021 and will likely not return to pre-pandemic levels. When the market for hot-rolled coils corrects, the downward trend is likely to be six-to-twelve months, after which we expect prices to solidify at higher levels. They had been hovering in the $600 per ton range. The new norm could become $800 or more.

Asset Based Lending in a Strange Environment

All of this might lead one to believe that net orderly liquidation values (NOLV's) are now at 200% based on escalating market prices. Unfortunately, this is not the case. Less expensive steel products bought last year, or even last month, are now long gone. While market prices have increased, supply is limited and inventories are turning over at a far faster rate than usual. As a result, older, less expensive inventory is being consumed and replaced by inventory acquired at closer to current market prices.

While it is true that replacement costs have increased, a dog is still a dog. Slow moving and other discrepant inventory types may have higher scrap values but have not seen significant appreciation as the market has increased. Given the current limited supply, the product mix may likely shift with the best inventories selling quickly and the remainder comprising a higher percentage of eligible inventory. As market prices increase and replacement costs go up, companies with a cap on their borrowing base may reach that cap. As a result, lenders would be well advised to give careful consideration to how they adapt to this unprecedented, and possibly temporary, change in the steel market. With this in mind, we encourage those of you with exposure across the steel, aluminum and other metals markets to reach out to our team at Hilco with any questions or concerns. The many conversations we are having each week, and the various engagements we continue to move forward, provide us with valuable insights and perspective that we welcome the opportunity to share. We are here to help.

Hilco valuation teams work in machinery, equipment and enterprise valuation for numerous companies in the metals and mining industry and thoroughly understand the unique dynamics of price volatility on manufacturers, distributors and fabricators. Hilco has unparalleled market trend data to assist our customers in ongoing assessment of how market forces drive recovery values. If you're looking for a thorough process and a proven partner to help you gauge metals recovery values in your portfolio or your business, give us a call.

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