

Rating Action:

Moody's assigns a B3 rating to senior unsecured tax exempt bonds guaranteed by AMG Advanced Metallurgical Group N.V.; affirms B1 CFR

14 Jun 2019

Approximately \$850 million of rated debt affected

New York, June 14, 2019 -- Moody's Investors Service ("Moody's") assigned a B3 senior unsecured rating to the \$300 million Ohio Air Quality Development Authority 30-year tax-exempt revenue bonds (State of Ohio Exempt Facilities Revenue Bonds). The bonds are guaranteed by AMG Advanced Metallurgical Group N.V. (AMG), the parent company of AMG Vanadium LLC. The B3 rating on the tax exempt unsecured bonds reflects the relatively high proportion of secured debt in AMG's capital structure and the bonds' effective subordination to its secured debt. At the same time, Moody's upgraded the ratings of the senior secured revolving credit facility and senior secured term loan to Ba3 from B1 to reflect the secured debt's senior position in the new capital structure. Moody's affirmed AMG's B1 corporate family rating, B1-PD probability of default rating and SGL-2 Speculative Grade Liquidity Rating. The outlook is stable.

The proceeds of the bonds will be loaned to AMG Vanadium LLC, under a loan agreement between Ohio Air Quality Development Authority and AMG Vanadium LLC, and will be used to finance the development of the 2nd spent catalyst recycling plant (Cambridge II) near Zanesville, Ohio. The "Cambridge II" project is expected to double AMG's spent catalyst recycling capacity to 60,000 short tons at a capital cost of \$300 million.

Affirmations:

..Issuer: AMG Advanced Metallurgical Group N.V.

.... Corporate Family Rating, Affirmed B1

.... Probability of Default Rating, Affirmed B1-PD

.... Speculative Grade Liquidity Rating, Affirmed SGL-2

Upgrades:

..Issuer: AMG Advanced Metallurgical Group N.V.

....Senior Secured Term Loan B, Upgraded to Ba3 (LGD3) from B1 (LGD3)

....Senior Secured Revolving Credit Facility, Upgraded to Ba3 (LGD3) from B1 (LGD3)

Assignments:

..Issuer: Ohio Air Quality Development Authority

....Gtd Senior Unsecured Revenue Bonds, Assigned B3 (LGD5)

Outlook Actions:

..Issuer: AMG Advanced Metallurgical Group N.V.

....Outlook, Remains Stable

RATINGS RATIONALE

AMG's B1 corporate family rating (CFR) reflects its presently moderate, albeit rising financial leverage, solid liquidity, good geographic and end market diversity and the importance of its products in lightweighting, energy efficiency and carbon emissions reduction which should lead to relatively steady customer demand. The company also has a strong market position with only a few major competitors for most of the critical materials it produces, and sells those materials to a number of blue chip customers with whom it has established long term relationships.

AMG's CFR considers the upside earnings potential if the company successfully builds the Cambridge II plant and expands production of commercial grade lithium concentrate from tantalum tailings at its existing plant in Brazil (Spodumene I+ project). Both projects carry relatively low technology, construction and operational risks. Cambridge II will replicate the Cambridge I plant and will benefit from the shared administrative oversight. The Cambridge II plant will further strengthen AMG's market leading position in North America by doubling its spent catalyst recycling capacity. However, it will also magnify AMG's exposure to the volatility in the price of ferrovanadium, as evidenced by its recent decline and impact on the company's revenues and earnings. The rating also considers moderate risks related to securing additional annual supply of 30kt of residual catalyst required for the Cambridge II plant. Spodumene I+ is an incremental capacity expansion project adding 30kt to production at a moderate capital cost of \$20 million.

The CFR is constrained by its modest scale versus higher rated manufacturers, increasing exposure to ferrovanadium, high capex and negative free cash flow over the next 2 years, as well as its reliance on raw materials from mines located in some less developed countries and those with potential geopolitical risks. The company generated free cash flow historically and could return to positive cash flow in 2021 when project spending is completed.

Moody's estimates that AMG's profitability, leverage and coverage metrics will weaken over the next 2 years relative to 2018 and LTM. The combination of high capex, the issuance of \$300 million of tax exempt bonds to fund the Cambridge II project and the decline in prices of FeV and other materials will likely result in credit metrics that are weakly positioned for B1 CFR. As a result, Debt/EBITDA ratio, as adjusted by Moody's, is expected to climb to around

6.5x by year-end 2019, compared to 2.6x as of March 31, 2019. Credit metrics are expected to return to levels appropriate for the rating following the completion of the Cambridge II project in 2021.

AMG is expected to maintain good liquidity and will have no meaningful debt maturities prior to the maturity date of the revolver in 2023 and the term loan B in 2025. As of March 31, 2019, the company had \$366 million in cash and cash equivalents and \$170 million available under its \$200 million revolver, which is undrawn but has a reduced borrowing capacity due to the outstanding debt at the Brazilian subsidiary. Moody's expects the revolving facility to remain undrawn over the rating horizon. Moody's also expects the company to have ample headroom under its 3.5x first lien leverage covenant despite higher leverage.

The stable outlook presumes the company's operating results will remain adequate over the next 12 to 18 months despite the decline in prices of FeV, Spodumene and other critical materials. Anticipated EBITDA growth in 2020 and a return to positive free cash flow in 2021 should result in improved credit metrics that support its rating. It also presumes the company will not experience any significant issues related to its growth projects.

The ratings could be upgraded if the company is able to sustain a leverage ratio below 4.0x, an interest coverage ratio above 3.0x and returns to free cash flow generation. Additionally, successful completion of the Cambridge II vanadium and Spodumene I+ projects and material improvement in its operating results could lead to an upgrade. However, AMG's moderate scale and increased product concentration will limit its upside ratings potential.

Negative rating pressure could develop if the company experiences any significant issues related to its growth projects. Any material disruptions that result in weaker than expected operating performance, or the pursuit of other debt financed growth projects that result in weakening of debt protection metrics and a further increase in leverage would negatively impact the company's rating. The ratings could be downgraded should the leverage ratio be sustained above 5.0x or the interest coverage ratio sustained below 2.0x. A significant reduction in borrowing availability or liquidity could also result in a downgrade.

AMG Advanced Metallurgical Group N.V., headquartered in Wayne, Pennsylvania, produces engineered specialty metals and mineral products through its AMG Critical Materials division. This segment produces aluminum master alloys and powders, titanium alloys and coatings, ferrovanadium, natural graphite, chromium metal, antimony, tantalum, niobium and silicon metal. Its AMG Engineering division designs and produces vacuum furnace equipment and systems used to produce and upgrade specialty metals and alloys. The company sells its products to the transportation, infrastructure, energy, and specialty metals & chemicals end markets from production facilities in Germany, the United Kingdom, France, Czech Republic, United States, China, Mexico, Brazil and Sri Lanka. The company produced revenues of \$1.35 billion during the twelve months ended March 31, 2019 with about 42% generated in Europe, 37% in North America, 16% in Asia and 5% in the rest of the world.

The principal methodology used in these ratings was Global Manufacturing Companies published in June 2017. Please see the Rating Methodologies page on www.moody's.com for a copy of this methodology.

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