

Morningstar Corporate Credit Research Highlights

Secondary trading activity surges as higher interest rates lure buyers.

)	Credit Market Insights						
5 December 2016		► Market data and insights.						
This Week	1	Credit Rating Actions						
		Rating Changes						
Credit Market Insights	2	lssuer/Ticker	Current Issuer Credit Rating	Previous Issuer Credit Rating				
		Western Refining WNR	BB/UR+	BB				
Credit Rating Actions	8	Tesoro TSO	BBB-/UR	BBB-				
		Advanced Micro Devices AMD	B-	CCC				
Recent Notes		Altria Group MO	A-	BBB				
Published by Credit Analysts	28	Weatherford International WFT	B+	BB+				
		AGCO AGCO	BBB-	BBB				
Credit Contacts	31	Parker Hannifin PH	A/UR-	Α				
		Issuer/Ticker	Current Issuer Credit Rating	Previous Issuer Credit Rating				
		Mattel MAT	BBB+	BBB+				
		Mattel MAT Hasbro HAS	BBB+ BBB+	BBB+ BBB+				
		Mattel MAT Hasbro HAS Boeing BA	BBB+ BBB+ A	BBB+ BBB+ A				
		Mattel MAT Hasbro HAS Boeing BA Frontier Communications FTR	BBB+ BBB+ A BB-	BBB+ BBB+ A BB-				
		Mattel MAT Hasbro HAS Boeing BA Frontier Communications FTR U.S. Steel X	BBB+ BBB+ A BB- B	BBB+ BBB+ A BB- B				
		Mattel MAT Hasbro HAS Boeing BA Frontier Communications FTR U.S. Steel X Teck Resources TCK	BBB+ BBB+ A BB- B	BBB+ BBB+ A BB- B				
		Mattel MAT Hasbro HAS Boeing BA Frontier Communications FTR U.S. Steel X Teck Resources TCK Cummins CMI	BBB+ BBB+ A BB- B B+ A	BBB+ BBB+ A BB- B B+ A				
		Mattel MAT Hasbro HAS Boeing BA Frontier Communications FTR U.S. Steel X Teck Resources TCK Cummins CMI Mead Johnson Nutrition MJN	BBB+ BBB+ A BB- B B+ A A-	BBB+ BBB+ A BB- B B+ A				
		Mattel MAT Hasbro HAS Boeing BA Frontier Communications FTR U.S. Steel X Teck Resources TCK Cummins CMI Mead Johnson Nutrition MJN Deere DE	BBB+ BBB+ A BB- B B+ A A- A-	BBB+ BBB+ A BB- B B+ A				
		Mattel MAT Hasbro HAS Boeing BA Frontier Communications FTR U.S. Steel X Teck Resources TCK Cummins CMI Mead Johnson Nutrition MJN Deere DE Caterpillar CAT	BBB+ BBB+ A BB- B B+ A A- A- A-	BBB+ BBB+ A BB- B B+ A A- A-				
		Mattel MAT Hasbro HAS Boeing BA Frontier Communications FTR U.S. Steel X Teck Resources TCK Cummins CMI Mead Johnson Nutrition MJN Deere DE Caterpillar CAT CVS Health CVS	BBB+ BBB+ A BB- B B+ A A- A- A- BBB+	BBB+ BBB+ A BB- B B+ A A- A- BBB+				
		Mattel MAT Hasbro HAS Boeing BA Frontier Communications FTR U.S. Steel X Teck Resources TCK Cummins CMI Mead Johnson Nutrition MJN Deere DE Caterpillar CAT	BBB+ BBB+ A BB- B B+ A A- A- A-	BBB+ BBB+ A BB- B B+ A A- A-				

Recent Notes Published by Credit Analysts

Walgreens Boots Alliance WBA Express Scripts Holding ESRX

- ▶ Time Warner announces new 10-year senior notes.
- ▶ Analog Devices announces senior debt to fund pending merger with Linear Technology.

BBB-

BBB-

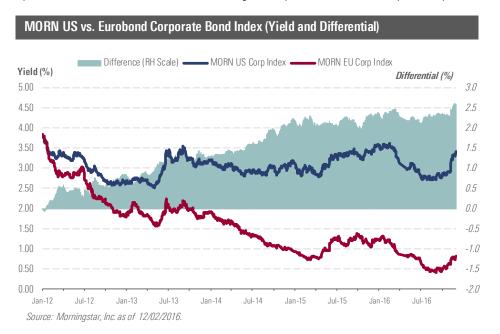
Credit Market Insights

Secondary Trading Activity Surges as Higher Interest Rates Lure Buyers

Spurred by heightened demand for U.S. dollar-denominated corporate bonds, trading volume in the secondary corporate bond market has reached near-record levels. In the investment-grade market, buyers helped push the average corporate credit spread of the Morningstar Corporate Bond Index tighter by 2 basis points last week to +136. In the high-yield market, buyers were unwilling to chase credit spreads and the Bank of America Merrill Lynch High Yield Master Index was unchanged at +464.

The yield curve for U.S. Treasury bonds continued to steepen last week, even though the interest rate futures market is pricing in with near certainty that the Federal Reserve will increase the federal funds rate next week. Interest rates on short-term bonds declined slightly, and the yield on longer-term bonds rose. The interest rate on 2-year and 5-year Treasury bonds declined 2 and 1 basis points, respectively; in the longer end of the curve, the yield on 10-year and 30-year bonds rose 3 and 6 bps. Since the U.S. presidential election, the yield curve between 2-year and 10-year Treasury bonds has steepened 29 bps.

After Thanksgiving, the corporate bond markets have been very active in the primary and secondary markets. As we approach the end of the year, volume in the primary market has been driven by the dwindling time that the window to the new issue market will remain open before the holiday season. Volume in the secondary market has been driven by renewed demand from insurance companies and pension funds, which have been sitting on cash waiting for interest rates to rise. Now that rates have risen, these investors are putting that cash to work. In addition, there remains a strong demand from overseas investors, including European and Asian buyers. With the recent backup in interest rates in the United States, the all-in yield provided by U.S. dollar-denominated corporate bonds has risen even higher than that of euro-denominated corporate bonds. For example, the yield of the Morningstar Corporate Bond Index yields only 0.81%.



The rise in interest rates has been driven by the expectation for renewed economic activity and resulting resurgence in inflation. According to the Federal Reserve Bank of St. Louis, the 5-year, 5-year forward inflation expectation rate has risen 24 basis points since the U.S. presidential election to almost 2%, its highest level since August 2015. Similarly, the market-implied probability that the Fed will increase the federal funds rate after the December Federal Open Market Committee meeting rose to over 92% at the end of last Friday.

With interest rates surging, fixed-income indexes have given back much of their year-to-date gains over the past two months. For example, quarter to date the Morningstar US Treasury Bond Index has lost 3.94% and is now only up 0.97% year to date. In the corporate bond sectors, credit spreads tightened, which helped to offset some of the impact of rising rates. Quarter to date, the Morningstar Corporate Bond Index has declined 3.59% and is now only up 5.09% year to date. With its lower correlation to interest rates and high-yield carry, the high-yield market has performed better, but even the Bank of America Merrill Lynch High Yield Master Index has essentially broken even and year to date is up 15.31%.

Exhibit 1 Morningstar Credit New Issue Monitor Week ended Dec. 2, 2016 (000,000s \$ unless otherwise noted)

Issuer			Issue				
Name	Ticker	Morningstar Corporate Rating	Size	Coupon	Description	Maturity	Approx Spread to US Treasuries
Analog Devices	ADI	A+	\$400	2.50%	Senior Notes	2021	+75
Analog Devices	ADI	A+	\$550	3.13%	Senior Notes	2023	+100
Analog Devices	ADI	A+	\$900	3.50%	Senior Notes	2026	+120
Analog Devices	ADI	A+	\$250	4.50%	Senior Notes	2036	+150
Bank of America	BAC	BBB	\$2,000	4.18%	Subordinated Notes	2027	+185
BP Capital Markets PLC	BP	A- ⁽¹⁾	\$1,200	3.22%	Senior Notes	2023	+110
BP Capital Markets PLC	BP	A- ⁽¹⁾	\$800	3.72%	Senior Notes	2028	+140
Constellation Brands	STZ	BBB-	\$600	3.70%	Senior Notes	2026	+140
Ecolab	ECL	BBB+	€ 575	1.00%	Senior Notes	2024	+75 ⁽²⁾
Heineken	HEINY	A-	€ 500	1.38%	Senior Notes	2027	+7 ⁽²⁾
Morgan Stanley	MS	BBB	€ 1,250	FLT	Senior Notes	2019	NA
Morgan Stanley	MS	BBB	€ 1,000	1.00%	Senior Notes	2022	+87 ⁽²⁾
Steel Dynamics	STLD	BB+	\$400	5.00%	Senior Notes	2026	+256
SunTrust Banks	STI	BBB+	\$1,000	2.70%	Senior Notes	2022	+93
Time Warner	TWX	BBB+	\$1,500	3.80%	Senior Notes	2027	+155
Xerox Business Services	XRX	BBB- ⁽¹⁾	\$510	10.50%	Senior Notes	2024	+854

Source: Advantage Data, Company SEC fillings.

⁽¹ Morningstar's issuer credit rating is assigned at the holding company level.

⁽²⁾ Spread over mid-swaps.

