

High Grade Basic Materials Weekly

Week ended February 23, 2024

Industry Overview

HG Basic Materials spreads finished 3 bps tighter w-o-w

HG Basic Materials spreads finished 3 bps tighter w-o-w, performing roughly in-line with the Corp Index (-4 bps, OAS basis). All subsectors performed in-line, excluding Construction Products / Homebuilders which underperformed (unch'd w-o-w). In Chemicals, Sherwin Williams (SHW, UW) underperformed other on the run peers and closed ~4 bps wider w-o-w through the curve.

HG Basic Materials outperforms the market

HG Basic Materials (+25 bps of excess returns) underperformed the Corp Index (+33 bps) w-o-w. All subsectors underperformed, excluding Metals which performed in-line.

IFF cuts dividend by ~50%; CE, NTRCN, TCKBCN earnings

On Wednesday, we published a note that upgraded International Flavors and Fragrances (IFF) to OW from MW following its announced dividend cut and encouraging commentary around future asset sales. Recall, Bloomberg reported in late October that IFF was looking to sell its Pharma business for a value of up to \$3.5b. We think the dividend cut / asset sale commentary significantly supports IFF's credit story and should allow the company to manage its deleveraging timeline. We also believe the shift in capital allocation signals a sustainable commitment to an IG balance sheet, making a downgrade to HY unlikely, in our opinion. We think IFF's spreads should outperform in the near-term and view a potential asset sale announcement as an incremental positive catalyst for spreads. We share our [full note on IFF](#) later in this piece. Away from IFF, we discuss earnings from Celanese Corp (CE, MW), Nutrien Ltd. (NTRCN, MW), and Teck Resources Ltd. (TCKBCN, MW). CE posted a slight EBITDA miss and guided 1Q24 / FY24 adj earnings soft vs consensus. CE continued to make progress on deleveraging and affirmed its commitment to returning leverage to 3.0x net. We remain OW and think bonds should gradually grind tighter over the de-leveraging horizon. As for NTRCN, the company posted EBITDA below consensus but guided FY24 sales volumes mostly in-line across products. We expect improved fundamentals in 2024 though remain MW given fair trading levels vs peers. Separately, TCKBCN printed EBITDA in-line following a pre-release in mid-January. Management affirmed previously announced 1Q24 / FY24 guidance and continues to see GLENLN's portion of the coal deal closing no later than 3Q24. TCKBCN's credit story remains unch'd post earning and we affirm our MW rec.

Metals prices softer w-o-w; China cuts 5-yr LPR by 25 bps

Metals prices were largely softer w-o-w. In the US, hawkish commentary from the Fed caused the USD to move higher as investors further questioned the pace of rate cuts this year. [Our US econ team](#) expects the first 25 bps cut to come in June but notes the risk of inflation re-accelerating is worth monitoring given the US economy continues to surprise to the upside. Separately, China's 5-year loan prime rate (LPR) was lowered by 25 bps vs consensus of a 10 bps cut. [Our China econ team](#) expects additional monetary policy easing in 2024, calling for 45 bps in cumulative cuts to the 1-yr LPR this year.

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Timestamp: 23 February 2024 02:32PM EST

23 February 2024

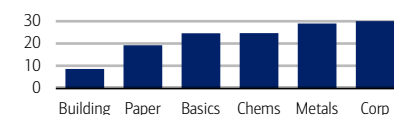
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Exhibit 1: WTD Excess Returns (bps)

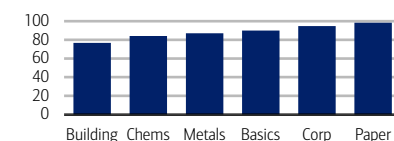
Basic materials underperformed this week



Source: BofA Global Research, ICE Data Indices, LLC
BofA GLOBAL RESEARCH

Exhibit 2: YTD Excess Return (bps)

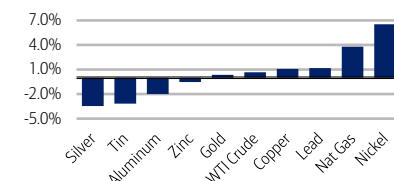
Basic materials underperformed YTD



Source: BofA Global Research, ICE Data Indices, LLC
BofA GLOBAL RESEARCH

Exhibit 3: W-o-w Commodity Performance

Nickel gained the most w-o-w at 6.5%; while Silver gained the least at -3.5%



Source: BofA Global Research, Bloomberg
BofA GLOBAL RESEARCH

News & Views

IFF cuts dividend by ~50% & affirms plans to sell assets; upgrade to OW from MW

IFF cuts dividend by ~50%; affirms plans to sell assets

On Tuesday evening, International Flavors and Fragrances (IFF) reported 4Q23 earnings. In its release, IFF reduced its dividend by ~50% to \$0.40/share (payable April 10) to enable faster deleveraging and provide improved financial flexibility. Management also maintained plans to pursue portfolio optimization actions with proceeds to be used for debt reduction. On its earnings call, management noted that its dividend cut does not change its divestiture strategy or timeline (though not provided). IFF also stated that targeted divestitures will be the biggest driver of achieving its de-leveraging goal. As a reminder, Bloomberg reported in late October that IFF was exploring a sale of its Pharma Solutions business, a sale that could be worth up to \$3.5b (according to Bloomberg), though investors believe that valuation is on the higher end. Separately, IFF affirmed its commitment to IG credit ratings and returning net leverage to 3.0x by YE24. The company reported adjusted net leverage of 4.5x as of YE23.

Dividend cut = sustainable commitment to IG B/S

IFF's dividend cut significantly supports its credit story and signals a more sustainable commitment to debt reduction. We believe rating agencies will view the decision favorably and could provide additional flexibility for IFF to reach its de-leveraging goal, which makes a downgrade to HY unlikely, in our view. Over the long-term, we think a smaller dividend burden (~\$400mm vs ~\$800mm previously) alleviates IFF's cash flow issues and could allow for more durable, value creation. In terms of asset sales, we believe that a Pharma sale is still on table and would essentially achieve IFF's de-leveraging goal, in our view. Should Pharma not be sold, we believe IFF would evaluate other divestitures to support de-leveraging. All together, we think IFF's dividend cut and encouraging commentary around asset sales significantly supports the company's credit story.

Attractive value vs peers, upgrade to OW from MW

We see value in IFF's spreads which are ~5-15 bps wide of LyondellBasell Industries (LYB, MW) and Eastman Chemical (EMN, NR) through the curve. We also see upside to IFF's ~20 bps discount to the BBB Corp Index when using a theoretical IFF 10-yr note (assuming a 25 bps 10s30s curve). We do not necessarily think IFF should trade tight to LYB or EMN right now given its lower credit rating, smaller size (to LYB), and higher leverage, but think the company's discount to both peers (and the BBB Corp Index) could decrease, over time, as the business executes on its de-leveraging plan and ratings improve. Notably, should a Pharma Solutions sale and/or other significant divestitures be announced, we think spreads could rally further and potentially trade inside LYB / EMN (and near the BBB Corp Index). As a result, we upgrade our issuer-level and bond-level recs on IFF to OW from MW as spreads likely tighten to reflect a credit friendly shift in capital allocation priorities and encouraging commentary around asset sales.

The above is an excerpt from our report [IFF cuts dividend by ~50% & affirms plans to sell assets; upgrade to OW from MW](#) published on February 21, 2024

CE 4Q23 adj. EBITDA miss; net debt down \$502mm q-o-q

On Tuesday evening, Celanese Corporation (CE, MW) reported 4Q23 adj. earnings of \$2.24/share, below Bloomberg consensus estimate of \$2.32/share. Adj. EBITDA of \$608mm was down 3% q-o-q and modestly below consensus estimates of \$618mm.

Cash flow and credit metrics

Cash from operations of \$830mm covered capex of \$128mm and dividends of \$77mm. CE reduced net debt by \$502mm during the quarter. Credit stats meaningfully improved q-o-q due to lower net debt levels: adj. total debt / LTM adj. EBITDA = 5.8x (6.3x as of 3Q23); adj. net debt / LTM adj. EBITDA = 5.1x (5.7x); LTM adj. EBITDA / LTM interest expense = 3.4x (3.2x).

Capital allocation

CE affirmed its commitment to IG credit ratings and returning net leverage to 3.0x “as rapidly as possible”. Management expects to finish 2024 near its leverage target and to reach it in 2025. Separately, in February, CE opportunistically amended its term loan / credit facility leverage covenant though noted that the amendment was not necessary.

Asset sales

CE maintained its opportunistic approach to asset sales (to support deleveraging) though noted its main priority is to integrate the Mobility & Materials (M&M) business.

1Q24 guidance

In 1Q24, CE expects adj. earnings of \$1.75-2.00/share, includes \$0.30/share for M&M amortization (consensus of \$2.56/share). For its segment, CE sees Acetyl Chain adj. EBIT of \$285-300mm (consensus of \$332mm) and Engineered Materials adj. EBIT \$190-200mm (consensus of \$231mm). CE does not expect meaningful sequential improvement in volume or pricing in 1Q24. The company also sees earnings impacted by over \$50mm of plant outage expenses. Away from earnings, CE expects negative free cash in 1Q24 due to working capital seasonality and one-time turnaround expenses. Management expects leverage to be stable q-o-q in 1Q24.

FY24 guidance

CE guided FY24 adj earnings of \$11-12/share (consensus of \$12.01/share). Key earnings drivers include (i) \$150mm of synergies from M&M (unch'd); (ii) \$100mm of incremental earnings from Clear Lake (unch'd); (iii) \$50mm lower debt costs; (iv) benefits from selling lower cost inventory; (v) \$50mm of higher expenses (planned plant outages); and (vi) \$50-75mm unfavorable impact from non-recurring contributions in FY23. Management also noted that at this stage they do not have enough visibility into order books or green shoots to meaningfully lift their demand outlook.

De-leveraging = achievable; remain OW as bonds should grind tighter

CEs credit story remains supported following its 4Q23 update. We think ongoing deleveraging actions should allow the business to maintain IG credit ratings at all three agencies. We forecast CE's leverage to be ahead of S&P downgrade triggers (4.0x net) by YE24 but note the company likely needs to reduce net debt by an additional ~\$1b in 2025 to prevent a downgrade to high yield at Moody's. We think this is manageable, as an improved macro could push earnings higher than our conservative outlook and management has assured investors they'd take additional actions (issuing equity, asset sales, etc.) to defend the rating, if needed. We therefore think a downgrade to HY is unlikely and believe that CE could trade closer to Eastman Chemical (which implies up to ~25 bps of upside potential) once de-leveraging is complete though this is likely 12-18 months away. As a result, we'd expect CE's spreads to grind tighter over its de-leveraging horizon but acknowledge that market volatility and macro uncertainty could lead to some choppiness along the way. We remain OW.

Segment results

- **AC:** 4Q23 EBITDA was \$354mm, down 3% q-o-q, due to lower pricing as CE had to source higher cost product from third parties due to operational disruptions. Volumes were consistent q-o-q.
- **EM:** 4Q23 EBITDA was \$311mm, down 9% q-o-q, due to lower volumes (destocking in auto and distribution in the Western hemisphere partly offset by improvements in Asia) and softer pricing.

Nutrien Ltd. (NTRCN) 4Q23 adj. EBITDA miss; FY24 sales guide mostly in-line across products

On Wednesday evening, Nutrien Ltd. (NTRCN, MW) reported 4Q23 adj. earnings of \$0.35/share, below Bloomberg consensus estimates of \$0.68/share. Adj. EBITDA of \$1,075mm was also below consensus estimates of \$1,123mm. The EBITDA miss was due to softer results in Potash.

Cash flow and credit metrics

Cash from operations of \$4,150mm (including a \$3,107mm working capital inflow) covered capex of \$781mm and dividends of \$262mm. There were no share repurchases during the quarter. Credit stats were mixed q-o-q: adj. total debt/LTM adj. EBITDA = 2.1x (2.1x as of 3Q23), adj. net debt/LTM adj. EBITDA = 1.8x (2.0x) and LTM adj. EBITDA/LTM interest expense = 7.6x (9.2x).

Market outlook

NTRCN provided the following outlook for its business segments in FY24:

- **Retail:** Adj. EBITDA of \$1.65-1.85b (consensus of \$1,805mm). Expect higher crop nutrient sale volumes and per ton margins, as well as a recovery in Brazilian crop protection margins in 2H24.
- **Potash:** Sales of 13-13.8mm tons (consensus of 13.1mm tons). Expect (i) 2024 global potash demand of 68-71 mt; (ii) strong North American demand in 1Q24; (iii) significantly increased demand from Southeast Asia; and (iii) lower potash imports from China compared to record levels in 2023.
- **Nitrogen:** Sales of 10.6-11.2mm tons (consensus of 10.9mm tons). Expect (i) continued global nitrogen supply constraints; (ii) balanced US markets; and (iii) global industrial demand at risk, most notably in Europe and Asia.
- **Phosphate:** Sales of 2.6-2.8mm tons (consensus of 2.5mm tons). Noting that phosphate fertilizer markets have remained relatively strong in 1Q24. Expect flat Chinese export volumes y-o-y and tight markets in India to support demand ahead of their key planting season.

Capital Allocation

NTRCN increased its quarterly dividend to \$0.54/share from \$0.53/share and approved a new share repurchase program of up to 5% of outstanding common shared over a 12-month period.

