

Corporate Credit Spread Chartbook

Basic Materials Sector

Morningstar Credit Ratings, LLC

2 November 2018

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Sean T. Sexton, CFA
 Vice President
 +1 312-348-3077
 sean.sexton@morningstar.com

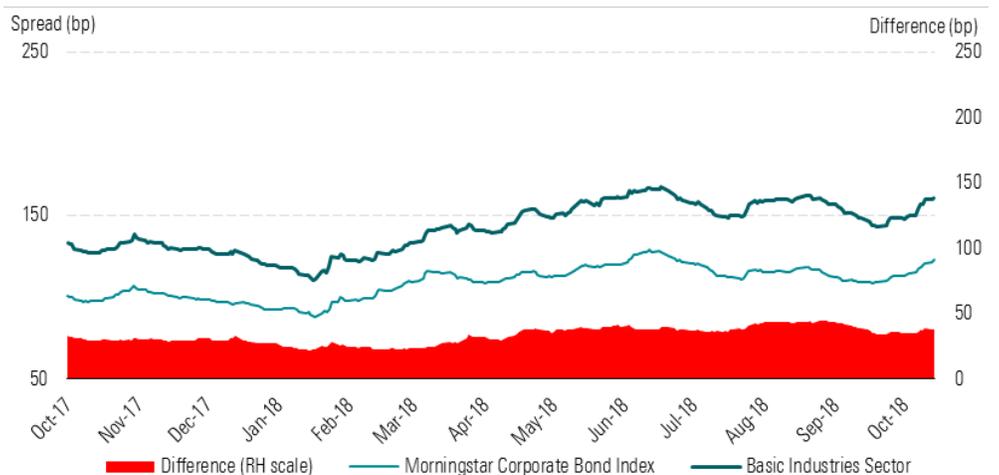
Executive Summary

Ratings activity in the basic materials sector since our last publication in June has consisted of seven affirmations with two revisions in outlook to positive from stable. Overall, spreads tightened slightly compared with June for the combined subsectors, with the Basic Materials Sector Index 4 basis points tighter while the Morningstar, Inc. Corporate Bond Index was 8 basis points tighter over the same time period.

Historical Sector Spreads

Over the past 12 months, spreads over Treasuries in the CBI and the Basic Materials Sector Index have both widened—the Basic Materials Sector Index by 34 basis points and the CBI by 25 basis points. As of Oct. 30, 2018, the Basic Materials Sector Index traded at a spread premium to the CBI of 38 basis points compared with 39 basis points a year ago. The Basic Materials Sector Index was at a spread over Treasuries of 161 basis points as of Oct. 30, while the CBI was at a spread over Treasuries of 123 basis points. It has been nearly three years since both the Basic Materials Sector Index and the CBI peaked on Feb. 11, 2016, at a spread of 436 and 216 basis points, respectively.

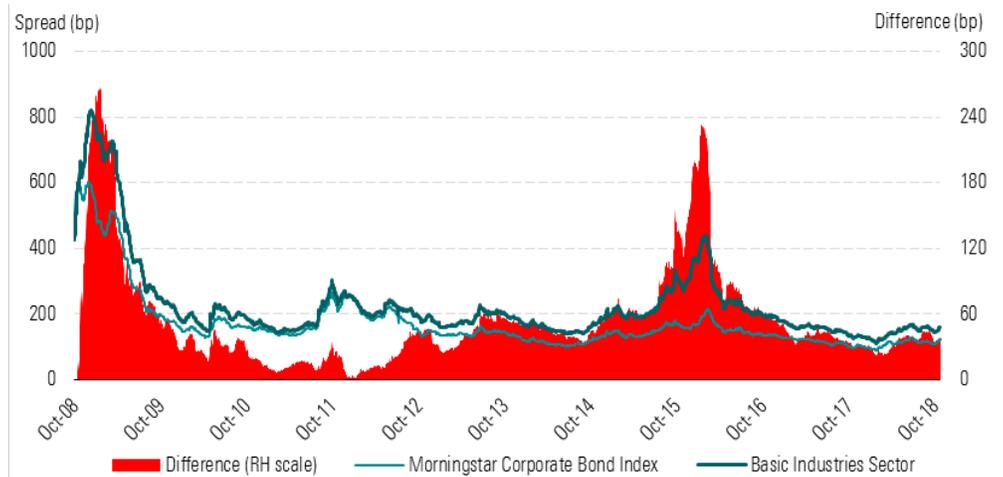
Exhibit 1 Morningstar, Inc. Corporate Bond Index Versus Basic Materials Sector (Trailing 12 Months)



