

High Grade Basic Materials Weekly

Week ended January 26, 2024

Rating Change - Credit

HG Basic Materials spreads finished unch'd w-o-w

HG Basic Materials spreads finished unch'd w-o-w, underperforming the Corp Index (-3 bps, OAS basis). All subsectors underperformed. In Chemicals, Albemarle (ALB, NR) outperformed after other lithium producers announced production cuts / project delays.

HG Basic Materials outperformed the market

HG Basic Materials (+2 bps of excess returns) underperformed the Corp Index (+20 bps) w-o-w. All subsectors also underperformed this week.

SHW, FCX, STLD, and DOW earnings; DD soft pre-release

HG Basic Materials earnings were in full swing this week. Sherwin Williams (SHW) reported 4Q23 adj EBITDA roughly in-line with estimates though guided FY24 earnings below consensus. We downgrade the name to UW from MW on rich trading levels vs peers and the Single-A Corp Index, coupled with our cautious outlook for the company's primary end-markets in 2024. Away from SHW, Freeport-McMoRan (FCX) printed adj EBITDA above consensus and discussed plans for a potential \$3.5b brownfield copper expansion. We maintain our favorable view of the business but think recent spread outperformance has capped material upside near-term. We therefore downgrade FCX to MW from OW. Next, we discuss Steel Dynamics (STLD) which posted EBITDA below BBG estimates. Our fundamental view of the business is unch'd following its release and we continue to expect support from sector wide tailwinds in 2024. However, we struggle to see value in STLD's notes given fair trading levels vs peers and spreads near the Corp Index. This leads us to downgrade STLD to MW from OW but remain OW the company's notes due 2050 given steeper 10s30s curves vs peers and an attractive discount to Nucor (NUE, MW) at the long end. To round out earnings, DOW reported EBITDA below consensus due to weakness in its Performance Materials & Coatings segment. The company guided 1Q24 sales below consensus and noted continued pressure on demand. We maintain our UW recommendation on DOW and expect spreads to widen near-term. Away from earnings, on Wednesday, Dupont (DD, NR) released 4Q23, 1Q24, and 2024 guidance. The update was soft as DD guided 4Q23 / 1Q24 EBITDA below consensus. Positively, DD expects y-o-y sales / earnings growth to return in 2H24 but confirmed our near-term cautious outlook for chemicals. Separately, Moody's revised Masco's (MAS, NR) outlook to positive from stable (affirmed Baa2 rating).

Metals prices stronger w/w; China stimulus actions

Metals prices were higher w-o-w supported by stronger than expected US econ data and China stimulus actions. In the US, 4Q23 GDP of 3.3% q/q came in above consensus of 1.5%. [Michael Gapen and team](#) maintained their outlook for rate cuts to start in March but noted that stronger 4Q23 GDP growth could be concerning to some hawkish Fed members. Away from the US, China announced various stimulus actions this week with the most important being a larger than expected 50 bps rate cut. [Our China econ team](#) continues to expect further government actions to support growth in 2024.

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Timestamp: 26 January 2024 12:47PM EST

26 January 2024

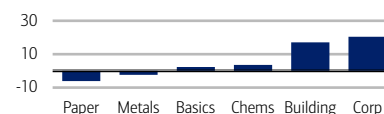
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Exhibit 1: WTD Excess Returns (bps)

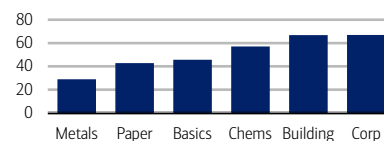
Basic materials outperformed this week



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

Exhibit 2: YTD Excess Return (bps)

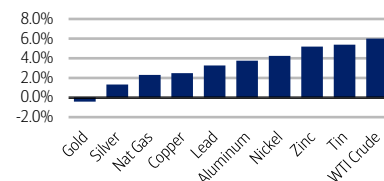
Basic materials underperformed YTD



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

Exhibit 3: W-o-w Commodity Performance

WTI Crude gained the most w-o-w at 6.0%; while Gold gained the least at -0.4%



Source: BofA Global Research, Bloomberg
BofA GLOBAL RESEARCH

News & Views

SHW 4Q23 adj. EBITDA roughly in-line; d/g to UW from MW on rich trading levels

On Thursday morning, The Sherwin Williams Co. (SHW) reported 4Q23 adj. earnings of \$1.81/share, roughly in-line with the Bloomberg consensus estimate of \$1.80/share. Adj. EBITDA of \$789mm (-38% q-o-q, -3% y-o-y) was modestly below estimate of \$807mm. The roughly in-line print was driven by strength in Performance Coatings and Consumer Brands, offset by softness in Paint Stores.

Cash flow and credit metrics

Cash from operations of ~\$900mm roughly covered capex of \$155mm, capex of \$320mm, and share repurchases of ~\$440mm. Credit stats were mostly unch'd q-o-q: total debt/LTM adj. EBITDA = 2.4x (2.4x at 3Q23), net debt/LTM adj. EBITDA = 2.3x (2.3x), and LTM adj. EBITDA/LTM interest expense = 10.0x (9.7x).

1Q24 guidance

SHW expects total sales to be up or down a low-single-digit % y-o-y (consensus of -1.6% y-o-y). For its business segments, SHW expects (in 1Q24):

- **Paint Stores Group (PSG):** sales up a low to mid-single-digit % y-o-y (consensus of roughly unch'd % y-o-y)
- **Performance Coatings Group (PCG):** sales down low-single-digit % y-o-y (consensus of roughly unch'd y-o-y)
- **Consumer Brands Group (CBG):** sales up or down a low-single-digit % y-o-y (consensus of -7% y-o-y)

2024 guidance

SHW expects FY24 adj earnings of \$10.85-11.35/share, excluding amortization / restructuring expense of \$0.80/share (consensus of \$11.41/share). Management sees total sales up a low to mid-single-digit % y-o-y (consensus of unch'd y-o-y). For its business segments, SHW expects (FY24):

- **PSG:** sales up a low to mid-single-digit % y-o-y (consensus of +3.2% y-o-y)
- **CBG:** sales up or down a low-single-digit % y-o-y (consensus of -2.4% y-o-y)
- **PCG:** sales flat to up a low-single-digit % y-o-y (consensus of -1% y-o-y)

Separately, SHW guided capex of ~\$605mm (consensus of \$605mm) and raw materials deflation of a low-single-digit % y-o-y.

Market commentary

In 2024, SHW expects some recovery in new residential construction, moderation in commercial construction, choppiness in repair & remodel, and few catalysts for do-it-yourself (DIY) end-markets. Management sees continued strength from Auto and Marine demand (but noted a tough y-o-y comp) and gradual improvement for Industrial Wood and Packaging. The company noted having less clarity for General Industrial. Away from demand, SHW expects elevated costs in labor related items. In response, the company announced a 5% price increase for its Paint Stores Group (effective February 1) and expects to roll out further targeted price hikes across the business going forward.

Capital allocation

SHW see itself at 2.3x net leverage as of YE23 and plans to remain within its long-term target range (2.0-2.5x) going forward. The company confirmed plans to refinance its ~\$1.1b of senior notes maturing in 2024. This includes: \$500 of notes due June 2024 and \$600mm of notes due August 2024. Separately, SHW expects to raise its annual

dividend by 18.2% to \$2.86/share and maintained its opportunistic approach to share repurchases. Regarding M&A, management reiterated its disciplined approach.

D/g SHW to UW from MW on rich trading levels vs peers and Single-A Index

SHW's update did not change our fundamental view of the business. We continue to like the company's large, bellwether status, conservative balance sheet, and robust market share position. We have concerns around its end-markets, however, given sluggish residential housing turnover, fading DIY demand, and an uncertain macro back drop. 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 target range (2.0-2.5x). Furthermore, we view SHW's current trading levels, which are inside DOW and near the Single-A Corp Index, as rich given our cautious outlook for the company's primary end-markets going forward. This leads us to downgrade SHW to UW from MW as we think spreads are likely biased wider in the near-term. We also note that SHW's flatter 10s30s curve vs peers further supports our UW recommendation.

Segment results

- **PSG:** 4Q23 EBIT was \$597mm, up 15% y-o-y, driven by higher volumes and moderating raw material costs.
- **PCG:** 4Q23 adj. EBIT was \$279mm, up 22% y-o-y, driven by moderating raw materials costs, partly offset by lower net sales volumes.
- **CBG:** 4Q23 adj. EBIT was \$75mm, down 22% y-o-y, due to lower sales volumes and higher FX losses.

FCX 4Q23 adj. EBITDA beat; d/g to MW following recent outperformance

On Wednesday morning, Freeport McMoRan, Inc. (FCX) reported 4Q23 adj. earnings of \$0.27/share, above the Bloomberg consensus estimate of \$0.24/share. Adj. EBITDA of \$2,292mm was also above consensus estimates of \$2,210mm.

Cash flow and credit metrics

Cash from operations of \$1,320mm (including a \$211mm working capital outflow) did not cover capex of \$1,362 and dividends of \$216mm. There were no share repurchases during the quarter. FCX has not repurchased shares since July 11, 2022 (\$3.2b available on its current program, no expiration date). Credit stats were largely unch'd q-o-q: adj. total debt/LTM adj. EBITDA: 1.2x (1.2x at 3Q23), adj. net debt/LTM adj. EBITDA: 0.4x (0.3x), and LTM adj. EBITDA/LTM interest expense: 17.1x (15.8x).

Capital allocation

FCX did not repurchase any debt in 4Q23 after repurchasing ~\$323mm of senior notes in the open market during 1Q-3Q23. In terms of shareholder returns, FCX declared a \$0.075/share common dividend and \$0.075/share variable dividend (payable on February 1, 2024). Separately, net debt was ~\$400mm higher q-o-q at \$3.6b (\$0.8b excluding net debt for Indonesia smelter projects) though remained comfortably below the company's net debt ceiling of \$3.0-\$4.0b excluding Indonesia smelter debt. Lastly, when asked about M&A, FCX stated they consider opportunities when they become available, but do have not found those opportunities as attractive when compared to their own project pipeline in the US and Indonesia.

