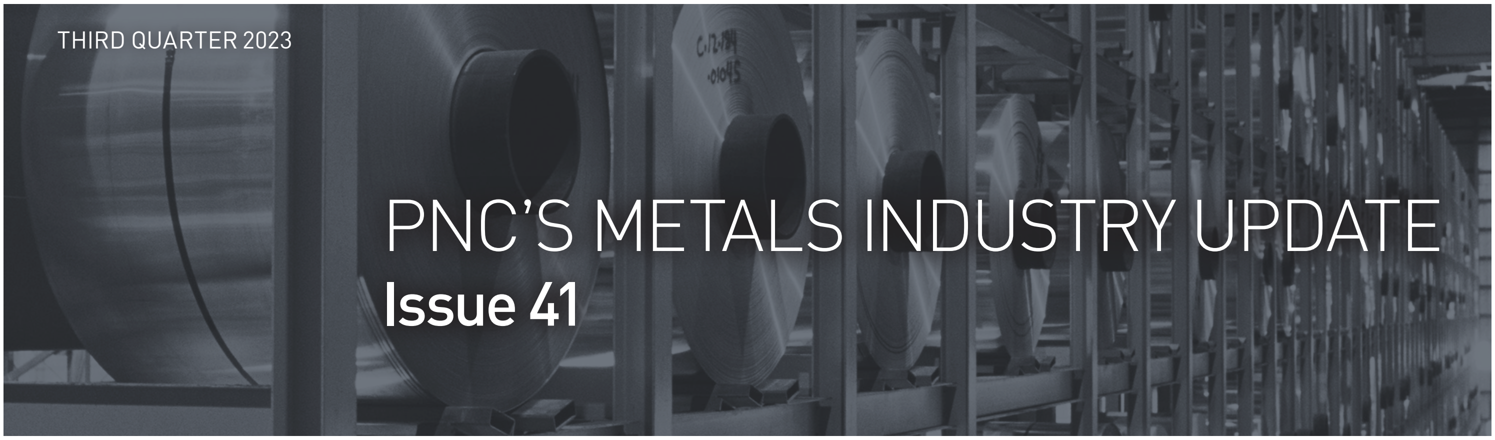


THIRD QUARTER 2023

PNC'S METALS INDUSTRY UPDATE

Issue 41

IN THIS ISSUE

FOR MORE INFORMATION

Contact PNC's Metals Group:

David B. Gookin
Executive Vice President
Metals Group–Diversified Ind.
The PNC Financial Services Group
One North Franklin Street
Suite 2500
Chicago, Illinois 60606
Office: 312-384-4610
Cell: 412-418-1970
Email: david.gookin@pnc.com

Joe McElhinny
Vice President
Metals Group–Diversified Ind.
The PNC Financial Services Group
The Tower at PNC Plaza
300 Fifth Avenue
Pittsburgh, Pennsylvania 15222
Office: 412-762-2480
Email: joseph.mcelhinny@pnc.com

Welcome to Issue #41 of PNC's *Metals Industry Update*.

Our cover story provides a look at the near-term economic outlook. PNC economist Abbey Omodunbi continues to see a mild recession as one of the potential scenarios for the 12-month outlook. Nevertheless, it is PNC's opinion that the Fed orchestrating a soft landing appears to be more likely. During the second quarter, metals prices played a role in tempering the effects of inflation, as almost all the prices we follow declined. Finally, the two important debt markets we follow, the bond market and the syndicated loan market, showed notable improvement in the second quarter over the first quarter results.

Thank you for continuing to read our quarterly *Update*. We aspire to provide you with information you can use and deliver it in a quick and easy way. As always, we appreciate any comments or questions that may help us better meet your needs.

SLOW CHINESE ECONOMIC RECOVERY TO WEIGH ON METAL PRICES IN SECOND HALF OF 2023

Summary

- A faltering Chinese economic recovery will weigh on base metals demand.
- The World Bank forecasts global GDP growth of 2.1% in 2023, down from 3.1% in 2022.
- U.S. infrastructure investment will provide some support to metals demand in 2023 and 2024.

The U.S. metals industry enters the second half of 2023 under pressure as a weak Chinese economic recovery, tighter financial conditions in many developed economies, and a more slowly growing global economy weigh on metal prices. PNC's baseline forecast calls for a mild U.S. recession starting in late 2023 or early 2024, with a small contraction in GDP of less than 1%, lasting into mid-2024. PNC expects the U.S. economy to grow 1.5% on a year-over-year basis in 2023 followed by a small 0.3% decline in 2024. China's reopening in late 2022 was a boost for the global economic outlook, but declining factory activity and softening demand for Chinese exports will weigh on the Chinese economy. The Bank of England (BoE) and the European Central Bank (ECB) are set to continue raising interest rates through 2023 to fight persistent inflationary pressures. The World Bank forecasts global GDP growth to slow to 2.1% in 2023 (on a year-over-year basis) from 3.1% in 2022.[1]

SLOW CHINESE ECONOMIC RECOVERY TO WEIGH ON METAL PRICES IN SECOND HALF OF 2023 *(Continued)*

U.S. manufacturing output is set to decline (**Chart 1**) as consumers spend more on services and experiences while tighter financial conditions weigh on the demand for interest-sensitive and metal-intensive durable goods such as cars, refrigerators and dryers. A shortage of semiconductors upended the U.S. auto industry in the first couple of years following the pandemic, leading to widespread production cuts. Auto production should improve in the second half of the year, although rising interest rates will likely weigh on sales (**Chart 2**).

