Ferrous Fortitude

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Excess supply, low export demand, transportation barriers, and prices out of line with other metallics—U.S. ferrous scrap had it hard in 2014, but the start of 2015 was arguably even worse. Recyclers wonder what the rest of this year will hold.

By Helen Burnett-Nichols

In an ordinary year, an uptick in ferrous scrap demand from the U.S. automotive sector and signs of further recovery in domestic construction would give U.S. ferrous recyclers cause for optimism. But 2014 was far from an ordinary year. A look back shows unusual market dynamics such as stable ferrous scrap prices in the face of tumbling iron ore values (at least until late last year), not to mention headwinds such as a stronger dollar, lagging U.S. scrap exports, transportation hassles, an abundance of supply, and the growing use of alternative metallics. Early 2015 has brought additional drama with a precipitous drop in the benchmark No. 1 busheling price, rattling recyclers and complicating the market picture even more. Ferrous processors wonder if 2015 will continue to bring tightening margins and increasing competition at home and abroad.

The Iron Ore Element

The plummeting price of iron ore was perhaps what most differentiated the 2014 ferrous scrap market from that of 2013, analysts say. “Iron ore tends to be the bellwether product” for the ferrous metallics market, “so what happens in iron ore generally happens in the rest of the market,” says Kurt Fowler, business development manager, North America, for The Steel Index (Pittsburgh). But for much of 2014, “if you look at a chart tracking iron ore versus scrap, you’d see a significant divergence from the trendline.”

Iron ore—buffeted by a glut of supply, ongoing global production, and a slowdown in Chinese demand—saw its price decline 50 percent, from roughly $135 a dry mt at the start of 2014 to a five-year low of about $70 by the end of the year, according to data from Bloomberg (New York). Ferrous scrap prices, meanwhile, were steady until the fourth quarter. Even then, “the magnitude of the decline of scrap prices was much lower than that of iron ore,” says Andrew Lane, equity research analyst covering steel and aluminum at Morningstar (Chicago). In February, however, the price of No. 1 busheling dropped roughly $100 a mt, a 28-percent decline from the $354 monthly average in January, notes Chris Plummer, managing director of Metal Strategies (West Chester, Pa.).

For scrap processors, the decline in iron ore prices in 2014 made their main customers—scrap-fed electric-arc furnace mills—less competitive compared with integrated steelmakers, but that dynamic reversed when ferrous scrap prices came crashing down in early 2015. From the start of 2014 through early March 2015, foreign EAF steelmakers saw a cost improvement of $193 a mt while foreign integrated mills realized a savings of $140 a mt, Plummer says. In contrast, he notes, in that period U.S. integrated mills only benefited from a cost improvement of $40 a mt because their captive iron ore supplies result in significantly less iron ore price volatility.

Competing Alternatives

Alternative ore-based metallics such as direct-reduced iron and pig iron, which some EAF mills use to supplement their ferrous scrap supplies, also could be affecting ferrous scrap prices, although market experts are divided on their impact. Steelmakers use such metallics for a variety of reasons, such as to reduce the residuals—particularly copper—in the melt and to branch out into markets that require higher-quality steels, says Philip Bell, president of the Steel Manufacturers Association (Washington, D.C.).

In 2014, the use of ore-based metallics—DRI, hot-briquetted iron, and merchant pig iron—in the U.S. market increased 32.5 percent from 2013, growing from 7.7 million tons to 10.2 million tons, Plummer says. One factor behind that increase was the start of the Nucor Corp. (Charlotte, N.C.) DRI facility in Louisiana in late 2013, as well as higher imports of alternative metallics. Nucor's use of DRI allows it to "change the mix of the materials that provide iron units to its melt, so it can arbitrage high-quality scrap prices against low-quality scrap prices against DRI costs," Lane says. That, in turn, allows the company to "select the optimal mix to reduce its total iron unit costs through the use of DRI"—something steelmakers that rely exclusively on scrap can't do, he says. While Nucor's DRI facility has the potential to improve its margins on its finished steel products, Fowler says, the operation hasn't yet affected domestic ferrous scrap players, even in the southern market near the facility.