1Q24 guidance

In 1Q24, FCX expects sales of copper = 1b lbs (consensus of 1b lbs), gold = 575k oz (consensus of 416k oz), and molybdenum = 20mm lbs (consensus of ~21mm lbs). 1Q24 copper net cash costs were guided to \$1.55/lb vs 4Q23A of \$1.532/lb.



2024 guidance

In 2024, FCX sees sales of copper = 4.1b lbs (consensus of 4.2b lbs), gold = 2mm oz (consensus of 1.8mm oz), and molybdenum = 85mm lbs (consensus of 85mm lbs). 2024 copper net cash costs were guided to \$1.60/lb (vs. FY23A \$1.61/lb). Regarding cash flows, FCX expects FY24 cash from operations of ~\$5.8b at \$3.75/lb copper (consensus of ~6.6b) and capex of \$4.6b (includes \$1b of Indonesia smelter spend, consensus of \$4.6b).

Indonesia smelter / regulation matters

FCX expects PT-FI to complete construction on its greenfield smelter project by mid-2024 with a ramp-up scheduled through YE24 (unch'd). The project exceeded 90% completion as of YE23. As a reminder, FCX has a ~49% ownership interest in PT-FI, which operates the Grasberg minerals district in Indonesia. The company is actively working with the Indonesia government to (i) extend its concentrate export license past the current May 2024 deadline and (ii) reduce the 7.5% export duty placed on all concentrate exports (enacted in July 2023) for 2H23. Under current law, concentrate exports for companies with smelter projects that are more than 90% complete must pay a 7.5% export duty in 2024 (enacted in July 2023). Note, PT-FI incurred export duties of \$307mm in 2H23 (includes \$160mm in 4Q23).

Growth projects

FCX is mulling plans to double the concentrator capacity at its Bagdad mine in Arizona. Initial capex is estimated to be ~\$3.5b (excluding infrastructure that would be required in the long-range plans) and is expected to increase copper production by 200-250mm lbs pounds annually. This would double current production at the site. FCX expects the project to take 3-4 years to complete. A final investment decision has not been made yet. Separately, FCX reached ~200mm lbs of annual run-rate production from its copper leach program in 4Q23 and confirmed its long-term goal of producing ~800mm lbs of copper annually from leach technology.

Downgrade to MW following recent outperformance

FCX posted a strong 4Q23 earnings update which further underpins our positive fundamental view of the business. We continue to like the company's large size and scale, blue-chip copper assets, and robust balance sheet. We appreciate FCX's continued progress on its smelter in Indonesia but reiterate the inherent risk of operating in the country. This will be something to continuously monitor going forward though we do not foresee any near-term credit concerns. Though we have a positive view on fundamentals, FCX notes have outperformed of late and now trade only 5-10 bps behind higher rated peer Glencore (GLENLN, NR) and ~15 bps inside Anglo American (AALLN, NR). We therefore downgrade our recommendation on the miner to MW from OW as we believe the relative upside is limited compared to peers after its recent outperformance.

Segment results

- **North America Copper Mines:** 4Q23 copper sales were 320mm lbs, down 11% y-o-y, due to lower ore grades, partly offset by leach recovery initiatives. Average unit net cash costs of \$2.86/lb were up 15% y-o-y, driven by lower volumes and increased costs of labor.
- **South America Mines:** 4Q23 copper sales were 287mm lbs, down 10% y-o-y, due to lower recovery rates at Cerro Verde and lower milling rates / ore grades. Average unit net cash costs of \$2.72/lb were up 18% y-o-y, driven by lower volumes and molybdenum by-product credits and higher treatment charges.
- **Indonesia Mining:** 4Q23 copper sales were 511mm lbs and gold sales were 544k oz, up 32% and 19% y-o-y, respectively. Copper and gold sales benefited from higher mining rates and ore grades. Average unit net cash costs of \$0.00/lb were

down \$0.06/lb y-o-y due to higher volumes and by-product credits, partly offset by higher export duties and treatment charges.

- **Molybdenum Mines:** 4Q23 molybdenum production was 8mm lbs, down 20% y-o-y, due to lower milling rates (connected to unplanned mill maintenance). Average unit net cash costs of \$14.83/lb were up 24% y-o-y, driven by lower production volumes and higher contract labor costs.

STLD 4Q23 adj. EBITDA miss; cash flows modestly soft vs recent levels

On Tuesday afternoon, Steel Dynamics, Inc. (STLD) reported 4Q23 adj. earnings of \$2.61/share, below Bloomberg consensus estimates of \$2.65/share. Adj. EBITDA of \$659mm was also below consensus estimates of \$687mm. Note, STLD pre-released earnings guidance of \$2.60-2.64/share on 12/15/2023 which was above consensus of \$2.43/share at the time. The earnings miss was due to weaker shipments and pricing in Steel Fabrication.

Cash flow and credit metrics

Cash from operations of \$865mm (including a \$319mm working capital inflow) did not cover capex of \$515mm, dividends of \$69mm, and share repurchases of \$387mm. Credit stats were largely stable q-o-q: total debt/LTM adj. EBITDA = 0.8x (0.8x at 3Q23), net debt/LTM adj. EBITDA = 0.3x (0.2x), and LTM adj. EBITDA/LTM interest expense = 47.9x (45.6x).

Capital allocation

STLD maintained its capital allocation priorities of (i) funding growth with cash from operations (and cash on hand); (ii) returning cash to shareholders; and (iii) retaining an IG credit rating. The company expects FY24 capex of ~\$2.0b (above consensus estimates of \$1.9b and higher than previous guidance of ~\$1.8-2.0b) which includes ~\$1.4b earmarked for its aluminum growth strategy.

Market outlook

STLD's outlook for steel demand remains constructive supported by government infrastructure spending and reshoring initiatives. The company noted that steel pricing has firmed recently (post the United Auto Workers strikes), and customer order activity remains solid across its Steel Operations business. In Steel Fabrication, the business saw improved monthly order activity during 4Q23 which resulted in a well-priced backlog now extending through 1H24 (prev. saw this into 1Q24). The company expects particular demand strength for steel joist and deck and flat rolled / long products in 2024, supported by construction activity connected to onshoring initiatives and government spending programs.

Growth projects

STLD continues to ramp up operations at its Sinton flat roll plant after the company recently completed four flat rolled steel coating lines at the plant and expects to commission two additional lines in 1Q24. Together, these lines will increase the plant's annual capacity to 1.1mm tons of flat rolled steel. Away from Sinton, STLD maintained its outlook to begin commissioning its greenfield aluminum flat roll mill (in Columbus, MS) in mid-2025. The 650k ton mill is expected to add \$650-700mm of through-cycle EBITDA and will serve the beverage can (300k tons), automotive (200k tons), and industrial (150k tons) end-markets. As a reminder, the mill is expected to cost \$2.7b (funded with cash from operations and cash on hand) and will include an on-site slab facility and two satellite recycling plants. Separately, the company plans to start operations at its new biocarbon facility at the end of 2024.



Downgrade STLD to MW on fair trading levels; remain OW long-end

Our positive fundamental view of STLD is unch'd following its 4Q23 earnings update. We acknowledge that weaker cash flows during the quarter could modestly weigh on the credit though note that supportive industry-wide fundamentals should largely offset this weakness. Looking ahead, we believe STLD remains supported by (i) strong credit metrics; (ii) growth plans into higher value add aluminum products; and (iii) conservative financial policies with explicit IG commitments. Despite our positive view of the business, we struggle to see value in the company's notes given their ~15 bps discount (in the belly) to larger, higher-rated producer, Nucor Corporation (NUE, MW). We also note that trading levels to near the BofA Corporate Index likely further constrains near-term upside for STLD's bonds. As a result, we downgrade STLD to MW from OW, however we remain OW the company's notes due 2050 given a steeper 10s30s curves vs peers and an attractive ~60 bps discount to NUE at the long end.

Segment results

- **Steel Operations:** 4Q23 operating income was \$365mm, down 23% q-o-q, due to seasonally lower long product steel shipment and flat rolled steel spread compression (as avg. selling prices fell more than scrap costs).
- **Steel Fabrication:** 4Q23 operating income was \$250mm, down 24% q-o-q, due to lower shipments and metal spread compression (as selling prices fell more than steel substrate costs).
- **Metals Recycling:** 4Q23 operating income was \$6mm, down 65% q-o-q, due to seasonally lower shipments and lower nonferrous scrap selling values.

DOW INC. (DOW) 4Q23 adj. EBITDA miss; remain UW on tight trading levels

On Thursday morning, Dow Inc. (DOW, UW) reported 4Q23 adj. earnings of \$0.43/share, above the Bloomberg consensus estimate of \$0.40/share. Adj EBITDA of \$1,216mm (-10% q-o-q; -7% y-o-y) was below consensus estimates of \$1,252mm. The EBITDA miss was due to softness in Performance Materials & Coatings (PM&C), offsetting stronger results in Packaging & Specialty Plastics (P&SP) and Industrial Intermediates & Infrastructure (II&I).

Cash flow and credit metrics

Cash from operations of \$1,656mm (including a \$1,690mm working capital outflow) covered capex of \$758mm, dividends of \$491mm, and share repo of \$125mm. Credit stats were weaker q-o-q due to lower LTM EBITDA: adj. total debt/LTM adj. EBITDA = 3.8x (3.7x in 2Q23), adj. net debt/LTM adj. EBITDA = 3.3x (3.1x) and LTM adj. EBITDA/LTM interest expense = 7.1x (7.5x).