Fundamentals likely supported in 2024 but fair-trading levels leave us MW

NTRCN's credit story is unch'd following its 4Q23 update. We like the company's large size & scale, responsive management team, and healthy balance sheet (despite significantly lower EBITDA y-o-y). In 2024, we see fundamentals supported by improved crop nutrient demand and leverage likely moving off its high point for the current cycle. However, we note that investors may be cautious given a recovery could be lumpy and the previous downcycle lasted longer than most expected. Compared to peers, we view

NTRCN's ~5-10 bps discount to Dow Chemical (DOW, UW) through the curve as fair. We think NTRCN trading near DOW makes sense given our significantly more favorable outlook for NTRCN's end-market which mostly offset DOW's higher credit rating, diversification, and liquidity. As a result, we maintain our MW recommendation on NTRCN.

Operating results

- **Retail:** 4Q23 adj. EBITDA was \$229mm, down 41% y-o-y, due to lower gross margin for crop protection products and higher expenses.
- **Potash:** 4Q23 adj. EBITDA was \$463mm, down 52% y-o-y, due to lower net realized selling prices, which offset higher North American sales volumes and lower provisional mining taxes / royalties.
- **Nitrogen:** 4Q23 adj. EBITDA was \$229mm, down 41% y-o-y, due to lower net realized selling prices all major products which offset lower natural gas costs and higher sales volumes.
- **Phosphate:** 4Q23 adj. EBITDA was \$130mm, up from \$28mm in 4Q22, driven by lower sulfur and ammonia input costs, partly offset lower net realized selling prices.

TCKBCN 4Q23 adj. EBITDA in-line; FY24 guide affirmed

On Thursday morning, Teck Resources Ltd. (TCKBCN, MW) reported 4Q23 adj earnings of \$1.40/share, above consensus of \$1.34/share. Adj EBITDA of C\$1,703mm was in-line with consensus. Note, TCKBCN pre-released 4Q23 production figures in mid-January.

Cash flow and credit metrics

Cash from operations of C\$1,126mm (including a C\$184mm working capital outflow) did not cover capex of C\$1,086mm, dividends of \$64mm, and share repurchases of C\$165mm. Credit stats were mixed q-o-q: adj. total debt/LTM adj. EBITDA = 1.2x (1.3x at 3Q23), adj. net debt/LTM adj. EBITDA = 1.1x (1.1x), and LTM adj. EBITDA/LTM interest expense = 39.3x (53.6x).

Capital allocation

TCKBCN announced a new C\$500mm share buyback program. The company plans to return significant capital to shareholders with proceeds received from its coal transaction (unch'd). Management also expects to use proceeds to reduce gross debt (where it makes economic sense) and retain cash on its balance sheet (unch'd).

Elk Valley transaction

TCKBCN expects GLENLN's portion of the coal transaction to close no later than 3Q24 (unch'd). Nippon / Posco's portion of the deal (US\$1.3b of proceeds) closed on January 3, 2024.

1Q24

TCKBCN maintained 1Q24 guidance, includes refined zinc sales of 70-85k tons (unch'd, consensus of 71k tons) and steelmaking coal sales of 5.9-6.3mm tons (unch'd, consensus of 6.1mm tons).

FY24 guidance

TCKBCN reiterated previously announced FY24 guidance: (i) copper production of 465-540k tons (consensus of 486k tons); (ii) zinc production of 840-920k tons (consensus of 892k tons); (iii) steelmaking coal production (100% basis) of 24-26mm tons (consensus of 21mm tons); (iv) copper unit net cash costs of US\$1.85-2.25/lb (consensus of US\$1.96/lb); and (v) capex of C\$2,445-2,950mm. FY24 capex includes: QB2 spending of C\$700-900mm, sustaining capex of C\$1,515-1,800mm, growth capex of C\$500-590mm,



and partner contributions of C\$270-340mm. Regarding costs, TCKBCN expects unit net cash costs of US\$1.85-2.25/lb (unch'd, FY23 of US\$1.87/lb) and US\$0.55-0.65/lb (unch'd, FY23 of US\$0.55/lb) for copper and zinc respectively. Adjusted site cash cost of sales for steelmaking coal are expected to be C\$95-110/ton (unch'd) vs FY23 of C\$96/ton.

QB2 update

Total project cost guidance for QB2 is unchanged at US\$8.6-8.8b with US\$500-700mm expected in 2024 (unch'd). The project was operating near design throughput capacity at YE23 (unch'd).

Growth projects

TCKBCN plans to focus FY24 growth capex on its Highland Valley Copper (HVC) mine life extension and feasibility studies at San Nicolas and Zafranal. The company does not expect to sanction any new growth projects in 2024 but hopes to do so in 2025. Separately, as previously announced, the Peruvian government approved an application to extend the mine life at Antamina from 2028 to 2036. TCKBCN's expected spend for the project is US\$450mm, spread over eight years.

Credit story unch'd; remain MW on fair trading levels

TCKBCN's credit story remains unchanged following its 4Q23 update. We continue to view the company's copper asset / growth outlook and strong balance sheet favorably but see upside constrained by its pro-forma (post-coal sale) smaller size and less diversified nature. In addition, we think that spreads, which are wrapped around other BBB rated miners, trade near fair value and note that illiquidity within TCKBCN's outstanding bonds likely makes transacting in the name difficult. We acknowledge that TCKBCN (post-coal sale) screens attractive as an acquisition target for a larger A-rated miner (given it would be a pureplay base metals business) but think this is unlikely a near-term event and therefore not a significant driver of spreads. This leads us to maintain our MW rec on the name.

Operating results

- **Copper:** 4Q23 gross profit was C\$81mm, down from C\$248mm in 4Q22, due to elevated operating costs at QB as production ramped up. Realized copper prices of US\$3.75/lb were comparable to US\$3.72/lb in 4Q22. Unit net cash costs of US\$1.84/lb increased from US\$1.67/lb in 4Q22.
- **Steelmaking Coal:** 4Q23 gross profit was C\$1,084mm, up from C\$849mm in 4Q22, led by higher sales volumes, partly offset by lower prices. Realized steelmaking coal prices of US\$270/ton were slightly lower than US\$278/ton in 4Q22. Unit costs of US\$110/ton were comparable to US\$107/ton in 4Q22.
- **Zinc:** 4Q23 gross profit was C\$71mm, up from C\$57mm in 4Q22, led by improved results from its Trail Operations and higher contracted zinc premiums, partly offset by lower prices and higher costs. Realized copper prices of US\$1.13/lb were down from US\$1.38/lb in 4Q22. Unit net cash costs of US\$0.63/lb were up from US\$0.55/lb in 4Q22.

Rating Agency Commentary

Moody's revises ECL's outlook to stable; affirms A3 rating

Last Friday (2/16), Moody's revised Ecolab's (ECL) outlook to stable from negative and affirmed its A3 rating. The change in outlook reflects ECL's improved performance and meaningful debt reduction. Moody's expects continued earnings improvement in 2024. A positive ratings action could be taken if ECL meaningfully expands its scale and end-market diversity, retained cash flow to debt rises above 35% and its internal leverage target is lowered. Conversely, the company could be downgraded if leverage is sustained above 2.5x, there is a change in capital allocation policy such that net leverage goals are increased, or a large debt-funded acquisition increases leverage for a prolonged period.

BofA Recommendations

Exhibit 4: BofA Global Research Recommendations

HG Basic Materials recommendations include 2 Overweights and 2 Underweights

Chemicals	Rating	Metals, Mining, & Steel	Rating
Celanese Corporation	OW	Freeport-McMoRan Inc.	MW
Dow Inc	UW	Nucor Corporation	MW
Int'l Flavors & Fragrances	OW	Steel Dynamics, Inc.	MW, OW 2050s
LyondellBasell Industries	MW	Teck Resources Ltd	MW
Nutrien Ltd	MW		
Sherwin-Williams	UW		

Source: BofA Global Research

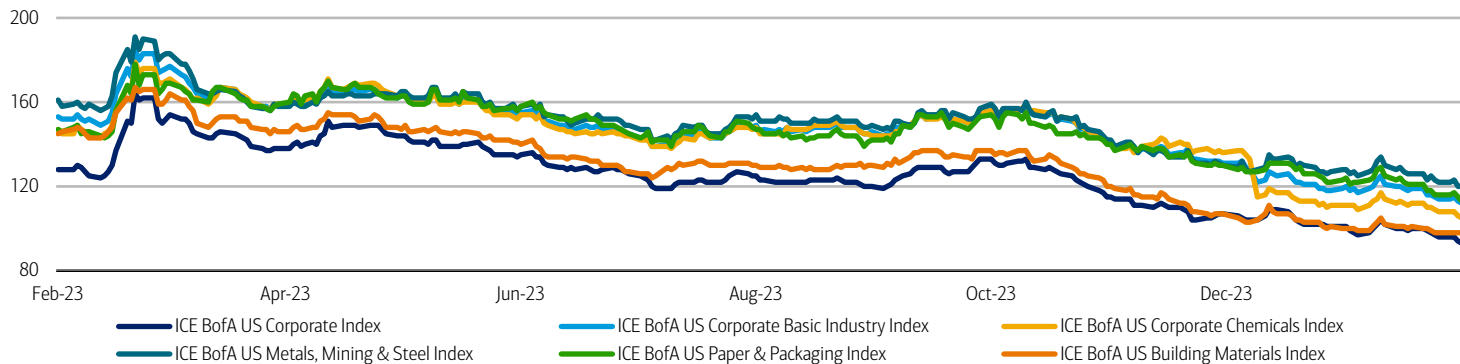
Note: UW = Underweight, MW = Marketweight, OW = Overweight, RSTR = Restricted. Please see credit opinion key at the end of this report

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HG Basic Materials Spreads

Exhibit 5: Option Adjusted Spread: HG Corporate Index and HG Basic Materials (& subsectors) Indices (LTM)

The Option Adjusted Spread for the HG Basic Materials Index has traded wide of the HG Corporate Index for the LTM



Source: BofA Global Research, ICE Data Indices, LLC

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Exhibit 6: HG Chemicals Cash Spreads (Bid)

In the HG Chemicals subsector, spreads were mixed w-o-w.

Issuer Entity		Coupon	Maturity	Outstanding (\$mm)	MDY/S&P	Bid (bps)	Z-Spread	G-Spread	Price	1 wk. change	6-mo tightts	6-mo wides	8-wk avg. spread (bps)
ALB	Albemarle Corp	5.050	6/1/2032	600	Baa3 / BBB	163	195	161	94.38	(1)	153	215	165
ALB	Albemarle Corp	5.650	6/1/2052	450	Baa3 / BBB	213	274	211	88.55	6	201	258	210
APD	Air Products and Chemicals	4.850	2/8/2034	1,150	A2 / A	76	110	76	98.46	0	76	78	77
APD	Air Products and Chemicals	2.800	5/15/2050	950	A2 / A	76	139	71	66.14	0	62	88	73
CE	Celanese US Holdings LLC	6.700	11/15/2033	1,000	Baa3 / BBB-	170	203	169	105.08	(3)	163	259	174
CF	CF Industries Inc	5.375	3/15/2044	750	Baa3 / BBB	142	207	144	92.94	1	138	200	144
CTVA	Corteva, Inc	4.800	5/15/2033	600	A3 / A-	76	110	75	98.18	1	75	125	79
DD	DuPont de Nemours Inc	5.419	11/15/2048	2,150	Baa1 / BBB+	114	171	107	98.19	0	96	150	110
DOW	Dow Chemical Co/The	5.150	2/15/2034	600	Baa1 / BBB	96	130	96	99.23	(3)	96	106	100
DOW	Dow Chemical Co/The	5.600	2/15/2054	650	Baa1 / BBB	130	194	130	98.37	1	129	133	131
ECL	Ecolab Inc	2.125	2/1/2032	650	A3 / A-	62	96	60	81.89	1	53	92	62
ECL	Ecolab Inc	2.700	12/15/2051	850	A3 / A-	83	149	80	63.01	4	69	107	76
EMN	Eastman Chemical Co	5.625	2/20/2034	750	Baa2 / BBB	144	178	144	99.22	2	142	144	143
EMN	Eastman Chemical Co	4.650	10/15/2044	900	Baa2 / BBB	144	210	147	84.11	3	138	192	142
FMC	FMC Corp	5.650	5/18/2033	500	Baa2 / BBB-	185	218	184	96.59	(8)	179	257	187
FMC	FMC Corp	6.375	5/18/2053	500	Baa2 / BBB-	218	280	217	97.20	(4)	205	271	216
HUN	Huntsman International LLC	2.950	6/15/2031	400	Baa3 / BBB-	169	201	166	82.30	(3)	165	225	170
IFF	International Flavors and Fragrances Inc	3.468	12/1/2050	1,500	Baa3 / BBB-	162	224	158	66.18	(2)	162	234	167
LIN	Linde Inc/CT	2.000	8/10/2050	300	A2 / A	70	135	65	55.15	3	62	95	65
LYB	LYB International Finance III LLC	5.625	5/15/2033	500	Baa2 / BBB	112	145	111	101.53	(2)	110	169	114
LYB	LYB International Finance III LLC	3.625	4/1/2051	1,000	Baa2 / BBB	146	209	142	69.73	(2)	136	192	146
MOS	Mosaic Co	5.625	11/15/2043	600	Baa2 / BBB	156	220	159	94.35	2	150	197	155
NTRCN	Nutrien Ltd	5.800	3/27/2053	750	Baa2 / BBB	139	202	138	99.99	1	122	181	131
RPM	RPM International Inc	2.950	1/15/2032	300	Baa3 / BBB	121	154	119	83.88	5	116	201	127
RPM	RPM International Inc	4.250	1/15/2048	300	Baa3 / BBB	141	198	133	79.87	0	141	200	146
SHW	Sherwin-Williams Co/The	2.200	3/15/2032	500	Baa2 / BBB	87	121	85	80.71	4	81	131	85
SHW	Sherwin-Williams Co/The	2.900	3/15/2052	500	Baa2 / BBB	98	164	95	64.19	4	87	143	93
WLK	Westlake Chemical Corp	3.125	8/15/2051	600	Baa2 / BBB	142	206	139	63.17	2	132	184	141

Source: BofA Global Research, BofA Trading Desk, Bloomberg

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Exhibit 7: HG Metals, Mining and Steel Cash Spreads (Bid)

In the HG Metals, Mining, & Steel subsector, spreads were mixed w-o-w.

