

Corporate Credit Spread Chartbook

Basic Materials Sector

Morningstar Credit Ratings, LLC
June 25, 2018

Contents

- 1 Historical Basic Materials Sector Spreads vs. Morningstar Corporate Bond Index
- 3 Chemicals
- 4 Metals, Mining, and Materials
- 6 Basic Materials Coverage

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

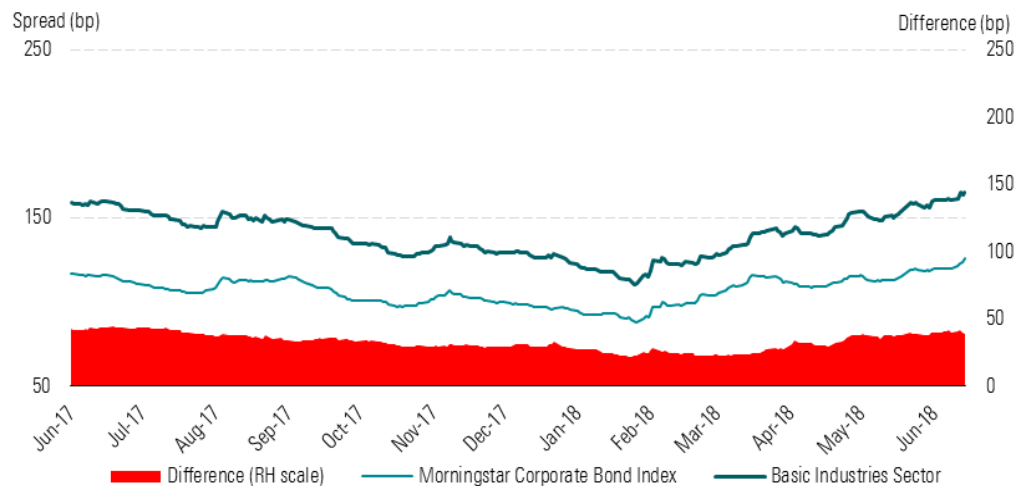
Executive Summary

Ratings activity in the basic materials sector since our last publication in February has been six affirmations and one upgrade. Overall, spreads widened compared with February for the combined subsectors, with the Basic Materials Sector Index 54 basis points wider while the Morningstar, Inc. Corporate Bond Index was 38 basis points wider 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 slightly—the Basic Materials Sector Index by 10 basis points and the CBI by 5 basis points. As of June 21, 2018, the Basic Materials Sector Index traded at a spread premium to the CBI of 39 basis points compared with 44 basis points a year ago. The Basic Materials Sector Index was at a spread over Treasuries of 165 basis points as of June 21, while the CBI was at a spread over Treasuries of 126 basis points. Over the past two and a half years, 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 vs. Basic Materials Sector (Trailing 12 Months)

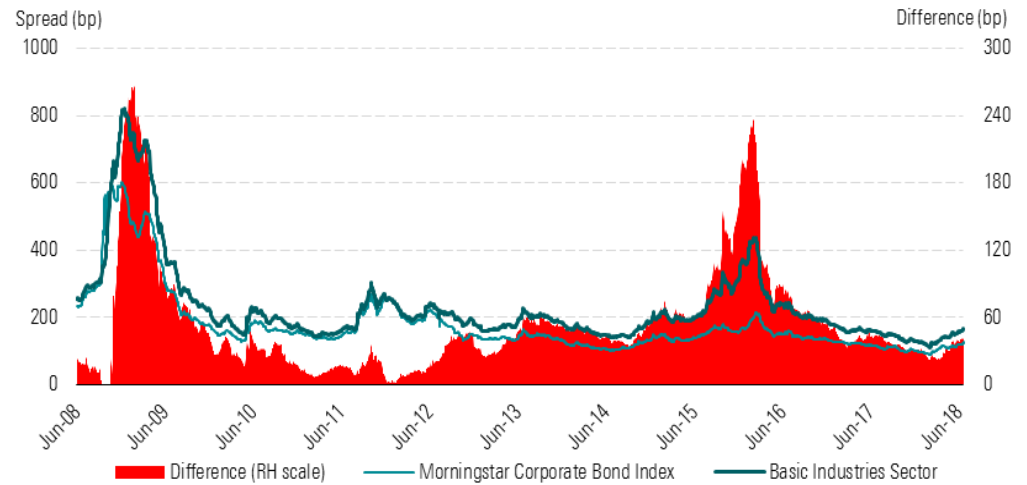


Source: Morningstar Direct. Data as of 6/21/2018.

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 to the long-term average of approximately 1.5 times.