1Q24 guidance

Dow expects continued soft demand for industrial and durable goods in 1Q24 though is encouraged by early positive signals in construction, automotive, and consumer electronic end-markets. As a result, the company guided total sales to be flat q-o-q in 1Q24 (implies ~\$10.6b, consensus of \$11.4B). In addition, DOW provided the following 1Q24 outlooks for its operating segments:

- **P&SP:** sales -2 to +2% q-o-q; adj. EBIT of ~\$590mm (consensus of \$687mm)
- **PM&C:** sales +3 to +7% q-o-q; adj. EBIT of approx. ~\$40mm (consensus of ~\$123mm)
- **II&I:** sales -2 to +2% q-o-q; adj. EBIT of -\$10mm (consensus of ~\$34m)

- **Corporate:** sales of ~\$75mm; adj. EBIT of -\$70mm; adj. EBITDA of -\$65mm

2024 guidance

Based on commentary on the call, DOW expects FY24 EBITDA of ~\$6.4-6.5b (consensus of \$6.4b). An EBITDA bridge vs FY23A (\$5,389mm) includes: (i) \$300mm uplift from margins expansion; (ii) \$800mm uplift from higher volumes across the business; (iii) \$200 headwind from turnaround costs; and (iv) \$100mm uplift from improved equity earnings. Away from EBITDA, DOW guided FY24 capex to \$3b vs consensus of \$2.6b.

Market commentary

DOW expects continued demand pressure in the near-term though noted that de-stocking (which started in late 2022) has largely run its course, resulting in low inventories throughout the value chain. In the US, industrial activity remains sluggish while consumer spending has proved resilient. Europe is largely soft though auto could be a bright spot going forward. In China, DOW noted that economic activity is improving (supported by government actions) albeit at a slow pace. As for the rest of the world, DOW highlighted strength in India and Mexico.

Capital allocation

DOW maintained its capital allocation priorities: (i) leverage target of 2.0-2.5x and (ii) return ~65% of net income to shareholders via share repurchases and dividends (targeting ~45% of net income). Separately, DOW is evaluating ~\$1.0-1.5b of non-core asset sales in 2024 and expects ~\$500mm of cash proceeds from its settlement with NOVA Chemicals (this year).

Growth projects

DOW expects to generate \$3b+ in annual earnings by 2030 from its Decarbonize & Grow initiatives. During 4Q23, the company reached final investment decision (FID) on its ~1.9mm mt/yr ethylene / polyethylene plant (Path2Zero) in Alberta, Canada. Construction of the facility will start in mid-2024 with expected completion in 2029. Total project capex was guided to ~\$5b (net of tax credits).

Remain UW on tight trading levels coupled with uncertain outlook

DOW's 4Q23 EBITDA miss and weaker 1Q24 guide confirms our cautious outlook for chemicals, broadly. We maintain our view that petrochemical demand remains near trough levels and that a sharp recovery is unlikely in the near-term. We appreciate DOW's roughly in-line FY24 EBITDA guide but note that limited visibility into the full-year leaves us wary of this outlook. Separately, we highlight that DOW identified various cash flow actions which could backstop fundamentals should EBITDA drop-off materially. Though we view this positively, we think tight trading levels and a potential pick up in corporate supply could weigh on credit spreads. Also, we point out that DOW's ~25-35 bps premium to LyondellBasell (LYB, MW) and flattish trading levels to the Single-A Corp Index screen rich, particularly given our bearish outlook for chemicals. As a result, we maintain our UW recommendation on DOW and expect spreads to widen near-term.

Segment Overview

- **P&SP:** 4Q23 operating EBIT was \$664mm, up 1% y-o-y, due improved volumes. Operating EBIT was up 39% q-o-q due to higher integrated polyethylene margins, the impact of planned maintenance turnaround activity in the third quarter, and higher licensing revenue.
- **PM&C:** 3Q23 operating EBIT was -\$61mm, up 53% y-o-y, due to lower costs as well as reduced planned maintenance turnaround activity. Operating EBIT was down 134% q-o-q primarily driven by seasonally lower volumes.
- **II&I:** 3Q23 operating EBIT was \$15mm, down 91% y-o-y, due to lower prices and reduced supply availability in Industrial Solutions. Operating EBIT was up 29% q-o-q driven by seasonally lower volumes in building & construction which were partly



offset by seasonally higher demand for deicing fluid and higher demand for mobility applications.

DD guides 4Q23 and 1Q24 EBITDA below consensus estimates

On Wednesday morning, DuPont (DD, NR) released 4Q23, 1Q24, and 2024 guidance. In 4Q23, DD expects sales of ~\$2.9b (consensus of ~\$3b), EBITDA of ~\$715mm (consensus of ~\$745mm), and cash from operations of ~\$640mm (consensus of ~\$540mm). In 1Q24, DD expects sales of ~\$2.8b (consensus of ~\$3b) and EBITDA of ~\$610mm (consensus of ~\$747mm). The company noted that channel inventory destocking (within its industrial businesses) and continued weak demand in China impacted operations in 4Q23. DD is seeing similar trends in 1Q24 and expects sales and earnings to decline sequentially. On a positive note, semi-conductor markets continue to stabilize, and DD expects a broad-based market recovery for electronics in 2024.

2024 guidance

DD expects ~10% higher EBITDA in 2Q24 vs 1Q24. In 2H24, the business expects to return to y-o-y sales and earnings growth. Separately, DD expects savings from its self-help actions to start later in 1Q24 (unch'd). As a reminder, DD announced various self-help actions in November 2023 with targeted run-rate savings of ~\$150mm annually.

Rating Agency Actions

Moody's revises MAS's outlook to positive from stable; affirms Baa2 rating

On Tuesday, Moody's revised Masco Corporation's (MAS, NR) outlook to positive from stable and affirmed its Baa2 rating. The positive outlook reflects Moody's belief that MAS will sustain EBITDA margins of ~19% through this year and that leverage will reach ~2.1x by late 2024, supported by high profitability. Moody's expects MAS to generate more than \$500mm of free cash flow in 2024. A positive ratings action could be taken if leverage remains around 2.0x and EBITDA margins are sustained above 18%. Conversely, Moody's could downgrade the business if leverage remained above 3.0x or EBITDA margins trended towards 15%. MAS's rating could also be negatively impacted should management pursue more aggressive financial policies.

BofA Recommendations

Exhibit 4: BofA Global Research Recommendations

HG Basic Materials recommendations include 1 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	MW, OW 2030s	Steel Dynamics, Inc.	MW, OW 2050s
LyondellBasell Industries	MW	Teck Resources Ltd	MW
Nutrien Ltd	MW		
Sherwin-Williams	UW		

Source: BofA Global Research

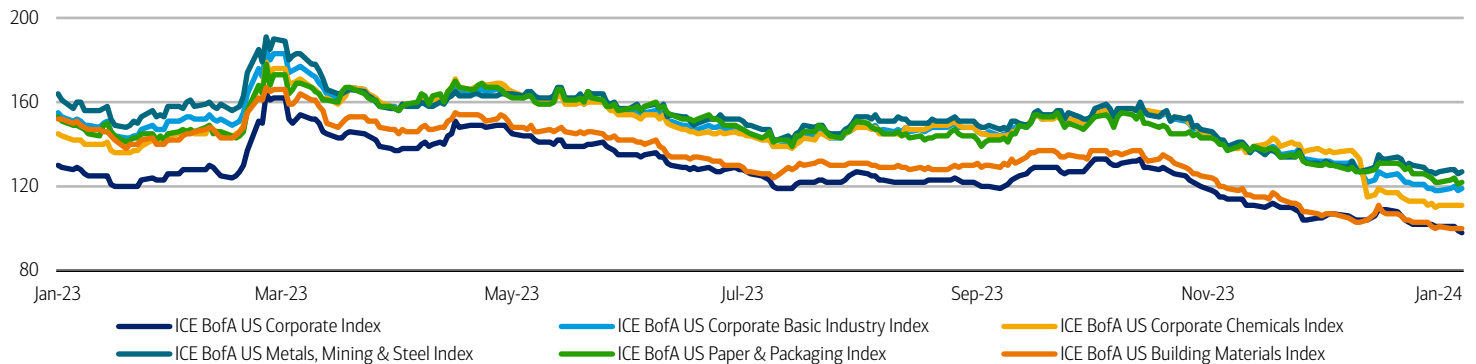
Note: UW = Underweight, MW = Marketweight, OW = Overweight, RSTR = Restricted. Please see credit opinion key at the end of this report

BofA GLOBAL RESEARCH

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

BofA GLOBAL RESEARCH

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 tight	6-mo wide	8-wk avg. spread (bps)
ALB	Albemarle Corp	5.050	6/1/2032	600	Baa3 / BBB	156	191	158	95.77	(11)	153	215	171
ALB	Albemarle Corp	5.650	6/1/2052	450	Baa3 / BBB	202	266	202	90.16	(10)	202	258	221
APD	Air Products and Chemicals	4.800	3/3/2033	600	A2 / A	51	86	52	101.13	(2)	48	88	50
APD	Air Products and Chemicals	2.800	5/15/2050	950	A2 / A	67	132	65	67.38	(3)	62	88	68
CE	Celanese US Holdings LLC	6.700	11/15/2033	1,000	Baa3 / BBB-	169	203	169	106.35	(5)	163	259	174
CF	CF Industries Inc	5.375	3/15/2044	750	Baa3 / BBB	139	204	139	94.17	1	138	206	154
CTVA	Corteva, Inc	4.800	5/15/2033	600	A3 / A-	77	112	78	99.24	1	75	126	78
DD	DuPont de Nemours Inc	5.419	11/15/2048	2,150	Baa1 / BBB+	105	166	101	99.75	9	96	160	107
DOW	Dow Chemical Co/The	6.300	3/15/2033	600	Baa1 / BBB	94	129	95	108.68	(1)	94	148	103
DOW	Dow Chemical Co/The	6.900	5/15/2053	900	Baa1 / BBB	135	200	135	116.29	(1)	135	201	142
ECL	Ecolab Inc	2.125	2/1/2032	650	A3 / A-	63	100	66	82.62	4	53	92	60
ECL	Ecolab Inc	2.700	12/15/2051	850	A3 / A-	72	139	71	64.43	0	69	107	73
EMN	Eastman Chemical Co	5.750	3/8/2033	500	Baa2 / BBB	136	171	137	101.79	1	135	197	139
EMN	Eastman Chemical Co	4.650	10/15/2044	900	Baa2 / BBB	140	205	141	85.35	1	138	192	149
FMC	FMC Corp	5.650	5/18/2033	500	Baa2 / BBB-	179	214	180	98.06	(5)	179	257	194
FMC	FMC Corp	6.375	5/18/2053	500	Baa2 / BBB-	205	270	206	99.18	(5)	205	271	218
HUN	Huntsman International LLC	2.950	6/15/2031	400	Baa3 / BBB-	165	201	168	83.18	(5)	165	230	170
IFF	International Flavors and Fragrances Inc	3.468	12/1/2050	1,500	Baa3 / BBB-	165	230	163	66.07	1	164	234	175
LIN	Linde Inc/CT	2.000	8/10/2050	300	A2 / A	67	133	65	55.63	5	62	100	68
LYB	LYB International Finance III LLC	5.625	5/15/2033	500	Baa2 / BBB	111	146	112	102.72	1	110	175	116
LYB	LYB International Finance III LLC	3.625	4/1/2051	1,000	Baa2 / BBB	137	202	136	70.89	1	136	197	150
MOS	Mosaic Co	5.625	11/15/2043	600	Baa2 / BBB	150	214	150	95.88	(4)	150	200	160
NTRCN	Nutrien Ltd	5.800	3/27/2053	750	Baa2 / BBB	122	187	122	102.74	(2)	122	190	132
RPM	RPM International Inc	2.950	1/15/2032	300	Baa3 / BBB	119	155	122	84.77	(10)	119	212	144
RPM	RPM International Inc	4.250	1/15/2048	300	Baa3 / BBB	144	204	139	79.77	(3)	144	207	156
SHW	Sherwin-Williams Co/The	2.200	3/15/2032	500	Baa2 / BBB	82	119	84	81.77	1	81	131	86
SHW	Sherwin-Williams Co/The	2.900	3/15/2052	500	Baa2 / BBB	88	155	88	65.47	1	87	143	93
WLK	Westlake Chemical Corp	3.125	8/15/2051	600	Baa2 / BBB	132	198	131	64.37	(3)	132	188	142