Issuer	Entity	Coupon	Maturity	Outstanding (\$mm)	MDY/S&P	Bid (bps)	Z-Spread	G-Spread	Price	1 wk. change	6-mo tights	6-mo wides	8-wk avg. spread (bps)
AALLN	Anglo American Capital PLC	5.500	5/2/2033	900	Baa2 / BBB	151	184	150	97.89	1	149	195	154
AALLN	Anglo American Capital PLC	4.750	3/16/2052	750	Baa2 / BBB	157	220	154	83.36	1	150	208	160
ABXCN	Barrick Gold Corp	5.750	5/1/2043	849	Baa1 / BBB	106	170	110	101.49	1	94	135	106
BHP	BHP Billiton Finance USA Ltd	5.250	9/8/2033	1,500	A2 / A-	82	116	81	101.04	(7)	82	120	88
BHP	BHP Billiton Finance USA Ltd	5.500	9/8/2053	800	A2 / A-	96	160	95	101.89	3	84	113	90
FCX	Freeport-McMoRan Inc	5.400	11/14/2034	730	Baa2 / BB+	151	185	149	96.84	2	131	206	145
FCX	Freeport-McMoRan Inc	5.450	3/15/2043	1,706	Baa2 / BB+	154	218	158	92.73	0	139	203	150
GLENLN	Glencore Funding LLC	6.500	10/6/2033	1,000	Baa1 / BBB+	130	163	129	106.59	(6)	130	197	136
GLENLN	Glencore Funding LLC	3.375	9/23/2051	500	Baa1 / BBB+	128	192	125	67.98	3	125	188	130
KCN	Kinross Gold Corp	6.250	7/15/2033	500	Baa3 / BBB-	166	199	165	102.10	(1)	157	238	167
NEM	Newmont Corp	2.600	7/15/2032	1,000	Baa1 / BBB+	97	131	95	82.16	(1)	80	136	94
NEM	Newmont Corp	4.875	3/15/2042	1,000	Baa1 / BBB+	105	169	112	91.72	2	84	139	95
NUE	Nucor Corp	3.125	4/1/2032	550	Baa1 / A-	80	113	78	87.10	2	76	127	79
NUE	Nucor Corp	3.850	4/1/2052	550	Baa1 / A-	95	160	93	78.19	3	83	142	91
RIOLN	Rio Tinto Finance USA Ltd	5.000	3/9/2033	650	A2 / A-	74	107	73	99.81	4	59	107	68
RIOLN	Rio Tinto Finance USA Ltd	5.125	3/9/2053	1,100	A2 / A-	97	161	96	96.30	3	83	116	90
SOUTAU	South32 Treasury Ltd	4.350	4/14/2032	700	Baa1 / BBB+	176	208	174	89.22	(3)	176	244	186
STLD	Steel Dynamics	3.250	1/15/2031	500	Baa2 / BBB	89	119	86	88.96	2	87	145	97
STLD	Steel Dynamics	3.250	10/15/2050	400	Baa2 / BBB	144	207	140	65.15	4	130	170	142
TCKBCN	Teck Resources Ltd	5.400	2/1/2043	367	Baa3 / BBB-	161	225	166	91.49	1	158	222	162

Source: BofA Global Research, BofA Trading Desk, Bloomberg

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Exhibit 8: HG Paper, Packaging, and Wood Cash Spreads (Bid)

In the HG Paper, Packaging, & Wood subsector, spreads were mostly unch'd w-o-w.

Issuer	Entity	Coupon	Maturity	Outstanding (\$mm)	MDY/S&P	Bid (bps)	Z-Spread	G-Spread	Price	1 wk. change	6-mo tights	6-mo wides	8-wk avg. spread (bps)
ATR	AptarGroup Inc	3.600	3/15/2032	400	Baa3 / BBB-	127	160	125	87.60	(6)	118	180	126
AVY	Avery Dennison Corp	5.750	3/15/2033	400	Baa2 / BBB	100	133	99	103.44	0	98	155	102
IP	International Paper Co	4.350	8/15/2048	740	Baa2 / BBB	113	170	105	84.48	0	103	155	109
PKG	Packaging Corp of America	3.050	10/1/2051	700	Baa2 / BBB	95	160	92	67.21	0	95	147	100
SON	Sonoco Products Co	2.850	2/1/2032	500	Baa2 / BBB	108	141	106	84.09	0	105	155	112
SON	Sonoco Products Co	5.750	11/1/2040	537	Baa2 / BBB	130	193	141	99.04	3	126	175	132
WRK	WRKCO Inc	3.000	6/15/2033	600	Baa2 / BBB	95	130	94	83.88	0	95	149	100
WY	Weyerhaeuser	3.375	3/9/2033	450	Baa2 / BBB	105	139	104	86.27	0	105	145	108
WY	Weyerhaeuser	4.000	3/9/2052	450	Baa2 / BBB	110	174	107	78.89	0	107	142	112

Source: BofA Global Research, BofA Trading Desk, Bloomberg

BofA GLOBAL RESEARCH



Exhibit 9: HG Construction Materials/Homebuilders Cash Spreads (Bid)

In the HG Construction Materials/Homebuilders subsector, spreads were mostly flat to 5 bps wider w-o-w.

Issuer	Entity	Coupon	Maturity	Outstanding (\$mm)	MDY/S&P	Bid (bps)	Z-Spread	G-Spread	Price	1 wk. change	6-mo tights	6-mo wides	8-wk avg. spread (bps)
EXP	Eagle Materials	2.500	7/1/2031	750	Baa2 / BBB	98	130	95	83.33	(4)	98	163	105
FBINUS	Fortune Brands Home & Security Inc	5.875	6/1/2033	600	Baa2 / BBB	137	170	136	101.54	3	130	200	138
FBINUS	Fortune Brands Home & Security Inc	4.500	3/25/2052	450	Baa2 / BBB	147	210	144	81.19	3	141	202	149
MAS	Masco Corp	2.000	2/15/2031	600	Baa2 / BBB	101	132	98	81.01	0	101	150	108
MAS	Masco Corp	3.125	2/15/2051	300	Baa2 / BBB	115	179	111	66.23	2	109	185	114
MLM	Martin Marietta Materials Inc	2.400	7/15/2031	900	Baa2 / BBB+	96	128	93	82.76	2	92	144	95
MLM	Martin Marietta Materials Inc	3.200	7/15/2051	900	Baa2 / BBB+	99	163	95	68.75	9	80	141	89
OC	Owens Corning	4.300	7/15/2047	600	Baa1 / BBB	124	195	130	80.95	(2)	96	172	112
PHM	PulteGroup Inc	7.875	6/15/2032	300	Baa2 / BBB	133	164	131	114.81	2	130	192	136
VMC	Vulcan Materials Co	4.700	3/1/2048	461	Baa2 / BBB+	110	167	102	89.31	5	99	151	109

Source: BofA Global Research, BofA Trading Desk, Bloomberg

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HG Basic Materials Financial Data

Exhibit 10: HG Chemicals Financial Data (LTM as of 3Q23)

LTM financial data for HG Chemical Companies as of 3Q23

Company Name	Air Products	Albemarle	Celanese	CF Industries	Dow Chemical	DuPont	Eastman Chemical	Ecolab Inc.	FMC Corp.
Debt Ticker:	APD	ALB	CE	CF	DOW	DD	EMN	ECL	FMC
Sector/Subsector:	Industrial Gases	Spec. Chemicals	Spec. Chemicals	Agri. Chemicals	Petro. Chemicals	Spec. Chemicals	Spec. Chemicals	Spec. Chemicals	Agri. Chemicals
Moody's	A2 / S	Baa3 / S	Baa3 / N	Baa3 / S	Baa1 / S	Baa1 / S	Baa2 / S	A3 / N	Baa2 / S
S&P	A / S	BBB / S	BBB- / S	BBB / S	BBB / P	BBB+ / S	BBB / S	A- / N	BBB- / S
Financials (LTM, US\$ mm)									
Total Revenue	\$12,600	\$7,571	\$10,719	\$7,668	\$45,860	\$12,274	\$9,376	\$15,053	\$4,963
EBITDA	\$4,702	\$3,899	\$2,322	\$3,464	\$5,427	\$2,965	\$1,558	\$2,934	\$1,155
EBITDA Margin	37.3%	51.5%	21.7%	45.2%	11.8%	24.2%	16.6%	19.5%	23.3%
Capital Expenditures	\$4,626	\$1,365	\$583	\$445	\$2,197	\$659	\$852	\$714	\$143
Dividends	\$1,497	\$140	\$305	\$314	\$1,976	\$647	\$373	\$608	\$486
Free Cash Flow	(\$2,917)	\$242	\$722	\$2,103	\$1,445	\$113	\$154	\$1,096	(\$629)
Cash & Cash Equivalents	\$1,949	\$1,587	\$1,357	\$3,254	\$3,080	\$1,338	\$439	\$1,001	\$324
Total Debt	\$10,306	\$3,236	\$14,334	\$2,967	\$20,029	\$9,314	\$5,924	\$8,616	\$4,116
Total Debt/EBITDA	2.2x	0.8x	6.2x	0.9x	3.7x	3.1x	3.8x	2.9x	3.6x
Net Debt	\$8,357	\$1,649	\$12,977	(\$287)	\$16,949	\$7,976	\$5,485	\$7,615	\$3,792
Net Debt/EBITDA	1.8x	0.4x	5.6x	-0.1x	3.1x	2.7x	3.5x	2.6x	3.3x
Interest	\$178	\$76	\$710	\$90	\$724	\$417	\$211	\$296	\$225
EBITDA/Interest	26.5x	51.0x	3.3x	38.5x	7.5x	7.1x	7.4x	9.9x	5.1x
Market Capitalization	\$59,627	\$13,438	\$12,844	\$15,283	\$34,064	\$29,961	\$8,717	\$49,834	\$6,337
Enterprise Value	\$67,984	\$15,087	\$25,821	\$15,373	\$51,013	\$37,937	\$14,202	\$57,449	\$10,129
EV/EBITDA	14.5x	3.9x	11.1x	4.4x	9.4x	12.8x	9.1x	19.6x	8.8x
Total Debt/EV	15%	21%	56%	19%	39%	25%	42%	15%	41%

Source: BofA Research, Company Reports, Bloomberg

BofA GLOBAL RESEARCH

Exhibit 11: HG Chemicals Financial Data (LTM as of 3Q23)

LTM financial data for HG Chemical Companies as of 3Q23

Company Name	Huntsman Corp.	Int'l Flavors & Fragrances	LyondellBasell	Mosaic	Nutrien	PPG Industries	RPM International	Sherwin-Williams	Westlake
Debt Ticker:	HUN	IFF	LYB	MOS	NTRCN	PPG	RPM	SHW	WLK
Sector/Subsector:	Commod. Chemicals	Spec. Chemicals	Petro. Chemicals	Agri. Chemicals	Agri. Chemicals	Coatings	Coatings	Coatings	Petro. Chemicals
Moody's	Baa3 / S	Baa3 / N	Baa2 / S	Baa2 / S	Baa2 / S	A3 / S	Baa3 / S	Baa2 / S	Baa2 / S
S&P	BBB- / S	BBB- / N	BBB / S	BBB / S	BBB / S	BBB+ / N	BBB / S	BBB / S	BBB / P
Financials (LTM, US\$ mm)									
Total Revenue	\$5,969	\$11,620	\$41,384	\$15,028	\$30,925	\$18,081	\$7,336	\$23,030	\$13,021
EBITDA	\$515	\$1,959	\$5,177	\$2,807	\$7,078	\$2,817	\$985	\$4,183	\$2,816
EBITDA Margin	8.6%	16.9%	12.5%	18.7%	22.9%	15.6%	13.4%	18.2%	21.6%
Capital Expenditures	\$233	\$550	\$1,520	\$1,384	\$2,814	\$531	\$249	\$803	\$1,049
Dividends	\$168	\$825	\$1,591	\$339	\$1,021	\$591	\$217	\$624	\$202
Free Cash Flow	(\$46)	(\$424)	\$1,931	\$1,102	\$1,817	\$978	\$447	\$1,818	\$1,347
Cash & Cash Equivalents	\$496	\$639	\$2,833	\$591	\$554	\$1,218	\$241	\$503	\$3,057
Total Debt	\$2,118	\$10,301	\$13,165	\$3,657	\$14,987	\$6,202	\$2,505	\$9,936	\$5,379
Total Debt/EBITDA	4.1x	5.3x	2.5x	1.3x	2.1x	2.2x	2.5x	2.4x	1.9x
Net Debt	\$1,622	\$9,662	\$10,332	\$3,066	\$14,433	\$4,984	\$2,264	\$9,433	\$2,322
Net Debt/EBITDA	3.1x	4.9x	2.0x	1.1x	2.0x	1.8x	2.3x	2.3x	0.8x
Interest	\$64	\$441	\$337	\$128	\$768	\$243	\$124	\$431	\$167
EBITDA/Interest	8.0x	4.4x	15.4x	21.9x	9.2x	11.6x	7.9x	9.7x	16.9x
Market Capitalization	\$4,294	\$18,130	\$29,971	\$11,266	\$27,952	\$29,508	\$12,606	\$65,463	\$15,845
Enterprise Value	\$5,916	\$27,792	\$40,303	\$14,332	\$42,385	\$34,492	\$15,112	\$74,896	\$18,167
EV/EBITDA	11.5x	14.2x	7.8x	5.1x	6.0x	12.2x	15.3x	17.9x	6.5x
Total Debt/EV	36%	37%	33%	26%	35%	18%	17%	13%	30%