Factory activity in China has lost steam in recent months due to weaker domestic demand, a cooling real estate market (**Chart 3**), and declining external demand. According to China's National Bureau of Statistics, China's industrial output of crude steel was up 13% in May from one year earlier, but a weak Chinese economic outlook will weigh on production through 2023. Bloomberg forecasts flat Chinese steel demand in 2023 and growth of 1.1% in 2023.[2]

The U.S. housing market is weak entering into the second half of 2023 although homebuilding sentiment has improved in recent months (**Chart 4**), according to the National Association of Home Builders' Housing Market Index. The index rose five points to 55 in June and has increased in every month of this year; a reading above 50 indicates expansion. With elevated mortgage rates and the Federal Reserve signaling additional interest rate hikes in 2023, housing starts and permits will remain depressed (**Chart 5**), weighing on demand for metals with heavy use in construction such as steel, iron, aluminum and lead.

While PNC expects housing starts and permits to decline in the second half of 2023, completions should improve as inflation moderates. The number of units under construction in June was near the highest level since 1974, and this should support construction spending in the near term.[3] Public construction spending is likely to get some support over the next decade from major bills passed in recent years such as the Infrastructure Investment and Jobs Act of 2021, the CHIPs and Science Act, and the Inflation Reduction Act of 2022.

Risks to the outlook are tilted to the upside. Better growth prospects in China coupled with a soft or bumpy landing in the U.S. would support base metals demand. PNC's expectation for a weaker dollar (**Chart 6**) in the next year will make dollar-priced metals cheaper for foreigners and provide some upside to demand.

