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CREDIT OPINION
7 April 2021

New Issue

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RATINGS

MAHLE GmbH

Domicile	Stuttgart, Germany
Long Term Rating	Ba1
Type	LT Corporate Family Ratings
Outlook	Stable

Please see the ratings section at the end of this report for more information. The ratings and outlook shown reflect information as of the publication date.

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MAHLE GmbH

New Issuer Report

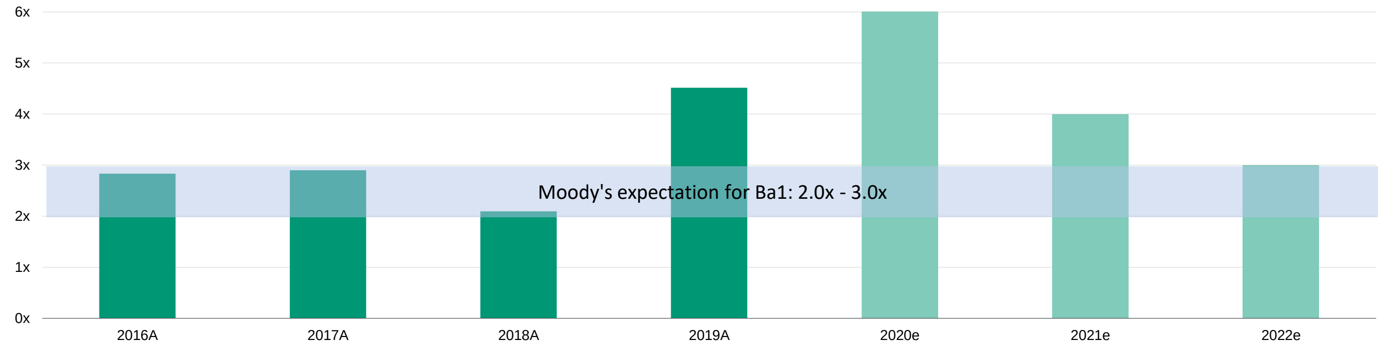
Summary

MAHLE GmbH (MAHLE)'s Ba1 Corporate Family Rating (CFR) reflects as positives the company's (1) size & scale as one of the world's 25 largest tier 1 automotive parts suppliers, with annual revenues of around €12 billion during the years 2016-19 and a well-diversified OEM customer base, (2) top 3 market position in its main product categories of engine systems and coolings, filtration and engine peripherals and thermal management, (3) positive strategic alignment with a dual strategy to address the disruptive automotive industry trend of electrification by using cash flow generated in the internal combustion engines (ICE) business to further broaden and grow its exposure to electric vehicle platforms and products that are not dependent on the powertrain (4) conservative financial policy, as reflected in a history of relatively low financial leverage and modest shareholder distributions, and (5) good liquidity profile.

The rating reflects as negatives the company's (1) exposure to the cyclicality of automotive production, which has passed its peak in 2018 and is expected to return to previous peak levels only at around mid-decade, (2) relatively low margins, given the highly competitive sector environment, and weak free cash flow generation over the last few years, (3) relatively low exposure to automotive aftermarket business, which is less cyclical and more profitable, (4) high investment needs into R&D and capex to make the product portfolio more independent from ICEs, and (5) challenges related to carbon transition, given the high dependency on products for internal combustion engines (ICEs).

The rating reflects the potential of MAHLE to further strengthen and consolidate its position in the ICE-related business. While the business faces secular demand decline, we believe that managing it to cost competitiveness will still allow the group to generate significant funds that allow it to continuously strengthen its other businesses so that the relative share of the ICE-related business will materially shrink over time. At the same time, considering the still significant challenges for a broader adoption of pure electric vehicles, related to, amongst other things, consumer preferences, charging infrastructure and range, we believe that the demand decline for such products will be in the low single digit percentages per year and hence manageable for MAHLE.

Exhibit 1
MAHLE's Debt / EBITDA is expected to be in a range of 2x - 3x (Moody's adjusted)



Source: Company data, Moody's estimates

Credit strengths

» Leading position as one of the world's 25 largest tier 1 automotive parts supplier

» Positive strategic alignment to address the disruptive trend of electrification and strengthen the position in mature product segments

» Conservative financial policy and good liquidity

Credit challenges

» Exposure to the cyclicality of automotive production

» Relatively low margins

» High investment needs to reduce historically high reliance on ICE technologies

Rating outlook

The stable outlook reflects the expectation of a continued recovery in global light vehicle sales after a trough in 2020, and a recovery of MAHLE's revenues at least in line with market volumes. The execution of cost saving measures should help to recover margins into a range of 4%-6% (Moody's adjusted EBITA) and reduce debt/EBITDA (Moody's adjusted) to a maximum of 3x by 2022, which is commensurate for the Ba1.