Exhibit 2 Morningstar, Inc. Corporate Bond Index Sector Summary

Cartan	Average	Number of	Modified	Spread	MTD Spread	•		YTD Total
Sector	Rating	Issues	Duration	(bps)	Chg (bps)	Chg (bps)	Return (%)	Return (%)
TOTAL	Α-	4,646	6.7	136	(1)	(32)	0.06	5.09
FINANCIAL	A-	1,435	5.4	128	0	(7)	0.02	3.37
Bank	A-	892	5.0	128	1	(4)	0.02	6.07
Finance	А	256	5.7	126	1	(6)	0.06	(4.96)
Insurance	А	208	7.5	126	(1)	(23)	(0.03)	3.90
REITs	BBB+	71	6.1	137	(11)	(15)	0.01	3.32
INDUSTRIAL	A-	2,665	7.4	138	(1)	(40)	0.08	5.57
Basic Industries	BBB+	225	7.4	191	2	(170)	0.08	14.18
Consumer Products	A-	287	7.5	113	(1)	(17)	0.02	4.66
Energy	A-	411	7.0	172	(2)	(72)	0.28	5.11
Healthcare	A-	410	7.7	120	(4)	(11)	0.09	3.96
Manufacturing	A-	385	6.1	111	(1)	(19)	0.06	3.63
Media	BBB+	192	8.3	164	0	(43)	(0.00)	7.61
Retail	A-	168	7.9	116	(1)	(20)	0.08	5.24
Technology	A+	270	7.1	114	0	(19)	0.03	2.51
Telecom	BBB+	152	8.3	166	(0)	(22)	(0.07)	5.85
Transportation	BBB+	123	8.9	142	(1)	(20)	(0.00)	11.96
UTILITY	BBB+	505	8.2	163	(2)	(83)	0.15	10.03
Electric Utilities	A-	301	8.6	142	(1)	(26)	(0.01)	6.83
Gas Pipelines	BBB+	196	7.6	195	(4)	(178)	0.41	16.85
Rating Bucket								
AAA Bucket		101	7.5	69	(1)	(13)	(0.03)	2.79
AA Bucket		542	5.9	87	(1)	(10)	0.07	2.79
A Bucket		1,776	6.7	111	(1)	(14)	0.04	3.85
BBB Bucket		2,227	6.9	175	(0)	(64)	0.09	7.05
Term Bucket		•				<u> </u>		
1-4	A-	1,466	2.3	96	(1)	(15)	0.04	2.39
4-7	A-	1,139	4.7	122	1	(33)	0.08	4.31
7-10	A-	862	7.2	146	(1)	(39)	0.07	5.22
10PLUS	A-	1,179	13.5	187	(3)	(45)	0.07	8.98

Data as of 12/02/2016

Exhibit 3 Morningstar, Inc. Corporate Bond Index Spread by Sector

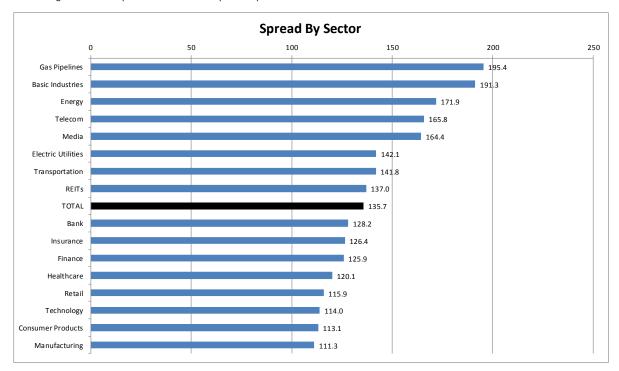


Exhibit 4 Morningstar, Inc. Corporate Bond Index YTD Spread Change

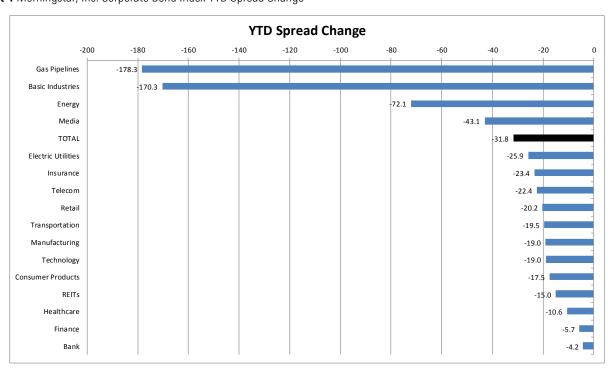


Exhibit 5 Morningstar, Inc. Corporate Bond Index YTD Total Return



Credit Rating Actions

► Rating Changes

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lssuer/Ticker	Current Issuer Credit Rating	Previous Issuer Credit Rating		
Western Refining WNR	BB/UR+	BB		
Tesoro TSO	BBB-/UR	BBB-		
Advanced Micro Devices AMD	B-	CCC		
Altria Group MO	A-	BBB		
Weatherford International WFT	B+	BB+		
AGCO AGCO	BBB-	BBB		
Parker Hannifin PH	A/UR-	Α		

► Rating Affirmations

lssuer/Ticker	Current Issuer Credit Rating	Previous Issuer Credit Rating
	<u> </u>	8
Mattel MAT	BBB+	BBB+
Hasbro HAS	BBB+	BBB+
Boeing BA	A	A
Frontier Communications FTR	BB-	BB-
U.S. Steel X	В	В
Teck Resources TCK	B+	B+
Cummins CMI	A	A
Mead Johnson Nutrition MJN	A-	A-
Deere DE	A	A
Caterpillar CAT	A-	A-
CVS Health CVS	BBB+	BBB+
Airbus Group AIR	A-	A-
Philip Morris International PM	A-	A-
ArcelorMittal MT	BB-	BB-
Walgreens Boots Alliance WBA	BBB-	BBB-
Express Scripts Holding ESRX	A-	A-
Frontier Communications FTR U.S. Steel X Teck Resources TCK Cummins CMI Mead Johnson Nutrition MJN Deere DE Caterpillar CAT CVS Health CVS Airbus Group AIR Philip Morris International PM ArcelorMittal MT Walgreens Boots Alliance WBA	B B+ A A- A- BBB+ A- A- BB- BBB-	B B+ A A- A- BBB+ A- BB- BBB-

Western Refining's BB Rating Under Review Positive on Proposed Purchase by Tesoro

On Nov. 17, Tesoro (rating: BBB-/UR) announced that it was acquiring Western Refining (rating: BB/UR+), both U.S.-based, independent petroleum refiners, in a stock transaction. We are affirming our BB corporate credit rating on Western and placing it under review positive. We expect to conclude our review before the targeted closing in the first half of 2017.

Western shareholders can elect to receive 0.4350 share of Tesoro for each share of Western stock they own, or \$37.30 in cash per share of Western stock in lieu of Tesoro shares, up to a cash cap equal to approximately 10% of the total equity consideration. The boards of directors of both companies have unanimously approved the deal. Further, elections to receive cash will be subject to proration to the extent they exceed 10.8 million shares, or about \$404 million aggregate. The companies expect the transaction to close in the first half of 2017, subject to customary closing conditions, including regulatory and shareholder approvals.

We believe the acquisition makes strategic sense for several reasons. First, the transaction combines U.S. refining assets that complement one another geographically. That is, Western adds refining capacity in

the Southwest and Upper Midwest regions, supplementing Tesoro's capacity, which is mostly located on the West Coast and in Alaska. Second, there are many cost-saving opportunities, including consolidation of corporate services and general and administrative costs, procurement efficiencies, and reduced supply and distribution costs. Larger, companywide refining capacity should allow Tesoro to better optimize staffing.

Third, the acquisition of Western would allow Tesoro to pursue crude oil midstream opportunities in the prolific Texas Permian via Western Refining Logistics (not rated), a master limited partnership controlled by Western. Tesoro also has a sponsored MLP, Tesoro Logistics (not rated), which owns and operates logistics assets related to the terminaling, pipeline transportation, natural gas processing, and storage of crude oil in the Rockies, in the Bakken Shale, and on the West Coast. More broadly, the combined capabilities of the two MLPs should generate a larger midstream opportunity set for Tesoro. Lastly, Western's retail footprint significantly complements that of Tesoro in the Southwest, Rockies, and Upper Midwest.

We expect Western's trailing 12-month debt/EBITDA ratio to decline to 1.8 times from 3.7 times, with net debt/EBITDA declining to 1.3 times from 3.2 times, pro forma for the combination with Tesoro, excluding any synergies and Tesoro's assumption of Western's net debt. As of September, Western had \$2.1 billion in total debt and \$266 million in cash and equivalents. Western's liquidity is enhanced by \$257 million availability on its \$900 million revolving credit facility. Additionally, there is \$206 million available on the NTI revolving credit facility, along with \$479 million available on Western Refining Logistics' credit facility. Incorporating our capital expenditure forecast and continuation of the yearly dividend at \$1.52 per share, we estimate that Western will generate free cash flow from 2017 through 2020.

Tesoro's BBB- Rating Under Review on Proposed Acquisition of Western Refining

On Nov. 17, Tesoro (rating: BBB-/UR) announced that it was acquiring Western Refining (rating: BB/UR+), both U.S.-based, independent petroleum refiners, in a stock transaction. We are affirming our BBB- corporate credit rating on Tesoro and placing it under review. We expect to conclude our review before the targeted closing in the first half of 2017.

Western shareholders can elect to receive 0.4350 share of Tesoro for each share of Western stock they own, or \$37.30 in cash per share of Western stock in lieu of Tesoro shares up to a cash cap equal to approximately 10% of the total equity consideration. The boards of directors of both companies have unanimously approved the deal. Further, elections to receive cash will be subject to proration to the extent they exceed 10.8 million shares or about \$404 million aggregate. The companies expect the transaction to close in the first half of 2017, subject to customary closing conditions, including regulatory and shareholder approvals.

We believe the acquisition makes strategic sense for several reasons. First, the transaction combines U.S. refining assets that complement one another geographically. Western adds refining capacity in the Southwest and Upper Midwest regions, supplementing Tesoro's capacity, mostly located on the West Coast and in Alaska. Second, there are many cost-saving opportunities, including consolidation of

corporate services and G&A, procurement efficiencies, and reduced supply and distribution costs.