SLOW CHINESE ECONOMIC RECOVERY TO WEIGH ON METAL PRICES IN SECOND HALF OF 2023 *(Continued)*

CHART 1: GLOBAL MANUFACTURING ACTIVITY SET TO DECLINE FURTHER

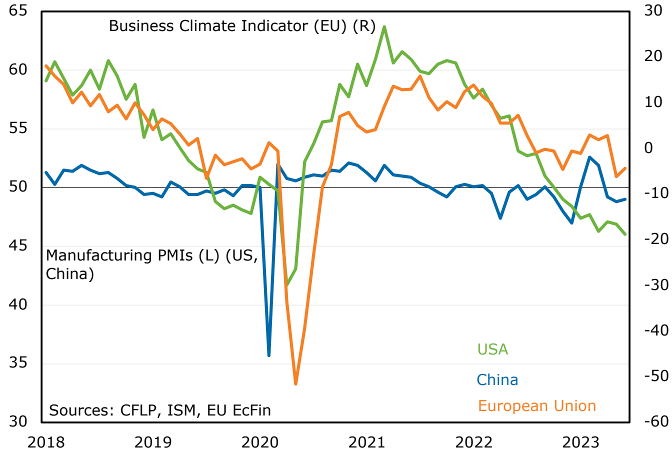


CHART 2: U.S. AUTO SALES EXPECTED TO DECLINE IN 2023

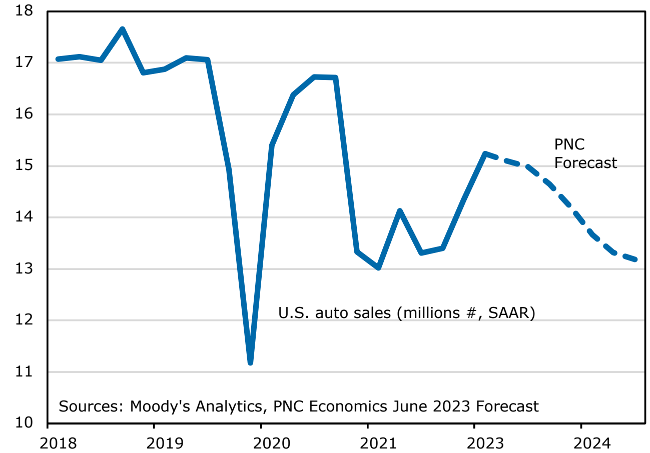


CHART 3: CHINA'S REAL ESTATE SECTOR IS STILL IN TROUBLE

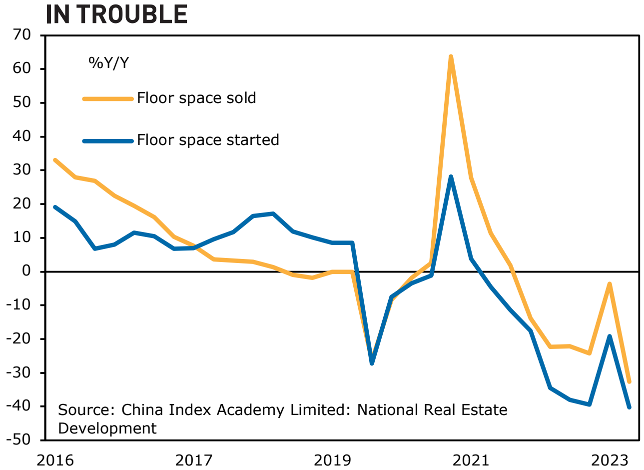


CHART 4: HOMEBUILDER SENTIMENT IS NOW IN POSITIVE TERRITORY

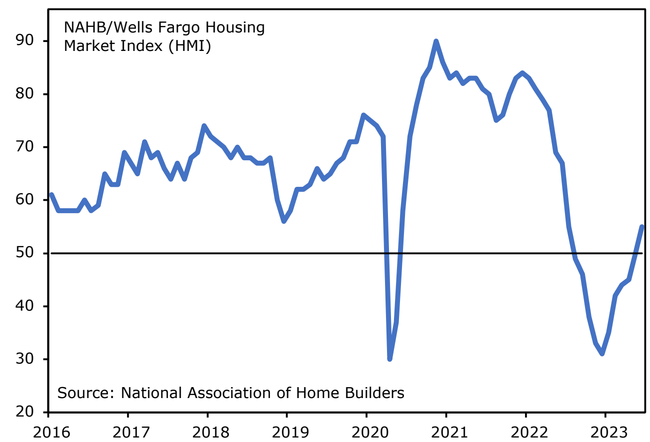


CHART 5: STARTS AND PERMITS ARE DOWN FROM 2022 BUT COMPLETIONS ARE SET TO INCREASE

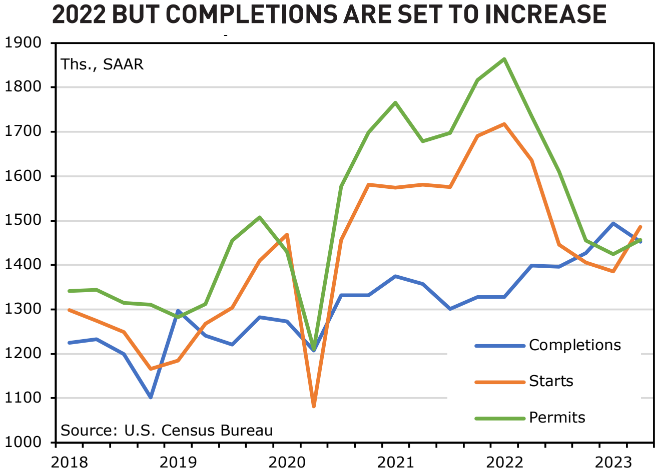
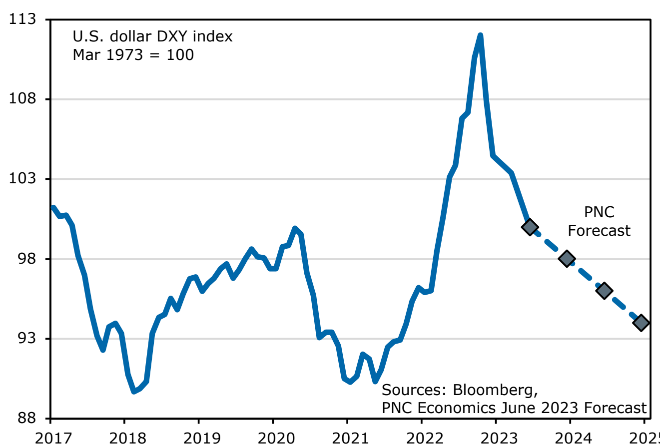


CHART 6: WEAKER DOLLAR WILL PROVIDE SUPPORT TO METAL PRICES



Visit http://www.pnc.com/economicreports to view the full listing of economic reports published by PNC's economists.

METALS PRICING

The pricing roller coaster continues. Metals prices were broadly down in fourth quarter 2022, broadly up in first quarter 2023, and back down again in second quarter 2023. Metals pricing is doing its fair share to help battle inflation. Out of the 25 prices we track during the quarter, 18 were down, four were up, and one remained flat. Carbon sheet once again captured most of the headlines with substantial declines across all three major product areas despite efforts by the major mills to raise prices during the first quarter. Not sure whether it is the chicken or the egg, but all four carbon steel raw material prices we track moved in tandem with sheet, helping to preserve very solid metal spreads for the mills.

Second Quarter 2023: Interesting Observations:

- HRC prices fell by 28% but remain higher than January levels.
- Spreads for CRC and GALV tightened by $60 per ton.
- Plate demand has kept pricing solid with a 3% price increase.
- Carbon long products have held up much better than sheet, declining in the low single digits.
- OCTG pricing continues to fall, down 8%.
- Base metals continue to decline with prices falling for AL, CU and NI.
- Carbon steel raw materials were down across the board; pellets down 16%, low vol met coal down 25%, HMS down 19% and shred down 20%.