Steelmakers are becoming much more savvy at playing the margin game when it comes to raw material substitution, Fowler says, viewing the various inputs—ferrous scrap, iron ore, pig iron, and DRI—as just "iron units." Kevin Torres, director, recycling and scrap procurement USA, for ArcelorMittal Long Carbon North America (LaPlace, La.), agrees, saying steel mills have gotten better at looking at the cost/benefit aspects of different inputs. New mills in particular—in the United States as well as Mexico—can use scrap or iron ore-based products, enabling them to "move back and forth based on commodity prices," he says.

In Bell's view, ferrous scrap will continue to be the raw material of choice for EAF steel producers, and he doesn't expect DRI to have a huge impact in the market for several

reasons. The North American DRI market is still in its “nascent stage,” he says, with no commercial or merchant DRI producers that sell product on the open market. Most North American mills that consume DRI either produce it in a captive facility—such as Nucor—or import the material. Further, Bell says, many EAF producers, particularly those that make lower-end products such as rebar, don’t consume a lot of DRI. “They can get by with the scrap that’s currently available,” he says.

The United States will gain additional production capacity for alternative metallics in 2016 if steelmaker voestalpine Group (Linz, Austria) commissions its planned HBI plant in Corpus Christi, Texas. The company says it expects to ship half of the plant’s output—estimated at 2 million mt a year—to its blast-furnace steel mills in Linz and Donawitz, Austria, and sell the other half to other steelmakers under long-term contracts.

The Scrap Supply Situation

In addition to the growing use of alternative metallics, several factors have made domestic ferrous scrap supplies more than adequate, depressing prices and eroding processors’ margins. The growing strength of the U.S. dollar, which in January 2015 rose to its highest level against the euro since 2003, has made U.S. ferrous scrap less competitive on the world market and, in turn, reduced U.S. exports of ferrous grades, particularly to Turkey, the world’s top steel scrap importer. In 2014, U.S. ferrous exports declined approximately 18 percent, year on year, to about 14.2 million mt, according to data from the U.S. Census Bureau (Suitland, Md.) and U.S. International Trade Commission (Washington, D.C.). U.S. shipments to Turkey slipped 31 percent, to 3.6 million mt, and a similar scenario played out with other major buyers of U.S. ferrous scrap last year, with Taiwan’s buying down 11 percent, to 2.5 million mt; South Korea down 33 percent, to 1.6 million mt; and China down 67 percent, to about 492,000 mt.

The protracted contract dispute between the Pacific Maritime Association and the International Longshore and Warehouse Union (both based in San Francisco) compounded the less-than-favorable market dynamics and further reduced scrap shipments from U.S. West Coast ports. U.S. exports of all types of scrap—not just ferrous—from those ports declined 12 percent by value, to $8.35 billion, and dipped 5 percent by volume, to 19.4 million mt, last year, Census Bureau and ITC data show.

The stronger dollar and the West Coast shipping disruptions prompted overseas consumers to source ferrous scrap from elsewhere and changed the import/export dynamic in the steel market, boosting steel imports into the United States, Torres says. In 2014, U.S. steel imports totaled 44.3 million net tons, up 38 percent compared with 2013 imports, the Census Bureau reports. Some sources say the strong dollar is even prompting domestic mills—and larger scrap companies—to import ferrous scrap, and the numbers seem to confirm that trend. In 2014, for instance, the United States imported the highest volume of

ferrous scrap—3.4 million mt—since 2006, according to ITC and Census Bureau data. Fowler says a large North American scrap recycling company booked more than five cargoes of scrap for import late last year, possibly higher-quality scrap from Europe "that countries such as Turkey and other places really wouldn't want to go after."

According to Rich Brady, executive vice president-Southeast for OmniSource Corp. (Spartanburg, S.C.), U.S. ferrous scrap previously destined for export is being redirected into the domestic market, and the incremental increase in supply contributed to keeping ferrous scrap prices in a tight range—at least until February. The additional supply in the domestic market combined with relatively flat demand has meant "more than adequate supply for domestic steel mills," he says.

Despite the plentiful domestic scrap supply situation, he adds, "the competitive pressures among steel producers persist, which makes for a tougher margin environment, while costs have continued to increase." In response to these pressures, some producers of higher-value steels are taking steps to idle higher-cost production. "We've seen some pockets of regional consolidation, which will likely continue," Brady says. Last fall, for example, Nucor acquired flat-rolled steel producer Gallatin Steel Co. (Ghent, Ky.) for $770 million.