Factors that could lead to an upgrade

» Debt/EBITDA (Moody's adjusted) below 2.0x, and

» EBITA margins (Moody's adjusted) exceeded 7%, and

» FCF sustained positive.

Factors that could lead to a downgrade

» Debt/EBITDA (Moody's adjusted) failed to improve to below 3x

» EBITA margins remained below 4% (Moody's adjusted), or

» FCF sustained negative, or

» Liquidity weakened.

Key indicators

Exhibit 2

	2016	2017	2018	2019	2020e	2021e	2022e	2023e
Revenue (USD billion)	13.80	14.32	14.09	13.50	10.45	11.35	12.24	12.85
EBITA margin %	4.2%	4.0%	6.8%	1.6%	-3.2%	2.9%	5.0%	6.2%
EBITA / Interest	4.5x	5.5x	7.0x	1.9x	-2.6x	2.8x	5.9x	7.2x
RCF / Net Debt	36.3%	37.6%	26.0%	16.7%	4.3%	13.4%	24.9%	33.1%
Debt / EBITDA	2.8x	2.9x	2.1x	4.5x	17.8x	4.0x	3.0x	2.5x

All ratios are based on 'Adjusted financial data and incorporate Moody's Global Standard Adjustments for Non-Financial Corporations
Source: Moody's Financial Metrics™

Profile

MAHLE GmbH, headquartered in Stuttgart, Germany, is one of the top 25 global automotive parts suppliers. MAHLE's three main business segments are Thermal management (38% of 2019 sales), Engine Systems and Components (22%) and Filtration and Engine Peripherals (17%). During the years 2016-19, MAHLE generated annual revenues of around €12 billion. MAHLE, which employed around 77.000 employees and produced in around 160 locations worldwide in 2019, is owned by the MAHLE Foundation.

Detailed credit considerations

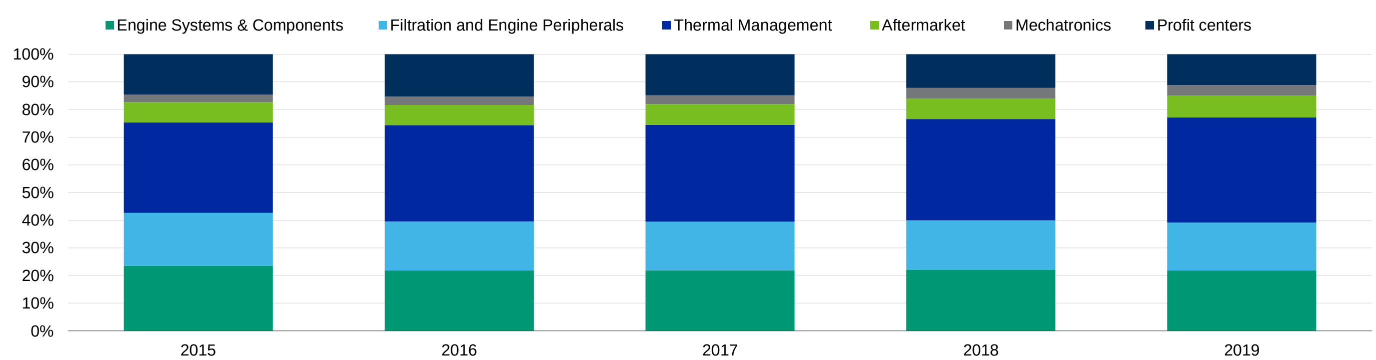
Leading position as one of the world's 25 largest tier 1 automotive parts supplier

With annual revenues of around €12 billion (2016-2019), MAHLE is one of the world's 25 largest automotive parts suppliers. MAHLE's product portfolio is diversified into 29 main product categories for light vehicles and trucks. In 23 of these product categories, MAHLE ranks among the top three players, according to its own calculations.