Below is the price detail for all the products we follow.

Carbon Flat-Rolled Steel $/NT April–June 2023			
Product	April	May	June
Hot-Rolled	1,120	1,000	870
Cold-Rolled	1,360	1,180	1,050
Galvanized	1,450	1,260	1,140

Discrete Plate $/NT April–June 2023			
Product	April	May	June
A36	1,480	1,530	1,570
A514	2,295	2,345	2,385
AR400	2,315	2,365	2,405

Wide Flange Beam $/cwt. April–June 2023			
Size	April	May	June
24"x12¾"	69.00	69.00	68.00
18"x6"	67.00	67.00	66.00

MBQ $/cwt. April–June 2023			
Shape	April	May	June
1" 1018 round	58.00	58.00	57.00

Rebar $/cwt. – Grade 60 April–June 2023			
Size	April	May	June
16 mm - #5	48.50	48.00	46.00

SBQ $/cwt. – 1" round April–June 2023			
Grade	April	May	June
HR 4140 Q&T	118.80	117.30	115.50

Pipe & Tube $/NT April–June 2023			
Product	April	May	June
OCTG J55	2,000	1,950	1,850
Linepipe, ERW	1,400	1,400	1,400

Aluminum $/lb April–June 2023			
Alloy	April	May	June
3003	2.17	2.17	2.12
LME	1.06	1.03	0.99
MWTP	1.31	1.28	1.23

Stainless $/lb – Cold-Rolled Coil April–June 2023			
Grade	April	May	June
304	2.06	2.08	2.07

Copper $/lb April–June 2023			
	April	May	June
Comex Avg.	4.00	3.74	3.78

Nickel $/lb April–June 2023			
	April	May	June
LME Avg.	10.77	10.08	9.61

Ferrous Scrap $/GT Midwest April–June 2023			
GRADE	April	May	June
No. 1 HMS	370	340	310
Shredded	510	475	425

Iron Ore $/LT U.S. April–June 2023			
GRADE	April	May	June
Furnace Pellets	105	85	90

Met Coal $/MT U.S. East Coast April–June 2023			
GRADE	April	May	June
Low-vol	254	248	204

The metals market price guide is courtesy of Sector3 Appraisals, Inc., provider of asset valuation and advisory services for asset-based lending (ABL) lenders, specializing in metals, chemicals and commodities.
For more information, contact Michael Dawson – Editor, Market Research at mdawson@sector3appraisals.com.

SECTOR3

PRICING FOR PUBLIC NOTES AND BONDS

METALS BOND UPDATE: ISSUERS FIND ATTRACTIVE WINDOWS IN SECOND QUARTER 2023 DESPITE "HIGHER FOR LONGER" NARRATIVE

Following the collapse of Silicon Valley Bank in March, the start of second quarter 2023 was marked by lingering concerns of contagion risk in the banking sector. While these fears eased throughout the quarter, persistent inflationary pressure forced the Fed to maintain a "higher for longer" rate path stance, which drove U.S. Treasury yields wider across the curve. A historically strong predictor of future recessions, the 2s/10s UST yield curve reached its most inverted point (-106 basis points) since the early 1980s on June 30. Despite Treasury rate volatility, issuers took advantage of periods of relative stability as the broader U.S. economy showed signs of resilience. Refinancing remained the dominant use of proceeds in second quarter 2023, as issuers in many cases elected to replace floating rate debt with fixed and to derisk upcoming (2024–2025) bond maturities in the face of mounting economic uncertainty in second half 2023.

Investment Grade volume in second quarter 2023 totaled $316 billion, falling from the $405 billion in first quarter 2023. Total supply is down only 2% year-over-year, an impressive measure given the risks faced by issuers (e.g., bank failures, debt ceiling, rate hikes). A-rated and BBB-rated yields rose 34 basis points and 30 basis points, respectively, while credit spreads tightened 12 basis points and 16 basis points, respectively. No IG metals issuers priced transactions in second quarter 2023. Looking specifically at the PNC IG Metals Bond Index, spreads tightened 9 basis points and yields widened 33 basis points.

High-yield volume of $53 billion was up 29% in second quarter 2023 compared to $41 billion in first quarter 2023. Amidst continued interest rate uncertainty and a tepid M&A landscape, 59% of high-yield offerings were for refinancing existing debt. BB-rated yields widened 32 basis points throughout the second quarter, while B-rated yields remained steady, rising only by 2 basis points. Spreads, fueled by a resilient labor market and lack of meaningful uptick in defaults, tightened across the ratings spectrum with the overall HY index moving 53 basis points tighter. Compared to the previous quarter, average yields of companies in the PNC HY Metals Bond Index widened by 24 basis points while spreads tightened by 17 basis points. Graftech Global Enterprise Inc. was the lone HY issuer, pricing $450 million 5.5NC2.5 9.875% Senior Secured Notes shortly before the end of the quarter on June 21, 2023.