Source: BofA Global Research, BofA Securities, 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 but mostly flat to 5 bps tighter 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)
AALLN	Anglo American Capital PLC	5.500	5/2/2033	900	Baa2 / BBB	149	184	150	99.12	(3)	149	195	156
AALLN	Anglo American Capital PLC	4.750	3/16/2052	750	Baa2 / BBB	150	215	150	84.46	(6)	150	210	167
ABXCN	Barrick Gold Corp	5.750	5/1/2043	849	Baa1 / BBB	102	166	104	102.91	0	94	144	102
BHP	BHP Billiton Finance USA Ltd	5.250	9/8/2033	1,500	A2 / A-	88	123	89	101.76	5	83	120	89
BHP	BHP Billiton Finance USA Ltd	5.500	9/8/2053	800	A2 / A-	85	151	86	103.91	0	84	113	88
FCX	Freeport-McMoRan Inc	5.400	11/14/2034	730	Baa2 / BB+	139	172	136	99.01	8	131	206	147
FCX	Freeport-McMoRan Inc	5.450	3/15/2043	1,706	Baa2 / BB+	141	205	143	94.96	2	139	204	154
GLENLN	Glencore Funding LLC	6.500	10/6/2033	1,000	Baa1 / BBB+	130	164	131	107.79	(1)	130	197	139
GLENLN	Glencore Funding LLC	3.375	9/23/2051	500	Baa1 / BBB+	127	193	126	68.29	(1)	127	189	137
KCN	Kinross Gold Corp	6.250	7/15/2033	500	Baa3 / BBB-	163	197	164	103.45	(5)	163	244	173
NEM	Newmont Corp	2.600	7/15/2032	1,000	Baa1 / BBB+	94	130	96	83.16	7	80	144	89
NEM	Newmont Corp	4.875	3/15/2042	1,000	Baa1 / BBB+	84	148	90	94.83	(8)	84	148	93
NUE	Nucor Corp	3.125	4/1/2032	550	Baa1 / A-	76	112	78	88.21	(2)	76	127	81
NUE	Nucor Corp	3.850	4/1/2052	550	Baa1 / A-	83	149	83	79.94	(4)	83	143	91
RIOLN	Rio Tinto Finance USA Ltd	5.000	3/9/2033	650	A2 / A-	66	101	67	101.48	4	59	108	64
RIOLN	Rio Tinto Finance USA Ltd	5.125	3/9/2053	1,100	A2 / A-	83	150	84	98.64	0	83	120	86
SOUTAU	South32 Treasury Ltd	4.350	4/14/2032	700	Baa1 / BBB+	188	224	190	89.35	0	188	244	199
STLD	Steel Dynamics	3.250	1/15/2031	500	Baa2 / BBB	97	133	101	89.26	(3)	97	145	105
STLD	Steel Dynamics	3.250	10/15/2050	400	Baa2 / BBB	139	204	137	65.81	(2)	130	170	141
TCKBCN	Teck Resources Ltd	5.400	2/1/2043	367	Baa3 / BBB-	159	223	162	92.48	(1)	159	222	165

Source: BofA Global Research, BofA Securities, 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 wrapped around 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 tightts	6-mo wides	8-wk avg. spread (bps)
ATR	AptarGroup Inc	3.600	3/15/2032	400	Baa3 / BBB-	115	151	117	89.00	(3)	115	190	125
AVY	Avery Dennison Corp	5.750	3/15/2033	400	Baa2 / BBB	98	133	99	104.50	0	98	160	110
IP	International Paper Co	4.350	8/15/2048	740	Baa2 / BBB	103	164	99	85.62	0	103	159	111
PKG	Packaging Corp of America	3.050	10/1/2051	700	Baa2 / BBB	99	166	98	66.70	0	99	147	108
SON	Sonoco Products Co	2.850	2/1/2032	500	Baa2 / BBB	105	141	108	84.88	0	105	165	123
SON	Sonoco Products Co	5.750	11/1/2040	537	Baa2 / BBB	135	199	146	99.12	(1)	135	180	141
WRK	WRKCO Inc	3.000	6/15/2033	600	Baa2 / BBB	99	134	100	84.35	0	99	160	103
WY	Weyerhaeuser	3.375	3/9/2033	450	Baa2 / BBB	107	142	108	86.87	2	105	145	110
WY	Weyerhaeuser	4.000	3/9/2052	450	Baa2 / BBB	110	176	110	78.82	2	108	148	117

Source: BofA Global Research, BofA Securities, Bloomberg

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

In the HG Construction Materials/Homebuilders subsector, spreads were mostly 5 to 10 bps tighter w-o-w.

Issuer	Entity	Coupon	Maturity	Outstanding (\$mm)	MDY/S&P	Bid (bps)	Z-Spread	G-Spread	Price	1 wk. change	6-mo tight	6-mo wide	8-wk avg. spread (bps)
EXP	Eagle Materials	2.500	7/1/2031	750	Baa2 / BBB	105	142	108	83.65	0	105	163	113
FBINUS	Fortune Brands Home & Security Inc	5.875	6/1/2033	600	Baa2 / BBB	130	165	131	103.14	(7)	130	200	144
FBINUS	Fortune Brands Home & Security Inc	4.500	3/25/2052	450	Baa2 / BBB	141	207	141	82.10	(3)	141	210	157
MAS	Masco Corp	2.000	2/15/2031	600	Baa2 / BBB	105	142	109	81.42	(1)	105	150	118
MAS	Masco Corp	3.125	2/15/2051	300	Baa2 / BBB	111	176	109	66.81	(3)	109	190	117
MDC	MDC Holdings Inc	2.500	1/15/2031	350	Ba1 / BBB- *	146	183	150	82.37	2	144	259	181
MDC	MDC Holdings Inc	6.000	1/15/2043	500	Ba1 / BBB- *	171	235	174	97.87	(18)	171	298	233
MLM	Martin Marietta Materials Inc	2.400	7/15/2031	900	Baa2 / BBB+	93	130	96	83.63	1	92	144	98
MLM	Martin Marietta Materials Inc	3.200	7/15/2051	900	Baa2 / BBB+	82	148	81	70.85	1	80	141	89
OC	Owens Corning	4.300	7/15/2047	600	Baa1 / BBB	96	165	100	84.97	(5)	96	175	115
PHM	PulteGroup Inc	7.875	6/15/2032	300	Baa2 / BBB	132	167	134	116.10	(10)	132	192	145
VMC	Vulcan Materials Co	4.700	3/1/2048	461	Baa2 / BBB+	99	159	94	90.92	(6)	99	154	117

Source: BofA Global Research, BofA Securities, 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 Global Research, Company Reports, Bloomberg

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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 Global 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 Global 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 Global 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%

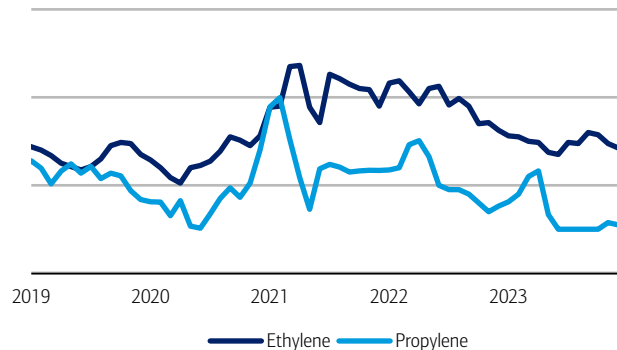
Source: BofA Global Research, Company Reports, Bloomberg

BofA GLOBAL RESEARCH

Chemical Markets Data

Exhibit 15: Olefin Pricing (\$/lb)

Olefin prices have declined from their highs

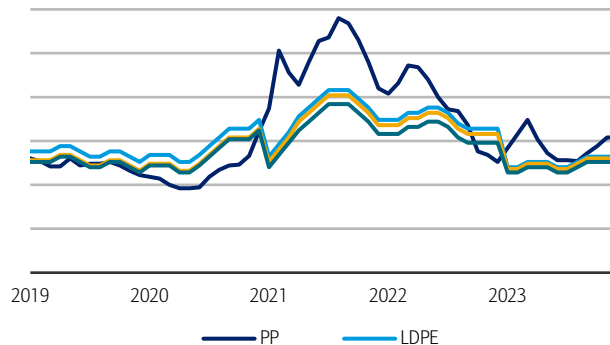


Source: Chemical Data Inc., a part of ICIS

BofA GLOBAL RESEARCH

Exhibit 16: Polyolefin Pricing (\$/lb)