The main business units are Engine Systems and Components (e.g., pistons, bearings and camshafts; 22% of 2019 revenues), Filtration and Engine Peripherals (e.g., oil and fuel filters, air intake modules and filters; 17% or revenues), and Thermal Management (e.g. air condition and engine cooling modules; 38% of revenues). The company also has two minor units, Aftermarket (8% of revenues) and Electronics and Mechatronics (4% of revenues). Four smaller profit centers contribute the remaining 11% to group revenues.

MAHLE's main competitors are in the areas of (i) engine systems and components Tenneco Inc. (B2 stable) and Rheinmetall AG (Baa3 stable, especially pistons and bearings), (ii) filtration and engine peripherals Mann + Hummel and Denso and (iii) thermal management Denso and Valeo S.A. (Baa3 negative).

Exhibit 3
Sales by business segment from 2015 to 2019



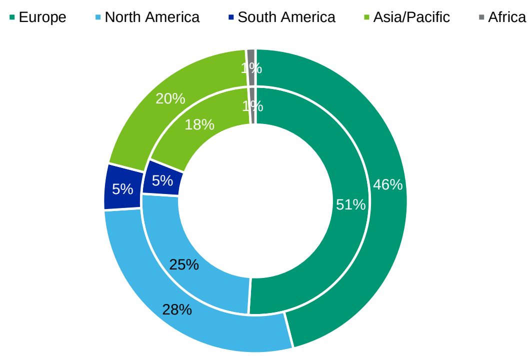
Source: Company Annual Report

MAHLE is a global player, with 160 production facilities and 16 R&D centers around the world. Its revenues are well diversified to all major regions of the world, with around 46% coming from Europe and 28% from North America. MAHLE also generates a sizeable part of its revenues in the APAC region (20%), which has shown a stronger volume development compared to the more mature markets in Europe and North America. Like most of its European peers, however, MAHLE's exposure to APAC lags behind the region's share in global light vehicle sales (approximately 47% in 2020, according to Moody's calculations). With the acquisition of Keihin's air conditioning business in February 2021, MAHLE's presence in Japan, Thailand and the US will be strengthened slightly.

Exhibit 4

Sales by geography 2019 (outside circle) vs. 2015 (inside circle)

Sales split by manufacturing country



Source: Company Annual Report

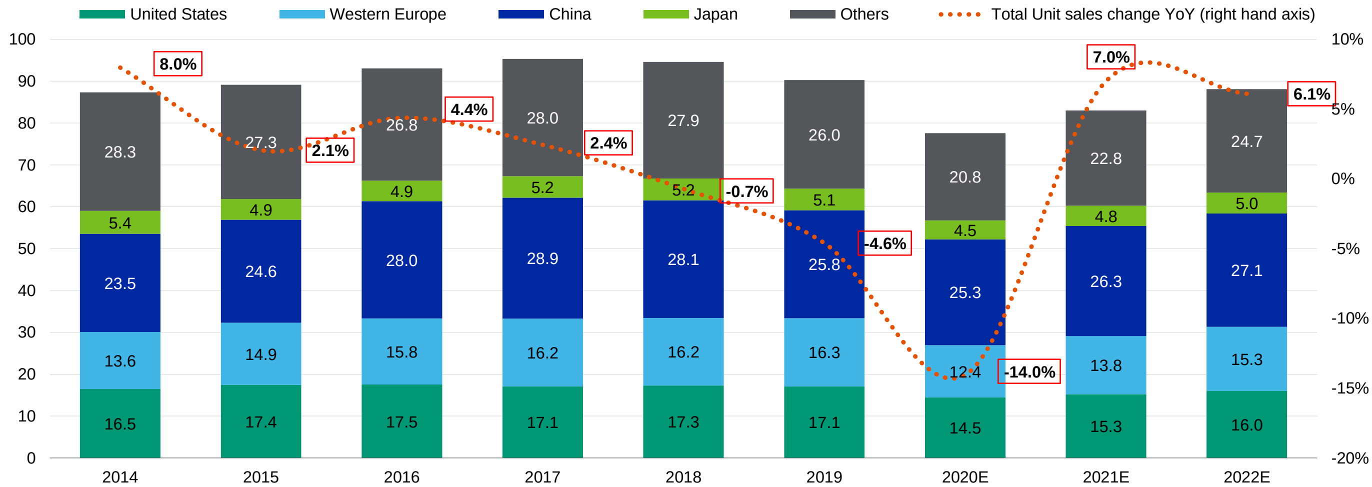
MAHLE's customer base comprises of a well-diversified group of highly rated global automotive manufacturers (OEMs). The 10 largest customers account for only 50% of the group's revenues, with Stellantis N.V. (Baa3 stable) being the only one accounting for more than 10%. Moreover, MAHLE's nine largest customers are all rated investment grade at Moody's. We note that the recent merger of FCA and Peugeot to create Stellantis brings additional challenges to its suppliers like MAHLE, considering that Stellantis has guided to material synergies also from more efficient sourcing. However, we expect that MAHLE will have some potential to offset potential pricing pressure with raising efficiencies.