METALS BOND INDEX

	PNC IG Metals Bond Index			PNC HY Metals Bond Index		
As of Date	7/14/2023	4/14/2023	Change	7/14/2023	4/14/2023	Change
Effective Maturity (Years)	9.21	9.34	-0.13	5.50	5.76	-0.26
Composite Rating	BBB+	BBB+	–	BB-	BB-	–
Weighted Average Coupon	4.15%	4.16%	-0.01%	5.55%	5.46%	0.08%
Yield to Worst	5.46%	5.13%	0.33%	6.51%	6.27%	0.24%
Option Adjusted Spread to Treasuries (bps)	126.0	135.1	-9.1	201.8	219.0	-17.2

Note: Excludes bonds of size < $250 million.

Source: Bloomberg

METALS BOND UPDATE

Issuance Date	Issuer	Amount Outstanding ($MM)	Structure	Moody's Rating	S&P Rating	Maturity	Coupon Rate	Price at Issuance	Issuance Spread over Treasury	As of 7/14/2023 Yield to Worst	As of 7/14/2023 Spread (OAS)	Since 4/14/2023 4/14 Spread	Since 4/14/2023 Change in Spread (bps)	Since 4/14/2023 % Change in Spread
	Steel Mills													
3/11/2019	ArcelorMittal SA	$401	Sr Unsecured	Baa3	BBB-	3/11/2026	4.550%	99.72	200 bps	5.331%	98 bps	129 bps	-31 bps	-23.9%
11/29/2022	ArcelorMittal SA	$1,200	Sr Unsecured	Baa3	BBB-	11/29/2027	6.550%	99.91	255 bps	5.594%	149 bps	177 bps	-28 bps	-15.9%
7/16/2019	ArcelorMittal SA	$500	Sr Unsecured	Baa3	BBB-	7/16/2029	4.250%	99.00	225 bps	5.078%	117 bps	161 bps	-44 bps	-27.3%
11/29/2022	ArcelorMittal SA	$1,000	Sr Unsecured	Baa3	BBB-	11/29/2032	6.800%	99.37	305 bps	6.372%	252 bps	264 bps	-12 bps	-4.5%
3/7/2011	ArcelorMittal SA	$434	Sr Unsecured	Baa3	BBB-	3/1/2041	6.750%	99.18	230 bps	6.565%	260 bps	290 bps	-31 bps	-10.6%
9/18/2020	Big River Steel LLC	$720	Secured	Ba2	BB-	1/31/2029	6.625%	100.00	604 bps	6.572%	138 bps	209 bps	-72 bps	-34.3%
3/13/2020	Cleveland-Cliffs Inc	$829	1st lien	B2	BB+	3/15/2026	6.750%	100.00	606 bps	5.935%	102 bps	144 bps	-43 bps	-29.5%
5/13/2019	Cleveland-Cliffs Inc	$555	Sr Unsecured	Ba3	BB-	6/1/2027	5.875%	96.13	-	6.262%	141 bps	196 bps	-55 bps	-28.0%
2/17/2021	Cleveland-Cliffs Inc	$368	Sr Unsecured	Ba3	N/A	3/1/2029	4.625%	100.00	368 bps	6.275%	232 bps	272 bps	-40 bps	-14.6%
4/14/2023	Cleveland-Cliffs Inc	$750	Sr Unsecured	Ba3	N/A	4/15/2030	6.750%	100.00	325 bps	7.248%	301 bps	288 bps	13 bps	4.4%
2/17/2021	Cleveland-Cliffs Inc	$325	Sr Unsecured	Ba3	N/A	3/1/2031	4.875%	100.00	374 bps	6.740%	280 bps	292 bps	-12 bps	-4.2%
1/28/2022	Commercial Metals Co	$300	Sr Unsecured	Ba2	BB+	1/15/2030	4.125%	100.00	-	5.980%	201 bps	242 bps	-41 bps	-17.0%
2/2/2021	Commercial Metals Co	$300	Sr Unsecured	Ba2	BB+	2/15/2031	3.875%	100.00	279 bps	6.060%	217 bps	254 bps	-37 bps	-14.5%
1/28/2022	Commercial Metals Co	$300	Sr Unsecured	Ba2	BB+	3/15/2032	4.375%	100.00	-	6.283%	243 bps	266 bps	-23 bps	-8.7%
4/16/2014	GTL Trade Finance Inc	$481	Sr Unsecured	Baa3	BBB-	4/16/2044	7.250%	100.00	368 bps	6.630%	258 bps	269 bps	-10 bps	-3.8%
5/23/2022	Nucor Corp	$500	Sr Unsecured	Baa1	A-	5/23/2025	3.950%	99.94	115 bps	5.432%	72 bps	56 bps	16 bps	28.1%