Furthermore, a larger, companywide refining capacity should allow Tesoro to better optimize staffing.

Third, the acquisition of Western would allow Tesoro to pursue crude-oil midstream opportunities in the prolific Texas Permian via Western Refining Logistics (not rated), a master limited partnership controlled by Western. Tesoro also has a sponsored MLP, Tesoro Logistics (not rated), which owns and operates logistics assets related to the terminaling, pipeline transportation, natural gas processing, and storage of crude oil in the Rockies and Bakken Shale and on the West Coast. The two MLPs will remain separate until after the acquisition is finalized. Last, Western's retail footprint significantly complements Tesoro in the Southwest, Rockies, and Upper Midwest.

As of September, Tesoro had \$4.8 billion in total debt and \$1.4 billion in cash and equivalents (consolidated basis). Assuming consummation of the deal, we estimate last-12-months' debt/EBITDA for Tesoro will increase to 1.8 times from 1.5 times, and net debt/EBITDA will increase to 1.3 times from 1.0 times, pro forma for Western's contribution (assuming no synergies) and assumption of Western's net debt. Tesoro estimates that the combination will achieve \$350 million-\$425 million of annual cost synergies with the run rate realized by the end of the second year. Merger synergies (including cost synergies) should help mitigate the increase in debt leverage and continuation of challenging refining industry conditions, possibly resulting in a rating affirmation.

On a stand-alone basis, Tesoro's liquidity is very good. As of September, Tesoro has \$1.4 billion in cash and equivalents and full availability on its \$2.0 billion credit facility plus Tesoro Logistics has full availability on a \$600 million secured revolving credit facility and \$600 million available on the drop-down credit facility's total capacity of \$1.0 billion. Incorporating our capital expenditure forecast and continuation of the yearly dividend at \$2.20 per share, we estimate that Tesoro will generate free cash flow from 2016 through 2020. Therefore, we estimate no need for Tesoro to draw on its credit facility.

Upgrading Advanced Micro's Rating to B-, Initiating Stable Outlook Following Debt RepaymentsMorningstar Credit Ratings, LLC is upgrading its corporate credit rating on Advanced Micro Devices to B-from CCC and initiating a stable outlook. Our credit rating reflects the company's recent steps to restore liquidity and reduce debt maturities, though we expect operating conditions to remain challenging in the coming years.

The company's rating remains pressured by low returns on invested capital and high leverage, driving a weak Business Risk profile and Solvency Score. However, we are confident that the company's recent \$1.4 billion issuance of a combination of new common stock and convertible debt should relieve any material liquidity concerns over the next few years. This should give the company critical headroom to execute on rebuilding operating stability and improving its Cash Flow Cushion and Distance to Default pillars. Our outlook incorporates our view that the company now has sufficient liquidity to absorb future operating losses, should they arise, while it continues to invest in new product development and marketing of existing products.

Advanced Micro Devices ended its September quarter with \$1.3 billion of cash on hand and total debt of \$1.9 billion (including the new convertible notes at full par value). Total debt declined by \$606 million during the quarter, driven by the repurchase of portions of the 6.75% notes due in 2019, the 7.75% notes due in 2020, and credit facility borrowings. After the quarter, the convertible notes issue was upsized to \$805 million. Advanced Micro Devices now has full availability under its \$500 million 2018 credit facility and \$162 million of new capital remaining, net of debt repayments. Management expects cash to end the fourth quarter higher, in line with its forecast of positive free cash flow for the full year.

While the company' cash flow trend has been improving, we continue to view management's guidance for full-year cash flow as optimistic. For the year to date, the company has burned \$154 million of free cash flow, and management has guided its cash balance, excluding the impact of new capital and joint venture proceeds, to be positive for the full year, suggesting a significant sequential uptick in performance for the fourth quarter.

Since its management overhaul in late 2014, the company has been working to shift its PC portfolio away from the high-end, hardcore enthusiast market in favor of lower-margin but less competitively intense midrange price points. Another key challenge for AMD in the coming years will be to expand diversity by targeting new end user applications for its enterprise, embedded, and semicustom product portfolio, which is currently dominated by gaming consoles. We may consider an upgrade to the rating if revenue visibility improves and the company can demonstrate that it can produce free cash flow for a sustainable period. We may downgrade the rating if progress on building revenue growth stalls and liquidity declines below \$1 billion.

Altria's Rating Upgraded on Improved Profitability, Balanced Capital-Allocation Policy

Morningstar Credit Ratings, LLC is upgrading Altria Group's corporate credit rating to A- from BBB and initiating a stable outlook. The rating upgrade is due to improvements in the company's profitability, interest coverage, and returns on invested capital, which resulted in a greater Solvency Score. Altria maintains a conservative capital structure with low leverage while generating strong cash flow from operations. These elements are balanced by the company's high dividend payout ratio and the industry's above-average litigation and regulatory risks.

Altria's rating is anchored by the company's leading market position and the ability of its cigarette business to generate cash flow, which is derived from its pricing power and industry-leading profitability margins. Altria's wholly owned subsidiary Philip Morris USA has over a 50% share of the U.S. cigarette market, and its leading brand, Marlboro, is the number-one cigarette brand in the United States, with over 40% share. The U.S. industry has evolved into a duopoly, and as marketing restrictions become tighter, we think competitors will find it difficult to almost impossible to take market share from the leading brands. Altria also holds leading market share in moist smokeless tobacco and machine-made cigars through its ownership of U.S. Smokeless Tobacco and John Middleton, respectively. Altria has made operational improvements over the past few years, which have reduced its cost structure. We forecast operating margins can continue to expand as higher pricing and more-efficient operations offset volume declines, but we expect the rate of improvement will subside.

Altria's total debt at Sept. 30 was \$13.9 billion, which was predominantly long term. Liquidity is provided by the company's cash balance, which was \$2.3 billion at period-end. Additional financial resources are provided by Altria's 10.2% equity ownership of Anheuser-Busch InBev, for which we estimate a value of approximately \$21 billion. Financial flexibility is supplied by the company's \$3.0 billion senior unsecured 5-year revolving credit agreement that expires Aug. 19, 2020. The credit agreement has financial covenants that require Altria to maintain debt/EBITDA (leverage ratio) of not more than 3.0 to 1.0 and EBITDA/interest expense (interest coverage ratio) of not less than 4.0 to 1.0, both calculated as of the end of the applicable quarter on a rolling-four-quarters basis. Altria was in compliance with its financial covenants at Sept. 30, and there were no borrowings outstanding at quarter-end.

MCR forecasts that leverage will remain near 1.5 times over our forecast period. In our projections, we assume that Altria's dividend payments (80% payout ratio) will use a substantial portion of cash flow, with the remaining cash flow used to repurchase stock. Altria's credit measures are at the high end of the rating category. For the latest 12-month period ended Sept. 30, total debt/EBITDA was 1.4 times, EBITDA/interest was 12 times, and free cash flow (cash flow from operation less capital expenditures and dividends) was \$596 million.

Over the long term, we forecast that cigarette volume will decline at a mid-single-digit rate annually, which we expect will be offset by price increases. Our credit rating incorporates the legal and regulatory risks inherent to the tobacco sector as litigation remains unpredictable but currently manageable. Tighter regulation is also a risk, and we expect regulatory bodies to implement further marketing regulations in both the long and the short term. Industry volume could also be adversely affected by rising excise taxes, as governments struggle to raise revenue.

We would consider a positive rating change if the company achieves meaningful diversification (generating 20% or more of operating income from sources other than cigarettes), tobacco litigation continues to moderate, and Altria successfully develops and markets lower risk-products. A negative rating action is likely if the company loses the ability to offset cigarette consumption declines through higher pricing, or if unanticipated volume declines pressure operating earnings and cash flow, resulting in total debt/EBITDA sustained above 2.0 times. A diminishing Solvency Score or management adopting an aggressive financial policy or strategy regarding leverage, acquisitions, dividends, or share repurchases that weakens the company's credit profile could also result in a rating downgrade.

Downgrading Weatherford on High Leverage, Inability to Consistently Generate Free Cash Flow Morningstar Credit Ratings, LLC is downgrading the corporate credit rating on Weatherford International by three notches to B+ and initiating a negative outlook. The firm's credit metrics have eroded, and we no longer view them as consistent with the BB+ category. Our rating reflects Weatherford's leveraged balance sheet and inability to consistently generate free cash flow since energy prices sharply declined in the fall of 2014. To improve its financial health, Weatherford has aggressively rationalized its operations following a period of broad buildout before energy prices tanked. We expect sluggish demand for oil field products and services and pricing pressure to continue, resulting in constrained company cash flow for the next few quarters. Although oil field services activity now appears to have

stabilized in some regions (for example, North America land), activity is still bottoming elsewhere (Far East and Latin America).

After the end of the September quarter, Weatherford issued \$540 million of 2024 senior unsecured notes with the intent to repay amounts outstanding (\$391 million) on the revolving credit facility and \$456 million (gross proceeds) in a registered direct stock offering to be used for general corporate purposes including the repayment of existing debt. Pro forma for the debt and stock offerings, Weatherford had \$1.0 billion in cash and equivalents at September.

Adding to liquidity, Weatherford will have the bulk of its \$1.38 billion unsecured revolving credit facility available, \$229 million of which matures in July 2017 and \$1.15 billion in July 2019. We estimate Weatherford will spend \$190 million on capital expenditures in 2016, about 70% less than the previous year, and \$350 million in 2017. After capital expenditures, we estimate Weatherford will generate positive free cash flow from 2017 through 2020.

Our base-case forecast incorporates Weatherford's revenue declining to \$5.8 billion in 2016 from \$15.3 billion peak in 2013, then cyclically rebounding to about \$14 billion in 2020. This would incorporate a 25% compound annual revenue growth rate from the trough in 2016, but result in 2020 revenue below the previous peak of the cycle. Furthermore, we estimate the company's adjusted EBITDA margin declining to 5% in 2016 from 14% in 2015, then gradually expanding back to about 19% in 2020. Commensurate with this, we estimate the ratio of total debt/trailing EBITDA will balloon from 6 times in 2015 to about 19 times in 2016, then gradually decline to about 3 times by 2020.