Source: Morningstar Direct. Data as of Oct. 30, 2018.

Over the past 10 years, we can see in Exhibit 2 that two credit stress events occurred. The more recent event occurred in late 2015 and early 2016 when crude oil, metals, and mined materials prices crashed on macro supply and demand concerns coupled with high debt levels for many issuers in the commodities industry. In comparing the spread differences for the two credit stress events, in the latest event, the spread was only 30 basis points less than the peak spread of 266 basis points, which occurred on Jan. 20, 2009, during the global financial crisis. However, both indexes' spreads were much higher then, with the Basic Materials Sector Index at a spread of 748 basis points in early 2009 and the CBI at a spread of 482 basis points, reflecting the overall systematic stress in early 2009. Another way to think about this is to look at the ratio of the BMAT/CBI over the two periods. In 2009, the ratio was 1.6 times, while it was higher in early 2016 at 2.2 times. This compares with the long-term average of approximately 1.2 times.

Exhibit 2 Morningstar, Inc. Corporate Bond Index Versus Basic Materials Sector (Trailing 10 Years)

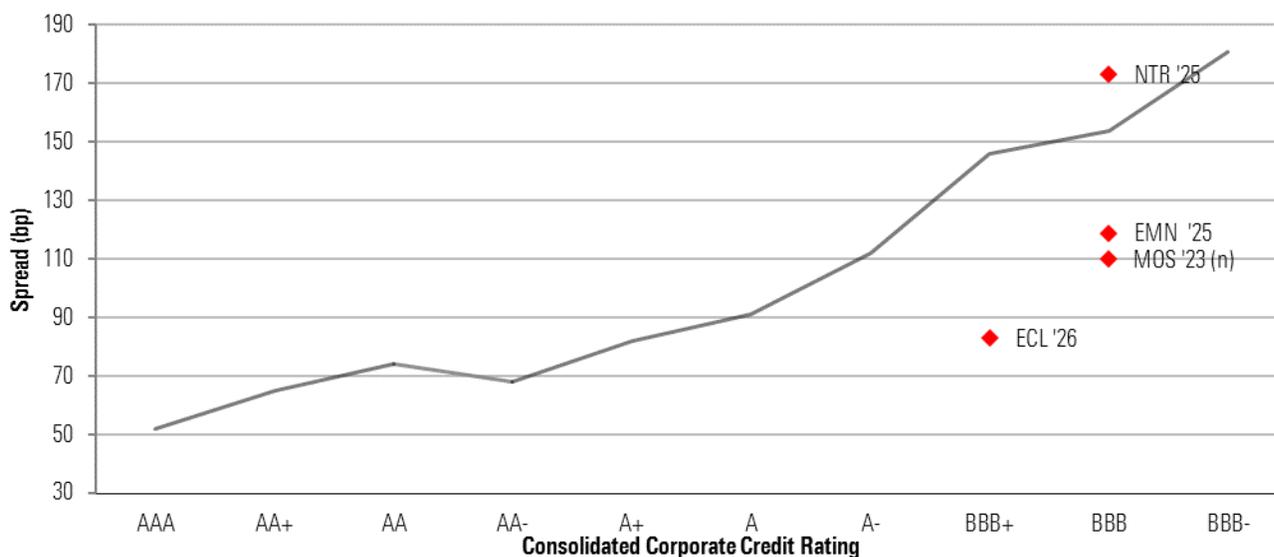


Source: Morningstar Direct. Data as of Oct. 30, 2018.