Polyolefin prices declined from their highs but have started to stabilize

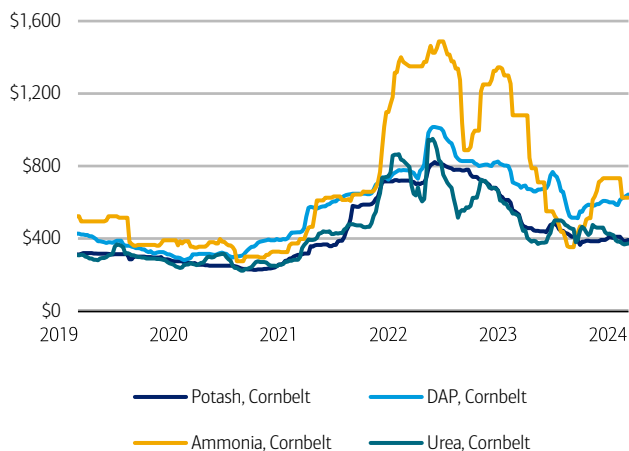


Source: Chemical Data Inc., a part of ICIS

BofA GLOBAL RESEARCH

Exhibit 17: Fertilizer Pricing (\$/st)

Fertilizer prices declined from their high but have started to stabilize

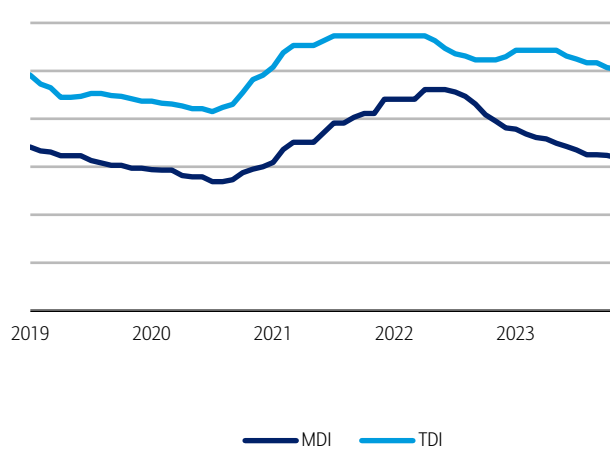


Source: BofA Global Research, Bloomberg

BofA GLOBAL RESEARCH

Exhibit 18: Isocyanates Pricing (\$/lb)

MDI and TDI have rebounded from their COVID lows

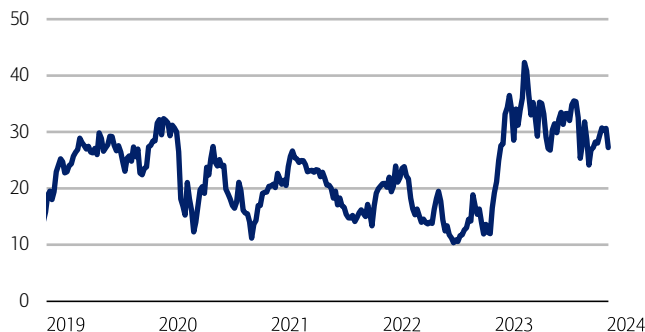


Source: Chemical Data Inc., a part of ICIS

BofA GLOBAL RESEARCH

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

The ratio of Brent to Natural Gas is at elevated levels

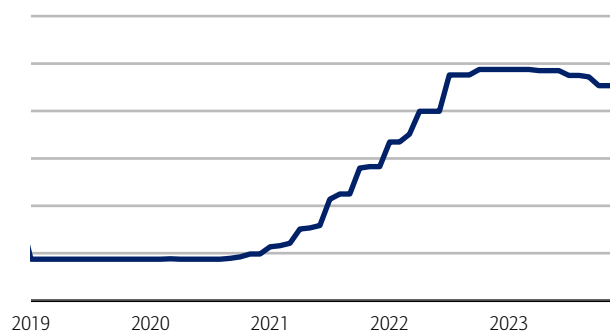


Source: BofA Global Research, Bloomberg

BofA GLOBAL RESEARCH

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

BofA GLOBAL RESEARCH

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 down -0.1% w/w at \$2,022



Source: BofA Global Research, Bloomberg

BofA GLOBAL RESEARCH

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

Silver prices ended up +1.1% w/w at \$22.88



Source: BofA Global Research, Bloomberg

BofA GLOBAL RESEARCH

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

Copper prices ended up +3.1% w/w at \$3.85

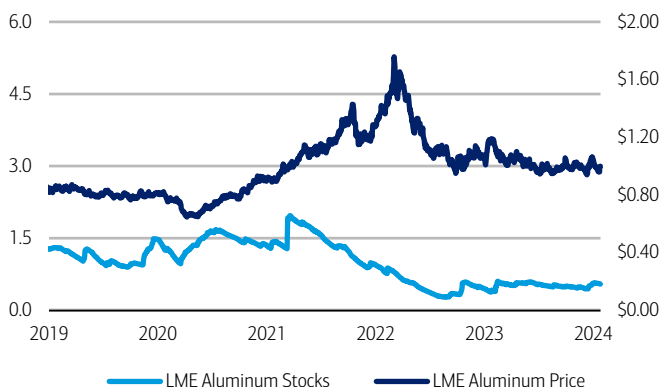


Source: BofA Global Research, Bloomberg

BofA GLOBAL RESEARCH

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

Aluminum prices ended up +4.0% w/w at \$1.00

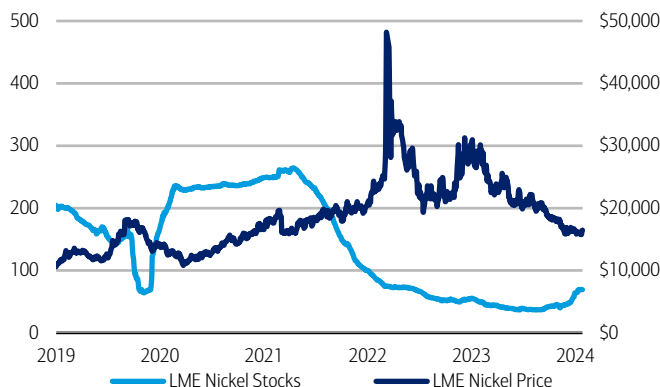


Source: BofA Global Research, Bloomberg

BofA GLOBAL RESEARCH

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

Nickel prices ended up +3.5% w/w at \$16,469



Source: BofA Global Research, Bloomberg

BofA GLOBAL RESEARCH

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

Zinc prices ended up +5.2% w/w at \$2,577

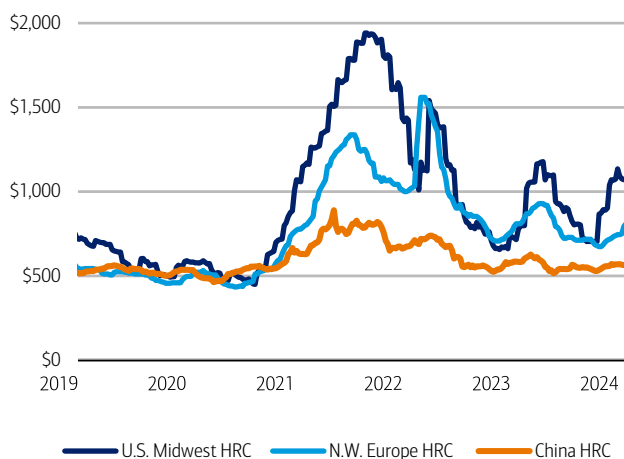


Source: BofA Global Research, Bloomberg

BofA GLOBAL RESEARCH

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

U.S. Midwest HRC prices ended up +0.7% w/w at \$1077; NW. Europe HRC prices ended up +2.1% w/w at \$810; China HRC prices ended up +1.0% w/w at \$569



Source: BofA Global Research, Bloomberg

BofA GLOBAL RESEARCH

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

China spot iron ore prices ended down -0.5% w/w at \$134

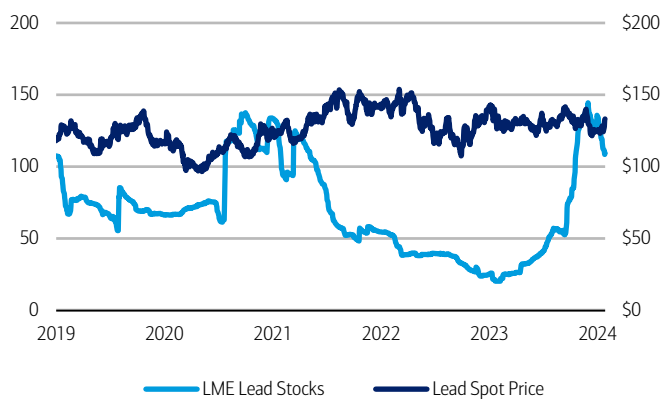


Source: BofA Global Research, Bloomberg

BofA GLOBAL RESEARCH

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

Lead prices ended up +7.0% w/w at \$133

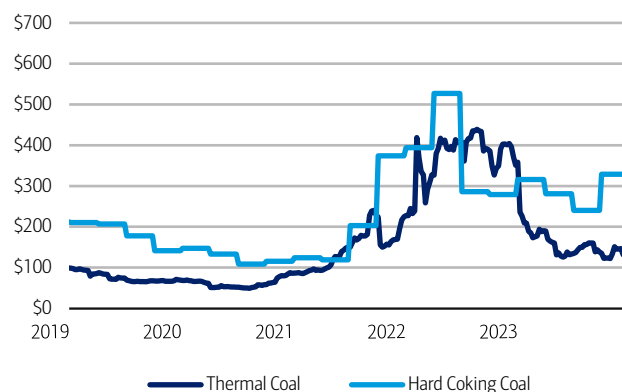


Source: BofA Global Research, Bloomberg

BofA GLOBAL RESEARCH

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

Thermal Coal prices ended down -0.9% w/w at \$127 Hard Coking Coal prices ended Unch. at \$329