Source: BofA Research, Company Reports, Bloomberg

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**Exhibit 12: HG Metals, Mining, & Steel Financial Data (LTM as of 3Q23)**

LTM financial data for HG Metals, Mining, & Steel Companies as of 3Q23

Company Name	Barrick Gold	Freeport McMoRan	Kinross Gold	Newmont Mining	Nucor	Reliance Steel	Steel Dynamics	Teck Resources
Debt Ticker:	ABXCN	FCX	KCN	NEM	NUE	RS	STLD	TCKBCN
Sector/Subsector:	Metals & Mining	Metals & Mining	Metals & Mining	Metals & Mining	Steel	Steel	Steel	Metals & Mining
Moody's	A3 / S	Baa3 / S	Baa3 / S	Baa1 / P	Baa1 / S	Baa2 / S	Baa2 / S	Baa3 / S
S&P	BBB+ / S	BB+ / P	BBB- / N	BBB+ / S	A- / S	BBB / P	BBB / S	BBB- / S
Financials (LTM, US\$ mm)								
Total Revenue	\$11,112	\$22,708	\$4,133	\$11,055	\$35,733	\$15,079	\$19,388	\$12,731
EBITDA	\$5,301	\$8,754	\$1,751	\$3,990	\$7,630	\$2,144	\$3,904	\$5,997
EBITDA Margin	47.7%	38.6%	42.4%	36.1%	21.4%	14.2%	20.1%	47.1%
Capital Expenditures	\$3,116	\$4,509	\$1,098	\$2,392	\$2,014	\$451	\$1,487	\$4,917
Dividends	\$785	\$861	\$148	\$1,390	\$517	\$233	\$262	\$515
Free Cash Flow	(\$354)	(\$964)	\$452	(\$625)	\$5,594	\$1,271	\$2,050	(\$1,544)
Cash & Cash Equivalents	\$4,261	\$6,442	\$465	\$3,190	\$6,719	\$977	\$2,266	\$1,343
Total Debt	\$4,775	\$9,405	\$2,415	\$6,087	\$6,681	\$1,142	\$3,095	\$6,745
Total Debt/EBITDA	0.9x	1.1x	1.4x	1.5x	0.9x	0.5x	0.8x	1.1x
Net Debt	\$514	\$2,963	\$1,950	\$2,897	(\$38)	\$165	\$829	\$5,402
Net Debt/EBITDA	0.1x	0.3x	1.1x	0.7x	0.0x	0.1x	0.2x	0.9x
Interest	\$205	\$555	\$104	\$215	\$28	\$46	\$86	\$112
EBITDA/Interest	25.9x	15.8x	16.8x	18.6x	276.3x	46.8x	45.6x	53.5x
Market Capitalization	\$26,491	\$50,913	\$6,421	\$39,415	\$37,385	\$15,291	\$17,528	\$24,883
Enterprise Value	\$27,005	\$53,876	\$8,371	\$42,312	\$37,347	\$15,456	\$18,357	\$30,285
EV/EBITDA	5.1x	6.2x	4.8x	10.6x	4.9x	7.2x	4.7x	5.0x
Total Debt/EV	18%	17%	29%	14%	18%	7%	17%	22%

Source: BofA Research, Company Reports, Bloomberg

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Exhibit 13: HG Paper, Packaging, & Wood Financial Data (LTM as of 3Q23)

LTM financial data for HG Paper, Packaging, & Wood Companies as of 3Q23

Company Name	Avery Dennison	CCL Industries	International Paper	Packaging Corp	Sonoco Products	WestRock	Weyerhaeuser
Debt Ticker:	AVY	CCLBCN	IP	PKG	SON	WRK	WY
Sector/Subsector:	Labeling	Labeling	Paper / Packaging	Paper / Packaging	Packaging	Packaging	Forestry
Moody's	Baa2 / S	Baa2 / S	Baa2 / S	Baa2 / S	Baa2 / S	Baa2 / S	Baa2 / S
S&P	BBB / S	BBB / S	BBB / S	BBB / S	BBB / N	BBB / S	BBB / S
Financials (LTM, US\$ mm)							
Total Revenue	\$8,280	\$4,896	\$19,448	\$7,843	\$6,822	\$20,310	\$7,723
EBITDA	\$1,178	\$957	\$2,535	\$1,622	\$1,022	\$2,872	\$1,742
EBITDA Margin	14.2%	19.5%	13.0%	20.7%	15.0%	14.1%	22.6%
Capital Expenditures	\$288	\$377	\$1,158	\$576	\$337	\$1,142	\$512
Dividends	\$252	\$137	\$646	\$453	\$195	\$281	\$1,208
Free Cash Flow	\$320	\$266	\$298	\$371	\$271	\$405	(\$408)
Cash & Cash Equivalents	\$210	\$577	\$1,149	\$727	\$258	\$393	\$1,173
Total Debt	\$3,314	\$1,889	\$5,669	\$2,087	\$3,255	\$8,584	\$5,679
Total Debt/EBITDA	2.8x	2.0x	2.2x	1.3x	3.2x	3.0x	3.3x
Net Debt	\$3,104	\$1,312	\$4,520	\$1,361	\$2,997	\$8,191	\$4,506
Net Debt/EBITDA	2.6x	1.4x	1.8x	0.8x	2.9x	2.9x	2.6x
Interest	\$112	\$67	\$238	\$57	\$128	\$418	\$274
EBITDA/Interest	10.5x	14.4x	10.7x	28.3x	8.0x	6.9x	6.4x
Market Capitalization	\$14,018	\$6,343	\$11,450	\$14,123	\$5,398	\$9,864	\$20,739
Enterprise Value	\$17,122	\$7,656	\$15,970	\$15,483	\$8,395	\$18,054	\$25,245
EV/EBITDA	14.5x	8.0x	6.3x	9.5x	8.2x	6.3x	14.5x
Total Debt/EV	19%	25%	35%	13%	39%	48%	22%

Source: BofA Research, Company Reports, Bloomberg

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**Exhibit 14: HG Construction Materials/Homebuilders Financial Data (LTM as of 3Q23)**

LTM financial data for HG Construction Materials/Homebuilders Companies as of 3Q23

Company Name	D.R. Horton	Eagle Materials	Fortune Brands	Martin Marrietta	Masco	Mohawk	Owens Corning	Vulcan
Debt Ticker:	DHI	EXP	FBINUS	MLM	MAS	MHK	OC	VMC
Sector/Subsector:	Homebuilding	Construction Products	Building Products	Construction Products	Building Products	Building Products	Building Products	Construction Products
Moody's	Baa1 / S	Baa2 / S	Baa2 / S	Baa2 / S	Baa2 / S	Baa1 / S	Baa2 / P	Baa2 / S
S&P	BBB+ / S	BBB / S	BBB / S	BBB+ / S	BBB / S	BBB+ / S	BBB / S	BBB+ / S
Financials (LTM, US\$ mm)								
Total Revenue	\$35,460	\$2,205	\$966	\$6,646	\$8,008	\$11,174	\$9,658	\$7,680
EBITDA	\$6,364	\$772	\$861	\$2,052	\$1,235	\$1,348	\$2,264	\$1,824
EBITDA Margin	17.9%	35.0%	89.2%	30.9%	15.4%	12.1%	23.4%	23.8%
Capital Expenditures	\$149	\$132	\$247	\$637	\$268	\$523	\$530	\$829
Dividends	\$341	\$36	\$124	\$169	\$256	\$0	\$175	\$225
Free Cash Flow	\$3,814	\$386	\$743	\$597	\$369	\$751	\$991	\$402
Cash & Cash Equivalents	\$3,874	\$47	\$453	\$648	\$560	\$518	\$1,323	\$340
Total Debt	\$5,095	\$1,090	\$2,829	\$4,344	\$3,012	\$2,598	\$3,022	\$3,875
Total Debt/EBITDA	0.8x	1.4x	3.3x	2.1x	2.4x	1.9x	1.3x	2.1x
Net Debt	\$1,221	\$1,042	\$2,376	\$3,697	\$2,452	\$2,080	\$1,699	\$3,535
Net Debt/EBITDA	0.2x	1.4x	2.8x	1.8x	2.0x	1.5x	0.8x	1.9x
Interest	\$204	\$42	\$122	\$168	\$108	\$75	\$89	\$190
EBITDA/Interest	31.3x	18.5x	7.1x	12.2x	11.4x	18.0x	25.4x	9.6x
Market Capitalization	\$43,162	\$5,165	\$6,959	\$28,052	\$12,610	\$5,137	\$11,047	\$25,661
Enterprise Value	\$44,383	\$6,207	\$9,335	\$31,749	\$15,062	\$7,216	\$12,746	\$29,196
EV/EBITDA	7.0x	8.0x	10.8x	15.5x	12.2x	5.4x	5.6x	16.0x
Total Debt/EV	11%	18%	30%	14%	20%	36%	24%	13%

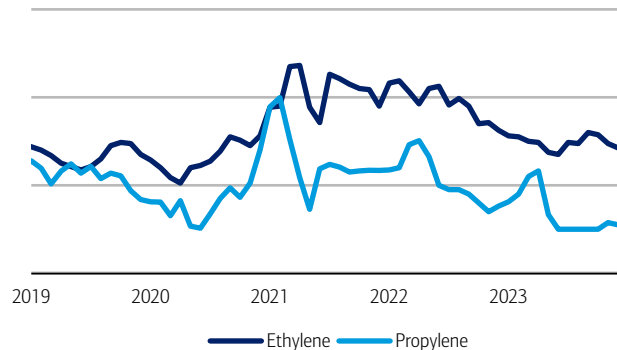
Source: BofA Research, Company Reports, Bloomberg

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Chemical Markets Data

Exhibit 15: Olefin Pricing (\$/lb)

Olefin prices have declined from their highs

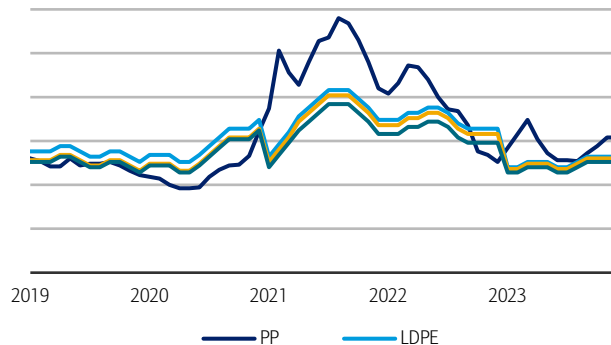


Source: Chemical Data Inc., a part of ICIS

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Exhibit 16: Polyolefin Pricing (\$/lb)

Polyolefin prices declined from their highs but have started to stabilize

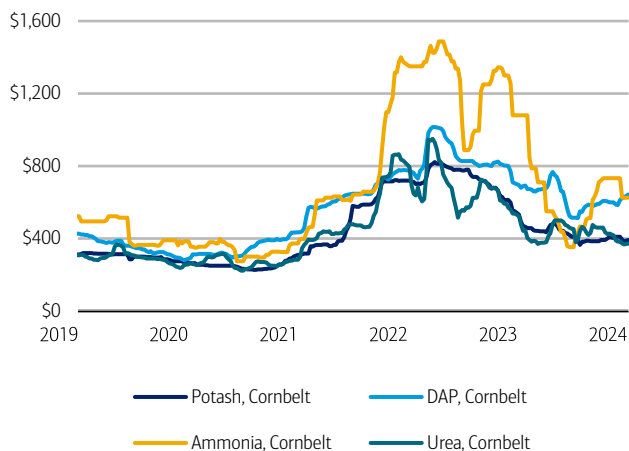


Source: Chemical Data Inc., a part of ICIS

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Exhibit 17: Fertilizer Pricing (\$/st)

Fertilizer prices declined from their high but have started to stabilize

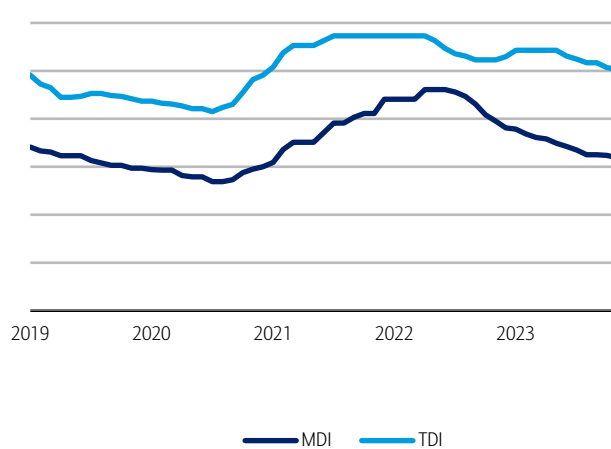


Source: BofA Global Research, Bloomberg

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Exhibit 18: Isocyanates Pricing (\$/lb)

