Morningstar Corporate Credit Research Highlights
Following August Slowdown, Corporate Bond Issuance Springs Back to Life

Morningstar Credit Ratings, LLC
10 September 2018

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Credit Rating Actions

- Rating Affirmations

Issuer/Ticker	Current Issuer Credit Rating	Previous Issuer Credit Rating
Commercial Metals **CMC**	BB+	BB+
Diageo **DGE**	A-	A-
Nucor **NUE**	A-	A-
British American Tobacco **BATS**	BBB	BBB
Steel Dynamics **STLD**	BB+	BB+
Brown-Forman **BF.B**	A+	A+
Equity Residential **EQR**	A-	A-
Camden Property Trust **CPT**	A-	A-
AvalonBay Communities **AVB**	A-	A-

Recent Notes Published by Credit Analysts

- **Duke Realty** (BBB+, Stable) Issues New 10-Year Senior Unsecured Notes to Retire Secured Debt
- **Cigna** (BBB/UR-) Issues $20 Billion in New Bonds to Fund Express Scripts (A-/UR-) merger

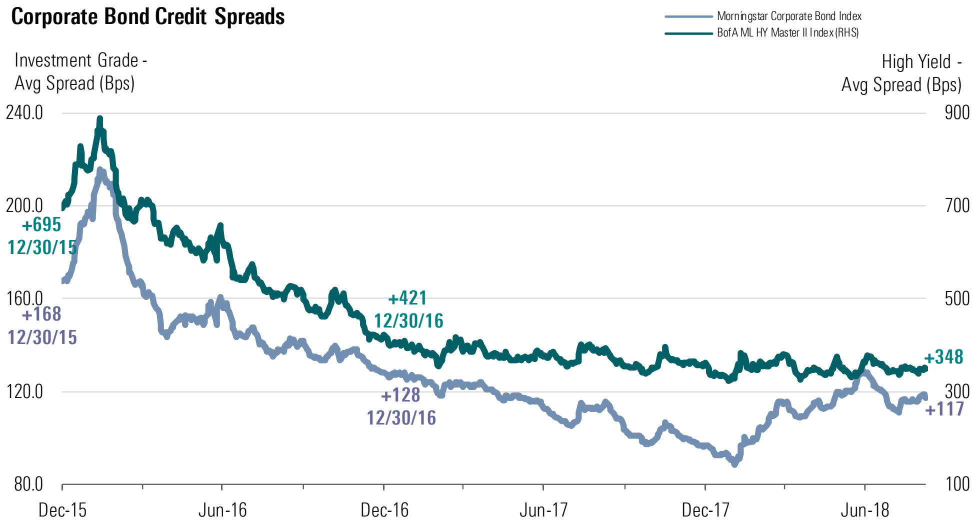
Credit Market Insights

Following August Slowdown, Corporate Bond Issuance Springs Back to Life

Following the typical seasonal slowdown in August, the new issue market sprang back to life following the Labor Day holiday. According to Bloomberg, this was the busiest week of the year for new corporate bond issuance, with over $53 billion worth of bonds priced. The largest transaction was brought by Cigna Corp (non-NRSRO rating: BBB/UR-) to help fund its pending acquisition of Express Scripts Holding Co (A-/UR-). Cigna issued $20 billion worth of notes across 10 tranches with maturities ranging from 3 to 30 years. This issuance came just a day after reports surfaced that the Cigna-Express Scripts merger and the pending merger between CVS Health Corp (BBB+/UR-) and Aetna Inc (not rated) will probably be allowed by antitrust regulators. Cigna has said it anticipates initially owing $41 billion in debt after the merger is completed. Therefore, pro forma leverage looks set to rise to the mid-3s if the merger closes as expected at the end of 2018, which is much higher than Express Scripts' stand-alone leverage around 2 times. However, Cigna management appears committed to deleveraging to maintain its investment-grade status, which is likely to inform our credit view of the combined entity.

Among other issuers we rate, Duke Realty Corporation (BBB+, stable) completed a $350 million, 10-year senior unsecured notes offering. The issuer is Duke Realty LP. Net proceeds are expected to be used for retiring in advance $224 million of secured debt maturing in March 2019, funding development, repaying borrowing under its revolver, and general corporate purposes. Duke Realty's BBB+ rating and stable outlook are supported by solid Business Risk and Cash Flow Cushion pillars, which are somewhat curbed by a weaker Solvency Score. Contributing to Business Risk is Duke's high-quality, largely unencumbered portfolio of bulk warehouse facilities, which is uniquely positioned to capture robust e-commerce demand. At an average age of 11 years, Duke's portfolio is the youngest among its peers; it is also among the largest in terms of average facility size, which results in lower capital expenditures and tends to draw higher-credit tenants with lower turnover. Larger average building size can also drive higher rent levels upon renewal. We believe the credit is further supported by some of the lowest leverage metrics among its industrial real estate investment trust peers, in particular debt/EBITDA and secured leverage. For greater detail regarding our ratings on these issuers as well as on all of the companies we rate, please visit www.morningstarcreditratings.com.

Considering that the equity market experienced a slight pullback and the corporate bond market had to digest a prodigious amount of new supply, the corporate bond market performed comparatively very well last week as credit spreads tightened slightly. The average spread of the Morningstar Corporate Bond Index (our proxy for the investment-grade market) tightened 1 basis point to end the week at +117. In the high-yield market, the BofA Merrill Lynch High Yield Master Index tightened 1 basis point to end the week at +348.



Source: Morningstar,Inc., BofA Merrill Lynch Global Indexes. Data as of 9/7/2018.

Among U.S. Treasuries, the middle and longer end of the curve were relatively unchanged. The yield on the 5-year widened 1 basis point to 2.82%. In the longer end of the curve, the yield on the 10-year decreased 1 basis point to 2.94% and the 30-year widened 1 basis point to 3.10%. However, in the short end of the curve, the yield on the 2-year bond rose 6 basis points to 2.70%, its highest level since mid-2008. At its current yield, the interest rate on the 2-year Treasury has risen 84 basis points thus far this year. Comparatively, yields on the 5-, 10-, and 30-year have risen 61, 53, and 36 basis points, respectively.