Exposure to the cyclicality of automotive production

MAHLE, like most global auto suppliers, has a strong reliance on the production rates of light vehicles by the various OEMs. After several years of continuous growth since the beginning of the decade, global light vehicle sales declined slightly to below 95 million units in 2018. In 2019, global light vehicle sales declined further by around 5% to around 90 million units, mainly driven by a 8% decline in China.

Global light vehicle sales plummeted 14% in 2020 (see our global automotive industry outlook, published March 2021) in the wake of the pandemic, which hit the auto sector materially. G-20 GDP declined by around 3.3% in 2020 (see Global Macro Outlook 2021-22 [February 2021 Update]). Amid our expectations of a 5.3% rebound in G-20 GDP growth this year, we expect global auto sales to grow 7% in 2021. From 2022 on, the recovery in auto demand is likely to continue, but at a slower pace. We expect 6% sales growth in 2022, bringing total global unit sales up to around 88 million units, still short of the 2019 sales level of 90 million units and much less than the recent peak of 95 million units.

Exhibit 5
Global auto sales expected to recover by 7.0% in 2021
Moody's global light vehicle sales projections by region



Note: China unit sales represent auto sales which include both passenger and commercial vehicles
Source: ACEA, CAAM, LMC, and Moody's estimates

Despite this cyclicality, we expect MAHLE to nevertheless outperform the market by around 1% over time, reflecting its strong positioning in conventional combustion technologies and its growing product portfolio in the area of electric drive systems and power electronics.

Dual strategy helps address challenges of automotive industry

MAHLE is highly exposed to the automotive industry megatrend of carbon transition and electrification. Around 41% of MAHLE's revenues related to light vehicles in 2020 were dependent on internal combustion engine (ICE) related products. As a result of increasing environmental standards and stricter carbon regulation worldwide, the share of ICE in global light vehicles (71% gasoline and 17% diesel in 2019) will gradually decline over the next years, with full and plug-in hybrid electric vehicles (4%) and battery electric vehicles (BEV, 2%) gaining rapidly in market share. In 2020, the share in BEVs in the EU increased to 5.9%, from 2.2% in 2019, and the share of hybrid electric vehicles increased to 16.4%, from 6.6%, according to ACEA (as %ages in light vehicle sales). Trends in the bus and truck markets are similar, although the carbon transition will take longer and diesel will represent the majority of vehicle sales at least until end of decade.

In our report Automakers' move to alternative fuels will hurt returns; updated forecasts show faster adoption, we said that we forecast the share of alternative fuel vehicles (including BEVs and hybrid electric vehicles) will approach 40% in global light vehicle sales at the end if this decade, compared to only 4% in 2020. BEVs will be the most important AFV technology, with around 25% of global light vehicles.

To address this challenge, MAHLE has established a dual strategy to (i) strengthen its position in the area of ICE-related technologies and (ii) develop future technologies, which are used in BEV, hybrid electric vehicles and also fuel cell vehicles. This strategy includes R&D spending into growing products like oil management modules for hybrid vehicles, on-board chargers for BEVs and humidifiers for fuel cell vehicles. As a result of the development of these new technologies, MAHLE aims to gradually reduce its dependency on ICE-related light vehicle sales by around 1% per year towards 30% in 2030. On a divisional basis, this will lead to declining contributions of Engine Systems and Components, while Electronics and Mechatronics will compensate the gap. The latter will result in a substantially higher content per vehicle for plug-in hybrid electric vehicles and for BEVs, compared to a conventional ICE powered vehicle.