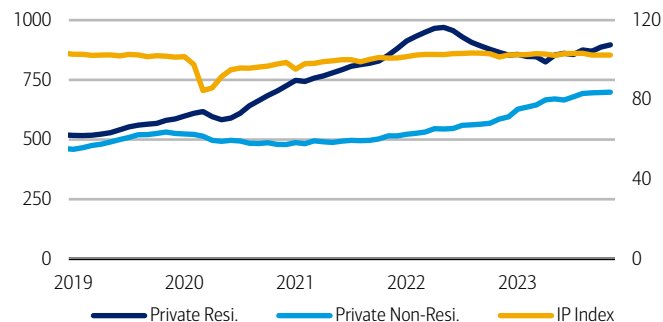
Source: BofA Global Research, Bloomberg

BofA GLOBAL RESEARCH

Construction Products Market Data

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

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

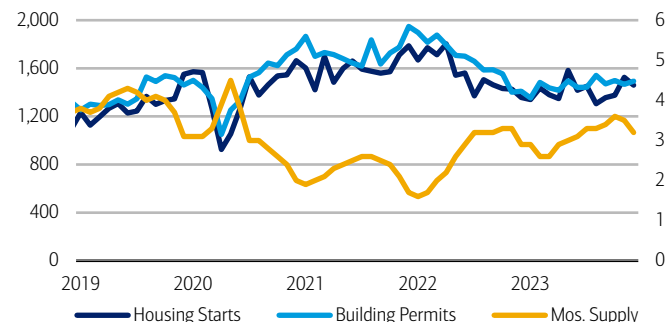


Source: BofA Global Research, Bloomberg

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

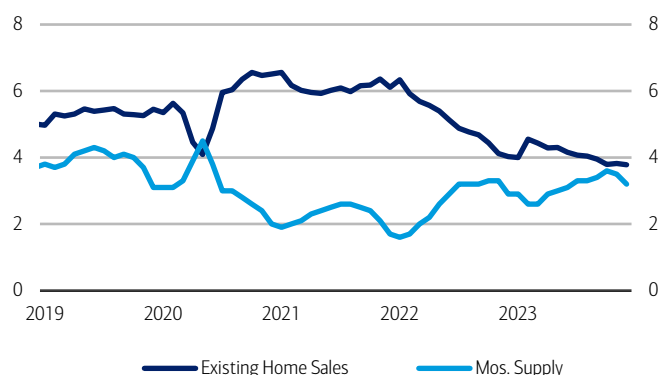


Source: BofA Global Research, Bloomberg

BofA GLOBAL RESEARCH

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

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

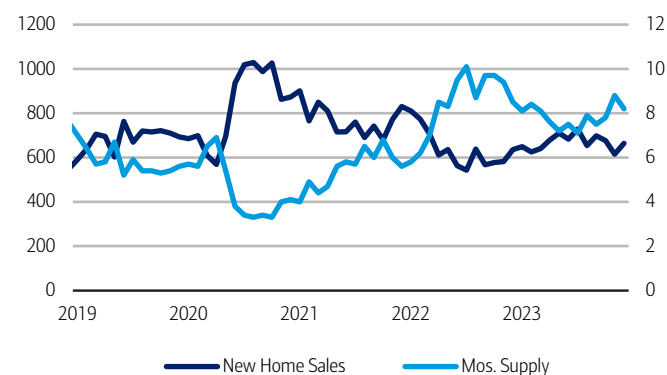


Source: BofA Global Research, Bloomberg

BofA GLOBAL RESEARCH

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

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

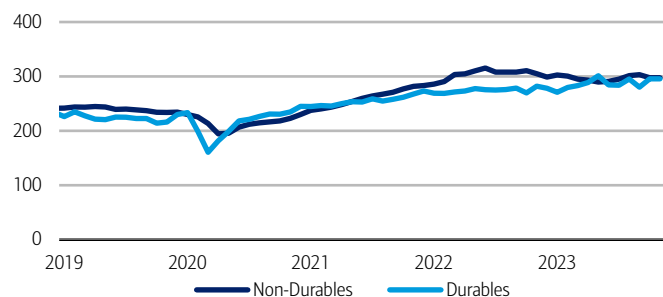


Source: BofA Global Research, Bloomberg

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

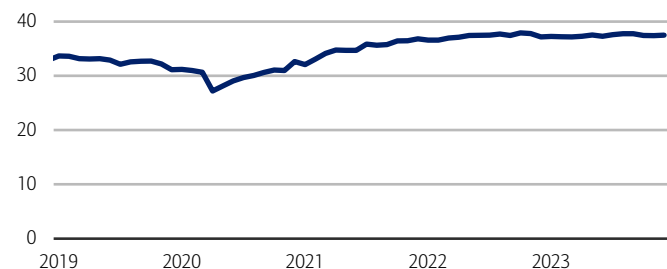


Source: BofA Global Research, Bloomberg

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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

BofA GLOBAL RESEARCH

Earnings Calendar

Exhibit 43: HG Basic Materials Earnings Calendar

HG Basic Materials earnings over the next few weeks

Company	Sector	Ticker	EPS Date	Time	Status	Call Date	Call Time	Call Number	Call PIN
Nucor Corp	Iron/Steel	NUE US	1/29/2024	Aft-mkt	Confirmed	1/30/2024	10:00:00 AM	#N/A N/A	#N/A N/A
MDC Holdings Inc	Home Builders	MDC US	1/30/2024	Bef-mkt	Confirmed	1/30/2024	12:30:00 PM	844-757-5733	#N/A N/A
PulteGroup Inc	Home Builders	PHM US	1/30/2024	Bef-mkt	Confirmed	1/30/2024	8:30:00 AM	(888) 440-6928	6106699
Fortune Brands Innovations Inc	Building Materials	FBIN US	1/30/2024	Aft-mkt	Confirmed	1/30/2024	5:00:00 PM	#N/A N/A	#N/A N/A
Avery Dennison Corp	Household Products/Wares	AVY US	1/31/2024	06:45	Confirmed	1/31/2024	1:00:00 PM	#N/A N/A	#N/A N/A
Corteva Inc	Biotechnology	CTVA	1/31/2024	Aft-mkt	Confirmed	2/1/2024	9:00:00 AM	#N/A N/A	#N/A N/A
Westrock Co	Packaging&Containers	WRK US	2/1/2024	Bef-mkt	Confirmed	NA	NA	#N/A N/A	#N/A N/A
International Paper Co	Forest Products&Paper	IP US	2/1/2024	Bef-mkt	Confirmed	2/1/2024	10:00:00 AM	844-291-5494	3266705
Eastman Chemical Co	Chemicals	EMN US	2/1/2024	16:15	Confirmed	2/2/2024	8:00:00 AM	+1 (833) 470-1428	844307
LyondellBasell Industries NV	Chemicals	LYB US	2/2/2024	Bef-mkt	Confirmed	2/2/2024	11:00:00 AM	877-407-8029	#N/A N/A
Air Products and Chemicals Inc	Chemicals	APD US	2/5/2024	Bef-mkt	Confirmed	2/5/2024	8:30:00 AM	#N/A N/A	#N/A N/A
Cabot Corp	Chemicals	CBT US	2/5/2024	Aft-mkt	Confirmed	2/6/2024	8:00:00 AM	#N/A N/A	#N/A N/A
FMC Corp	Chemicals	FMC US	2/5/2024	Aft-mkt	Confirmed	2/6/2024	9:00:00 AM	+1 833 470 1428	196953
DuPont de Nemours Inc	Chemicals	DD US	2/6/2024	06:00	Confirmed	2/6/2024	8:00:00 AM	888-440-4172	5994046
Linde PLC	Chemicals	LIN	2/6/2024	06:00	Confirmed	2/6/2024	9:00:00 AM	1 888 770 7292	6877110
Masco Corp	Building Materials	MAS US	2/8/2024	07:00	Confirmed	2/8/2024	8:00:00 AM	888-259-6580	96682919
Mohawk Industries Inc	Building Materials	MHK US	2/8/2024	Aft-mkt	Confirmed	2/9/2024	11:00:00 AM	1-833-630-1962	#N/A N/A
AptarGroup Inc	Packaging&Containers	ATR US	2/8/2024	Aft-mkt	Confirmed	2/9/2024	9:00:00 AM	#N/A N/A	#N/A N/A
International Flavors & Fragra	Chemicals	IFF US	2/8/2024	NA	Estimated	NA	NA	#N/A N/A	#N/A N/A
Ecolab Inc	Chemicals	ECL US	2/13/2024	Bef-mkt	Confirmed	2/13/2024	1:00:00 PM	#N/A N/A	#N/A N/A
Barrick Gold Corp	Mining	ABX CN	2/14/2024	06:00	Confirmed	2/14/2024	11:00:00 AM	1 800 319 4610	#N/A N/A
Owens Corning	Building Materials	OC US	2/14/2024	Bef-mkt	Confirmed	2/14/2024	9:00:00 AM	1 833 470 1428	498688
CF Industries Holdings Inc	Chemicals	CF US	2/14/2024	Aft-mkt	Confirmed	2/15/2024	10:00:00 AM	#N/A N/A	#N/A N/A
Kinross Gold Corp	Mining	K CN	2/14/2024	Aft-mkt	Confirmed	2/15/2024	8:00:00 AM	+1 (888) 330-2446	4915537
Sonoco Products Co	Packaging&Containers	SON US	2/14/2024	Aft-mkt	Confirmed	2/15/2024	8:30:00 AM	+1 844-543-0451	916190
Albemarle Corp	Chemicals	ALB US	2/14/2024	Aft-mkt	Confirmed	2/15/2024	9:00:00 AM	+1 (888) 330-2007	5205664
Martin Marietta Materials Inc	Building Materials	MLM US	2/15/2024	NA	Estimated	NA	NA	#N/A N/A	#N/A N/A
Reliance Steel & Aluminum Co	Iron/Steel	RS US	2/15/2024	Bef-mkt	Tentative	2/15/2024	11:00:00 AM	#N/A N/A	#N/A N/A
Vulcan Materials Co	Building Materials	VMC US	2/16/2024	Bef-mkt	Confirmed	2/16/2024	10:00:00 AM	800-274-8461	4460325
Northern Star Resources Ltd	Mining	NST AU	2/20/2024	NA	Estimated	NA	NA	#N/A N/A	#N/A N/A
Celanese Corp	Chemicals	CE US	2/20/2024	Aft-mkt	Confirmed	2/21/2024	10:00:00 AM	1-877-407-0989	#N/A N/A
Toll Brothers Inc	Home Builders	TOL US	2/21/2024	NA	Estimated	NA	NA	#N/A N/A	#N/A N/A
Westlake Corp	Chemicals	WLK US	2/21/2024	NA	Estimated	NA	NA	#N/A N/A	#N/A N/A
Teck Resources Ltd	Coal	TCK	2/21/2024	Bef-mkt	Confirmed	2/22/2024	11:00:00 AM	#N/A N/A	#N/A N/A
Huntsman Corp	Chemicals	HUN US	2/21/2024	Aft-mkt	Confirmed	2/22/2024	10:00:00 AM	(877) 402-8037	#N/A N/A
Nutrien Ltd	Chemicals	NTR CN	2/21/2024	Aft-mkt	Confirmed	2/22/2024	10:00:00 AM	1-888-886-7786	#N/A N/A
CCL Industries Inc	Packaging&Containers	CCL/B CN	2/22/2024	NA	Estimated	NA	NA	#N/A N/A	#N/A N/A
Mosaic Co/The	Chemicals	MOS US	2/22/2024	NA	Estimated	NA	NA	#N/A N/A	#N/A N/A
Newmont Corp	Mining	NEM US	2/22/2024	Bef-mkt	Confirmed	2/22/2024	10:00:00 AM	833 470 1428	960159