MDI and TDI have rebounded from their COVID lows

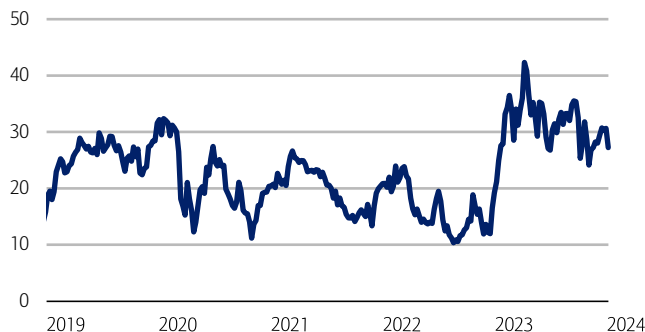


Source: Chemical Data Inc., a part of ICIS

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Exhibit 19: Brent (\$/bbl) to Natural Gas (\$/mmbtu)

The ratio of Brent to Natural Gas is at elevated levels

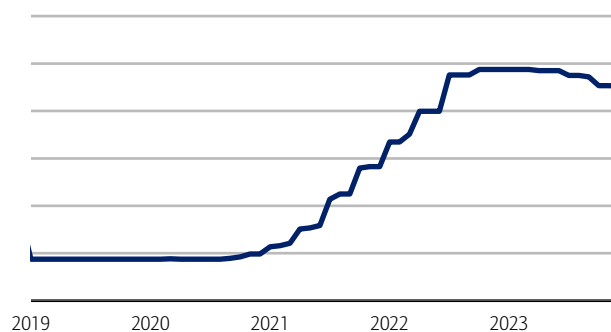


Source: BofA Global Research, Bloomberg

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Exhibit 20: Chlorine Price (US Gulf Coast FOB \$/st)

Chlorine price were largely flat in 2023



Source: Chemical Market Analytics by OPIS, a Dow Jones Company

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Commodity Forecasts

Exhibit 21: Commodity Team Base Metals Forecasts

BofA's quarterly and annual forecasts for base metals

		1Q24E	2Q24E	3Q24E	4Q24E	2024E	2025E	2026E	2027E	2028E	LT price
Aluminum	US\$/t	2,250	2,500	2,750	2,750	2,563	3,000	3,250	3,015	2,781	2,546
	US\$/lb	102	113	125	125	116	136	147	137	126	115
Strip Aluminum	US\$/t	2,279	2,279	2,279	2,279	2,279	2,425	2,546	2,637		
Copper	US\$/t	8,000	8,500	8,750	9,250	8,625	10,500	9,500	9,539	9,578	9,617
	US\$/lb	363	386	397	420	391	476	431	433	434	436
Strip Copper	US\$/t	8,593	8,593	8,593	8,593	8,593	8,686	8,712	8,725		
Lead	US\$/t	2,000	2,000	2,000	2,000	2,000	1,750	2,024	2,217	2,409	2,602
	US\$/lb	91	91	91	91	91	79	92	101	109	118
Strip Lead	US\$/t	2,167	2,167	2,167	2,167	2,167	2,189	2,219	2,251		
Nickel	US\$/t	18,500	18,500	19,000	19,000	18,750	20,000	20,000	19,141	18,283	17,424
	US\$/lb	839	839	862	862	850	907	907	868	829	790
Strip Nickel	US\$/t	16,925	16,925	16,925	16,925	16,925	17,858	18,628	19,421		
Zinc	US\$/t	2,500	2,500	2,250	2,250	2,375	2,250	2,424	2,596	2,769	2,942
	US\$/lb	113	113	102	102	108	102	110	118	126	133
Strip Zinc	US\$/t	2,592	2,592	2,592	2,592	2,592	2,621	2,627	2,630		

Source: BofA Global Research, BofA Global Commodity Research, Bloomberg

BofA GLOBAL RESEARCH

Exhibit 22: Commodity Team Precious Metals Forecasts

BofA's quarterly and annual forecasts for precious metals

		1Q24E	2Q24E	3Q24E	4Q24E	2024E	2025E	2026E	2027E	2028E	LT price
Gold, nominal	US\$/oz	1,950	1,950	2,000	2,000	1,975	2,150	2,096	2,095	2,094	2,093
Gold, real	US\$/oz	1,950	1,950	2,000	2,000	1,975	2,098	1,995	1,946	1,898	1,850
Strip Gold	US\$/oz	2,064	2,064	2,064	2,064	2,064	2,155	2,259	2,314		
Silver, nominal	US\$/oz	22.50	23.00	23.53	24.00	23.26	24.75	26.07	27.18	28.39	29.42
Silver, real	US\$/oz	22.50	23.00	23.53	24.00	23.26	24.15	24.81	25.21	25.60	26.00
Strip Silver	US\$/oz	22.92	22.92	22.92	22.92	22.92	24.26	25.19	25.40		
Platinum	US\$/oz	1,000	1,000	1,100	1,250	1,050	1,250	1,322	1,372	1,421	1,471
Strip Platinum	US\$/oz	907	907	907	907	907	936	969			
Palladium	US\$/oz	900	800	700	600	750	500	500	824	1,147	1,471
Strip Palladium	US\$/oz	958	958	958	958	958	1,000	1,049			

Source: BofA Global Research, BofA Global Commodity Research, Bloomberg

BofA GLOBAL RESEARCH

Exhibit 23: Commodity Team Bulk Commodities Forecasts

BofA's quarterly and annual forecasts for bulk commodities

		1Q24E	2Q24E	3Q24E	4Q24E	2024E	2025E	2026E	2027E	2028E	LT price
Hard coking coal	US\$/t fob	360	280	210	230	270	215	205	212	219	226
Strip Hard coking coal	US\$/t fob	295	295	295	295	295	273	220	215		
Semi-soft	US\$/t fob	238	185	139	152	178	142	135	134	133	132
Thermal Coal	US\$/t fob	148	148	151	153	150	125	112	112	113	113
Iron ore fines, spot	US\$/t CIF	150	130	120	100	125	90	90	94	98	102
Strip Iron ore fines, spot	US\$/t CIF	128	128	128	128	128	112	102			

Source: BofA Global Research, BofA Global Commodity Research, Bloomberg

BofA GLOBAL RESEARCH

Exhibit 24: Commodity Team Other Materials Forecasts

BofA's quarterly and annual forecasts for other materials

		1Q24E	2Q24E	3Q24E	4Q24E	2024E	2025E	2026E	2027E	2028E	LT price
Lithium spodumene	\$/t	1,950	1,850	1,750	1,500	1,763	2,188	1,858	1,722	1,586	1,450
Lithium carbonate	\$/t	18,000	17,000	16,000	15,000	16,500	21,875	21,250	20,833	20,417	20,000
Lithium hydroxide	\$/t	19,500	18,500	17,500	16,500	18,000	23,375	22,750	22,333	21,917	21,500
Alumina	\$/t	340	340	340	340	340	348	357	375	394	412
Uranium	\$/lb	75.00	7,750.00	80.00	80.00	78.13	75.00	70.00	65.00	60.00	55.00
Molybdenum	\$/lb	18.10	18.10	18.10	18.10	18.10	18.10	18.10	16.32	14.54	12.76
Cobalt	\$/lb	18.00	18.00	18.00	18.00	18.00	18.00	18.44	19.84	21.23	22.63
Manganese ore	\$/dmtu	4.35	4.35	4.35	4.35	4.35	4.35	4.93	5.52	6.11	6.70

Source: BofA Global Research, BofA Global Commodity Research, Bloomberg

BofA GLOBAL RESEARCH

Exhibit 25: Commodity Team Steel HRC Forecasts

BofA's quarterly and annual forecasts for steel

		1Q24E	2Q24E	3Q24E	4Q24E	2024E	2025E
HRC, Europe	US\$/t	719	701	639	674	683	714
HRC, US	US\$/t	1,130	1,020	882	805	959	799
HRC, China	US\$/t	568	602	623	592	595	602

Source: BofA Global Research, BofA Global Commodity Research, Bloomberg

BofA GLOBAL RESEARCH

Exhibit 26: Commodity Team Energy Forecasts

BofA's quarterly and annual forecasts for steel

		1Q24E	2Q24E	3Q24E	4Q24E	2024E
Brent	US\$/bbl	78.00	80.00	82.00	80.00	80.00
Strip Brent	US\$/bbl	80.16	80.16	80.16	80.16	80.16
WTI	US\$/bbl	73.00	75.00	77.00	75.00	75.00
Strip WTI	US\$/bbl	75.46	75.46	75.46	75.46	75.46
Henry Hub	US\$/MMBtu	2.90	2.50	3.00	3.60	3.00
Strip Henry Hub	US\$/MMBtu	2.76	2.76	2.76	2.76	2.76

Source: BofA Global Research, BofA Global Commodity Research, Bloomberg

BofA GLOBAL RESEARCH

Precious and Base Metals Market Data

Exhibit 27: Gold Spot Price (\$/oz)

Gold prices ended up +0.4% w/w at \$2,021



Source: BofA Global Research, Bloomberg

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Exhibit 28: Silver Spot Price (\$/oz)

Silver prices ended down -3.3% w/w at \$22.65

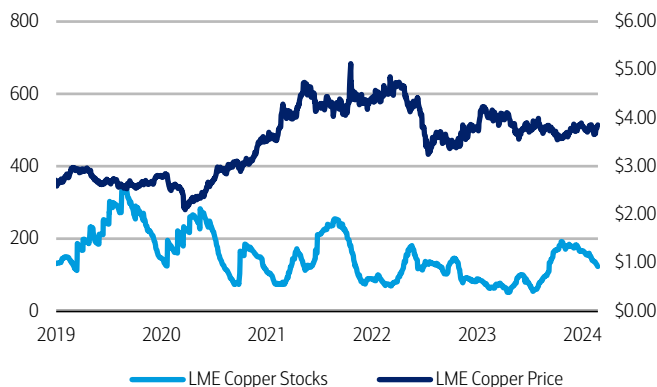


Source: BofA Global Research, Bloomberg

BofA GLOBAL RESEARCH

Exhibit 29: LME Copper Warehouse Stocks (000s mt) & Price (\$/lb)

Copper prices ended up +3.4% w/w at \$3.86

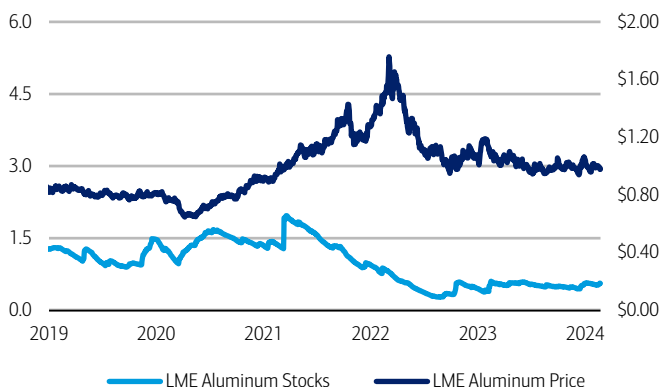


Source: BofA Global Research, Bloomberg

BofA GLOBAL RESEARCH

Exhibit 30: LME Aluminum Warehouse Stocks (mm mt) & Price (\$/lb)

Aluminum prices ended down -2.0% w/w at \$0.98

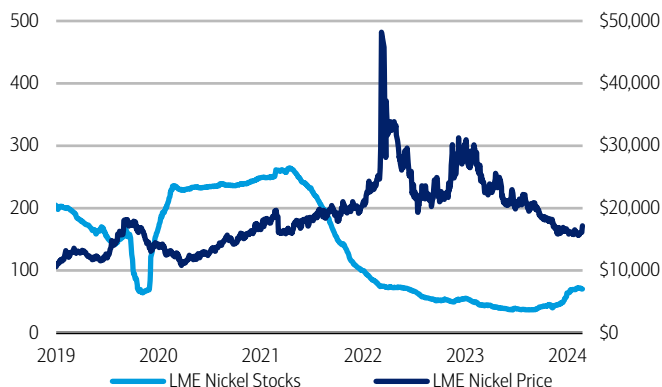


Source: BofA Global Research, Bloomberg

BofA GLOBAL RESEARCH

Exhibit 31: LME Nickel Warehouse Stocks (000s mt) & Price (\$/mt)

Nickel prices ended up +7.2% w/w at \$17,166

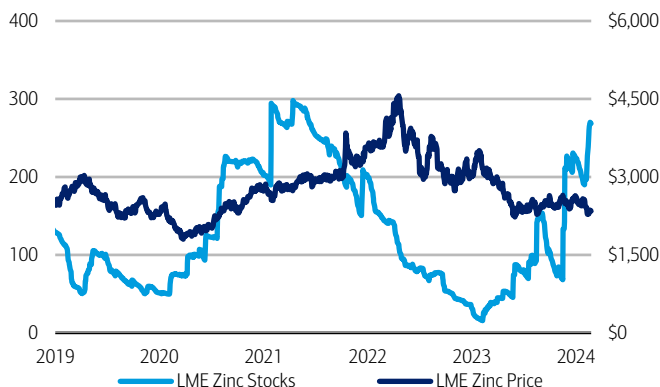


Source: BofA Global Research, Bloomberg

BofA GLOBAL RESEARCH

Exhibit 32: LME Zinc Warehouse Stocks (000s mt) & Price (\$/mt)