5/22/2020	Nucor Corp	$500	Sr Unsecured	Baa1	A-	6/1/2025	2.000%	99.85	170 bps	5.504%	78 bps	87 bps	-9 bps	-10.5%
5/23/2022	Nucor Corp	$500	Sr Unsecured	Baa1	A-	5/23/2027	4.300%	99.84	145 bps	4.912%	75 bps	80 bps	-5 bps	-6.0%
4/26/2018	Nucor Corp	$500	Sr Unsecured	Baa1	A-	5/1/2028	3.950%	99.85	100 bps	4.958%	95 bps	103 bps	-8 bps	-8.1%
5/22/2020	Nucor Corp	$500	Sr Unsecured	Baa1	A-	6/1/2030	2.700%	99.72	205 bps	4.923%	103 bps	119 bps	-16 bps	-13.6%
3/11/2022	Nucor Corp	$550	Sr Unsecured	Baa1	A-	4/1/2032	3.125%	99.67	130 bps	4.861%	116 bps	123 bps	-7 bps	-5.7%
3/11/2022	Nucor Corp	$550	Sr Unsecured	Baa1	A-	4/1/2052	3.850%	99.07	165 bps	5.303%	136 bps	141 bps	-5 bps	-3.3%
12/7/2020	Nucor Corp	$329	Sr Unsecured	Baa1	A-	12/15/2055	2.979%	99.29	130 bps	5.427%	142 bps	149 bps	-7 bps	-5.0%
12/11/2019	Steel Dynamics Inc	$400	Sr Unsecured	Baa2	BBB	12/15/2024	2.800%	99.93	115 bps	4.518%	91 bps	120 bps	-29 bps	-24.1%
6/5/2020	Steel Dynamics Inc	$400	Sr Unsecured	Baa2	BBB	6/15/2025	2.400%	99.62	210 bps	4.730%	123 bps	97 bps	26 bps	26.8%
12/6/2016	Steel Dynamics Inc	$400	Sr Unsecured	Baa2	BBB	12/15/2026	5.000%	100.00	266 bps	4.040%	44 bps	-37 bps	81 bps	-218.9%
10/9/2020	Steel Dynamics Inc	$350	Sr Unsecured	Baa2	BBB	10/15/2027	1.650%	99.30	120 bps	4.798%	140 bps	140 bps	0 bps	0.2%
12/11/2019	Steel Dynamics Inc	$600	Sr Unsecured	Baa2	BBB	4/15/2030	3.450%	99.74	165 bps	4.798%	144 bps	145 bps	-1 bps	-0.8%
6/5/2020	Steel Dynamics Inc	$500	Sr Unsecured	Baa2	BBB	1/15/2031	3.250%	98.96	260 bps	4.798%	149 bps	144 bps	6 bps	3.9%
10/9/2020	Steel Dynamics Inc	$400	Sr Unsecured	Baa2	BBB	10/15/2050	3.250%	96.33	185 bps	4.798%	171 bps	172 bps	-1 bps	-0.8%
2/11/2021	United States Steel Corp	$475	Sr Unsecured	B1	BB-	3/1/2029	6.875%	100.00	592 bps	7.184%	252 bps	231 bps	21 bps	9.0%
5/21/2007	United States Steel Corp	$274	Sr Unsecured	B1	BB-	6/1/2037	6.650%	99.41	180 bps	6.983%	311 bps	344 bps	-34 bps	-9.8%
	Distribution													
8/3/2020	Reliance Steel & Aluminum Co	$400	Sr Unsecured	Baa2	BBB	8/15/2025	1.300%	99.69	110 bps	5.445%	78 bps	121 bps	-43 bps	-35.6%
8/3/2020	Reliance Steel & Aluminum Co	$500	Sr Unsecured	Baa2	BBB	8/15/2030	2.150%	99.72	160 bps	5.223%	133 bps	125 bps	8 bps	6.5%
11/20/2006	Reliance Steel & Aluminum Co	$250	Sr Unsecured	Baa2	BBB	11/15/2036	6.850%	99.43	220 bps	5.875%	197 bps	199 bps	-2 bps	-0.8%
	Specialty													
7/13/2020	Alcoa Nederland Holding BV	$750	Sr Unsecured	Baa3	BB+	12/15/2027	5.500%	100.00	255 bps	6.048%	115 bps	116 bps	-1 bps	-0.8%
5/17/2018	Alcoa Nederland Holding BV	$500	Sr Unsecured	Baa3	BB+	5/15/2028	6.125%	100.00	314 bps	6.331%	161 bps	150 bps	11 bps	7.2%
3/24/2021	Alcoa Nederland Holding BV	$500	Sr Unsecured	Baa3	BB+	3/31/2029	4.125%	100.00	274 bps	6.306%	228 bps	228 bps	0 bps	0.0%
5/13/2020	Arconic Corp	$700	1st lien	Ba1	BB+ *-	5/15/2025	6.000%	100.00	563 bps	4.604%	-63 bps	102 bps	-165 bps	-162.0%