MCR's negative outlook on Weatherford's credit rating reflects the potential for a lower rating if profitability improvements do not materialize and leverage does not significantly improve. This could come about if sales volumes and pricing for oil field products and services sag lower and for longer than currently estimated, further squeezing company margins. Given the negative outlook, a rating upgrade is not anticipated over the next few years. However, the outlook may be revised to stable with demonstrated operational improvements that result in material leverage reduction.

Downgrading AGCO One Notch to BBB- and Initiating a Stable Outlook

We are downgrading our corporate credit rating on AGCO one notch to BBB-. AGCO's credit profile has deteriorated meaningfully over the past 18 months, which has also coincided with a downtrodden agricultural market. The firm's financial health has been exacerbated by its capital-allocation strategy, including the \$345 million acquisition of Cimbria Holdings, which has increased gross leverage to 3.3 times from 1.9 times at the start of the year. We are initiating a stable outlook since we see few catalysts to change our rating in the next year or so.

Our credit rating reflects the firm's average competitive position, poor financial performance, and diminished cash flow generation. AGCO benefits from its relatively large size as the dominant tractor manufacturer in Brazil, with around 50% market share. However, we believe the firm has been unable to translate this position into a durable competitive advantage. Moreover, the firm operates with a narrow focus in a cyclical industry that also hurts its customer concentration score. These factors all result in a

relatively weak Business Risk score. AGCO has also suffered from challenging end markets. For instance, the North American industry retail sales of tractors and combines will experience its third straight decline this year. This has resulted in EBITDA of \$565 million being down 12% on a trailing 12-month basis through September and roughly half of the \$965 million produced in 2014. Combined, these trends have hurt the firm's Solvency Score. So, too, has the increase in leverage, which we estimate was 3.3 times pro forma for the acquisition, up from 1.9 times at the beginning of the year. The added leverage and the reduced earnings have negatively affected the firm's Cash Flow Cushion score, along with the firm's shareholder-friendly policies, including \$270 million of share repurchases over the trailing 12 months and the commitment to increase the dividend initiated in 2013. The firm faces a manageable debt maturity schedule over the next few years, although nearly all of its debt comes due in 2020 and 2021.

We have assigned the firm a stable outlook since we view AGCO as an investment-grade company. While difficult end markets may continue to weigh on its credit profile, we expect the company to defend its investment-grade rating. However, should earnings again contract in 2017, leverage could worsen, and the firm's Cash Flow Cushion and Solvency Scores could weaken enough for us to consider a downgrade. Alternatively, should end markets improve faster than we expect, then we could foresee stronger EBITDA growth that improves leverage, which would benefit both our Solvency and Cash Flow Cushion scores enough to consider an upgrade.

Parker Hannifin's A Rating Under Review Negative on Announced CLARCOR Acquisition

On Dec. 1, Parker Hannifin announced it plans to acquire filtration technology company CLARCOR for
\$4.3 billion in an all-cash transaction. Parker will finance the deal with \$1.5 billion of cash and \$3 billion
of incremental debt, which we estimate will boost gross leverage to 3.6 times. We are affirming our
stand-alone A corporate credit rating on Parker Hannifin and placing it under review with negative
implications because of the pending deal, which is scheduled to close by the end of September 2017.
We expect a roughly one-notch downgrade as a result.

We think the deal makes strategic sense, as it expands and complements Parker's filtration business segment, which will increase to 31% of sales from 22% on a stand-alone basis, while boosting its aftermarket business. According to Parker, CLARCOR generates 81% of its revenue from aftermarket businesses, compared with 50% for Parker. As such, the company is forecasting the deal to generate \$140 million of synergies by year three. In the aftermath of this combination, Parker will focus its capital-allocation activities on reducing debt, and we estimate it will have to repay approximately \$2 billion to return to predeal leverage metrics, something we suspect may take three years to achieve.

Our stand-alone A rating on Parker Hannifin reflects strong earnings potential across all operating segments coupled with a solid financial profile. Parker's motion and control products are integral components throughout the global manufacturing process, and it boasts a market-leading position in this \$120 billion global industry. Parker's broad suite of product offerings as a systems integrator combined with its brand name has enabled the firm to garner a narrow economic moat, as assigned by Morningstar, Inc., which helps support its Business Risk score. The firm's Business Risk also benefits from its large customer base of nearly half a million customers with no single one representing more

than 4% of sales. However, this is offset by the firm's predominant exposure to general manufacturing, which also increases the cyclicality component. Still, Parker has monetized its competitive position into robust returns on invested capital and interest coverage ratios, helping bolster its Solvency Score. We forecast that the firm will generate \$1.4 billion in annual operating cash flow and reinvest a nominal 2% of sales (approximately \$220 million) per year back into the business annually, while facing a manageable debt maturity schedule. These factors help its Cash Flow Cushion but are offset by the firm's 30% target dividend payout ratio.

Mattel's BBB+ Rating Affirmed With a Negative Outlook

Morningstar Credit Ratings, LLC is affirming Mattel's BBB+ credit rating and negative outlook. The affirmation reflects Mattel's leading market position in the domestic toy industry and a financial policy that seeks to maintain a moderately leveraged capital structure.

Mattel's solid Business Risk Score is based on its large scale, narrow economic moat as assigned by Morningstar, Inc., brand strength, moderate cyclicality, and customer concentration. Mattel holds a market-leading share of more than 15% of the domestic toy industry along with licensing and entertainment relationships that provide substantial barriers to entry. Still, competition is intensifying with shorter product cycles and an increasing use of high technology in electronics and video games. Further, Mattel's three largest customers--Wal-Mart, Toys 'R' Us, and Target--account for over one third of sales and are increasingly selling their own private-label toys. Meanwhile, online retailers such as Amazon.com increasingly offer a wide variety of toys at low prices.

Due to these competitive pressures, Mattel's operating results have been weak over the past few years, including mid-single-digit revenue declines in 2014 and 2015 that hurt its Solvency Score. The loss of the Disney Princess license at the beginning of the year further exacerbated this trend. Nevertheless, Mattel has demonstrated quarterly improvement throughout 2016 including stabilization in revenue, EBITDA, and margins. Still, Mattel's below-average Cash Flow Cushion is reflected in lower levels of projected free cash flow coupled with substantial cash dividends and a modest debt maturity schedule.

Mattel had adjusted debt of \$3.6 billion at the end of its most recent quarter, including \$1.1 billion for obligations related to operating leases, underfunded pensions, and OPEB. Adjusted debt/EBITDAR stands at 3.4 times, which is high for the rating category. Also, the debt/capitalization ratio was 50%, substantially above management's target ratio of 35%. Debt leverage is typically highest at the end of the third quarter because of seasonal working capital needs. Following the typically strong cash flow-generating fourth quarter, Mattel expects cash balances will increase to its year-end target range of \$800 million-\$1 billion. Mattel continued to refrain from share repurchases in the third quarter, given the increase in debt leverage over the past couple of years.

MCR's negative outlook on Mattel's credit rating reflects the potential for a lower rating if profitability improvements do not materialize and leverage does not significantly improve toward management's targeted 35% debt/capitalization ratio. Given the negative outlook, a rating upgrade is not anticipated over the next several years. However, the outlook may be revised to stable with demonstrated operational improvements that result in material leverage reduction.

Hasbro's Rating Affirmed at BBB+ With Stable Outlook

Morningstar Credit Ratings is affirming Hasbro's BBB+ credit rating and establishing a stable outlook. The affirmation reflects Hasbro's strong competitive position, solid free cash flow generation, and sound credit metrics.

Hasbro's solid Business Risk Score and competitive advantage stem from the firm's large scale, strong licensing relationships, and brand intangible asset. Hasbro estimates that it controls approximately 11% of the \$24 billion domestic toy market and 9% of the \$32 billion European market. The three largest players in the U.S. market are Hasbro, Mattel, and Lego, accounting for more than 30% share. Hasbro's market position is reinforced through licensing and entertainment relationships that are difficult to replicate. Also, Hasbro benefits from a leading position in TV and film, which builds strong loyalty behind its brands. This competitive position buffers risks related to increasing online retail growth, as well as customer concentration risks. Hasbro's top three distributors--Wal-Mart, Target, and Toys 'R' Us--totaled 34% of 2015 sales.

MCR's credit rating also reflects solid mid-single-digit revenue and EBITDA growth over the past several years. MCR forecasts that this operating performance will continue and, coupled with the maintenance of a moderately leveraged balance sheet, will provide support to the company's above-average Solvency Score. Leverage trended lower in the third quarter as debt/EBITDA fell to 1.6 times, versus 1.9 times at the end of 2015. As of Sept. 25, adjusted debt of \$2.1 billion included an estimated \$500 million of obligations related to operating leases and underfunded pensions. With over \$800 million in cash, leverage is nearly one turn lower on a net basis; however, most of this cash is held overseas. Hasbro's Cash Flow Cushion score benefits from minimal debt maturities over the next five years, including only \$350 million in 2017, as well as solid free cash flow generation that comfortably covers cash dividends.

MCR's stable outlook on Hasbro's credit rating incorporates the expectation that EBITDA growth and strong free cash flow generation will enable the company to continue to meet its targeted maximum debt/EBITDA ratio of 2.0-2.5 times, along with its stated goal of maintaining a solid investment-grade rating. The credit rating could be raised if management articulates and adheres to a targeted maximum debt/EBITDA ratio of 2.0. The credit rating could be lowered if Hasbro's profitability erodes due to further penetration of e-commerce or private-label toy retailers, while at the same time debt leverage exceeds targets.