Zinc prices ended up +0.6% w/w at \$2,345

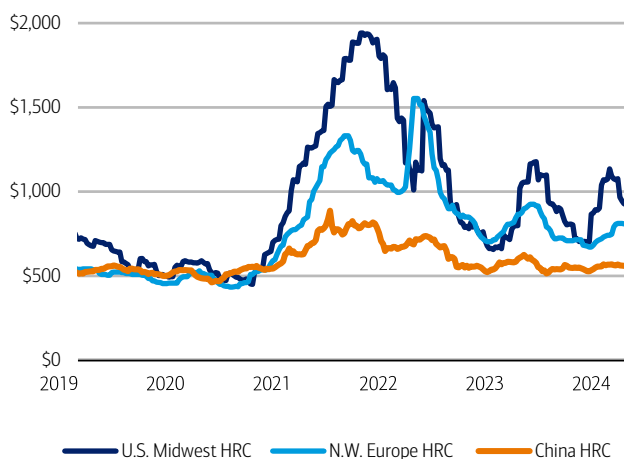


Source: BofA Global Research, Bloomberg

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Exhibit 33: U.S. Midwest HRC (\$/t), NW. Europe HRC (\$/mt) and China HRC (\$/mt)

U.S. Midwest HRC prices ended down -0.8% w/w at \$922; NW. Europe HRC prices ended down -0.7% at \$806; China HRC prices ended down -0.5% w/w at \$558



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Exhibit 34: China Spot Iron Ore 62% (\$/mt)

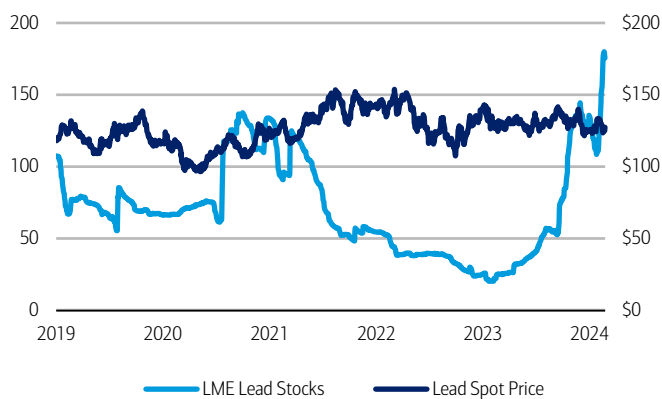
China spot iron ore prices ended down -3.7% w/w at \$126



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Exhibit 35: LME Lead Warehouse Stocks (000s mt) & Price (\$/lb)

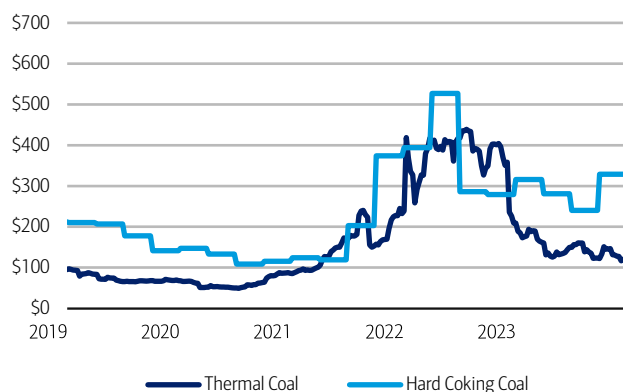
Lead prices ended up +2.9% w/w at \$127



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Exhibit 36: Hard Coking Coal (\$/mt) and Thermal Coal (\$/mt)

Thermal Coal prices ended up +0.1% w/w at \$119 Hard Coking Coal prices ended Unch. at \$329



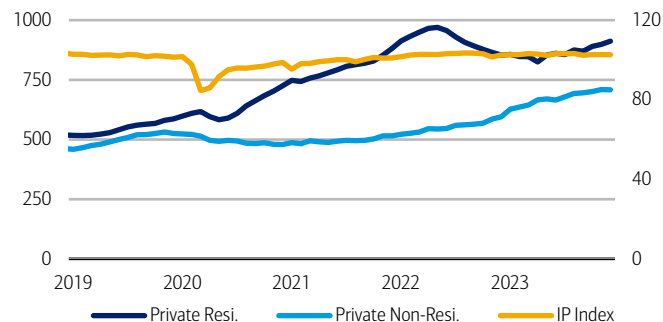
Source: BofA Global Research, Bloomberg

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Construction Products Market Data

Exhibit 37: US Construction Spending (\$bn) & Industrial Production Index

U.S. private residential new construction spending peaked in May 2022

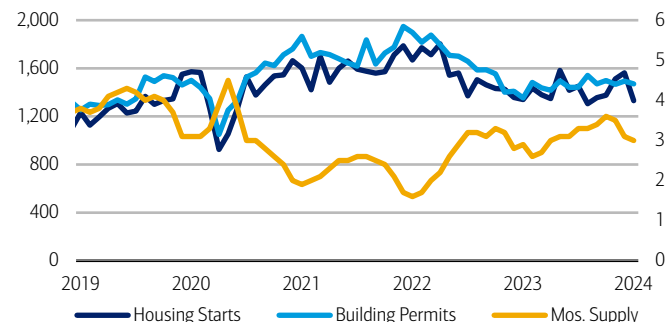


Source: BofA Global Research, Bloomberg

BofA GLOBAL RESEARCH

Exhibit 38: US Housing Statistics (000s, SAAR) & Months' Supply of Existing Homes

U.S. housing starts & building permits have fallen from Spring 2022 highs

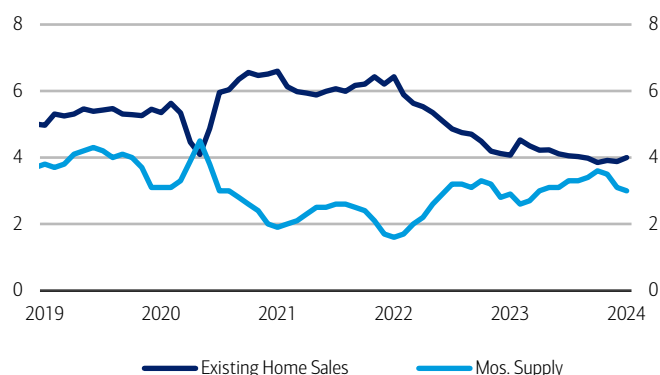


Source: BofA Global Research, Bloomberg

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Exhibit 39: Existing Home Sales (mm) & Months' Supply of Existing Homes

U.S. existing home sales have declined since February 2022

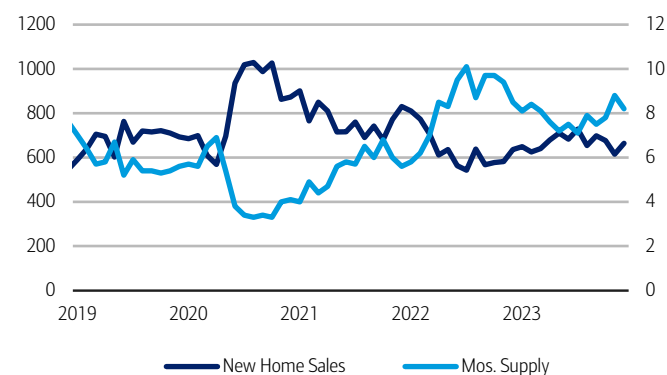


Source: BofA Global Research, Bloomberg

BofA GLOBAL RESEARCH

Exhibit 40: New Home Sales (000s) & Months' Supply of New Homes

U.S. new home sales have fallen from 2020 highs

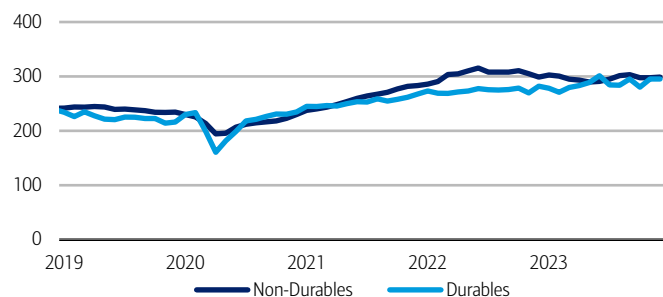


Source: BofA Global Research, Bloomberg

BofA GLOBAL RESEARCH

Exhibit 41: U.S. Durable/Non-Durable Goods (\$bn)

New orders for U.S. durable and non-durable goods have rebounded since their COVID lows

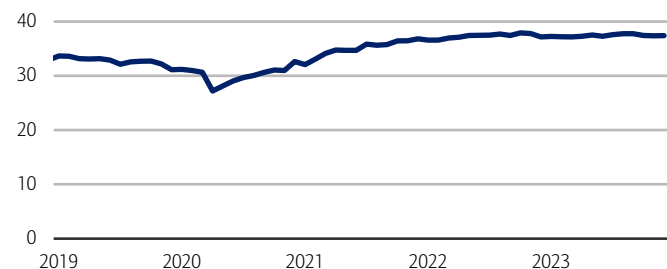


Source: BofA Global Research, Bloomberg

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Exhibit 42: U.S. Durable Goods: Machinery (\$bn)

New orders for U.S. machinery have rebounded since their COVID lows



Source: BofA Global Research, Bloomberg

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HG Basic Materials New Issuance

Exhibit 43: HG Energy New Issuance

There was ~\$4.5b of HG New Issuance to date in 2024

Announce Date	Ticker	Issuer	Moody's	S&P	Amount Issued (\$MM)	Coupon (%)	Maturity Date	Term (yrs)	Spread At Issue
2/6/2024	APD	Air Products & Chemicals	A2	A	750	4.6	2/8/2029	5	60
2/6/2024	APD	Air Products & Chemicals	A2	A	600	4.75	2/8/2031	7	70
2/6/2024	APD	Air Products & Chemicals	A2	A	1150	4.85	2/8/2034	10	80
2/7/2024	DOW	Dow Chemical Co/The	Baa1	BBB	600	5.15	2/15/2034	10	105
2/7/2024	DOW	Dow Chemical Co/The	Baa1	BBB	650	5.6	2/15/2054	30	130
2/15/2024	EMN	Eastman Chemical Co	Baa2	BBB	750	5.625	2/20/2034	10	142

Source: Bloomberg, Company & Partnership Reports

BofA GLOBAL RESEARCH

Valuation & risk

Celanese Holdings (CE)

Celanese Corporation (CE) is a global chemical and specialty materials company, which produces high-performance engineered polymers and acetyl products.

Following CE's transformation Mobility & Material acquisition, investors are focused on the company's elevated leverage levels and whether it can pay down debt and maintained IG ratings. We believe the company has a path to de-levering (and remain IG) and are confident that management would take additional actions (including asset sales and issuing equity) to defend the rating, if necessary. We see a downgrade to HY as unlikely and think CE's spreads should progressively grind tighter as the market grows more confident in its ability to reduce debt and maintain IG status. We therefore believe an OW rec is appropriate.

Risks to our recommendation are failure to meet de-leveraging targets, greater-/lower-than-expected synergy generation and ability integrate the combined business, ability to execute on divestitures (if needed), ratings changes, and higher-/lower-than-expected raw material/energy inflation.

Int. Flavors (IFF)

International Flavors & Fragrances Inc. (IFF) is a creator & manufacturer of food, bev, health & biosciences, scent & pharma solutions.

Operational underperformance and elevated leverage have been a focal point for IFF's credit story. The company remains committed to IG credit ratings and returning net leverage to 3.0x which management hopes to achieve by YE24. IFF has taken steps to fix its balance sheet following the announced sale of its Lucas Meyer business (\$810mm) in 2023, approx. 50% dividend cut at 4Q23 earnings, and commitment to sell additional assets. As a result, we view a downgrade to HY for IFF as unlikely and think de-leveraging is manageable. Looking ahead, we think IFF's credit story has significant support from its announced dividend cut and encouraging commentary around additional asset sales. Compared to peers, we see upside to IFF's spreads vs liquid / low-BBB producers, as well as the BBB Corp Index. We therefore think spreads likely tighten near-term and provide an OW rec on the name.

Risks: failure to meet de-leveraging targets, failure to achieve projected synergies/integrate the combined business, failure to execute on divestitures or divestitures well in excess of needs, competitors taking market share, ratings downgrades, and higher/lower-than-expected raw material inflation/deflation.

Nutrien (NTRCN)

Nutrien Ltd. (NTRCN) is the world's largest provider of crop nutrients, inputs, & services.

We like NTRCN's (i) large size & scale, (ii) responsive management team, and (iii) healthy balance sheet (despite significantly lower LTM EBITDA y-o-y). In 2024, we see fundamentals supported by improved crop nutrient demand and leverage likely moving off its high point for the current cycle. We note, however, that investors may be cautious given a recovery could be lumpy and the previous downcycle lasted longer than most expected. Compared to peers, we do not see material upside in the company's notes given fair trading levels versus other bellwether IG chemical producers. We also note that illiquidity in the company's outstanding notes caps significant upside should the industry rebound sharply. We therefore have a MW recommendation on the name.