2/7/2020	Arconic Corp	$900	2nd lien	NR	B+ *-	2/15/2028	6.125%	100.00	457 bps	5.103%	-61 bps	192 bps	-253 bps	-131.9%
11/22/2019	ATI Inc	$350	Sr Unsecured	B2	B+	12/1/2027	5.875%	100.00	414 bps	6.494%	151 bps	163 bps	-12 bps	-7.5%
9/14/2021	ATI Inc	$325	Sr Unsecured	B2	B+	10/1/2029	4.875%	100.00	255 bps	6.643%	256 bps	257 bps	-1 bps	-0.6%
9/14/2021	ATI Inc	$350	Sr Unsecured	B2	B+	10/1/2031	5.125%	100.00	255 bps	6.654%	266 bps	285 bps	-18 bps	-6.5%
7/24/2020	Carpenter Technology Corp	$400	Sr Unsecured	B2	BB	7/15/2028	6.375%	100.00	587 bps	5.848%	203 bps	256 bps	-53 bps	-20.8%
3/16/2022	Carpenter Technology Corp	$300	Sr Unsecured	B2	BB	3/15/2030	7.625%	100.00	566 bps	5.848%	214 bps	258 bps	-44 bps	-17.0%
4/14/2021	Century Aluminum Co	$250	Secured	Caa1	B	4/1/2028	7.500%	100.00	615 bps	8.717%	440 bps	502 bps	-62 bps	-12.3%
12/22/2020	GrafTech Finance Inc	$500	Secured	B1	BB	12/15/2028	4.625%	100.00	390 bps	8.896%	491 bps	488 bps	3 bps	0.6%
6/26/2023	GrafTech Global Enterprises	$450	Secured	B1	BB	12/15/2028	9.875%	97.46	654 bps	9.680%	533 bps	-	-	-
9/22/2014	Howmet Aerospace Inc	$905	Sr Unsecured	Ba1	BB+	10/1/2024	5.125%	100.00	255 bps	5.837%	69 bps	82 bps	-13 bps	-15.8%
4/24/2020	Howmet Aerospace Inc	$600	Sr Unsecured	Ba1	BB+	5/1/2025	6.875%	100.00	255 bps	5.543%	73 bps	104 bps	-31 bps	-30.1%
9/1/2021	Howmet Aerospace Inc	$700	Sr Unsecured	Ba1	BB+	1/15/2029	3.000%	100.00	255 bps	5.408%	143 bps	182 bps	-39 bps	-21.3%
1/25/2007	Howmet Aerospace Inc	$625	Sr Unsecured	Ba1	BB+	2/1/2037	5.950%	99.62	113 bps	5.785%	187 bps	216 bps	-29 bps	-13.4%
5/31/2018	JW Aluminum Continuous	$300	1st lien	B3	B-	6/1/2026	10.250%	100.00	718 bps	10.432%	513 bps	498 bps	15 bps	3.0%
11/26/2019	Kaiser Aluminum Corp	$500	Sr Unsecured	B2	BB-	3/1/2028	4.625%	100.00	289 bps	7.295%	318 bps	376 bps	-58 bps	-15.3%
5/20/2021	Kaiser Aluminum Corp	$550	Sr Unsecured	B2	BB-	6/1/2031	4.500%	100.00	288 bps	7.571%	367 bps	420 bps	-53 bps	-12.6%
8/11/2021	Novelis Corp	$750	Sr Unsecured	Ba3	BB	11/15/2026	3.250%	100.00	836 bps	6.156%	189 bps	210 bps	-21 bps	-10.0%
1/16/2020	Novelis Corp	$1,600	Sr Unsecured	Ba3	BB	1/30/2030	4.750%	100.00	836 bps	6.635%	258 bps	260 bps	-2 bps	-0.6%
8/11/2021	Novelis Corp	$750	Sr Unsecured	Ba3	BB	8/15/2031	3.875%	100.00	836 bps	6.431%	253 bps	276 bps	-23 bps	-8.3%
6/10/2015	Precision Castparts Corp	$850	Sr Unsecured	Aa2	AA	6/15/2025	3.250%	99.80	110 bps	5.000%	22 bps	34 bps	-12 bps	-35.5%
6/10/2015	Precision Castparts Corp	$275	Sr Unsecured	Aa2	AA	6/15/2035	4.200%	99.40	130 bps	5.100%	126 bps	107 bps	19 bps	18.0%
12/20/2012	Precision Castparts Corp	$500	Sr Unsecured	Aa2	AA	1/15/2043	3.900%	99.38	100 bps	5.090%	101 bps	107 bps	-6 bps	-5.9%
6/10/2015	Precision Castparts Corp	$325	Sr Unsecured	Aa2	AA	6/15/2045	4.375%	99.67	145 bps	5.182%	112 bps	116 bps	-5 bps	-3.9%