While many expect such consolidation to improve mills' competitiveness, it puts pressure on the scrap side of the business because mills that previously were customers for some recycling companies can become competitors, says Greg Dixon, CEO of Smart Recycling Management (Lexington, Ky.). For many recycling companies—especially independent, family-owned yards—"competition has become very fierce, and it's coming from many directions," he says. Last year "was pretty much a flat year for scrap pricing," he notes. "That made it very challenging on all the yards because they never got a chance to 'catch the bump' as the market moved up and they had some inventory on the ground."

One additional challenge for the ferrous scrap industry, Fowler says, is the shortage of trucks and rail cars to transport material, especially when competing for space against more valuable commodities. Dixon agrees. "There's a big problem in our industry when it comes to transportation," he says. "There aren't enough rail cars, and new ones aren't being built. There aren't enough barges, and new ones aren't being built. And with the regulations on trucking now, that industry has shrunk, and I don't necessarily see it coming back the way it should."

Despite 2014's challenges, Dixon began the new year hopeful it would provide a better market for scrap sellers thanks to the possibility of additional domestic steelmaking capacity coming online. Unfortunately, he says, the strong dollar and uptick in steel imports "have caused the current market to contract and forced mills to reduce capacity. It therefore appears that 2015 could be a difficult year."

The Steel Demand Picture

Growth in the U.S. production of steel and in the largest U.S. markets for steel were not enough to outweigh the scrap supply, price, and transportation difficulties, the market participants say. Shipments from U.S. mills totaled 98.2 million net tons in 2014, up 3 percent compared with 2013 shipments, according to the American Iron and Steel Institute (Washington, D.C.). In the U.S. automotive sector, J.D. Power (Westlake Village, Calif.) and LMC Automotive (Troy, Mich.) project light vehicle sales were 16.5 million in 2014 and will rise to 17 million in 2015. On the production side, the two groups estimate North American new vehicle production was 16.9 million units in 2014 and will grow to 17.4 million units this year. The auto sales results are "really a bright spot" for the steel market, particularly the flat-rolled sector, Torres says, adding that the solid automotive production also is boosting the supply of prime and busheling scrap.

The construction sector remains in recovery mode in the United States but showed positive signs in 2014. Nonresidential construction spending rose 6.6 percent, year on year, to $606.2 billion, while residential construction spending increased 3.8 percent, to $355.2 billion, which means that total construction spending grew 5.6 percent, to $961.4 billion, last year, the Census Bureau reports. Looking closer at the 2014 residential housing market, single-family housing starts rose 4.9 percent, to 647,400 units, while total housing starts jumped 8.8 percent, to just over 1 million units, according to the Census Bureau and the U.S. Department of Housing and Urban Development (Washington, D.C.).

Despite the ongoing recovery in the automotive and construction sectors, Plummer expects U.S. demand for metallics—scrap, DRI, and merchant pig iron—to decline 2 to 4 percent in 2015 as a result of a projected 30- to 40-percent downturn in the energy sector, which he estimates is the third-largest consuming sector after automotive and construction.

Looking at the bigger steel picture, the World Steel Association (Brussels) expects global steel demand to increase 1.9 percent in 2015—down from the 6.7-percent increase in demand in 2014.

Chinese Headwinds

One big concern for steel and ferrous scrap market participants is the extent to which China's steel consumption will decelerate. Lane expects the slowdown to be more immediate than investors and analysts currently forecast. In his view, Chinese steel consumption peaked in 2014 at roughly 800 million mt.

China also poses concerns on the production side: The issue for U.S. mills, he says, is that many large Chinese steelmaking companies are state-owned and unlikely to cut production, regardless of market conditions, which could make China an ever-larger steel exporter. Its exports could compete in the U.S. market against domestically produced steel, especially if

the price difference is significant enough. With several analysts predicting decent growth in steel demand in North America this year, the question becomes “how much [steel] is going to be produced in North America, and does that production put added pressure on the scrap market?” Brady asks.

In the longer term, the concern for scrap processors in developed economies is when China will become a net exporter of ferrous scrap. As its installed base of steel products ages and the replacement cycle begins, it could create a “tidal wave of scrap” that China can’t consume itself, Lane says. If that “potential long-term headwind” plays out, “you’re going to see a major addition to global scrap supply, and that would weigh on prices over the long term.” Will China’s shift to scrap-exporter status happen in one decade, two decades, or longer? Lane sees that development taking “a little bit longer than a decade, but it’s inevitable it will happen.”

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