Risks: easing sanctions in Belarus, a resolution of the Russia-Ukraine War, price inflation/deflation, extreme weather conditions, lower/higher-than-expected demand and pricing in key fertilizer markets, lower/higher production costs, reduced farmer income, and a shift to a more/less shareholder-friendly capital allocation policy.

Teck Resources (TCKBCN)

Teck Resources Ltd (TCKBCN) is a diversified resource company focused on copper, zinc, and steelmaking (met) coal.

We view TCKBCN positively given its favorable copper assets, robust copper growth outlook and strong balance sheet. Pro-forma (PF) for its announced steelmaking coal sale, TCKBCN is well positioned as a pure play base metals producer with a robust copper growth pipeline. We think the standalone company could benefit from an increased investor base who previously could not participate due to its steelmaking coal exposure (a positive technical for spreads) though expect fundamentals to be constrained by its PF smaller size and scale and less diversified nature. We maintain that TCKBCN screens attractive as an acquisition target for a larger A-rated miner (now that it's a pureplay base metals business) though such a transaction is unlikely a near-term event and therefore not a significant driver of spreads. We therefore view current trading levels wrapped around other BBB rated miners as fair value and provide a MW recommendation on the company.

Risks: M&A, global economic weakness, operational disruptions, execution risk on the ramp-up of QB2, more/less favorable regulatory/environmental regulations, particularly at its Chilean operations, unfavorable currency moves, and acceleration/deceleration of the energy transition.

The Sherwin-Williams (SHW)

The Sherwin-Williams Company (SHW) is a global specialty chemicals company engaged in the development, manufacture, distribution and sale of paint, coatings and related products.

We view SHW favorably given its large size and scale, conservative balance sheet, and robust market share position. We foster concerns around its end-markets, however, given sluggish residential housing turnover, fading DIY demand, and an uncertain macro backdrop. We think these headwinds could weigh on the credit story going forward despite our forecasts for the business to generate consistent cash flow this year and maintain leverage within its long-term range (2.0-2.5x). Compared to peers, we think SHW trades rich particularly given our concerns around end-market demand this year. As a result, we see spreads biased wider in the near-term and provide an UW rec on the name.

Risks: M&A, a change in leverage targets, a shift in FCF priorities, unexpected raw material price increases/decreases and competitors taking market share



Analyst Certification

I, Daniel Lungo, hereby certify that the views expressed in this research report accurately reflect my personal views about the subject securities and issuers. I also certify that no part of my compensation was, is, or will be, directly or indirectly, related to the specific recommendations or view expressed in this research report.

Security/Loan pricing

Celanese US Holdings LLC / CE

	Amt		Ratings			Yield	Spread
Security		Maturity date	Moody's/S&P/Fitch	Price	Price date	(%)	(bps)
3.5, Senior, USD, 2024:B	500	08-MAY-2024	Baa3/BBB-/BBB-	99.54	22-Feb-2024	5.68	25
1.4, Senior, USD, 2026:B	400	05-AUG-2026	Baa3/BBB-/BBB-	90.44	22-Feb-2024	5.63	101
6.05, Senior, USD, 2025:B	1,750	15-MAR-2025	Baa3/BBB-/BBB-	100.47	22-Feb-2024	5.59	55
6.165, Senior, USD, 2027:B	2,000	15-JUL-2027	Baa3/BBB-/BBB-	101.58	22-Feb-2024	5.65	116
6.33, Senior, USD, 2029:B	750	15-JUL-2029	Baa3/BBB-/BBB-	102.87	22-Feb-2024	5.70	136
6.379, Senior, USD, 2032:B	1,000	15-JUL-2032	Baa3/BBB-/BBB-	102.67	22-Feb-2024	5.97	166
5.9, Senior, USD, 2024:B	2,000	05-JUL-2024	Baa3/BBB-/BBB-	99.86	22-Feb-2024	6.27	80
6.7, Senior, USD, 2033:B	1,000	11-Nov-2033	Baa3/BBB-	105.12	22-Feb-2024	5.98	166
6.35, Senior, USD, 2028:B	1,000	15-Nov-2028	Baa3/BBB-/BBB-	102.72	22-Feb-2024	5.68	129
6.55, Senior, USD, 2030:B	1,000	15-NOV-2030	Baa3/BBB-/BBB-	103.97	22-Feb-2024	5.81	149

For pricing information refer to "Other Important Disclosures" below.

B=Bond; L=Loan; CS=Capital Security (Not including Equity Preferred); CDS=Credit Default Swap; EP=Equity Preferred

International Flavors & Fragrances Inc / IFF

	Amt		Ratings			Yield	Spread
Security		Maturity date	Moody's/S&P/Fitch	Price	Price date	(%)	(bps)
1.23, Senior, USD, 2025:B	1,000	01-OCT-2025	Baa3/BBB-/BBB	93.08	22-Feb-2024	5.81	99
1.832, Senior, USD, 2027:B	1,200	15-OCT-2027	Baa3/BBB-/BBB	88.00	22-Feb-2024	5.51	105
4.45, Senior, USD, 2028:B	400	26-SEP-2028	Baa3/BBB-/BBB	96.21	22-Feb-2024	5.39	101
2.3, Senior, USD, 2030:B	1,500	01-NOV-2030	Baa3/BBB-/BBB	82.22	22-Feb-2024	5.51	120
3.268, Senior, USD, 2040:B	750	15-NOV-2040	Baa3/BBB-/BBB	70.29	22-Feb-2024	6.13	160
4.375, Senior, USD, 2047:B	500	01-JUN-2047	Baa3/BBB-/BBB	75.09	22-Feb-2024	6.46	183
5, Senior, USD, 2048:B	800	26-SEP-2048	Baa3/BBB-/BBB	83.72	22-Feb-2024	6.31	169
3.468, Senior, USD, 2050:B	1,500	01-DEC-2050	Baa3/BBB-/BBB	66.31	22-Feb-2024	6.02	145

For pricing information refer to "Other Important Disclosures" below.

B=Bond; L=Loan; CS=Capital Security (Not including Equity Preferred); CDS=Credit Default Swap; EP=Equity Preferred

Nutrien Ltd / NTRCN

	Amt		Ratings			Yield	Spread
Security		Maturity date	Moody's/S&P/Fitch	Price	Price date	(%)	(bps)
6.125, Senior, USD, 2041:B	497	15-JAN-2041	Baa2/BBB/NR	102.12	22-Feb-2024	5.92	140
4.9, Senior, USD, 2043:B	499	01-JUN-2043	Baa2/BBB/NR	89.67	22-Feb-2024	5.80	120
5.25, Senior, USD, 2045:B	466	15-JAN-2045	Baa2/BBB/NR	93.22	22-Feb-2024	5.81	119
3, Senior, USD, 2025:B	451	01-APR-2025	Baa2/BBB/NR	97.16	22-Feb-2024	5.69	68
4, Senior, USD, 2026:B	412	15-DEC-2026	Baa2/BBB/NR	96.73	22-Feb-2024	5.27	70
5.875, Senior, USD, 2036:B	481	01-DEC-2036	Baa2/BBB/NR	101.64	22-Feb-2024	5.69	129
5.625, Senior, USD, 2040:B	452	01-DEC-2040	Baa2/BBB/NR	97.41	22-Feb-2024	5.87	134
4.125, Senior, USD, 2035:B	438	15-MAR-2035	Baa2/BBB/NR	89.28	22-Feb-2024	5.43	107
2.95, Senior, USD, 2030:B	500	13-MAY-2030	Baa2/BBB/NR	88.13	22-Feb-2024	5.21	88
3.95, Senior, USD, 2050:B	500	13-MAY-2050	Baa2/BBB/NR	77.30	22-Feb-2024	5.61	103
4.2, Senior, USD, 2029:B	750	01-APR-2029	Baa2/BBB/NR	96.04	22-Feb-2024	5.09	73
5, Senior, USD, 2049:B	750	01-APR-2049	Baa2/BBB/NR	89.70	22-Feb-2024	5.78	117
5.9, Senior, USD, 2024:B	500	07-Nov-2024	BBB	100.16	22-Feb-2024	5.65	46
5.95, Senior, USD, 2025:B	500	07-Nov-2025	BBB	100.97	22-Feb-2024	5.34	55
4.9, Senior, USD, 2023:B	750	27-Mar-2028	BBB	99.21	22-Feb-2024	5.12	70
5.8, Senior, USD, 2053:B	750	27-Mar-2053	BBB	99.90	22-Feb-2024	5.81	133

For pricing information refer to "Other Important Disclosures" below.

B=Bond; L=Loan; CS=Capital Security (Not including Equity Preferred); CDS=Credit Default Swap; EP=Equity Preferred

The Sherwin-Williams Co / SHW

	Amt		Ratings			Yield	Spread
Security		Maturity date	Moody's/S&P/Fitch	Price	Price date	(%)	(bps)
4.5, Senior, USD, 2047:B	1,250	01-JUN-2047	Baa2/BBB/BBB	86.48	22-Feb-2024	5.54	91
3.45, Senior, USD, 2027:B	1,500	01-JUN-2027	Baa2/BBB/BBB	95.37	22-Feb-2024	5.00	50
3.125, Senior, USD, 2024:B	500	01-JUN-2024	Baa2/BBB/BBB	99.29	22-Feb-2024	5.73	30
4, Senior, USD, 2042:B	300	15-DEC-2042	Baa2/BBB/BBB	80.60	22-Feb-2024	5.69	111
3.45, Senior, USD, 2025:B	400	01-AUG-2025	Baa2/BBB/BBB	97.54	22-Feb-2024	5.25	39
4.55, Senior, USD, 2045:B	400	01-AUG-2045	Baa2/BBB/BBB	85.78	22-Feb-2024	5.71	108



The Sherwin-Williams Co / SHW

	Amt		Ratings			Yield	Spread
Security		Maturity date	Moody's/S&P/Fitch	Price	Price date	(%)	(bps)
2.3, Senior, USD, 2030:B	500	15-MAY-2030	Baa2/BBB/BBB	84.95	22-Feb-2024	5.16	83
3.3, Senior, USD, 2050:B	500	15-MAY-2050	Baa2/BBB/BBB	69.37	22-Feb-2024	5.53	94
2.2, Senior, USD, 2032:B	500	15-MAR-2032	Baa2/BBB/BBB	80.79	22-Feb-2024	5.14	83
2.9, Senior, USD, 2052:B	500	15-MAR-2052	Baa2/BBB/BBB	64.63	22-Feb-2024	5.35	83

For pricing information refer to "Other Important Disclosures" below.

B=Bond; L=Loan; CS=Capital Security (Not including Equity Preferred); CDS=Credit Default Swap; EP=Equity Preferred

Teck Resources Ltd / TCKBCN

	Amt		Ratings			Yield	Spread
Security		Maturity date	Moody's/S&P/Fitch	Price	Price date	(%)	(bps)
6.125, Senior, USD, 2035:B	609	01-OCT-2035	Baa3/BBB-/BBB-	102.10	22-Feb-2024	5.87	151
6.25, Senior, USD, 2041:B	795	15-JUL-2041	Baa3/BBB-/BBB-	100.07	22-Feb-2024	6.24	171
5.2, Senior, USD, 2042:B	399	01-MAR-2042	Baa3/BBB-/BBB-	89.89	22-Feb-2024	6.14	157
5.4, Senior, USD, 2043:B	377	01-FEB-2043	Baa3/BBB-/BBB-	92.14	22-Feb-2024	6.11	151
6, Senior, USD, 2040:B	491	15-AUG-2040	Baa3/BBB-/BBB-	98.23	22-Feb-2024	6.17	165
3.9, Senior, USD, 2030:B	550	15-JUL-2030	Baa3/BBB-/BBB-	91.23	22-Feb-2024	5.55	122

For pricing information refer to "Other Important Disclosures" below.