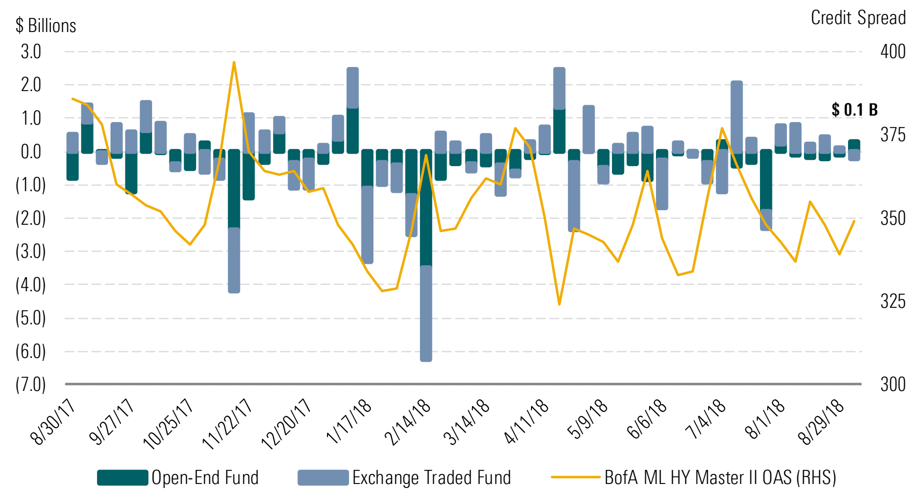
Based on the current market-implied probabilities for additional hikes to the federal-funds rate, it appears that the yield on the 2-year has further to rise. According to the CME FedWatch Tool, the market is pricing in a 25-basis-point increase to the federal-funds rate, to 2.00%-2.25% from its current 1.75%-2.00%, following the next Federal Open Market Committee meeting, which concludes Sept. 26. The market is pricing in an 80% probability of an additional hike following the December FOMC meeting to over 2.25%.

Even following that increase, with the economy running full steam ahead, inflation heating up, and wage growth finally showing life, the market is pricing in additional hikes in 2019. The Atlanta Fed's GDPNow forecast for third-quarter GDP growth is currently 4.4%, which would be an acceleration from the already strong 4.1% rate in the second quarter. Inflation pressures have been steadily building over the past few months, leading to an increase in the Federal Reserve's preferred measure of inflation, personal consumption expenditures, to 2.3% (higher than the Fed's 2% target), and the consumer price index for July rose at a 2.9% annual rate. Job growth remains robust as August nonfarm payrolls rose 201,000, and with the unemployment rate below 4%, annual wage growth surged to 2.9% in August, its highest in nine years. With these factors in mind, the market is pricing in a 76% probability that the federal-funds rate will be 2.50% or higher this time next year.

Weekly High-Yield Fund Flows

Over the past six weeks, the volatility of high-yield fund flows has been relatively nonexistent as weekly flows have ranged within plus or minus $1 billion. Last week, net fund flows into the high-yield asset class were only $0.1 billion, consisting of $0.3 billion of inflows among open-end high-yield mutual funds, partially offset by $0.2 billion of net unit redemption across high-yield exchange-traded funds. Over the past six weeks, the average weekly fund flow was only $0.3 billion of inflows. Year to date, fund flows have registered a total outflow of $14.8 billion, consisting of $2.5 billion of net unit redemptions across ETFs and $12.3 billion of redemptions among open-end funds.

Estimated Weekly High-Yield Bond Fund Flows and High Yield Credit Spreads



Source: Morningstar, Inc. and BofA Merrill Lynch Global Indexes.

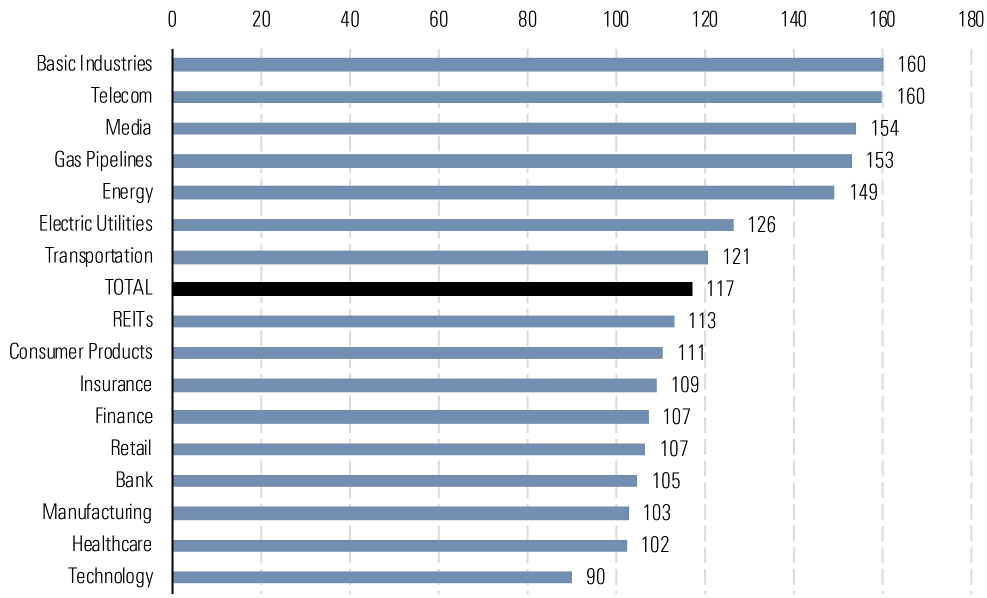
Exhibit 1 Morningstar Corporate Bond Index Sector Summary