Boeing's A Rating Affirmed With Stable Outlook

Morningstar Credit Ratings, LLC is affirming its A rating on Boeing and establishing a stable outlook. The rating reflects Boeing's leading position in the large commercial aircraft business balanced with a healthy defense business. Strong liquidity and a healthy balance sheet also support the rating.

In evaluating Boeing's credit, we focus on both the manufacturing operations as well as the strength of its finance subsidiary, Boeing Capital, whose bonds directly benefit from guarantees from Boeing. Our Business Risk rating considers Boeing's wide economic moat as assigned by Morningstar, Inc., which is derived in part from the ability to share technologies among business units and the firm's entrenched positions in commercial airline fleets and legacy defense platforms. Boeing's moat also reflects the

company's long record of commercial and military aircraft development, a strong intangible asset base, and high costs to customers for switching to alternative providers. Our high uncertainty rating reflects the vagaries of the company's use of program accounting, business cyclicality, and execution risks related to new program launches. With respect to cyclicality, we note that Boeing's defense and commercial businesses have historically run on different cycles, which we believe mitigates the impact on operating performance.

Our rating also considers the firm's share-repurchase actions, which were nearly \$7 billion in fiscal 2015 and are expected to total another \$12 billion in fiscal 2016-17. We expect these, along with annual dividends approaching \$3 billion, to be funded by free cash flow over that period. Boeing continues to have excellent liquidity, with manufacturing cash and investments in excess of total debt. This is in part due to advanced customer payments on aircraft, but we expect management to remain committed to a strong balance sheet. Boeing's Cash Flow Cushion also benefits from modest upcoming debt maturities and manageable expected pension contributions over our forecast horizon. We expect commercial aircraft deliveries to steadily increase during the next few years as monthly build rates increase on programs such as the 787. This should more than offset tepid defense revenue, leading to low-single-digit revenue and EBITDA growth, very good financial flexibility, and gross leverage in the 1 times area. Pension-adjusted leverage of over a turn higher is a rating constraint.

Our stable outlook is driven by the strong backlog in the commercial aircraft segment and disciplined capital-allocation policy. Should the firm experience a sharp downturn in orders and deliveries that leads to meaningfully increased leverage, we may downgrade our rating. A change in capital-allocation policy to use debt to fund share buybacks or large acquisitions could also pressure the rating. Conversely, a steady increase in operating margins that drives EBITDA and cash flow higher combined with flat debt levels may result in a positive rating action.

Affirming Frontier at BB-, Moving Outlook to Negative Following Recent Weak Operating Trends
Morningstar Credit Ratings, LLC is affirming its BB- corporate credit rating on Frontier Communications
and shifting the outlook to negative. Our rating and outlook reflect disappointing results following the
acquisition of fixed-line customers from Verizon in April. Nonetheless, we still think Frontier's position in
the acquired market regions will be much stronger across its existing footprint as a result of the
acquisition, which contributes to a moderate Business Risk assessment. However, it remains to be seen
how well Frontier can retain these customers over the longer term.

The acquisition added 2.5 million new customers and \$1.7 billion of additional EBITDA in exchange for \$8.5 billion of new debt. This time around, the Verizon assets appear to exhibit stronger performance compared with the Midwest assets that Frontier acquired from them in 2010. More than half of the new territory has been upgraded to FiOS, Verizon's fiber-to-the-home network. Frontier reported Verizon customer losses during the second and third quarters, along with normal churn from its legacy customers, as it has faced challenges in managing customer service. It was also slow to initiate new customer marketing. Our rating still assumes Frontier's subscriber base will stabilize in the coming years, with declines in voice largely offset by growth in Internet access, driven by Verizon, as well as ongoing investment in fiber upgrades to Frontier's legacy network.

Frontier's net debt ended the September quarter at \$17.6 billion, or 4.3 times EBITDA, adjusted to include annualized contribution from the Verizon assets. We believe pro forma net leverage will increase toward 4.4 times next year, based on our projected EBITDA around \$4.0 billion. In our view, elevated financial leverage will continue to drive weak Cash Flow Cushion, Solvency Score, and Distance to Default pillars. Cash and equivalents ended the quarter at \$331 million, down \$350 million from the second quarter. For the most recent 12 months, Frontier reported free cash flow of \$147 million, compared with \$605 million in the year-ago period. Stable operating cash flow during the year was offset by a 167% increase in capital expenditures, attributable to network spending for Connect America Fund II and the Verizon acquisition. Currently, the dividend payout is running at 335% of trailing free cash flow, though we believe this should decline to a payout of around 50% over the next few years.

In addition to cash on hand, Frontier's short-term liquidity is also supported by its \$750 million undrawn revolving credit facility, which matures in May 2018. Through the end of 2018, the carrier faces \$1.2 billion of scheduled debt maturities. Over the same period, we forecast free cash flow of \$978 million after projected dividends, leaving a funding deficit of approximately \$220 million, which can be funded via the revolving credit facility if necessary.

Our outlook is negative, reflecting increased uncertainty over subscriber retention and near-term operating profitability and free cash flow. Therefore, we consider an upgrade of the rating to be unlikely. We may consider downgrading the rating if customer losses accelerate and margin pressure continues beyond next year, putting additional stress on cash flow and credit metrics and increasing the carrier's dependence on external capital.

Affirming U.S. Steel Rating at B, Revising Outlook to Stable

Morningstar Credit Ratings is affirming its corporate credit rating on U.S. Steel at B and revising the outlook to stable from negative. The affirmation reflects the company's position in the steel industry and high operating and financial leverage combined with a strong management team that is proactively addressing challenges. The company faces high Business Risk, primarily due to industry cyclicality, and we view its Cash Flow Cushion risk as moderate.

U.S. Steel operates in the globally competitive steel industry, and its operating cost profile is positioned toward the high end of the industry cost curve. Therefore, Morningstar, Inc. does not consider the company to benefit from an economic moat. U.S. Steel's assets are mainly composed of higher-fixed-cost blast furnaces that contribute to its high operating leverage. The company has approximately \$3.1 billion in balance sheet debt. Year to date, free cash flow is marginally positive solely due to working capital benefits. We forecast EBITDA to total only \$400 million-\$500 million this year and, as such, we expect total debt to end 2016 at approximately 6 times EBITDA.

Over the next few years, we expect moderate improvement in EBITDA with marginally positive free cash flow. In this context, we expect debt/EBITDA to decline toward the 4 times range. The company's liquidity is good, supported by \$1.4 billion of cash and equivalents as of Sept. 30 and approximately \$1.6 billion of available external liquidity through the company's main \$1.5 billion revolving credit facility and its EUR 250 million USSK revolving credit facilities.

We may consider a rating upgrade if the company's Cash Flow Cushion Score or Solvency Scores improves. This could happen as a result of market conditions allowing better results or additional actions the company may take to improve its credit profile. We would consider a downgrade if the Cash Flow Cushion Score deteriorates of if liquidity materially declines.

Affirming Teck Resources' Rating at B+; Revising Outlook to Positive on Met Coal Strength Morningstar Credit Ratings is affirming its credit rating on Teck Resources at B+ and revising its outlook to positive from stable. The revision in outlook was driven by Teck's recent debt reduction, extension of nearer-term maturities, and a better near-term outlook for metallurgical coal prices.

Our rating reflects Teck's leveraged capital structure, exposure to volatile copper, met coal and zinc prices, and capital spending requirements. The company operates with a highly leveraged capital structure reflected by its debt at over 5 times trailing 12-month EBITDA. However, we expect EBITDA-based credit metrics to improve in the near term given the recent rebound in met coal prices to \$200 per metric ton from under \$80 earlier this year. Morningstar, Inc. does not assign Teck an economic moat. While Teck has some attractive assets in its portfolio, its mines overall are positioned around the middle of the industry cost curve. Teck's credit profile is also negatively affected by product concentration and the cyclicality of commodity prices.

We expect debt will decline to 3 times EBITDA by year-end 2016. We estimate EBITDA will end 2016 at CAD 2.7 billion, up approximately 30% from a year ago. Our forecast reflects stronger met coal pricing and the roll-off of a weak quarter a year ago. We also now expect the company to be free cash flow positive for the full year. In 2017, we forecast that EBITDA will further improve, and we believe Teck can remain free cash flow positive if prices for its mined commodities hold at existing levels and capital spending is not expanded from current expectations.

We would consider upgrading Teck's rating if cash flows exceed our expectations on a consistent basis or if we deem the company's Business Risk profile to be lower. We would also take into account further debt reduction in our evaluation. We would consider a downgrade if the company's cash flows trend materially below our base forecast.

Affirming Cummins at A and Initiating a Stable Outlook

We are affirming our A corporate credit rating on Cummins. Our rating balances Cummins' strong competitive position and modest leverage with its industry's cyclicality. We are also initiating a stable outlook for the firm since we do not see a significant catalyst in the next couple of years that would cut into its rating. We believe creditor-friendly policies and modest leverage should protect Cummins' credit profile from the broad end-market sluggishness it is currently facing, specifically in the North American truck market.

Our A rating takes into account Cummins' position as the leading global engine manufacturer offset by the risks associated with its end-markets. Cummins has amassed a low-cost position that has helped it earn a narrow economic moat, as assigned by Morningstar, Inc., that supports its Business Risk pillar. However, the firm's customer concentration (largest customer PACCAR represented 15% of 2015).

revenue while the seven largest represented 40%) and the industry's cyclicality constrain the pillar to moderate levels. Cummins has capitalized on its cost position and technology prowess by producing midteens returns on invested capital, which helped boost its Solvency Score despite a precipitous 30% decline in North American heavy-truck production. The company also operates with minimal leverage (0.8 times gross), augmenting its Solvency Score while the resulting minimal debt maturities combined with a generally creditor-friendly capital-allocation policy of targeting to return 50% of its operating cash flow to shareholders boost its Cash Flow Cushion score.