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Disclosures

Important Disclosures

Credit opinion history

Celanese US Holdings LLC / CE

Company	Date ^{R1}	Action	Recommendation	Price
Celanese US Holdings LLC / CE	04-Jan-2023	Initial	Overweight	
	23-Feb-2023	Restricted	NA	
	28-Feb-2023	Coverage Resumed	Overweight	
	10-Aug-2023	Restricted	NA	
	11-Sep-2023	Coverage Resumed	Overweight	
Security	Date ^{R1}	Action	Recommendation	Price
3.5, Senior, USD, 2024:B	31-Jan-2023		Overweight	
	23-Feb-2023	Restricted	NA	NA
	28-Feb-2023	Coverage Resumed	Overweight	
	10-Aug-2023	Restricted	NA	NA
	11-Sep-2023	Coverage Resumed	Overweight	98.16
1.4, Senior, USD, 2026:B	31-Jan-2023		Overweight	
	23-Feb-2023	Restricted	NA	NA
	28-Feb-2023	Coverage Resumed	Overweight	
	10-Aug-2023	Restricted	NA	NA
	11-Sep-2023	Coverage Resumed	Overweight	87.07
6.05, Senior, USD, 2025:B	31-Jan-2023		Overweight	
	23-Feb-2023	Restricted	NA	NA
	28-Feb-2023	Coverage Resumed	Overweight	
	10-Aug-2023	Restricted	NA	NA
	11-Sep-2023	Coverage Resumed	Overweight	99.83
6.165, Senior, USD, 2027:B	31-Jan-2023		Overweight	
	23-Feb-2023	Restricted	NA	NA
	28-Feb-2023	Coverage Resumed	Overweight	
	10-Aug-2023	Restricted	NA	NA
	11-Sep-2023	Coverage Resumed	Overweight	99.44
6.33, Senior, USD, 2029:B	31-Jan-2023		Overweight	
	23-Feb-2023	Restricted	NA	NA
	28-Feb-2023	Coverage Resumed	Overweight	
	10-Aug-2023	Restricted	NA	NA
	11-Sep-2023	Coverage Resumed	Overweight	99.05
6.379, Senior, USD, 2032:B	31-Jan-2023		Overweight	
	23-Feb-2023	Restricted	NA	NA
	28-Feb-2023	Coverage Resumed	Overweight	
	10-Aug-2023	Restricted	NA	NA

Celanese US Holdings LLC / CE

Company	Date^{R1}	Action	Recommendation	
5.9, Senior, USD, 2024:B	11-Sep-2023	Coverage Resumed	Overweight	98.20
	31-Jan-2023		Overweight	
	23-Feb-2023	Restricted	NA	NA
	28-Feb-2023	Coverage Resumed	Overweight	
6.7, Senior, USD, 2033:B	10-Aug-2023	Restricted	NA	NA
	11-Sep-2023	Coverage Resumed	Overweight	99.80
	10-Aug-2023	New Issue	NA	
	11-Sep-2023	Coverage Resumed	Overweight	
6.35, Senior, USD, 2028:B	15-Sep-2023	Added to iQ Model	Overweight	98.89
	10-Aug-2023	New Issue	NA	
	11-Sep-2023	Coverage Resumed	Overweight	
	15-Sep-2023	Added to iQ Model	Overweight	99.69
6.55, Senior, USD, 2030:B	24-Aug-2023	New Issue	NA	
	11-Sep-2023	Coverage Resumed	Overweight	
	15-Sep-2023	Added to iQ Model	Overweight	99.32

Table reflects credit opinion history as of previous business day's close.^{R1}First date of recommendation within the last 36 months, if for an issuer or within the last 12 months, if for a security or loan. The investment opinion system is contained at the end of the report under the heading "BofA Global Research Credit Opinion Key."

Pricing information in the table is provided for each action where available. In the case of bonds, loans, capital securities and equity preferreds, the price shown reflects the nominal cash price for the security; and in the case of CDS, the price shown reflects the spread, on the date of the relevant action.

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International Flavors & Fragrances Inc / IFF

Company	Date^{R2}	Action	Recommendation	
International Flavors & Fragrances Inc / IFF	31-Jan-2021		Overweight	
	12-Feb-2021	Downgrade	Marketweight	
	04-Mar-2021	Extended Review	NA	
	09-Jul-2021	Coverage Reinstatement	Overweight	
	23-Aug-2021	Restricted	NA	
	24-Aug-2021	Coverage Resumed	Overweight	
	13-Jan-2023	Downgrade	Marketweight	
	10-Mar-2023	Upgrade	Overweight	
	28-Nov-2023	Downgrade	Marketweight	
	21-Feb-2024	Upgrade	Overweight	
Security	Date^{R2}	Action	Recommendation	Price
1.23, Senior, USD, 2025:B	31-Jan-2023		Marketweight	
	10-Mar-2023	Upgrade	Overweight	88.41
	28-Nov-2023	Downgrade	Marketweight	90.88
	21-Feb-2024	Upgrade	Overweight	92.99
1.832, Senior, USD, 2027:B	31-Jan-2023		Marketweight	
	10-Mar-2023	Upgrade	Overweight	83.49
	28-Nov-2023	Downgrade	Marketweight	85.22
	21-Feb-2024	Upgrade	Overweight	87.96
4.45, Senior, USD, 2028:B	31-Jan-2023		Marketweight	
	10-Mar-2023	Upgrade	Overweight	92.99
	28-Nov-2023	Downgrade	Marketweight	94.42
	21-Feb-2024	Upgrade	Overweight	96.33
2.3, Senior, USD, 2030:B	31-Jan-2023		Marketweight	
	10-Mar-2023	Upgrade	Overweight	77.79
3.268, Senior, USD, 2040:B	31-Jan-2023		Marketweight	
	10-Mar-2023	Upgrade	Overweight	69.12
	28-Nov-2023	Downgrade	Marketweight	65.46
	21-Feb-2024	Upgrade	Overweight	69.91
4.375, Senior, USD, 2047:B	31-Jan-2023		Marketweight	
	10-Mar-2023	Upgrade	Overweight	76.44
	28-Nov-2023	Downgrade	Marketweight	70.71
	21-Feb-2024	Upgrade	Overweight	74.96
5, Senior, USD, 2048:B	31-Jan-2023		Marketweight	
	10-Mar-2023	Upgrade	Overweight	83.56
	28-Nov-2023	Downgrade	Marketweight	78.26
	21-Feb-2024	Upgrade	Overweight	83.28
3.468, Senior, USD, 2050:B	31-Jan-2023		Marketweight	
	10-Mar-2023	Upgrade	Overweight	66.46
	28-Nov-2023	Downgrade	Marketweight	61.62
	21-Feb-2024	Upgrade	Overweight	65.80

International Flavors & Fragrances Inc / IFF

Company	Date ^{R2}	Action	Recommendation
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B=Bond; L=Loan; CS=Capital Security (Not including Equity Preferred); EP=Equity Preferred; CDS=Credit Default Swap

Nutrien Ltd / NTRCN

Company	Date ^{R3}	Action	Recommendation
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Nutrien Ltd / NTRCN	31-Jan-2021		Overweight
	04-Mar-2021	Extended Review	NA
	09-Sep-2021	Coverage Reinstatement	Marketweight
	03-May-2022	Upgrade	Overweight
	12-Aug-2022	Downgrade	Marketweight

Security	Date ^{R3}	Action	Recommendation	Price
6.125, Senior, USD, 2041:B	31-Jan-2023		Marketweight	
4.9, Senior, USD, 2043:B	31-Jan-2023		Underweight	
	10-Mar-2023	Upgrade	Marketweight	88.81
5.25, Senior, USD, 2045:B	31-Jan-2023		Underweight	
	10-Mar-2023	Upgrade	Marketweight	91.84
3, Senior, USD, 2025:B	31-Jan-2023		Marketweight	
4, Senior, USD, 2026:B	31-Jan-2023		Marketweight	
5.875, Senior, USD, 2036:B	31-Jan-2023		Marketweight	
5.625, Senior, USD, 2040:B	31-Jan-2023		Marketweight	
4.125, Senior, USD, 2035:B	31-Jan-2023		Marketweight	
2.95, Senior, USD, 2030:B	31-Jan-2023		Marketweight	
3.95, Senior, USD, 2050:B	31-Jan-2023		Underweight	
	10-Mar-2023	Upgrade	Marketweight	76.13
4.2, Senior, USD, 2029:B	31-Jan-2023		Marketweight	
5, Senior, USD, 2049:B	31-Jan-2023		Underweight	
	10-Mar-2023	Upgrade	Marketweight	89.69
5.9, Senior, USD, 2024:B	31-Jan-2023		Marketweight	
5.95, Senior, USD, 2025:B	31-Jan-2023		Marketweight	
4.9, Senior, USD, 2023:B	23-Mar-2023	New Issue	Marketweight	
	24-Mar-2023	Added to iQ Model	Marketweight	100.78
5.8, Senior, USD, 2053:B	23-Mar-2023	New Issue	Marketweight	
	24-Mar-2023	Added to iQ Model	Marketweight	100.81

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The Sherwin-Williams Co / SHW

Company	Date ^{R4}	Action	Recommendation
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The Sherwin-Williams Co / SHW	31-Jan-2021		Marketweight
	04-Mar-2021	Extended Review	NA
	22-Jun-2021	Coverage Reinstatement	Underweight
	29-Sep-2021	Upgrade	Marketweight
	26-Jan-2024	Downgrade	Underweight

Security	Date ^{R4}	Action	Recommendation	Price
4.5, Senior, USD, 2047:B	31-Jan-2023		Marketweight	
	26-Jan-2024	Downgrade	Underweight	88.83
3.45, Senior, USD, 2027:B	31-Jan-2023		Marketweight	
	26-Jan-2024	Downgrade	Underweight	96.18
3.125, Senior, USD, 2024:B	31-Jan-2023		Marketweight	
	26-Jan-2024	Downgrade	Underweight	99.10
4, Senior, USD, 2042:B	31-Jan-2023		Marketweight	
	26-Jan-2024	Downgrade	Underweight	82.05
3.45, Senior, USD, 2025:B	31-Jan-2023		Marketweight	
	26-Jan-2024	Downgrade	Underweight	97.48
4.55, Senior, USD, 2045:B	31-Jan-2023		Marketweight	
	26-Jan-2024	Downgrade	Underweight	87.39
2.3, Senior, USD, 2030:B	31-Jan-2023		Marketweight	
	26-Jan-2024	Downgrade	Underweight	86.40

The Sherwin-Williams Co / SHW

Company	Date ^{R4}	Action	Recommendation	
3.3, Senior, USD, 2050:B	31-Jan-2023		Marketweight	
	26-Jan-2024	Downgrade	Underweight	71.34
2.2, Senior, USD, 2032:B	31-Jan-2023		Marketweight	
	26-Jan-2024	Downgrade	Underweight	81.89
2.9, Senior, USD, 2052:B	31-Jan-2023		Marketweight	
	26-Jan-2024	Downgrade	Underweight	65.64

Table reflects credit opinion history as of previous business day's close.^{R4}First date of recommendation within the last 36 months, if for an issuer or within the last 12 months, if for a security or loan. The investment opinion system is contained at the end of the report under the heading "BofA Global Research Credit Opinion Key."

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Teck Resources Ltd / TCKBCN

Company	Date ^{R5}	Action	Recommendation	
Teck Resources Ltd / TCKBCN	31-Jan-2021		Marketweight	
	04-Mar-2021	Extended Review	NA	
	16-Feb-2022	Coverage Terminated	NA	
	16-Jun-2022	Coverage Reinstatement	Marketweight	
Security	Date ^{R5}	Action	Recommendation	Price
6.125, Senior, USD, 2035:B	31-Jan-2023		Marketweight	
6.25, Senior, USD, 2041:B	31-Jan-2023		Marketweight	
5.2, Senior, USD, 2042:B	31-Jan-2023		Marketweight	
5.4, Senior, USD, 2043:B	31-Jan-2023		Marketweight	
6, Senior, USD, 2040:B	31-Jan-2023		Marketweight	
3.9, Senior, USD, 2030:B	31-Jan-2023		Marketweight	
	14-Nov-2023	Downgrade	Underweight	86.62
	28-Nov-2023	Upgrade	Marketweight	89.09

Table reflects credit opinion history as of previous business day's close.^{R5}First date of recommendation within the last 36 months, if for an issuer or within the last 12 months, if for a security or loan. The investment opinion system is contained at the end of the report under the heading "BofA Global Research Credit Opinion Key."

Pricing information in the table is provided for each action where available. In the case of bonds, loans, capital securities and equity preferreds, the price shown reflects the nominal cash price for the security; and in the case of CDS, the price shown reflects the spread, on the date of the relevant action.

B=Bond; L=Loan; CS=Capital Security (Not including Equity Preferred); EP=Equity Preferred; CDS=Credit Default Swap

BofA Global Research Credit Opinion Key

BofA Global Research provides recommendations on an issuer's bonds (including corporate and sovereign external debt securities), loans, capital securities, equity preferreds and CDS as described below. Convertible securities are not rated. An issuer level recommendation may also be provided for an issuer as explained below. BofA Global Research credit recommendations are assigned using a three-month time horizon.

Issuer Recommendations: If an issuer credit recommendation is provided, it is applicable to bonds and capital securities of the issuer except bonds and capital securities specifically referenced in the report with a different credit recommendation. Where there is no issuer credit recommendation, only individual bonds and capital securities with specific recommendations are covered. Loans, CDS and equity preferreds are rated separately and issuer recommendations do not apply to them.

BofA Global Research credit recommendations are assigned using a three-month time horizon:

Overweight: Spreads and/or excess returns are likely to outperform the relevant and comparable market over the next three months.

Marketweight: Spreads and/or excess returns are likely to perform in-line with the relevant and comparable market over the next three months.

Underweight: Spreads and/or excess returns are likely to underperform the relevant and comparable market over the next three months.

BofA Global Research uses the following rating system with respect to **Credit Default Swaps (CDS)**:

Buy Protection: Buy CDS, therefore going short credit risk.

Neutral: No purchase or sale of CDS is recommended.

Sell Protection: Sell CDS, therefore going long credit risk.

Corporate Credit Issuer Investment Rating Distribution: Global Group (as of 31 Dec 2023)

Coverage Universe	Count	Percent	Inv. Banking Relationships ^{R6}	Count	Percent
Buy	144	37.21%	Buy	119	82.64%
Hold	193	49.87%	Hold	163	84.46%
Sell	50	12.92%	Sell	37	74.00%

^{R6} Issuers that were investment banking clients of BofA Securities or one of its affiliates within the past 12 months. For purposes of this Investment Rating Distribution, the coverage universe includes only corporate credit issuer recommendations. A corporate credit issuer rated Overweight is included as a Buy, a corporate credit issuer rated Marketweight is included as a Hold, and a corporate credit issuer rated Underweight is included as a Sell.

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