Relatively low margins, given a highly competitive sector environment

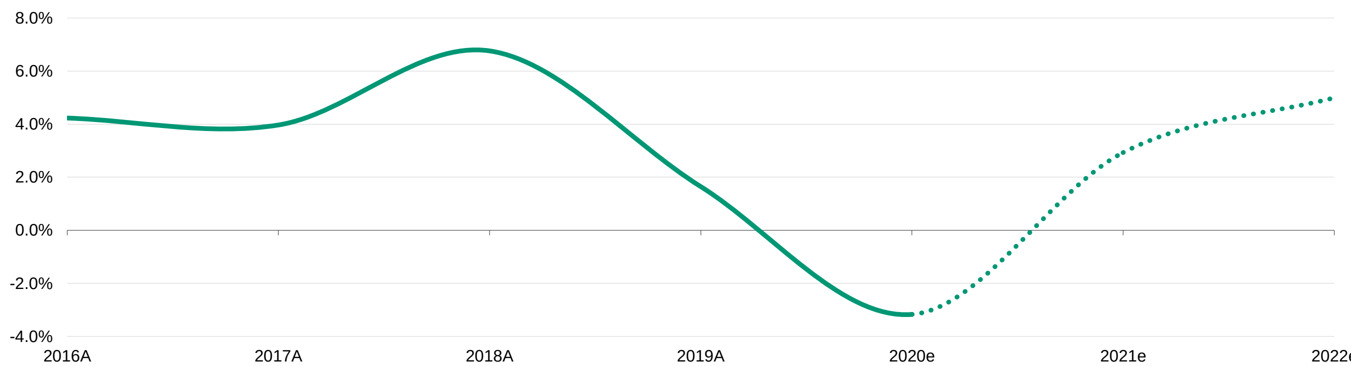
MAHLEs operating profit margins (Moody's adjusted EBITA) amounted to around 4%-6% during 2016-18, a relatively low level, which is illustrative of the highly competitive automotive industry environment, and high investments (R&D and capex) needed to manage the automotive industry transformation, especially in terms of carbon transition. The low margin level is, however, largely in line with the overall sector.

In 2019, MAHLE's margin dropped to only 2% and is expected to be negative in 2020, as a result of the pandemic and a drop in global light vehicle production of around 15%.

To address this challenge, MAHLE has implemented a €200 million long-term cash savings program in 2020, equivalent to around 2% of group revenues. The restructuring expenses were charged in 2020 and contributed to the negative margin. We expect the restructuring measures, however, to contribute to the margin improvement in 2021 and 2022, together with the expected recovery of global light vehicle production and sales.

Exhibit 6

MAHLE's EBITDA margins have suffered from the pandemic in 2020 and are expected to recover swiftly



Source: Company data, Moody's estimates

Conservative financial policy

MAHLE has established a track record of relatively low financial leverage metrics (below 3x during the years 2016-18), good liquidity and modest shareholder distributions. We consider the financial policy, which includes a declared net debt/EBITDA target of below 2x (company defined), as well as very low shareholder distributions to the MAHLE Foundation as conservative.

Since 2014, MAHLE has made several tuck-in acquisitions, including the acquisition of Letrika (2014, €242m sales), Delphi Thermal (2015, €1,066m sales) and Keihin Air Conditioning (2021, €234m sales). All other acquisitions had sales of less than €100 million. The acquisitions were focused on expanding MAHLE's product offering and enhance its technological expertise as well as its global footprint. MAHLE also entered into several Joint Ventures, including a JV with Faurecia (Ba2 stable) in the area of interior thermal management, which saves investment spending. Given MAHLE's ownership structure, all acquisitions need to be funded with cash or additional debt. During 2016-19, MAHLE spent a total of slightly less than €300 million for acquisitions. With its, we consider MAHLE's M&A strategy as conservative, with the risk of larger debt-funded acquisitions being relatively small.

ESG considerations

Environmental, social and governance (ESG) risks are relevant and have been reflected in MAHLE's ratings. Environmental risks for automotive parts suppliers are high, according to Moody's environmental heatmap, published December 2020. This is explained by high carbon transition risks in the automotive industry, which is gradually transiting to battery electric vehicles, driven by stricter environmental regulation. As a result, conventional internal combustion engines and related technologies are losing market share. This also affects demand for MAHLE's products, because still around 41% of revenues with light vehicles relate to ICE technologies. MAHLE's dual strategy addresses this risk, but we note that the carbon transition process will require high investments into R&D and capex. By contrast, the exposure of MAHLE's manufacturing processes to waste and pollution, water management, natural capital and physical climate risks is relatively low.

MAHLE's social risk exposure is moderate. In terms of human capital, we note that around two thirds of its 42k employees (2019) being employed in Europe and North America, where retention of skilled manufacturing workforce is typically easier than in developing countries. MAHLE is also exposed to health & safety risks. This is exemplified by the global coronavirus outbreak and its negative impact on global light vehicle production and consumer demand. Cost related to stricter health & safety requirements will also weigh somewhat on operating efficiency.