Sector	Average Rating	Number of Issues	Modified Duration	Spread (bps)	MTD Spread Chg (bps)	YTD Spread Chg (bps)	MTD Total Return (%)	YTD Total Return (%)
TOTAL	**A-**	**5,101**	**6.8**	**117**	**(0)**	**21**	**(0.37)**	**(2.33)**
FINANCIAL	**A-**	**1,476**	**5.3**	**106**	**0**	**23**	**(0.33)**	**(1.79)**
Bank	A-	900	4.8	105	1	24	(0.29)	(1.59)
Finance	A	261	5.6	107	(2)	20	(0.35)	(2.04)
Insurance	A	217	8.1	109	(1)	23	(0.55)	(2.81)
REITs	BBB+	89	5.9	113	0	9	(0.33)	(1.24)
INDUSTRIAL	**A-**	**2,967**	**7.5**	**121**	**(1)**	**20**	**(0.38)**	**(2.59)**
Basic Industries	BBB	246	7.4	160	(1)	31	(0.37)	(3.17)
Consumer Products	BBB+	354	7.4	111	(1)	27	(0.42)	(3.36)
Energy	A-	397	7.3	149	1	27	(0.48)	(2.42)
Healthcare	A-	417	7.7	102	(0)	14	(0.46)	(2.85)
Manufacturing	A-	461	5.9	103	(1)	22	(0.28)	(2.19)
Media	BBB+	166	8.5	154	(1)	25	(0.38)	(3.14)
Retail	A-	171	7.7	107	(2)	20	(0.32)	(2.68)
Technology	A+	351	7.2	90	(1)	13	(0.33)	(1.99)
Telecom	BBB+	167	9.0	160	(5)	17	(0.21)	(1.90)
Transportation	BBB+	172	8.9	121	0	23	(0.55)	(3.59)
UTILITY	**BBB+**	**608**	**8.6**	**138**	**(1)**	**18**	**(0.52)**	**(2.81)**
Electric Utilities	A-	349	9.2	126	(0)	23	(0.59)	(3.67)
Gas Pipelines	BBB	242	7.7	153	(2)	10	(0.40)	(1.52)
Rating Bucket								
AAA Bucket		122	7.7	51	(1)	3	(0.39)	(2.25)
AA Bucket		501	5.7	66	0	8	(0.33)	(1.32)
A Bucket		1,914	6.8	94	(0)	20	(0.43)	(2.47)
BBB Bucket		2,564	7.1	151	(2)	24	(0.34)	(2.42)
Term Bucket								
1-4	A-	1,655	2.3	67	(0)	10	(0.10)	0.37
4-7	A-	1,183	4.7	108	0	28	(0.26)	(1.08)
7-10	A-	890	7.0	133	0	27	(0.40)	(2.57)
10PLUS	A-	1,373	13.5	171	(2)	26	(0.75)	(6.00)

Data as of 09/07/2018

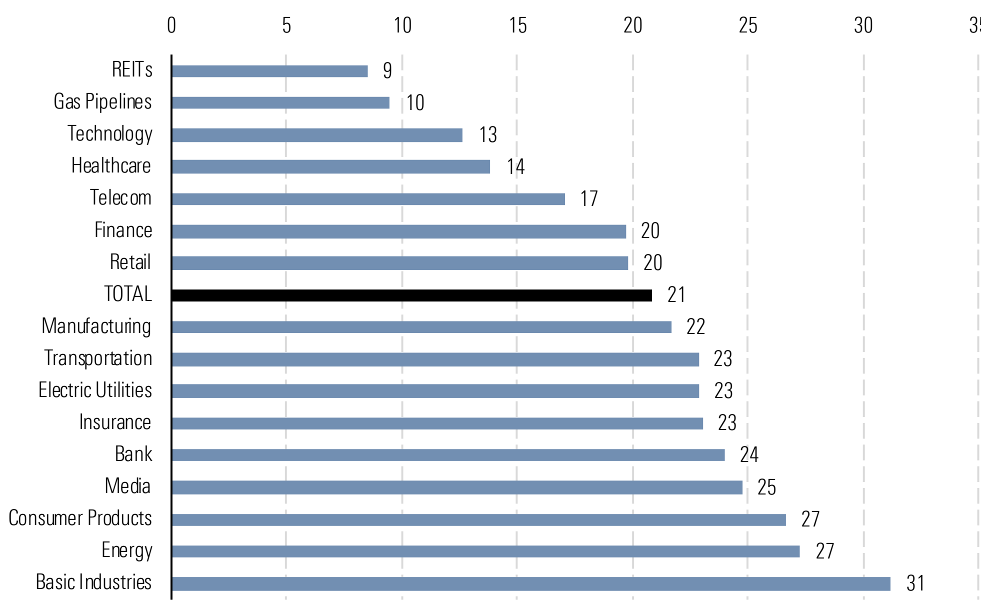
Source: Morningstar, Inc.

Exhibit 2 Morningstar Corporate Bond Index Spread by Sector



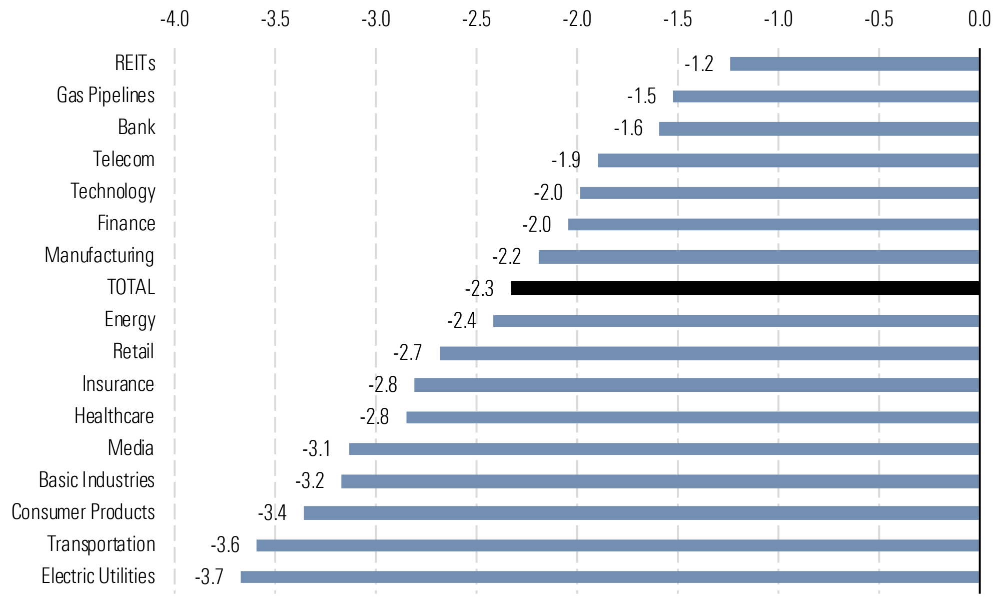
Source: Morningstar, Inc.