We expect our corporate credit rating to remain at A given our current projections, but our rating could move upward should the heavy-duty truck market exhibit a faster rebound than we project. In this situation, we suspect that stronger-than-expected results could improve the Solvency and Cash Flow Cushion scores. Should the evolving emission standards in international markets provide Cummins the opportunity to again prove successful in sustaining market share gains, then we foresee a potential reassessment of the firm's competitive position that could boost its Business Risk pillar. In any case, we foresee an upgrade would likely be limited to one notch. Alternatively, our rating could fall if Cummins were to decide to increase leverage to pursue an acquisition, as the firm has mentioned taking leverage up to 1.5-2.0 times for the right target. A meaningfully debt-financed deal could result in a downgrade of a notch or more.

Mead Johnson Credit Rating Affirmed at A-; Outlook Stable

Morningstar Credit Ratings, LLC is affirming Mead Johnson Nutrition's credit rating at A- and establishing a stable outlook. The affirmation is supported by the company's leadership in the global infant formula and children's nutritional products industry and market shares in the low to mid-40s in the U.S. and low double digits in China, its key markets. Mead Johnson's strong brand intangible assets demonstrated by its high returns on invested capital and its cost advantages have resulted in Morningstar, Inc. assigning the company a wide economic moat. Reinforcing the rating is the company's above average Solvency Score and its high level of liquidity. Mead Johnson has a narrow product line, as infant formula accounts for about 60% of sales, with the remainder from children's nutritional products.

Approximately 67% of the company sales were generated in Asia and Latin America, while North America and Europe accounted for the remainder. Mead Johnson has excellent growth opportunities in emerging markets, supported by greater female participation in the work force and an emerging middle class, but it should be noted that the company could experience some margin deterioration as sales shift toward these regions. Children's nutritional products generate lower gross margins than infant formula and are a larger portion of overseas sales, but increased sales and resulting cash flow growth should more than offset any negative credit implications. However, prolonged periods of emerging market economic instability could also negatively affect the company's financial position.

For the latest 12-month period ended Sept. 30, Mead Johnson's debt/adjusted EBITDA was approximately 3.1 times and adjusted EBITDA/interest was 9.5 times. Enhancing Mead Johnson's credit profile is the substantial liquidity provided by its cash balance of \$1.8 billion at Sept. 30. On a net debt basis, cash less estimated repatriation taxes, debt/adjusted EBITDA was 1.9 times. Overall, these

measures are in line with the rating category. Free cash flow (cash flow from operations less capital expenditures and dividends) was about \$300 million. In the near to intermediate term, we expect Mead Johnson's credit measures and cash flow generation to remain stable. However, gross debt levels may rise if Mead Johnson does not repatriate sufficient funds to fully support shareholders' remunerations. One of the greatest risks we see is the firm's sole focus on selling infant nutritional products. This leaves little diversification against the possibility of negative publicity, which would result from product contamination and recalls. In addition, periodic input cost volatility, particularly for dairy costs could adversely affect the firm's margins.

An upgrade in the company's credit rating is not anticipated in the near to intermediate term. Longer term if Mead Johnson reduces its gross debt/adjusted EBITDA to below 2.0 times, maintains operating margins, cash flow generation and strengthens its competitive position in developed markets, a positive rating action would be considered. A negative rating action is likely if the company's market share, operating earnings, and cash flow decline to the extent that debt/adjusted EBITDA increases beyond 3.5 times on a gross basis or 2.5 times on a net basis, or if the company's Business Risk or Solvency scores deteriorate.

Affirming Deere at A and Initiating a Negative Outlook

We are affirming our issuer rating on Deere at A and initiating a negative outlook. Deere's credit profile has suffered from weakness in the farming sector, with 2016 capping off its third straight year of annual sales declines. The resulting decline in EBITDA has caused leverage to essentially double from the beginning of fiscal 2015 to 1.9 times as of October 2016. Should trends continue, then we foresee a further deterioration in both the firm's Solvency and Cash Flow Cushion scores, which could eventually result a one-notch downgrade.

Our rating on Deere focuses on the company's manufacturing operations, along with a qualitative assessment of risk added by the finance subsidiary, John Deere Capital. Deere has amassed dominant share in the North American agricultural equipment market, owing to its strong brand name and immense dealership network. These factors have helped the firm earn a wide economic moat, as assigned by Morningstar, Inc., which bolsters its Business Risk pillar, but the firm's narrow customer base and cyclical end markets slightly mitigate the moat-related boost. Deere has translated its strong competitive position into impressive high-double-digit returns on invested capital and strong interest coverage ratios. However, the prolonged slump has weighed down both figures recently, resulting in a subpar Solvency Score. Deere's Cash Flow Cushion score benefits from its limited reinvestment needs, as the firm has historically reinvested roughly 3% of annual sales in the business. The firm's maturity schedule is light during the next five years, with \$752 million in debt due in 2019 and its next maturity (\$1 billion) not due until 2022.

Reflected in our negative outlook, we believe continued weakness in the farming end market could pressure both the Solvency and Cash Flow Cushion scores enough to result in a one-notch downgrade in our rating within the next year or so. However, should the end market roar back faster than our current projections, or should cost-cutting prove more bountiful, then our EBITDA and cash flow projections

would be too low. As such, our Solvency and Cash Flow Cushion scores could improve enough to consider an upgrade, although we believe any upgrade would be limited to one notch.

Revised: Affirming Caterpillar at A- and Initiating a Negative Outlook

We are affirming our corporate credit rating on Caterpillar at A- and initiating a negative outlook. We still think the firm's credit profile benefits from its strong competitive position and manageable maturity schedule. However, if earnings continue to deteriorate meaningfully, we would consider a one-notch downgrade in the near term, which informs our negative outlook.

Caterpillar's leverage has risen meaningfully during 2016, but the increase was sowed when it agreed to purchase Bucyrus in 2011. The timing turned out to be near the 2012 peak of mining activity for Caterpillar, with new equipment sales down 80%-90% since then, while the purchase saddled the firm with \$4.5 billion in incremental debt. The subsequent collapse in mining and continued malaise in the industrial economy have caused EBITDA to decline 30% so far in 2016, boosting leverage 0.8 turn to 2.7 times as of Sept. 30. Moreover, the firm's pension and postretirement plans were \$8.5 billion (\$5.5 billion net of deferred tax assets) underfunded at the start of year.

Our rating on Caterpillar focuses on the manufacturing operations, along with a qualitative assessment of risk added by the finance subsidiary, Caterpillar Financial Services. Caterpillar enjoys a wide economic moat rating from Morningstar, Inc. as the world's largest manufacturer of heavy equipment. The firm's substantial dealer network has helped it dominate the U.S. market. These two factors support its Business Risk score, but they are counteracted by the firm's end-market cyclicality and narrow customer base. Caterpillar has monetized its competitive position into double-digit returns on invested capital and solid interest coverage ratios, which have helped its Solvency Score. However, these metrics are currently depressed, given the fourth consecutive year of revenue and earnings decline. We suspect that Caterpillar's aggressive capital-allocation polices of yesteryear are unlikely to reappear, so its Cash Flow Cushion score benefits from strong free cash flow generation and a manageable debt maturity schedule.

Based on our current projections, our rating may eventually come under pressure if the current end-market malaise continues and further deteriorates the firm's Solvency and Cash Flow Cushion scores. However, we expect that a downgrade would be limited to one notch. Our rating could improve should Caterpillar's restructuring actions prove more lucrative than our current assumptions. In this situation, we'd suspect that our Solvency and Cash Flow Cushion scores would improve as higher earnings should translate into higher returns on invested capital and stronger free cash flow generation. We believe an upgrade would be limited to one notch.

CVS' Rating Affirmed and Stable Outlook Initiated on Stagnant Leverage Outlook for 2017

Morningstar Credit Ratings, LLC is affirming its BBB+ credit rating on CVS Health and establishing a stable outlook. Our rating continues to reflect the firm's solid competitive position in the drug supply chain and its manageable, albeit elevated, financial obligations. While its elevated leverage pushes CVS to the weak end of BBB+ territory in our opinion, management's commitment to funding expected returns to shareholders through internal means keeps our outlook stable for now.

By pillar, CVS' Business Risk score is particularly robust and is influenced by Morningstar, Inc.'s wide moat assessment along with its large size and predictable cash flows. Overall, we recognize that CVS enjoys some synergies from the combination of its top-tier pharmacy benefit management business and large pharmacy retail chain, but the company's key competitive advantages stem from its PBM prowess, in our opinion. Scale is particularly important for PBMs, and larger firms in this industry typically enjoy more process efficiencies and power in negotiations with suppliers and customers. CVS, Express Scripts, and UnitedHealth's Optum unit enjoy significant scale advantages with each firm processing over 1 billion in adjusted claims annually. These top-tier players can pass along some scale benefits to their clients, creating a mild network effect that acts as a barrier to entry for the industry.

In 2015, though, CVS completed the acquisitions of Omnicare (pharmacy services to long-term care facilities) and Target's pharmacy and clinic operations, which increased the firm's debt leverage and stressed the firm's Cash Flow Cushion and Solvency Score pillars. Because of these deals, pro forma lease-adjusted debt/EBITDAR remains above its 2.7 times target at around 3.1 times by our estimates as of September. The company's preliminary outlook for 2017 suggests profits may stay stagnant, and given CVS' plans to make large returns to shareholders in the near term, we expect leverage to remain above its target next year. This elevated leverage and ongoing returns to shareholders push CVS to the weak end of BBB+ territory in our opinion.