Source: Bloomberg

BofA GLOBAL RESEARCH

Valuation & risk

Dow Chemical (DOW)

Dow Inc. (DOW) is a global chemical company whose portfolio of plastics, industrial intermediates, coatings and silicones businesses delivers a broad range of products and solutions such as packaging, infrastructure, mobility and consumer care.

DOW's fundamentals are supported by its large size & scale, diversification, and industry



bellwether status. In the near term, however, we believe that an uncertain macro backdrop, poor investor sentiment, and petrochemical demand around trough levels could weigh on the company's credit story. Furthermore, we think that DOW's current trading levels screen rich vs peers and the Single-A Corporate Index, particularly given the current chemicals downcycle. As a result, we expect DOW's spreads to widen near-term and provide an UW rec on the name.

Risks: commodity price volatility, lower/higher supply and/or demand, lower/higher production costs, a more/less shareholder-friendly capital allocation policy and government intervention.

Freeport-McMoRan (FCX)

Freeport McMoRan (FCX) is the world's largest publicly traded copper and molybdenum producer and among the larger gold producers. FCX's portfolio of assets includes the Grasberg minerals district (Indonesia) and mining operations in North America and South America.

We continue to view FCX positively given its large size and scale, blue-chip copper assets, robust free cash flow generation, and strong balance sheet. We appreciate FCX's continued progress on its smelter in Indonesia but reiterate the inherent risk of operating in the country. This will be something to continuously monitor going forward though we do not foresee any near-term credit concerns. Compared to peers, we believe that FCX's spreads fully reflect our positive view on the business given its bonds trade near and/or tight to other BBB-rated miners. As a result, we think FCX trades at fair value and provide a MW rec.

Risks: global macro weakness, operational disruptions, execution risk to further cost-cutting measures, more/less favorable regulatory or environmental regulations, particularly at its Indonesian operations, unfavorable currency moves, and acceleration/deceleration of the energy transition

Steel Dynamics (STLD)

Steel Dynamics Inc (STLD) is a North American steel producer with annual production capacity of approx. 14mm tons. The company primarily operates electric arc furnace mills and manufactures (i) flat-rolled products, (ii) special/merchant bars, and (iii) structural steel products. STLD's circular business model includes a recycling segment which processes ferrous and nonferrous scrap metals.

We believe that STLD is well positioned fundamentally and should benefit from supportive sector wide fundamentals. Overall, the company benefits from (i) strong credit metrics, (ii) growth plans into higher value add products and (iii) conservative financial policies with explicit commitments to IG ratings. Despite our positive view of the business, we struggle to see value in the company's notes given fair trading levels vs peers and the BofA Corp Index. We therefore provide a MW rec on STLD. However, we are OW the company's notes due 2050 given a steeper 10s30s curve and attractive discount to peers at the long end.

Risks: steel price volatility, lower/higher supply and/or demand, lower/higher production costs, a more/less shareholder-friendly capital allocation policy, large-scale M&A activity and changes to Section 232 steel tariffs.

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

Dow Chemical Company / DOW

	Amt		Ratings			Yield	Spread
Security		Maturity date	Moody's/S&P/Fitch	Price	Price date	(%)	(bps)
7.375, Senior, USD, 2029:B	748	01-NOV-2029	Baa1/BBB/BBB+	111.64	25-Jan-2024	5.02	98
9.4, Senior, USD, 2039:B	558	15-MAY-2039	Baa1/BBB/BBB+	136.20	25-Jan-2024	5.80	146
5.25, Senior, USD, 2041:B	750	15-NOV-2041	Baa1/BBB/BBB+	96.34	25-Jan-2024	5.58	114
4.25, Senior, USD, 2034:B	500	01-OCT-2034	Baa1/BBB/BBB+	93.95	25-Jan-2024	4.99	82
4.625, Senior, USD, 2044:B	500	01-OCT-2044	Baa1/BBB/BBB+	89.14	25-Jan-2024	5.51	100
4.8, Senior, USD, 2049:B	750	15-MAY-2049	Baa1/BBB/BBB+	88.78	25-Jan-2024	5.64	113
4.8, Senior, USD, 2028:B	600	30-NOV-2028	Baa1/BBB/BBB+	100.20	25-Jan-2024	4.75	70
5.55, Senior, USD, 2048:B	896	30-NOV-2048	Baa1/BBB/BBB+	100.06	25-Jan-2024	5.55	102
2.1, Senior, USD, 2030:B	850	15-NOV-2030	Baa1/BBB/BBB+	84.54	25-Jan-2024	4.79	73
3.6, Senior, USD, 2050:B	1,150	15-NOV-2050	Baa1/BBB/BBB+	74.31	25-Jan-2024	5.43	96
6.3, Senior, USD, 2033:B	600	15-MAR-2033	Baa1/BBB/BBB+	108.89	25-Jan-2024	5.05	93
6.9, Senior, USD, 2053:B	900	15-MAY-2053	Baa1/BBB/BBB+	116.31	25-Jan-2024	5.74	134

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

Freeport-McMoRan Inc. / FCX

	Amt		Ratings			Yield	Spread
Security		Maturity date	Moody's/S&P/Fitch	Price	Price date	(%)	(bps)
5.45, Senior, USD, 2043:B	1,866	15-MAR-2043	Baa2/BB+/BBB-	94.93	25-Jan-2024	5.90	142
4.55, Senior, USD, 2024:B	730	14-NOV-2024	Baa2/BB+/BBB-	99.09	25-Jan-2024	5.73	82
5.4, Senior, USD, 2034:B	750	14-NOV-2034	Baa2/BB+/BBB-	99.22	25-Jan-2024	5.50	132
5, Senior, USD, 2027:B	600	01-SEP-2027	Baa2/BB+/BBB-	98.66	25-Jan-2024	5.41	131
5.25, Senior, USD, 2029:B	600	01-SEP-2029	Baa2/BB+/BBB-	100.23	25-Jan-2024	5.18	108
4.125, Senior, USD, 2028:B	700	01-Mar-2028	Ba1/BB/BB+	95.40	25-Jan-2024	5.39	132
4.25, Senior, USD, 2030:B	600	01-Mar-2030	Baa2/BB+/BBB-	93.38	25-Jan-2024	5.54	149
4.375, Senior, USD, 2028:B	650	01-AUG-2028	Baa2/BB+/BBB-	96.06	25-Jan-2024	5.37	132
4.625, Senior, USD, 2030:B	850	01-AUG-2030	Baa2/BB+/BBB-	96.15	25-Jan-2024	5.33	128

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	88.83	25-Jan-2024	5.34	81
3.45, Senior, USD, 2027:B	1,500	01-JUN-2027	Baa2/BBB/BBB	96.18	25-Jan-2024	4.70	57
3.125, Senior, USD, 2024:B	500	01-JUN-2024	Baa2/BBB/BBB	99.10	25-Jan-2024	5.73	36
4, Senior, USD, 2042:B	300	15-DEC-2042	Baa2/BBB/BBB	82.05	25-Jan-2024	5.55	108
3.45, Senior, USD, 2025:B	400	01-AUG-2025	Baa2/BBB/BBB	97.48	25-Jan-2024	5.20	69
4.55, Senior, USD, 2045:B	400	01-AUG-2045	Baa2/BBB/BBB	87.39	25-Jan-2024	5.56	104
2.3, Senior, USD, 2030:B	500	15-MAY-2030	Baa2/BBB/BBB	86.40	25-Jan-2024	4.83	78
3.3, Senior, USD, 2050:B	500	15-MAY-2050	Baa2/BBB/BBB	71.34	25-Jan-2024	5.34	85
2.2, Senior, USD, 2032:B	500	15-MAR-2032	Baa2/BBB/BBB	81.89	25-Jan-2024	4.93	84
2.9, Senior, USD, 2052:B	500	15-MAR-2052	Baa2/BBB/BBB	65.64	25-Jan-2024	5.25	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

Steel Dynamics, Inc. / STLD

	Amt		Ratings			Yield	Spread
Security		Maturity date	Moody's/S&P/Fitch	Price	Price date	(%)	(bps)
5, Senior, USD, 2026:B	400	15-DEC-2026	Baa2/BBB/NR	99.72	25-Jan-2024	5.10	93
3.45, Senior, USD, 2030:B	600	15-APR-2030	Baa2/BBB/BBB	91.67	25-Jan-2024	5.03	98
3.25, Senior, USD, 2031:B	500	15-JAN-2031	Baa2/BBB/BBB	89.45	25-Jan-2024	5.07	100
1.65, Senior, USD, 2027:B	350	15-OCT-2027	Baa2/BBB/BBB	88.98	25-Jan-2024	4.93	84
3.25, Senior, USD, 2050:B	400	15-OCT-2050	Baa2/BBB/BBB	66.15	25-Jan-2024	5.74	127