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

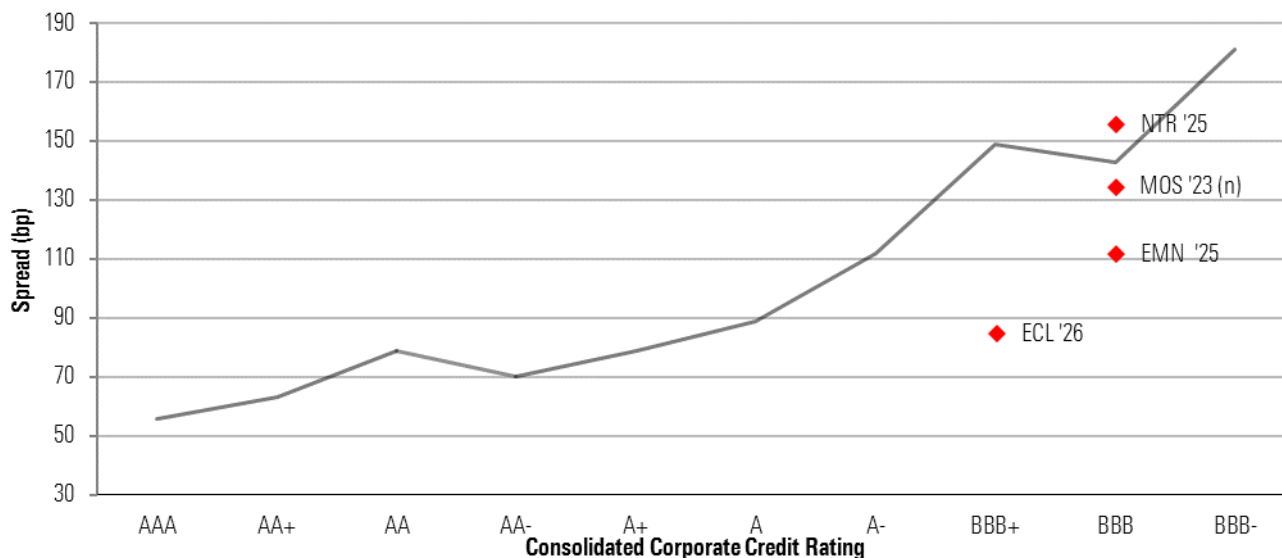


Source: Morningstar Direct. Data as of 6/21/2018

Spread Charts by Basic Materials Subsector

Chemicals

Exhibit 3 Chemicals Subsector vs. Morningstar, Inc. Industrials Index



Source: Morningstar Credit Ratings, LLC, Morningstar, Inc. and Interactive Data as of 6/21/2018.

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

Credit Trends

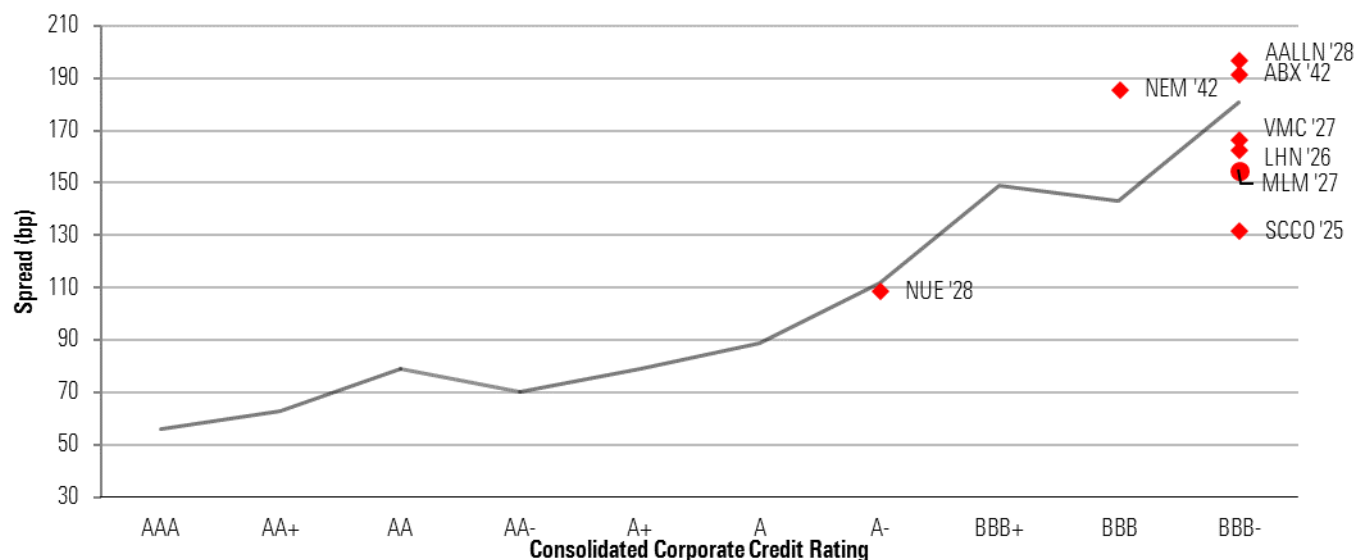
On average, bonds in the chemicals subsector widened 43 basis points since our last publication in February versus the CBI, which widened 38 basis points over the same period. The chemicals subsector is stable, since most end markets for these issuers have remained relatively steady over the past several months. 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 March, we initiated a BBB corporate credit rating on Nutrien Ltd. The predecessor companies, Agrium Inc. and Potash Corporation of Saskatchewan, both had BBB corporate credit ratings before their announced merger in September 2016.
- ▶ Mosaic's negative outlook reflects the potential for fertilizer prices to remain depressed for the intermediate term that could cause the company's BBB rating to be pressured.