Exhibit 3 Morningstar Corporate Bond Index YTD Spread Change



Source: Morningstar, Inc.

Exhibit 4 Morningstar Corporate Bond Index YTD Return



Source: Morningstar, Inc.

Credit Rating Actions

Rating Affirmations

Issuer/Ticker	Current Issuer Credit Rating	Previous Issuer Credit Rating
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AvalonBay Communities **AVB**	A-	A-

Morningstar Credit Ratings Releases Updated Rating for Commercial Metals

Morningstar Credit Ratings, LLC is affirming the credit rating of Commercial Metals Company at BB+ and maintaining the outlook at stable.

The BB+ rating reflects Commercial Metals' high Business Risk and moderate risk profiles for its Cash Flow Cushion, Solvency Score, and Distance to Default. Its high Business Risk stems from steel industry cyclicality and a lack of an economic moat as assigned by Morningstar's Equity Research Group. Its moderate Cash Flow Cushion ranking reflects minimal near-term debt maturities, a low dividend, and stable operating cash flows. Moderate leverage and strong liquidity support its Solvency Score. As of the end of the company's third quarter (May 31), debt was approximately $1.2 billion and cash and equivalents on hand was $600 million. Latest 12-month adjusted EBITDA was approximately $315 million, resulting in debt/LTM adjusted EBITDA of 3.7 times (1.8 net), and LTM free cash flow was approximately $50 million.

Liquidity is provided by previously mentioned cash and equivalents on hand and nearly full availability on its $350 million secured revolving credit facility due June 2022. Commercial Metals is expected to close on its acquisition of certain U.S. rebar steel mill and fabrication assets from Gerdau by the end of this year, which will use the bulk of the cash balance. The company also has a $200 million accounts receivable facility for liquidity purposes. Its main covenants on its RCF are a 60% debt/capital ratio and a minimum interest coverage ratio of 2.5 times. As of May 31, the actual debt/capital ratio was 45% while interest coverage was 7.89 times. The next significant maturity is expected to be the company's term loan facility due June 2022, which has a balance of approximately $144 million.

Given the stable outlook, we do not envision movement of the rating in the near term. Longer term, however, the rating could come under pressure if its Business Risk or Cash Flow Cushion would deteriorate, which would probably be due to sustained weak steel margins. The rating could experience upward momentum if the Business Risk or Cash Flow Cushion pillars were to strengthen substantially.

Morningstar Credit Ratings Releases Updated Rating for Diageo

Morningstar Credit Ratings, LLC is affirming Diageo plc's corporate credit rating at A- and maintaining a stable outlook. Diageo's rating reflects our low Business Risk assessment derived from the predictability and strength of its operating earnings, cash flow, and moderate use of leverage. Diageo is the world's largest spirits producer, owns seven of the world's top-selling 20 brands, holds unrivaled global distribution and marketing scale, and has unmatched brand strength. These attributes have resulted in Morningstar's Equity Research Group assigning the company a wide economic moat. We also believe these qualities will assist the company in navigating a post-Brexit environment. The rating is further supported by strong and improving returns on invested capital and operating margins, which result in a moderate Solvency Score. Diageo's Cash Flow Cushion score remains weak as the company has over 60% of its debt maturing within MCR's five-year forecast period.

With a diversified portfolio of spirit brands, broad geographic footprint, and category depth and range, Diageo is able to garner significant bargaining power to secure shelf space and successfully negotiate with distributors and retailers on pricing. The company's focus on improving operating efficiency in production, procurement, and logistics are yielding tangible benefits in operating margins. Diageo's management demonstrates financial discipline with lease adjusted debt/EBITDAR of 2.5 times for the fiscal year ended June 30 and EBITDAR/interest expense of 8.0 times. Considering the company's credit pillars, these measures are positioned well within the rating category. Diageo's low Business Risk assessment and sizable free cash flow after dividends of approximately GBP 919 million for the fiscal year ended June 30 provide it with financial flexibility at the current A- credit rating level. We expect the company to use its free cash flow for acquisitions and share buybacks.

Diageo's total debt was GBP 9.9 billion at fiscal year-end, inclusive of short-term debt of GBP 1.8 billion and maturing debt as follows: GBP 1.9 billion in 2020, GBP 981 million in 2022, and GBP 5.2 billion thereafter. Though Diageo's near-term maturities are high, its overall schedule is manageable. Liquidity is provided by Diageo's GBP 874 million cash balance and supplemented by its GBP 2.6 billion of undrawn committed bank credit facilities at fiscal year-end, of which GBP 788 million expires in fiscal 2019 and GBP 1.864 billion expires after fiscal 2020.

Diageo's measures are highly stable. The company's adjusted debt/EBITDA is forecast to be in the low 2.0 times at fiscal year-end 2019 and its EBITDA/interest at slightly over 9 times, on mid-single-digit top-line growth and improving operating margins. Management targets an adjusted net debt (including postemployment benefit liabilities of GBP 872 million at fiscal 2018)/EBITDA ratio of 2.5-3.0 times. Diageo was below its targeted range at fiscal year-end and plans to use a portion of its excess capacity for its GBP 2.0 billion share-repurchase program, which is expected to be completed by June 30, 2019. Diageo also plans to contribute GBP 200 million to its postemployment plans in fiscal 2019, which should reduce its obligation.

Diageo's current earnings momentum and free cash flow generation provide the company with some headroom for further leverage, a scenario we believe is quite likely, given that we expect continued industry consolidation. Lower leverage could give Diageo more financial flexibility to act if an attractive sizable asset were to become available. We anticipate that in the near term, free cash flow and incremental debt will probably be utilized for share repurchases.

Maintaining leverage within its targeted range and an improvement in Diageo's Cash Flow Cushion could result in a positive rating action. Conversely, debt-financed acquisitions concurrent with share repurchases may push Diageo's leverage ratio higher, which could weaken its Solvency Score and Cash Flow Cushion and negatively affect the credit rating.