Denotes new issuance since 4/14/23 Metals Bond Update

Denotes bond that matures in the next two years

**+/*- Indicates ratings currently on review for upgrade/downgrade*

Source: Bloomberg

SYNDICATED BANK LOAN MARKET

Following a very poor first quarter 2023, syndicated loan volume improved 470% sequentially with a total of seven deals for $6.02 billion. Driving the second quarter's volume increase was the maturity extension for Cleveland-Cliffs' $4.5 billion ABL revolver. Interest in the deal was strong enough to support an increase in the total facility to $4.725 billion. Other notable deals in the quarter included a $350 million revolver for Carpenter Technology, a $300 million project financing for ACG Electric Metals, and a $200 million ABL revolver for Haynes International. Financial headlines continue to question the availability of attractive financing choices in the bank market. Our experience continues to suggest good businesses can access financing in the syndicated bank loan market at very acceptable terms.

Below are the expanded details for some of the deals that were completed in the quarter.

($ in millions)	ACG Electric Metals Ltd	Haynes International Inc.	Cleveland-Cliffs Inc.
Date	June 2023	June 2023	June 2023
Deal Size ($ in MM)	$75.0 / $225.0	$200.0	$4,750.0
Facility Type	CF Revolver / Term Loan	ABL Revolver	ABL Revolver
Tenor	*Not disclosed*	5 years	5 years
Purpose	Corporate Purposes / Acquisition	Corporate Purposes	Corporate Purposes
Ratings			
S&P	NR	NR	BB-
Moody's	NR	NR	Ba2
Amortization	*Not disclosed*	-	-
Pricing at close (bps)			
All-in Spread		235.0	185.0
SOFR Margin	*Not disclosed*	225.0	175.0
Facility Fee		-	-
Commitment Fee		37.5	30.0
Sustainability Adjustment	*Not disclosed*	-	-
Pricing Detail (bps)	*Not disclosed*	see below	see below

Haynes International Inc. – Pricing Detail (bps):

Avg. Quarterly Avail.	SOFR Spread	Comm. Fee
≥ 66.6%	200.0	37.5
≥ 33.3%	225.0	37.5
< 33.3%	250.0	37.5

Cleveland-Cliffs Inc. – Pricing Detail (bps):

Avg. Daily Excess Avail.	SOFR Spread Leverage < 4.00x	SOFR Spread Leverage > 4.00x
≥ 66.6%	125.0	150.0
≥ 33.3%	150.0	175.0
< 33.3%	200.0	200.0

Avg. Revolver Usage	Comm. Fee
≥ 50.0%	25.0
≥ 20.0%	30.0
< 20.0%	35.0

($ in millions)	ACG Electric Metals Ltd	Haynes International Inc.	Cleveland-Cliffs Inc.
SOFR Adjustment (bps) (1-mo / 3-mo / 6-mo)	*Not disclosed*	10.0 / 10.0 / 10.0	10.0 / 10.0 / 10.0
Rate Floor	*Not disclosed*	0.00%	0.00%
Financial Covenants			
Interest Coverage Ratio		-	-
Net Leverage Ratio	*Not disclosed*	-	-
Debt to Capital Ratio		-	-
Fixed Charge Coverage		1.00x when Avail is < the greater of i) $25.0 million and ii) 15% of Line Cap	1.00x when Avail is < the greater of i) $25.0 million and ii) 15% of Line Cap
Secured	No	Yes	Yes

Sources: S&P Capital IQ, Moody's, Refinitiv Loan Connector

PNC

SYNDICATED BANK LOAN MARKET *(Continued)*

($ in millions)	Edw. C. Levy Co.	Carpenter Technology Corp
Date	Oct. 2022 (Amended April 2023)	April 2023
Deal Size ($ in MM)	$150.0	$350.0
Facility Type	ABL Revolver	CF Revolver
Tenor	3 years	5 years
Purpose	Corporate Purposes	Corporate Purposes
Ratings		
S&P	NR	BB
Moody's	NR	B1
Amortization	-	-
Pricing at close (bps)		
All-in Spread	150.0	260.0
SOFR Margin	150.0	250.0
Facility Fee	***Not disclosed***	-
Commitment Fee	***Not disclosed***	37.5
Sustainability Adjustment	***Not disclosed***	-
Pricing Detail (bps)	*Not disclosed*	**Total Leverage Ratio / SOFR Spread / Comm. Fee** ≤ 2.00x / 175.0 / 25.0 > 2.00x / 200.0 / 30.0 > 2.50x / 225.0 / 35.0 ≥ 3.25x / 250.0 / 37.5
SOFR Adjustment (bps) (1-mo / 3-mo / 6-mo)	*Not disclosed*	10.0 / 10.0 / 10.0
Rate Floor	*Not disclosed*	0.00%
Financial Covenants	*Not disclosed*	
Interest Coverage Ratio		3.00x
Net Leverage Ratio		4.00x[1]
Debt to Capital Ratio		-
Fixed Charge Coverage		-
Secured	Yes	Yes

Sources: S&P Capital IQ, Moody's, Refinitiv Loan Connector

1 Nets (i) domestically held unrestricted cash and equivalents, and (ii) non-domestic unrestricted cash and equivalents up to $20.0 million; aggregate amount cannot exceed $100.0 million

1 World Bank. 2023. *Global Economic Prospects*, June 2023.

2 Bloomberg Finance L.P.

3 U.S. Census Bureau.

CIB SV PDF 0723-077-2296802