Metals, Mining, and Materials

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



Source: Morningstar Credit Ratings, LLC, Morningstar, Inc. and Interactive. Data as of 6/21/2018.

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

Credit Trends

On average, bond spreads in the metals, mining, and materials subsector widened 58 basis points since our last publication versus the CBI, which widened 38 basis points. In the graph above, we use longer-dated bonds for Barrick Gold and Newmont Mining since they do not have any actively traded bonds of size in the 10-year area. In the non-investment-grade part of the subsector, some of our rated issuers have positive rating outlooks, reflecting possible upgrades in the future. Many of the non-investment-grade issuers have made self-help credit-enhancing efforts over the past several quarters, such as deleveraging via asset sales, equity issuances, etc.

Issuer Highlights

- ▶ In late June, we upgraded the rating of Anglo American PLC to BBB- from BB+ because of the company's progress toward reducing debt and our expectations of robust free cash flow in 2018 and further debt reduction going forward.
- ▶ In May, we affirmed the rating of Martin Marietta at BBB-. Martin Marietta's rating reflects the company's high Business Risk and weak Cash Flow Cushion offset by a strong Solvency Score and Distance to Default risk profile.
- ▶ In April, we affirmed LafargeHolcim at BBB- and revised its outlook to stable from positive. Its credit rating reflects high risk profiles for its Cash Flow Cushion and Solvency Scores combined with a moderate risk profile for its Business Risk and a low risk profile for its Distance to Default.

- ▶ In March, we affirmed the ratings of Vulcan Materials at BBB-. Vulcan's rating reflects its moderate risk profile for its Business Risk and Solvency Score, a constrained Cash Flow Cushion, and a strong Distance to Default score. **III**

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	NTR	BBB	Stable	Sexton
Metals and Mining				
Anglo American	NGLOY	BBB-	Stable	Sexton
ArcelorMittal	MT	BB+	Stable	Sexton
Arconic	ARNC	BB+	Stable	Sexton
Barrick Gold	ABX	BBB-	Stable	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+	Stable	Sexton
Southern Copper	SCCO	BBB-	Stable	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

©2018 Morningstar. All Rights Reserved. Unless otherwise provided in a separate agreement, you may use this report only in the country in which its original distributor is based. The information, data, analyses, and opinions presented herein do not constitute investment advice; are provided solely for informational purposes and therefore are not an offer to buy or sell a security; and are not warranted to be correct, complete, or accurate. The opinions expressed are as of the date written and are subject to change without notice. Except as otherwise required by law, Morningstar shall not be responsible for any trading decisions, damages, or other losses resulting from, or related to, the information, data, analyses, or opinions or their use. References to "Morningstar Credit Ratings" refer to ratings issued by Morningstar Credit Ratings, LLC, a credit rating agency registered with the Securities and Exchange Commission as a nationally recognized statistical rating organization ("NRSRO"). Under its NRSRO registration, Morningstar Credit Ratings issues credit ratings on financial institutions (e.g., banks), corporate issuers, and asset-backed securities. While Morningstar Credit Ratings issues credit ratings on insurance companies, those ratings are not issued under its NRSRO registration. All Morningstar credit ratings and related analysis are solely statements of opinion and not statements of fact or recommendations to purchase, hold, or sell any securities or make any other investment decisions. Morningstar credit ratings and related analysis should not be considered without an understanding and review of our methodologies, disclaimers, disclosures, and other important information found at <http://morningstarcreditratings.com>. Investment research is produced and issued by subsidiaries of Morningstar, Inc. including, but not limited to, Morningstar Research Services LLC, registered with and governed by the U.S. Securities and Exchange Commission. The information contained herein is the proprietary property of Morningstar and may not be reproduced, in whole or in part, or used in any manner, without the prior written consent of Morningstar. To license the research, contact Vanessa Sussman (+1 646 560-4541) or by email to: vanessa.sussman@morningstar.com.