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



Disclosures

Important Disclosures

Credit opinion history

Dow Chemical Company / DOW

Company	Date ^{R1}	Action	Recommendation	
Dow Chemical Company / DOW	31-Dec-2020		Underweight	
	04-Mar-2021	Extended Review	NA	
	19-Oct-2021	Coverage Reinstatement	Marketweight	
	18-Aug-2023	Downgrade	Underweight	
Security	Date ^{R1}	Action	Recommendation	Price
7.375, Senior, USD, 2029:B	31-Dec-2022		Marketweight	
	18-Aug-2023	Downgrade	Underweight	108.79
9.4, Senior, USD, 2039:B	31-Dec-2022		Marketweight	
	18-Aug-2023	Downgrade	Underweight	128.63
5.25, Senior, USD, 2041:B	31-Dec-2022		Marketweight	
	18-Aug-2023	Downgrade	Underweight	91.74
4.25, Senior, USD, 2034:B	31-Dec-2022		Marketweight	
	18-Aug-2023	Downgrade	Underweight	87.71
4.625, Senior, USD, 2044:B	31-Dec-2022		Marketweight	
	18-Aug-2023	Downgrade	Underweight	82.15
4.8, Senior, USD, 2049:B	31-Dec-2022		Marketweight	
	18-Aug-2023	Downgrade	Underweight	82.12
4.8, Senior, USD, 2028:B	31-Dec-2022		Marketweight	
	18-Aug-2023	Downgrade	Underweight	97.62
5.55, Senior, USD, 2048:B	31-Dec-2022		Marketweight	
	18-Aug-2023	Downgrade	Underweight	91.98
2.1, Senior, USD, 2030:B	31-Dec-2022		Marketweight	
	18-Aug-2023	Downgrade	Underweight	80.04
3.6, Senior, USD, 2050:B	31-Dec-2022		Marketweight	
	18-Aug-2023	Downgrade	Underweight	68.80
6.3, Senior, USD, 2033:B	31-Dec-2022		Marketweight	
	18-Aug-2023	Downgrade	Underweight	104.13
6.9, Senior, USD, 2053:B	31-Dec-2022		Marketweight	
	18-Aug-2023	Downgrade	Underweight	107.22

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.

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

Freeport-McMoRan Inc. / FCX

Company	Date ^{R2}	Action	Recommendation	
Freeport-McMoRan Inc. / FCX	31-Dec-2020		Marketweight	
	30-Mar-2022	Coverage Terminated	NA	
	30-Mar-2022	Coverage Reinstatement	Marketweight	
	30-Mar-2022	Coverage Terminated	NA	
	16-Jun-2022	Coverage Reinstatement	Overweight	
	12-May-2023	Downgrade	Marketweight	
	28-Nov-2023	Upgrade	Overweight	
Security	Date ^{R2}	Action	Recommendation	Price
5.45, Senior, USD, 2043:B	31-Dec-2022		Overweight	
	12-May-2023	Downgrade	Marketweight	92.42
	28-Nov-2023	Upgrade	Overweight	87.51
4.55, Senior, USD, 2024:B	31-Dec-2022		Overweight	
	12-May-2023	Downgrade	Marketweight	98.88
	28-Nov-2023	Upgrade	Overweight	98.27
5.4, Senior, USD, 2034:B	31-Dec-2022		Overweight	
	12-May-2023	Downgrade	Marketweight	97.52
	28-Nov-2023	Upgrade	Overweight	93.71
5, Senior, USD, 2027:B	31-Dec-2022		Overweight	
	12-May-2023	Downgrade	Marketweight	98.97
	28-Nov-2023	Upgrade	Overweight	96.85
5.25, Senior, USD, 2029:B	31-Dec-2022		Overweight	
	12-May-2023	Downgrade	Marketweight	98.89

Freeport-McMoRan Inc. / FCX

Company	Date ^{R2}	Action	Recommendation	
	28-Nov-2023	Upgrade	Overweight	97.95
4.125, Senior, USD, 2028:B	31-Dec-2022		Overweight	
	12-May-2023	Downgrade	Marketweight	94.13
	28-Nov-2023	Upgrade	Overweight	92.68
4.25, Senior, USD, 2030:B	31-Dec-2022		Overweight	
	12-May-2023	Downgrade	Marketweight	92.38
	28-Nov-2023	Upgrade	Overweight	89.94
4.375, Senior, USD, 2028:B	31-Dec-2022		Overweight	
	12-May-2023	Downgrade	Marketweight	94.55
	28-Nov-2023	Upgrade	Overweight	92.88
4.625, Senior, USD, 2030:B	31-Dec-2022		Overweight	
	12-May-2023	Downgrade	Marketweight	94.73
	28-Nov-2023	Upgrade	Overweight	91.60

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

The Sherwin-Williams Co / SHW

Company	Date ^{R3}	Action	Recommendation	
The Sherwin-Williams Co / SHW	31-Dec-2020		Marketweight	
	04-Mar-2021	Extended Review	NA	
	22-Jun-2021	Coverage Reinstatement	Underweight	
	29-Sep-2021	Upgrade	Marketweight	
Security	Date ^{R3}	Action	Recommendation	Price
4.5, Senior, USD, 2047:B	31-Dec-2022		Marketweight	
3.45, Senior, USD, 2027:B	31-Dec-2022		Marketweight	
3.125, Senior, USD, 2024:B	31-Dec-2022		Marketweight	
4, Senior, USD, 2042:B	31-Dec-2022		Marketweight	
3.45, Senior, USD, 2025:B	31-Dec-2022		Marketweight	
4.55, Senior, USD, 2045:B	31-Dec-2022		Marketweight	
2.3, Senior, USD, 2030:B	31-Dec-2022		Marketweight	
3.3, Senior, USD, 2050:B	31-Dec-2022		Overweight	
	13-Jan-2023	Downgrade	Marketweight	74.34
2.2, Senior, USD, 2032:B	31-Dec-2022		Marketweight	
2.9, Senior, USD, 2052:B	31-Dec-2022		Overweight	
	13-Jan-2023	Downgrade	Marketweight	67.83

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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

Steel Dynamics, Inc. / STLD

Company	Date ^{R4}	Action	Recommendation	
Steel Dynamics, Inc. / STLD	31-Dec-2020		Marketweight	
	22-Jun-2022	Extended Review	NA	
	28-Sep-2023	Coverage Reinstatement	Underweight	
	28-Nov-2023	Upgrade	Overweight	
Security	Date ^{R4}	Action	Recommendation	Price
5, Senior, USD, 2026:B	31-Dec-2022		NA	
	28-Sep-2023	Coverage Reinstatement	Underweight	97.99
	28-Nov-2023	Upgrade	Overweight	98.17
3.45, Senior, USD, 2030:B	31-Dec-2022		NA	
	28-Sep-2023	Coverage Reinstatement	Underweight	86.80
	28-Nov-2023	Upgrade	Overweight	87.31
3.25, Senior, USD, 2031:B	31-Dec-2022		NA	
	28-Sep-2023	Coverage Reinstatement	Underweight	84.90
	28-Nov-2023	Upgrade	Overweight	85.59
1.65, Senior, USD, 2027:B	31-Dec-2022		NA	
	28-Sep-2023	Coverage Reinstatement	Underweight	85.23
	28-Nov-2023	Upgrade	Overweight	85.90
3.25, Senior, USD, 2050:B	31-Dec-2022		NA	



Steel Dynamics, Inc. / STLD

Company	Date ^{R4}	Action	Recommendation	
	28-Sep-2023	Coverage Reinstatement	Underweight	60.75
	28-Nov-2023	Upgrade	Overweight	62.29

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."

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 ^{R5}	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%

^{R5} 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.

Credit Opinion History Tables for the securities referenced in this research report are available on the [Price Charts and Credit Opinion History Tables website](#), or call 1-800-MERRILL to have them mailed.

The issuer is or was, within the last 12 months, an investment banking client of BofAS and/or one or more of its affiliates: Dow Chemical, Freeport-McMoRan Inc, Sherwin-Williams, Steel Dynamics.

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BofAS together with its affiliates beneficially owns one percent or more of the common stock of this issuer. If this report was issued on or after the 9th day of the month, it reflects the ownership position on the last day of the previous month. Reports issued before the 9th day of a month reflect the ownership position at the end of the second month preceding the date of the report: Freeport-McMoRan Inc.

BofAS or one of its affiliates has a significant financial interest in the fixed income instruments of the issuer. If this report was issued on or after the 15th day of the month, it reflects a significant financial interest on the last day of the previous month. Reports issued before the 15th day of the month reflect a significant financial interest at the end of the second month preceding the report: Dow Chemical, Freeport-McMoRan Inc, Sherwin-Williams, Steel Dynamics.

BofAS or one of its affiliates trades or may trade as principal in the debt securities (or in related derivatives) that are the subject of this research report: Dow Chemical, Freeport-McMoRan Inc, Sherwin-Williams, Steel Dynamics.

The issuer is or was, within the last 12 months, a securities business client (non-investment banking) of BofAS and/or one or more of its affiliates: Dow Chemical, Freeport-McMoRan Inc, Sherwin-Williams, Steel Dynamics.

BofA Global Research personnel (including the analyst(s) responsible for this report) receive compensation based upon, among other factors, the overall profitability of Bank of America Corporation, including profits derived from investment banking. The analyst(s) responsible for this report may also receive compensation based upon, among other factors, the overall profitability of the Bank's sales and trading businesses relating to the class of securities or financial instruments for which such analyst is responsible.

BofA Securities fixed income analysts regularly interact with sales and trading desk personnel in connection with their research, including to ascertain pricing and liquidity in the fixed income markets.

Other Important Disclosures

From time to time research analysts conduct site visits of covered issuers. BofA Global Research policies prohibit research analysts from accepting payment or reimbursement for travel expenses from the issuer for such visits.

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