Spread Charts by Basic Materials Sector

Chemicals

Exhibit 3 Chemicals Subsector Versus Morningstar, Inc. Industrials Index



Source: Morningstar Credit Ratings, LLC, Morningstar, Inc., and Interactive Data as of Oct. 30, 2018.

UR = rating under review/(p) = positive outlook/(n) = negative outlook

Credit Trends

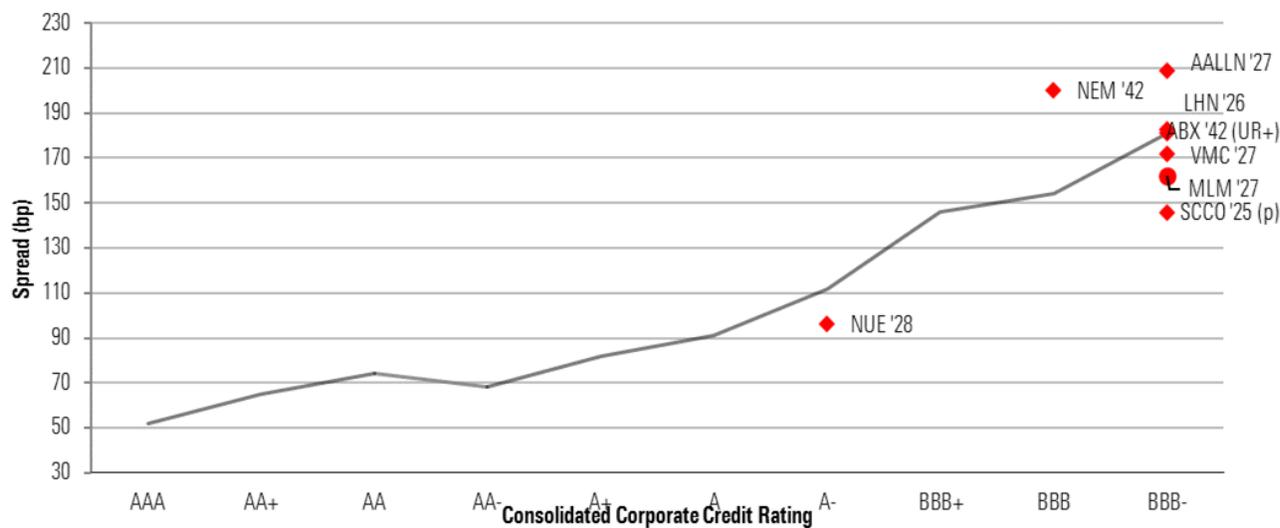
On average, bonds' spreads in the chemicals subsector were unchanged since our last publication in June versus the CBI. The chemicals subsector is stable, since most end markets for these issuers have remained relatively steady over the past several quarters. For the most part, spreads in this subsector trade below the spreads indicated by the Industrials Index for their respective credit rating. Further mergers and acquisitions in this subsector are possible because of the consistent free cash flow profiles of many issuers and the still low interest rates available to many corporate borrowers.

Issuer Highlights

- ▶ In July, we affirmed the rating of Mosaic Company at BBB and maintained a negative outlook. Mosaic's rating reflects its moderate to high Business Risk as well as moderate risk profiles for its Cash Flow Cushion, Solvency Score, and Distance to Default.
- ▶ In October, we affirmed the rating of Eastman Chemical Company at BBB. The rating reflects moderate risk scores for the company's Business Risk and Solvency Score credit pillars, while its Cash Flow Cushion pillar is weak and its Distance to Default pillar is strong.
- ▶ In October, we affirmed the rating of Ecolab, Inc. at BBB+. Ecolab's rating is supported by low Business Risk, a strong Distance to Default and moderate Solvency Score, offset by a weak Cash Flow Cushion.