Morningstar Credit Ratings Releases Updated Rating for Nucor

Morningstar Credit Ratings, LLC is affirming the credit rating of Nucor Corporation at A- and maintaining its stable outlook. Nucor's rating reflects its moderate Business Risk profile, strong Cash Flow Cushion and Distance to Default scores, and a very strong Solvency Score. Its Business Risk is supported by its size in the steel markets, conservative financial strategy, strong operating cash flows and liquidity offset somewhat by industry cyclicality, and a lack of an economic moat as assigned by Morningstar's Equity Research Group. Nucor is the largest steel producer in the U.S. and management adheres to a low leverage philosophy, as evidenced by its 10-year average net debt/EBITDA of 1.5 times. Nucor's Cash Flow Cushion benefits from consistently large free cash flows offset somewhat by nearly $500 million in annual dividend payments and capital spending. Its Solvency Score is supported by strong liquidity, solid fixed-charge coverages, and returns on invested capital that we forecast at above the company's weighted average cost of capital over the next five years. Underpinning Nucor's strong credit profile is consistent positive free cash flow throughout the cycle; the company has been FCF positive after capital spending in 9 of the past 10 years. Balance sheet debt was $4.3 billion as of the end of June and cash and equivalents were $1.5 billion. The firm's debt/LTM EBITDA was 1.5 times (1.0 times net) and LTM FCF was approximately $1 billion.

Liquidity is provided by the cash and equivalents and full availability on the company's $1.5 billion unsecured revolving credit facility due 2023. Nucor also benefits from having no pension or retirement obligations. Significant nearer-term maturities include $600 million due in 2022 and $500 million due in 2023. We expect debt/EBITDA to be approximately 1.5 times or lower throughout our forecast horizon and for the company to remain strongly free cash flow positive.

In our opinion, rating upside is limited as Nucor already has a conservative capital structure in a cyclical industry; however, we may consider an upgrade if we observe a reduction in Business Risk. Conversely, Nucor's rating could come under pressure if its Cash Flow Cushion or Solvency Score deteriorates, which would most likely be due to a sustained weakening in the steel markets or Nucor leveraging its capital structure.

Morningstar Credit Ratings Releases Updated Rating for British American Tobacco

Morningstar Credit Ratings, LLC is affirming its BBB credit rating on British American Tobacco plc and maintaining a stable outlook. BAT is the largest tobacco company in the world, with a substantial portfolio of cigarette brands that compete in every major market and across key price points. The company's products are continuously consumed, garner substantial brand loyalty—particularly at the premium segment—and provide pricing flexibility and operating margins north of 40%. British American Tobacco's global footprint positions the company well to benefit from emerging markets that have a growing population of young adults and less regulation. It has effectively offset volume declines through pricing and produces strong and stable operating earnings and cash flows.

We forecast mid-single-digit pricing partially offset by the company's low-single-digit volume declines, providing revenue growth averaging 3% after 2019. Operating margins, inclusive of $400 million of cost synergies from the acquisition of Reynolds American in 2017, are projected to decline only modestly as the company ramps up investments in its next-generation products. Debt/adjusted EBITDA is expected to trend from 4.0 times by year-end, which is slightly high for the rating category, to low 3.0 times by the end of the forecast period. Forecast free cash flow generation after dividends is projected to average over GBP 2.0 billion annually and will probably be used for debt reduction.

British American Tobacco's debt was GBP 48.5 billion at June 30, composed of GBP 5.3 billion of current maturities. The company's cash balance was GBP 2.1 billion at period-end. At Dec. 31, 2017, its 5-year maturities averaged GBP 4.9 billion annually, inclusive of its two $2.5 billion term loans maturing in 2020 and 2022, respectively. Liquidity is provided by British American's cash balance, but given the company's high maturities, capital market access is necessary. Financial flexibility is afforded through the company's undrawn revolving credit facilities, which consist of a 364-day revolving credit facility of GBP 3.0 billion maturing in 2019 and a GBP 3.0 billion revolving credit facility maturing in 2021. These facilities back the company's $4 billion commercial paper program and GBP 3.0 billion euro commercial paper program.

The company targets paying out 65% of its long-term sustainable earnings in the form of dividends. It plans to deleverage to the higher end of its net debt/EBITDA range of 1.5-2.5 times and is targeting around 3.0 times by the end of 2019. In addition to debt balance, its other major obligation is its pension plan, which was substantially funded at 95% at Dec. 31, 2017. It contributed GBP 73 million during the first six months of 2018.

Over the long term, we forecast that cigarette volume will decline at a low- to mid-single-digit rate annually in developed markets, which we expect will be more than offset by price increases. Our credit rating incorporates the legal and regulatory risks inherent to the tobacco sector as litigation remains unpredictable in the U.S. but currently manageable. Increased regulation is also a risk, and we expect regulatory bodies to implement further marketing regulations in both the long and the short term.

We would consider a positive rating action if BAT meaningfully extends its debt maturities and deleverages, resulting in an improvement in its Cash Flow Cushion and Solvency Score. BAT achieving its net debt/adjusted EBITDA target of about 3 times by 2019, increasing its revenue growth through new products and maintaining profitability margins, may also result in a positive rating action. Loss of pricing ability in developed markets to offset consumption declines that negatively affects operating margins and weakens either the company's Cash Flow Cushion or Solvency Score could result in a negative rating action. A negative rating action may also occur due to an increase in tobacco regulation that causes deterioration in the company's intangible asset value that adversely affects revenue, earnings, or cash flow.

Morningstar Credit Ratings Releases Updated Rating for Steel Dynamics

Morningstar Credit Ratings, LLC is affirming the corporate credit rating of Steel Dynamics, Inc. at BB+ and revising its outlook to positive. The affirmation is based upon the company's size and low-cost position in the steel industry coupled with its growth ambitions and its leverage target of net debt of 3.0 times or less. The rating reflects credit pillars that include a high Business Risk profile, a moderate Cash Flow Cushion ranking, a low risk Solvency Score ranking, and a moderate Distance to Default ranking. The company's Business Risk reflects high industry cyclicality and a lack of an economic moat as assigned by Morningstar's Equity Research Group. Its Cash Flow Cushion is supported by strong operating cash flow combined with low levels of capital spending requirements, a modest dividend, and a moderate debt maturity schedule over the next five years while its Solvency Score reflects moderate leverage in its capital structure, strong internal liquidity, and robust interest coverage. Its moderate Distance to Default ranking primarily stems from the company's market capitalization ($10 billion) of its common equity relative to its debt balance of $2.4 billion.