However, our outlook for the rating is stable. Management's capital-allocation priorities and our outlook for free cash flow suggest that leverage will not materially deteriorate during the next year. Our stable outlook reflects the firm's intention to use internal means, rather than debt financing, to make its returns to shareholders. But if the company's free cash flow prospects drop below expectations or its financing intentions change significantly, we may consider downgrading our rating by a notch. On the other end of the spectrum, we do not envision a scenario where we would upgrade our rating in the near term given the firm's weakness in its rating category and current capital-allocation plans. An upgrade would require a significant change in CVS' capital-allocation priorities that results in lower leverage than its current target in the long run.

Airbus' Rating Affirmed at A-, but Positive Outlook Reflects Expected Growth in Free Cash Flow Morningstar Credit Ratings, LLC is affirming its A- rating on Airbus Group driven by tepid recent cash flow performance but considering the company's strong cash balances and leading market positions. We are also establishing a positive outlook based on expected strong improvement in operating results by 2018.

Our rating reflects Airbus' leading position in the large commercial aircraft business (73% of sales) balanced with its defense and space (18%) and helicopter (9%) segments. Airbus largely splits the global market for large commercial aircraft with Boeing. Historically, Airbus has been more competitive in the narrow-body segment of its A320 platform while it has lagged somewhat in the wide-body segment. Its A380 super-jumbo has been a disappointment although the firm is focusing on mitigating losses. We think the A350 is in a stronger position to compete against the Boeing 777 and 787. Airbus' helicopter unit provides a balance of civil and military helicopter sales, along with meaningful aftermarket business. The company is also reshaping its defense capabilities including the pending sale of defense electronics.

With these segments typically running on different cycles, Airbus is able to mitigate the impact of cyclicality on its operating performance. Our Business Risk rating considers Airbus' narrow economic moat, as assigned by Morningstar, Inc., which is derived in part from the ability to share technologies among its business units, and its well-entrenched positions in commercial airline fleets and legacy defense platforms. Still, industry operating risks justify the high uncertainty rating, which factors into our Business Risk assessment.

Airbus has produced roughly flat free cash flow over the past four fiscal years in part due to various new developmental programs. However, we expect commercial aircraft deliveries to ramp up during the next several years based on the impressive backlog of orders, which should drive free cash flow higher in the outer years of our forecast. With a commensurate increase in EBITDA and assuming flat debt levels, we expect to see a steady reduction in leverage.

Our positive outlook suggests a possible one-notch increase in the credit rating if the company grows its operating margins and cash flow in line with the anticipated acceleration in aircraft production and deliveries over the next few years. We could see improvement in our Solvency Score, driven by lower leverage and increased interest coverage and returns on invested capital. Our Cash Flow Cushion could also benefit from higher operating cash flow combined with a modest decline in capital spending. We view a downgrade as unlikely, but it may occur if the company meaningfully changes its financial policy, particularly if it uses debt to fund shareholder returns or if the company undertakes a large acquisition in the non-commercial part of the business.

Philip Morris' A- Rating Affirmed on Strong Market Position and Cash Flow Generation

Morningstar Credit Ratings, LLC is affirming Philip Morris International's A- credit rating and
establishing a stable outlook. The affirmation reflects Philip Morris' leading market position in the global
tobacco market, the strength of its brands, and the stability of its cash flows. Philip Morris' portfolio
includes the iconic Marlboro brand, several other well-known brands such as Virginia Slims and
Parliament, and local niche labels. Brand strength, scale advantages, and demand inelasticity allow the
firm to be the price leader in most of its markets, supporting the firm's wide economic moat, which was
assigned by Morningstar, Inc. These elements also resulted in the company's solid business risk score.
Growth is being driven by expanding populations in emerging markets, some of which are also among
the most underpenetrated, presenting tobacco firms with long-term growth opportunities. As the firm
offers primarily premium products, we expect it to exploit the trend in emerging markets for consumers
to trade up to premium brands as disposable incomes rise, allowing the company to generate superior
operating margins. In the near term, we expect that global economic stagnation will hinder the firm's
performance.

The company's debt balance at Sept. 30, 2016, was \$30.1 billion, of which current maturities and short-term debt were \$3.1 billion. Sufficient liquidity is provided by the firm's cash and cash equivalents of \$4.9 billion at period-end. Substantial financial flexibility is afforded by Philip Morris' credit facilities that total \$7.85 billion and supports its U.S. and European commercial paper programs. In our projections, we assume that Philip Morris will use free cash flow to support its high dividend payout ratio and use

remaining cash flow to repurchase stock. However, leverage has increased steadily over the past few years, and the company placed a moratorium on share repurchases in 2015 to support its credit profile.

For the latest 12-month period ended Sept. 30, debt/EBITDA was 2.8 times, EBITDA/interest was 11 times, and free cash flow (cash flow from operations less capital expenditures and dividends) was \$399 million. While the firm will use most of its cash flow to benefit shareholders, it generates significant amounts of cash flow from operations that could be diverted to support its credit quality. Our credit rating incorporates the legal and political risks inherent to the tobacco sector as litigation remains unpredictable, but manageable. Tighter regulation is also a risk, and we expect regulatory bodies to implement further marketing regulations. Industry volume could also be adversely affected by rising excise taxes as governments struggle to raise revenue.

We would consider a positive rating change if the company achieves meaningful diversification (generating 20% or more of operating income from sources other than cigarettes or from lower risk products), maintains leverage at or below 2.0 times, and limits debt financed share repurchases. A negative rating action is likely if the company loses pricing ability or if unanticipated volume declines in a major market pressure operating earnings and cash flow, resulting in total debt/EBITDA sustained above 3.0 times. A diminishing Solvency Score or if management adopts an aggressive financial policy or strategy regarding leverage, acquisitions, dividends, or share repurchases that weakens Philip Morris' credit profile would also lead to a negative rating action.

Affirming ArcelorMittal at BB-; Revising Outlook to Positive Reflecting Debt Reduction

Morningstar Credit Ratings, LLC is affirming the credit rating of ArcelorMittal SA at BB- and revising its outlook to positive from negative. Our outlook reflects management's debt-reduction efforts made to date as well as a slightly better outlook for the steel industry.

Our rating reflects the firm's size and scale within the steel industry coupled with a leveraged capital structure and underfunded pension and other postretirement liabilities. Trailing 12-month EBITDA is \$5.7 billion, resulting in leverage of approximately 2.5 times EBITDA compared with 3.8 times as of year-end 2015. The reduction is largely due to ArcelorMittal's debt-reduction efforts in 2016, which have lowered debt to \$14.5 billion as of Sept. 30 from approximately \$20 billion at the end of 2015. However, the company is further burdened by significant underfunded pension and other postretirement obligations amounting to over \$9 billion, which raises its adjusted leverage to approximately 4 times on a last-12-months basis. Morningstar, Inc. assigns the company an economic moat rating of none, given its middling position on the industry cost curve. The company's steel plants are generally older blast furnaces that are usually characterized by high fixed costs and operating leverage.

For 2016, we expect the company to produce approximately \$6.3 billion in EBITDA for 2016 and to be largely free cash flow neutral to slightly positive. For 2017 and forward, we expect the company to remain at least free cash flow neutral and EBITDA will remain flat.

The rating could be upgraded if the company's Cash Flow Cushion score improves beyond our expectations or if we deem the company's Business Risk score has improved. Additionally, further

significant debt reduction may also contribute to an upgrade. On the other hand, we would consider a downgrade if industry conditions worsen or if the company's capital policy becomes more aggressive, inducing pressure on the company's Cash Flow Cushion score.

Walgreens' Credit Rating Affirmed at BBB-; Stable Outlook Initiated

Morningstar Credit Ratings, LLC is affirming its BBB- credit rating on Walgreens Boots Alliance and establishing a stable outlook. Our rating reflects the firm's rising lease-adjusted leverage to fund investment activities and its top-tier retail pharmacy operations. Since we see limited catalysts to lead to a rating change in the next year or so, we view its rating trajectory as stable.

After increasing its investment in AmerisourceBergen in 2016, Walgreens plans to acquire Rite Aid in early 2017. As of August, Walgreens owes \$19 billion in debt and holds \$10 billion in cash. Much of that cash will be used to acquire Rite Aid, if the merger closes as expected. That deal was initially valued at \$17 billion, including Rite Aid's \$7 billion of debt that Walgreens plans to assume. To complete that transaction, Walgreens appears willing to tap a new term loan facility and other borrowing sources (\$6 billion) and use cash generated in the interim, in addition to the debt it already issued in mid-2016. After funding the Rite Aid merger, we estimate Walgreens will operate with lease-adjusted leverage in the low to mid-4s. That leverage is about a turn higher than it operated with in May 2016, which was prior to its \$6 billion new bond issuance to help fund the Rite Aid acquisition and \$1 billion investment in AmerisourceBergen. In our methodology, this elevated leverage and associated cash outflows constrain Walgreen's Cash Flow Cushion and Solvency Score pillars.

In addition, relative to our coverage universe, Walgreens only achieves a moderate Business Risk score, despite its large size, expansive geographic reach, and reasonably predictable cash flows. In this pillar, Walgreens is hurt by Morningstar, Inc.'s assessment that the company lacks an economic moat. Walgreen's retail pharmacy operations are constrained by substantial supplier power, such as pharmacy benefit managers, and increasing competition from nontraditional rivals, such as Wal-Mart and mailorder pharmacies. From a competitive advantage standpoint, front-of-the-store operations are even less attractive than retail pharmacy operations, and generally, we think grocery and convenience stores have a difficult time achieving sustainable competitive advantages. As we do not expect these dynamics to change materially in the near future, we expect Walgreen's credit rating to remain lower than those of key peers that earn a narrow or wide moat assessment from Morningstar, Inc. For comparison, CVS earns a wide moat assessment from Morningstar, Inc. and operates with lower lease-adjusted leverage than Walgreens by about a turn; we rate CVS two notches higher than Walgreens.