Metals, Mining, and Materials

Exhibit 4 Metals, Mining, and Materials Subsector Versus Morningstar, Inc. Industrials Index



Source: Morningstar Credit Ratings, LLC, Morningstar, Inc. and Interactive. Data as of Oct. 30, 2018.
 UR = rating under review/(p) = positive outlook/(n) = negative outlook

Credit Trends

On average, bond spreads in the metals, mining, and materials subsector widened 8 basis points since our last publication versus the CBI. In the graph above, we use longer-dated bonds for Barrick Gold and Newmont Mining because they do not have any actively traded bonds of size in the 10-year area.

For metals producers, steel tariffs have had a positive impact on steel prices and margins thereby increasing cash flows for issuers in this sector. Both Steel Dynamics and U.S. Steel have positive outlooks that reflect these strong cash flows. In the mining space, relatively robust prices for iron ore, metallurgical coal, and copper have continued through the first three quarters of 2018. We have positive outlooks on Freeport-McMoRan Inc., Southern Copper Corporation, Teck Resources, and Vale SA that are a result of these prices and their corresponding cash flow impacts.

Issuer Highlights

- ▶ In late June, we affirmed the rating of Southern Copper Corporation at BBB- and revised its outlook to positive from stable. The revision in outlook stems from expectations of continued robust operating cash flows that are partially due to strong copper prices.

- ▶ In August, we affirmed the rating of Steel Dynamics at BB+ and revised its outlook to positive from stable. The revision in outlook is driven by the strong operating results and cash flows relative to debt. If Steel Dynamics maintains lower leverage than in the past, which would maintain the strength of its existing credit pillars, we may consider an upgrade of the current rating.
- ▶ In August, we affirmed Nucor at A-. Nucor's rating reflects its moderate Business Risk profile, strong Cash Flow Cushion and Distance to Default scores, and a very strong Solvency Score.
- ▶ Also, in August, we affirmed the ratings of Commercial Metals at BB+. Its rating reflects its high Business Risk and moderate risk profiles for its Cash Flow Cushion, Solvency Score, and Distance to Default.
- ▶ In late September, we placed the rating of Barrick Gold (BBB-) on Under Review Positive following its announcement that it is merging with Randgold Resources Limited (not rated) in a share-for-share exchange. From a credit standpoint, we view the combination positively because of the lack of debt financing in the merger agreement and the fact that Randgold has almost no debt. ■■

Exhibit 6 Morningstar Credit Ratings Sector Coverage: Basic Materials

Issuer	Ticker	Corporate Rating	Rating Outlook	Analyst
Building Materials				
LafargeHolcim	LHN	BBB-	Stable	Sexton
Martin Marietta Materials	MLM	BBB-	Stable	Sexton
Summit Materials	SUM	B+	Stable	Sexton
Vulcan Materials	VMC	BBB-	Stable	Sexton
Chemicals				
CF Industries	CF	BB	Stable	Sexton
Eastman Chemical	EMN	BBB	Stable	Sexton
Ecolab	ECL	BBB+	Stable	Sexton
Mosaic	MOS	BBB	Negative	Sexton
Nutrien Ltd.	NTR	BBB	Stable	Sexton
Metals and Mining				
Anglo American	NGLOY	BBB-	Stable	Sexton
ArcelorMittal	MT	BB+	Stable	Sexton
Arconic Inc.	ARNC	BB+	Stable	Sexton
Barrick Gold	ABX	BBB-	UR+	Sexton
Commercial Metals	CMC	BB+	Stable	Sexton
Freeport McMoran	FCX	BB-	Positive	Sexton
Newmont Mining	NEM	BBB	Stable	Sexton
Nucor	NUE	A-	Stable	Sexton
Steel Dynamics	STLD	BB+	Positive	Sexton
Southern Copper	SCCO	BBB-	Positive	Sexton
Teck Resources	TECK	BB	Positive	Sexton
United States Steel	X	B	Positive	Sexton
Vale	VALE	BB+	Positive	Sexton

Morningstar® Credit Research

For More Information

Todd Serpico
+1 312 384-5488
todd.serpico@morningstar.com



22 West Washington Street
Chicago, IL 60602 USA

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