The revision in outlook is driven by the strong operating results and cash flows relative to debt. The company is reporting record levels of adjusted EBITDA on a latest 12 months basis and resulting debt/adjusted LTM EBITDA was 1.5 times as of June 30 and net debt/adjusted LTM EBITDA was approximately 1.0 times, a 12-year low. Historically, Steel Dynamics' net debt/EBITDA leverage averaged approximately 3.6 times over the past 10 years, a bit above its current leverage target.

Liquidity is provided by cash and equivalents on hand of approximately $800 million at June 30 and the $1.2 billion secured revolving credit facility due 2023, which was essentially fully available at the end of the quarter. Financial covenants on the RCF are a maximum of 5.0 times net leverage and minimum interest coverage of 2.5 times, and it is secured by substantially all of the company's receivables and inventories. At the end of the second quarter, the company had repurchased $396 million of its common shares under its $450 million share-repurchase authorization, leaving only $54 million remaining. LTM free cash flow was approximately $700 million.

If Steel Dynamics maintains lower leverage than in the past that would maintain the strength of its existing credit pillars, we may consider an upgrade of the current rating. This would probably be due to stronger-than-average steel margins combined with some level of restraint in the use of debt for the company's growth ambitions. The rating could come under pressure if the company's Cash Flow Cushion or Solvency Score were to weaken substantially, which would probably be due to weak steel industry conditions or a leveraging transaction of some sort.

Morningstar Credit Ratings Releases Updated Rating for Brown-Forman

Morningstar Credit Ratings, LLC is affirming its A+ credit rating on Brown-Forman and maintaining a stable outlook. Brown-Forman's credit rating reflects robust returns on invested capital and leading operating margins driven by the company's portfolio of global premium spirits and the growth of its super-/ultra-premium whiskey portfolio led by the iconic Jack Daniel's brand, coupled with a moderately leveraged capital structure.

Brown-Forman's product portfolio is heavily concentrated in its Jack Daniel's brand, which the company has successfully expanded through line extensions. Should consumers' tastes change, the company's financial results could be pressured. However, we believe Brown-Forman's brand strength and competitive advantages will allow the firm to maintain pricing power and generate returns on invested capital substantially in excess of its weighted average cost of capital. Our strong Business Risk assessment considers Brown-Forman's wide economic moat as assigned by Morningstar's Equity Research Group, which is derived in part from strong intangible brand assets and cost advantage.

Consistent demand for Brown-Forman's spirits results in stable operating earnings and cash flow, as the firm exhibits low cyclicality. Approximately 53% of the company's sales are from outside the U.S., of which 27% is from Europe, which has imposed retaliatory tariffs, and 5% from Mexico, which has also imposed such tariffs. Tariffs on American whiskey are likely to result in either lower margins or higher consumer prices, either of which could negatively affect the company's financial results. Even so, we believe the impact would be transitory because of the company's strong brand equity and pricing ability. MCR expects that revenue will increase in midsingle digits and operating margins will average a little better than 32% during the five-year forecast period. Although leverage has ticked up with share repurchases and bolt-on acquisitions, MCR expects Brown-Forman's credit pillars to remain strong.

Brown-Forman's total debt was $2.5 billion at July 31, composed of $176 million of short-term borrowings, mainly commercial paper and $2.3 billion of long-term debt. In addition to commercial paper, the only debt maturity in our five-year horizon consists of $248 million senior unsecured notes due in 2023. Liquidity is provided by Brown-Forman's $211 million cash balance at July 31, augmented by its commercial paper program, which is supported by the company's undrawn $800 million revolving credit agreement that expires in 2022. Brown-Forman's pension plan and postretirement medical and life insurance plan was approximately 86% funded on a projected benefit obligation basis at fiscal year-end 2018, and the company expects to make an $8 million contribution in fiscal 2019.

Total debt/EBITDA was 2.2 times for the latest 12-month period ended July 31, which is slightly weak for the rating category, but we expect the ratio will gradually improve throughout our five-year forecast period. We project that Brown-Forman will pay out just over 40% of its cash flow from operations in dividends and can generate free cash flow less dividends of $400 million-$500 million annually. We believe acquisitions may periodically result in temporarily high leverage levels, but we do not expect them to weaken the company's credit profile. Brown-Forman has periodically returned substantial amounts of cash to shareholders, which at times resulted in higher debt levels. The company paid out $773 million in dividends in fiscal 2018, including a special dividend of $481 million. However, we do not expect Brown-Forman to pay another special dividend in the near to intermediate term. Additionally, Brown-Forman's board approved a new $200 million share-repurchase program that expires in July 2019, but the company can easily fund share repurchases with its free cash flow.

Although not anticipated, weakness in the company's operations concurrent with share repurchases that diminishes Brown-Forman's Solvency Score or Cash Flow Cushion could pressure the company's credit rating. Conversely, operating margin improvement, stronger revenue growth, and diversification that broadens Brown-Forman's product portfolio and strengthens its Solvency Score and Cash Flow Cushion could result in a positive rating action.

Morningstar Credit Ratings Releases Updated Rating for Equity Residential

Morningstar Credit Ratings, LLC, is affirming its corporate credit rating on Equity Residential at A-. Our rating for Equity Residential reflects the company's low Business Risk and moderate Cash Flow Cushion as well as a weak Solvency Score. We are leaving our stable outlook for Equity Residential unchanged, as we expect that the company's credit profile will remain unchanged over our projection period.