We have initiated a stable outlook on Walgreens. Although we expect the firm to deleverage moderately after completing the pending Rite Aid merger, we do not expect those deleveraging activities to be substantial enough that we would consider upgrading our rating in the next year or so. We would need to see Walgreens deleverage by at least a turn to consider an upgrade. And while we view a downgrade as unlikely at present, several factors could lead us to consider a lower rating. For example, if the company has trouble integrating the Rite Aid acquisition or if profits fall on other fundamental concerns, Walgreens could experience deleveraging delays or even leverage increases, which could put pressure on our current rating.

Express Scripts' Rating Affirmed, but Negative Outlook Reflects Uncertainty on Anthem Contract Morningstar Credit Ratings, LLC is affirming its A- credit rating on Express Scripts and establishing a negative outlook. Our rating continues to reflect the firm's significant advantages in pharmacy benefit management and manageable leverage. However, an ongoing dispute with top customer Anthem creates risk around whether or not that relationship will continue beyond its current contract period, which influences our negative outlook.

Express Scripts scores slightly above average in the Business Risk pillar, which is influenced by its wide moat assessment from Morningstar, Inc. and sizable operations in the recession-resistant PBM business. Scale is particularly important for PBMs to achieve processing efficiencies and power in supplier and customer negotiations. Express Scripts, CVS, and UnitedHealth's Optum unit enjoy significant scale advantages, with each firm processing over 1 billion adjusted claims annually. These top-tier players can pass along some scale benefits to their respective clients to create a mild network effect that acts as a barrier to entry in this business. However, Express Scripts does face customer concentration risk, and currently, it remains in a dispute with its top customer Anthem (16% of sales in 2015). While we think it is unlikely that its current contract will change dramatically, that business appears in play when the contract expires at the end of 2019. Anthem recently announced that it will issue a request for proposal in early 2017 and make a decision about its future PBM functions by the end of 2017. If Anthem chooses another PBM firm to provide those functions or takes those functions in-house, a significant chunk of Express Scripts' profits could dissolve.

The moderate leverage contributes to solid marks in the Solvency Score and Distance to Default pillars, but the Cash Flow Cushion remains constrained by ongoing returns to shareholders on top of its maturity schedule. At the end of September, Express Scripts owed \$16 billion in debt (2.3 times trailing 12-month EBITDA) and \$2 billion in cash (leading to net debt/EBITDA of 1.9 times). Express Scripts faces \$7 billion of debt maturities on a cumulative basis through 2020. With the ability to generate about \$5 billion in annual free cash flow on average during the next five years, Express Scripts should be able to easily repay its obligations with existing cash and internally generated resources. However, we would not be surprised to see the firm refinance its obligations as they come due or issue debt to return more cash to shareholders, especially if it can quickly return leverage to its target of roughly 2 times. For example, after integrating the Medco merger in 2012, Express Scripts has repurchased \$4 billion-\$5 billion annually of shares. Those outflows have led to a stagnant leverage profile near its target since 2013.

Our negative rating outlook reflects Express Scripts' stagnant leverage and event risk surrounding the potential loss of its Anthem relationship. A loss of that business could severely dent the company's ongoing profits and potentially reduce some of its scale advantages relative to peers. We would consider a roughly one-notch downgrade on Express Scripts if it were to lose the Anthem contract. We would also consider downgrading our rating if the company becomes more aggressive with its capital-allocation practices, pushing more cash out to shareholders or making another large, debt-funded acquisition. On the other hand, we would consider an upgrade of our rating if the firm tightens its leverage target by about half a turn. The company would probably need to refrain from shareholder returns for about a year to achieve that. We would also probably need to see a favorable outcome of its dispute with Anthem to consider an upgrade.

Recent Notes Published by Credit Analysts

Time Warner Announces New 10-Year Senior Notes

Market News and Data

Time Warner (rating: BBB+, UR-) has announced a benchmark-size issue of 10-year senior notes, its second senior note transaction this year. The company has indicated proceeds from the notes will go toward debt repayment ahead of its proposed merger with AT&T (rating: BBB, UR-), expected to close late next year. Its next scheduled maturity is \$500 million of 7.25% notes due October 2017. According to the preliminary prospectus filing, the proposed notes will be indirectly guaranteed by the company's HBO and TBS broadcast subsidiaries through Time Warner's subsidiary Historic TW, which is consistent with most of Time Warner's other outstanding senior notes.

According to pricing data from Advantage Data and FINRA TRACE, Time Warner's existing 2.95% notes due July 2026 are indicated at +141 basis points over the nearest Treasury. For comparison, AT&T's 4.13% notes due 2026 are indicated at +170 basis points. Meanwhile, competitor CBS' (rating: BBB, stable) 4.00% notes due 2026 are indicated around +135 basis points, while Discovery Communications' (rating: BBB, negative) 4.90% notes due 2026 are indicated around +200 basis points.

MCR Credit Risk Assessment

MCR's credit rating on Time Warner remains under review negative pending its merger with AT&T. If it receives regulatory approval, we project the merger will increase the companies' combined pro forma net debt to about 2.9 times EBITDA and will probably weaken Time Warner's Business Risk, Cash Flow Cushion and Solvency scores. For comparison, CBS' net debt is currently 2.6 times EBITDA while Discovery Communications' net debt is 3.2 times. We continue to view Time Warner and CBS as having well diversified content portfolios, which should position them well to respond to the emergence of new video content delivery modes, such as streaming video on demand.

As proposed, we believe the merger transaction will increase Time Warner's net debt by 125%, and we estimate an additional \$1.5 billion-\$2.0 billion of annual interest expense, assuming the new debt would be internally allocated to Time Warner. At the end of the September quarter, the company reported total debt of \$24.5 billion, supported by \$2.3 billion of cash and short-term investments. It ended the quarter with net debt/EBITDA of 2.8 times EBITDA, slightly lower from a year ago. By year-end 2017, AT&T expects Time Warner's net debt to be \$21 billion.

Our credit rating review will focus on the likelihood of the deal being completed, the impact of the significant amount of debt financing anticipated, and management stability at Time Warner following the transaction. We await further details on how AT&T will address Time Warner's senior note guaranty structure and where the debt will be held within AT&T's corporate structure. Time Warner's existing public debt is primarily issued out of the parent company, Time Warner Inc. Since 2006, substantially all of Time Warner's parent-level debt has been issued with a subsidiary guaranty from legacy Time Warner subsidiaries (Historical TW). In turn, Historical TW is guaranteed by its HBO and TBS network subsidiaries. Guarantor subsidiaries account for roughly one third of Time Warner's consolidated EBITDA and about 63% of its consolidated free cash flow.

Analog Devices Announces Senior Debt to Fund Pending Merger With Linear Technology Market Data and Analysis

Analog Devices (rating: A+/UR-) has announced a new multitranche issue of senior notes. The company plans to place 5-year, 7-year, 10-year, and 20-year maturity notes, with proceeds targeted to partially fund its proposed acquisition of Linear Technology (not rated). According to the preliminary prospectus filed Nov. 30, certain series of the proposed issue will be redeemable at 101 plus accrued interest if the merger is not completed by Oct. 26, 2017.

According to pricing data provided by Advantage Data and FINRA TRACE, Analog Devices' existing 3.90% notes due 2025 recently traded at +122 basis points over the nearest Treasury while its 5.30% notes due 2045 are indicated around +194 basis points. The A+ tranche of the Morningstar Corporate Index is +105 basis points, while the A- tranche is at +124 basis points.

For comparison, semiconductor equipment maker Applied Materials' (A+, stable) 3.90% notes due 2025 traded on Nov. 29 at +98 basis points. Meanwhile, equipment maker KLA-Tencor's (BBB+, stable) 4.65% notes due 2024 traded on Nov. 29 at +150 basis points, while its 5.65% notes due 2034 are indicated around +265 basis points. On the long end, Intel (AA-, stable) has 4.10% notes due 2046, which traded on Nov. 29 at +124 basis points.

MCR Credit Risk Assessment

Our corporate credit rating on Analog Devices remains under review negative pending the completion of the firm's proposed \$14.8 billion merger with Linear Technology. The transaction is awaiting regulatory approvals with closing estimated for mid-2017.

As proposed, the Linear Technology merger increase gross debt to \$9 billion and leave cash on hand of just \$750 million, compared with Analog Devices' current position of \$1.7 billion of debt and \$3.8 billion of cash and investments. We estimate that pro forma net debt will likely rise to 3.8 times EBITDA, excluding operating synergies, at the close of the merger. At this level, the company will have the highest leverage among its industry peers, which typically operate with high levels of cash relative to debt. Intel currently has net debt of 0.4 times its EBITDA, Applied Materials zero, and KLA-Tencor 0.6 times (down from 1.1 times a year ago). However, our view is that high operating margins and free cash flow generation should provide a partial offset to the higher leverage. The combined companies reported trailing 12-month free cash flow for of \$1.8 billion through the end of September. Less Analog Devices' dividend of \$509 million, this should leave over \$1 billion per year of discretionary cash flow for debt repayment or to build reserves. Analog Devices' management has indicated its intention to suspend share repurchase activity until net debt is reduced to a long-range target of 2.0 times, which appears reasonable even assuming no growth in EBITDA.

We still believe the proposed merger has some strategic merits, particularly an increase in share for many key end markets for analog technology. Linear Technology designs and manufactures standard high-performance analog integrated circuits for a diverse array of end markets spanning industrial, automotive, communications, and high-end consumer electronics. We think this portfolio will complement Analog Devices' leading market share in data conversion devices, allowing the combined

company to operate within an expanded market for their products. The combined portfolio will continue to target end markets in industrial, automotive and communications, enhancing Analog Devices' current offerings to these channels. Geographically, the combined company will remain well diversified, with 41% of its revenue projected to come from the Americas, 26% from Europe and the Middle East, and 33% from Asia-Pacific and Japan.

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