After essentially completing its strategy to sell most of its noncore exposure, Equity Residential maintains holdings primarily concentrated in densely populated, high-rent markets on the coasts. In our view, the resulting portfolio has substantial barriers to entry and is better positioned to take advantage of strong rental demand in markets with high-priced homes that command institutional premiums. The company's low Business Risk is reflective of mostly positive competitive characteristics. While Morningstar's Equity Research Group does not currently assign an economic moat to Equity Residential, we believe the company's scale and balance sheet afford it meaningful cost advantages compared with other owner-operators in the multifamily sector.

We project debt/gross assets to average 32.1% for the next few years for Equity Residential as well as debt/EBITDA at 5.5 times in 2018 and 5.3 times thereafter, down from 5.7 times and 6.0 times in 2017 and 2016, respectively. We believe the real estate investment trust is prudently lowering leverage at a point in the multifamily cycle that we view to be near the top. This should allow it to gain balance sheet flexibility when cash flow growth will be more difficult to achieve and, importantly, capacity for opportunistic acquisitions when high-quality though poorly managed and financed projects are forced on the market as a result of distress. We project EBITDA/interest expense to remain around 4.0 times, somewhat below peer group averages.

Equity Residential has meaningfully lowered its five-year debt burden, which contributed to a stronger Cash Flow Cushion. Five-year maturities total $3.6 billion due through 2022, which is down from $4.5 billion through 2021 at this time last year. With average annual adjusted funds from operations estimated at roughly $1.1 billion, we expect the REIT will continue to rely on refinancing for a portion of its maturing debt obligations and construction commitments. The company has a revolving credit facility with a capacity of $2 billion, which had availability of $1.6 billion at the end of the second quarter after consideration for commercial paper and letters of credit outstanding. The moderate Cash Flow Cushion incorporates current borrowing capacity and the REIT's large unencumbered portfolio.

Equity Residential's rating could improve if the company is able grow significantly, approaching $2.5 billion of EBITDA while maintaining leverage at current levels and while keeping the debt structure predominantly senior unsecured. The REIT would also need to achieve meaningfully more diversity while successfully navigating through moderating market conditions. We may consider a downgrade if the REIT pursues development or acquisitions that are financed with a greater percentage of debt on a permanent basis than is currently on the balance sheet and interest coverage is significantly reduced.

Morningstar Credit Ratings Releases Updated Rating for Camden Property Trust

Morningstar Credit Ratings, LLC is affirming the A- corporate credit rating for Camden Property Trust and maintaining a stable outlook. The rating and stable outlook are based on Camden's high-quality portfolio of apartment complexes located in 15 widely diverse markets and highly experienced management team, supporting a moderate Business Risk, Cash Flow Cushion, and Solvency Score. The company also maintains solid interest coverage and leverage metrics.

Camden owns gross assets at cost of roughly $8.1 billion. While meaningfully smaller than the other multifamily REITs in the peer group, this creates only a slight disadvantage in the Business Risk. Camden's average same property monthly rent per unit is $1,456, which is up 2.5% from a year earlier and is well above the national average but is lower than that of most of the peer group. However, the company's credit metrics are better than peers, with debt/EBITDA of 4.2 times (peer average 5.3 times) at June 30 and EBITDA/interest of 6.4 times (peer average 5.3 times). Since 2014, the company has reduced debt by about $525 million, mainly through the retirement of senior unsecured debt. Our rating assumes a small increase in leverage to 4.6 times by 2020 and some slippage in coverage to 5.3 times. We estimate that Camden will produce adjusted funds from operations averaging $400 million per year from 2018 through 2022 compared with an average of $283 million of annual debt maturities over that period. However, we believe the company will continue to rely on external debt and equity financing as well as dispositions to fund a portion of its debt maturities and development pipeline expenditures.

Availability of a credit line and a significant unencumbered portfolio support Camden's Cash Flow Cushion. Our assumptions are based on Camden continuing to operate in a variety of markets and maintain a meaningful development program. We assign no sustainable competitive advantage to Camden as the apartment industry has major players in the public and private spheres as well as many smaller participants of varying sizes and capabilities. With so much competition, and with a product that that is challenging to differentiate even at the higher price points, it is extremely challenging for any given company to enjoy a meaningful advantage. That said, we believe Camden's strengths in the quality of its portfolio and the recession-tested management team are credit positives.

Having put the impact of last year's hurricane in Houston behind it, Camden's could improve its rating, in our view, if it can grow to a more substantial size over time while expanding to additional markets to improve diversification. However, we do not see this as a likely development in the near term. Maintaining low leverage and maintaining an unsecured capital structure would also be essential to an upgrade. On the other hand, if the period of slow rent growth in certain markets is more prolonged than expected, and Camden's development program becomes too large (greater than 20% of total gross assets) or fails to achieve profitable returns, we may consider a downgrade. Leverage and coverage metrics persistently weaker than the investment-grade multifamily peer group would also put downward pressure on the rating.

Morningstar Credit Ratings Releases Updated Rating for AvalonBay Communities
Morningstar Credit Ratings LLC is affirming the A- corporate credit rating for AvalonBay and maintaining a stable outlook. The rating and stable outlook are based on AvalonBay's low Business Risk, which we view as supported by a portfolio of high-quality apartment complexes located primarily in high-rent, high-barrier markets and a highly experienced management team. The company also maintains solid interest coverage and leverage metrics that contribute to a moderate Solvency Score. Since 2014, AvalonBay has replaced roughly $2.1 billion of secured debt with $3.2 billion of senior unsecured debt, increasing its balance sheet flexibility. We expect EBITDA interest coverage to increase slightly to 6.8 times by 2020 due to a minute weakening in debt ratios. We also expect some net new borrowings, asset dispositions, and equity raises through 2020 to fund the company's development program, but we anticipate slightly lower leverage in 2021 and 2022.

With its large size and economies of scale, AvalonBay is well positioned to withstand competition. Despite a good record of profitable operation of its large portfolio of apartment complexes, competition with many other similar offerings, even in high-barrier markets, can present challenges. Periods of good profitability conditions nearly always spark new development, which has historically led to oversupply in certain markets. AvalonBay owns gross real estate assets of more than $22.0 billion, smaller than the largest multifamily REIT at $26.1 billion. Moreover, AvalonBay's average monthly rent per unit is $2,597, among the highest in the sector. However, the company's credit metrics remain in line with or better than peer averages, with debt/EBITDA of 5.2 times and interest coverage of 6.8 times EBITDA for the 12 months ended June 30. We anticipate a small increase in leverage to about 5.5 times EBITDA in the near term before heading slightly lower, and only a slight increase in coverage through the forecast period. We project average adjusted funds from operations of roughly $1.3 billion per year from 2018 through 2022, which should be more than adequate to cover debt maturities and a portion of development activities. However, we believe that the company will access debt, disposition, and equity capital to fund debt maturities averaging $420 million over the next five years, plus a smaller but still-robust development program. Strong, sustainable AFFO and a large unencumbered portfolio support the company's strong Cash Flow Cushion. Our assumptions are based on AvalonBay continuing to focus its exposure to a select few markets along the Northeast Corridor and the Pacific Coast, while recycling out of older assets and into newer ones. Like most REITs, Morningstar Equity Research Group does not view AvalonBay as having an economic moat due to the lack of clear competitive advantage that would contribute to excess returns over a long time horizon.

Meaningful expansion of regional diversity as well as significant growth in size approaching $2.5 billion of EBITDA would be required for us to consider an upgrade, which seems unlikely in the near to intermediate time horizon. Maintaining low leverage and keeping the debt structure simple and transparent would also be essential to an upgrade. On the other hand, we believe a downgrade may result if AvalonBay's $3.0 billion development program fails to achieve the desired returns, driving cash flow and interest coverage lower.

Recent Notes Published by Credit Analysts

Duke Realty (BBB+, Stable) Issues New 10-Year Senior Unsecured Notes to Retire Secured Debt

Market News and Data

Duke Realty Corporation (BBB+, stable) is reportedly in the market with a $350 million, 10-year senior unsecured notes offering. The issuer is Duke Realty LP. Net proceeds are expected to be used to retire in advance $224 million of secured debt maturing in March 2019, which is eligible for prepayment at par in September. Any remaining proceeds from the offering are expected to fund development, repay borrowing under the REIT's revolver, and be used for general corporate purposes. Duke Realty has filed a preliminary supplement to the prospectus dated April 30.

Duke Realty's rated industrial REIT peers are Prologis Inc. (A-, stable) and Liberty Property Trust (BBB, stable). The following pricing data is from Interactive Data as of Aug. 31. In the 10-year area, spreads over the nearest Treasury from these issuers were:

- Prologis' $400 million 3.875% bonds due in 2028 at +78 basis points.
- Duke Realty's $300 million 3.375% bonds due 2027 at +121 basis points.
- Liberty Property's $400 million 3.25% bonds due 2026 at +129 basis points.

The BBB+ Morningstar Corporate Bond Index is currently priced at +141 basis points.

Duke Realty's BBB+ rating and stable outlook are supported by solid Business Risk and Cash Flow Cushion pillars, which are somewhat curbed by a weaker Solvency Score. Contributing to Business Risk is Duke's high-quality, largely unencumbered portfolio of bulk warehouse facilities, which is uniquely positioned to capture robust e-commerce demand. At an average age of 11 years, Duke's portfolio is the youngest among its peers; it is also among the largest in terms of average facility size, which results in lower capital expenditures and tends to draw higher-credit tenants with lower turnover. Larger average building size can also drive higher rent levels upon renewal. We believe that the credit is further supported by some of the lowest leverage metrics among its industrial REIT peers, in particular debt/EBITDA and secured leverage.

With this replacement of secured debt with unsecured debt, we project Duke Realty's secured debt/gross assets will decline to 2.0% from 4.7%, which is not only the lowest among investment-grade industrial REITs but also one of the lowest levels across all public REITs. We expect Duke Realty will prudently manage acquisition and development spending, primarily using proceeds from dispositions, augmented by a combination of debt, equity, and internally generated cash as necessary. Should Duke approach $1 billion in EBITDA while making meaningful strides in terms of portfolio quality, such as higher average rents and a relatively smaller noncore portfolio, we may consider upgrading the credit rating. In the case of a reversal in its commitment to unsecured borrowing and an unencumbered portfolio, or excessive development risk—which we would view as its development pipeline at around 20% of total assets—neither of which we currently expect, we would probably downgrade the credit rating.

Cigna (BBB/UR-) Issues $20 Billion in New Bonds to Fund Express Scripts (A-/UR-) Merger

Cigna has stated that it anticipates initially owing $41 billion in debt after the merger is completed. Therefore, pro forma leverage looks set to rise to the mid-3s if the merger with Cigna closes as expected at the end of 2018, or much higher than Express Scripts' stand-alone leverage around 2 times. This rising leverage looks likely to cut into Express Script's A- rating and could even cut into Cigna's BBB rating. At year-end 2017, Cigna reported 28% debt/capital. Upon close of the deal, proforma debt/capital (including new debt issuance and debt assumed from Express Scripts) is expected to increase materially to roughly 49%. Notably, though, Cigna management appears committed to deleveraging to maintain its investment-grade status, which will probably inform our credit view of the combined entity. Cigna aims to achieve financial leverage in the 30s over the 18-24 months after the deal closes. For comparison, CVS owed $65 billion in debt as of June, and management expects pro forma gross leverage of 4.6 times once the Aetna deal closes in late 2018. After that, the company aims to reach 3.5 times gross leverage within two years of the deal's closure and around 3 times in the long run.

Strategically, we view the benefits of combining a top-tier pharmacy benefit manager (Express Scripts) with a top-tier managed-care organization (Cigna) as compelling. As the largest independent pharmacy benefit manager, Express Scripts will bring its enormous scale advantages and wide-moat status, according to Morningstar's Equity Research Group, to the combined entity. Cigna, a managed-care organization with no moat, according to the equity group, also provides PBM services on a smaller scale. This combination of PBM and managed-care operations has worked relatively well for another top-tier PBM, UnitedHealth Group Inc (non-NRSRO rating: A-, stable) and is being considered by the other top-tier PBM, CVS, in its pending combination with Aetna. Therefore, if the Cigna combination succeeds, Express Scripts will be on more equal footing with its key PBM peers from a strategic perspective, and the combined entity will be able to control more healthcare cost components.

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