MAHLE's governance risks are moderate. The company has a prudent financial strategy and risk management in place, including the net leverage target of below 2x, a conservative M&A policy and moderate shareholder distributions. The company is owned by a foundation, which is a positive from a governance perspective, because it guarantees a long-term stable ownership structure. Voting rights lie with MABEG, an independent shareholders' committee comprising of external industry experts. Dividend payments to the foundation are relatively moderate, allowing MAHLE to retain most of the cash generated and invest it into future technologies. However, a negative aspect is the lack of access to equity capital markets. The company also has established an organizational structure, which is appropriate for its size and complexity. Management's credibility and track record is high. This is exemplified by the highly experienced management team, with the eight management board members having in excess of 20 years of industry experience on average. Some weaknesses relate to MAHLE's financial reporting, which is less detailed compared to its publicly listed peers, as well as limited disclosure in terms of management compensation design.

Liquidity analysis

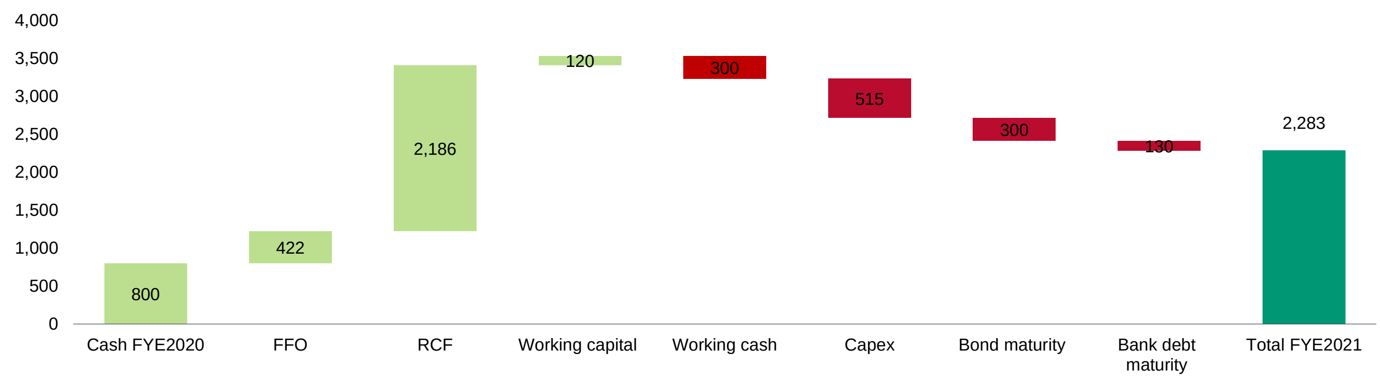
We consider MAHLE's liquidity position to be good. The company's main sources of liquidity include (1) cash on the balance sheet of €800 million (as of December 2020, excluding restricted cash) and (2) annual funds from operations of around €400 million in our Moody's base case. The company also has a €1.8 billion revolving credit facility (RCF) maturing in 2024, of which €64 million were drawn as of September 2020. The RCF does not include performance covenants. Moreover, MAHLE secured an additional €500 million syndicated credit facility in June 2020 with three years maturity, of which only €50 million were drawn as of September 2020. Together with minor working capital inflow, the liquidity sources over the next 12 months amount to approximately €3.5 billion under the stressed assumption of no access to capital markets.

These liquidity sources comfortably exceed liquidity uses, mainly comprising of capital spending, which Moody's expects at around €530 million - €580 million, and a €300 million medium term note maturity in May 2021. Uses of liquidity further include maturing bank debt of €130 million and our working cash assumption of €300 million.

Exhibit 7

MAHLE's liquidity is good

Liquidity sources and uses over the next four quarters to December 2021, according to Moody's liquidity stress case



Source: Moody's calculation

Rating methodology and scorecard factors

The actual rating assigned of Ba1 is two notches above the scorecard-indicated outcome, based on financial metrics for the year ended 31 Dec 2019. 2019 margin, leverage and coverage metrics were, however, negatively impacted by non-recurring items.

Looking through the trough expected for 2020, our 12-18-months forward-view leads to a one-notch higher scorecard-indicated outcome of Ba2. For fiscal 2022, we expect a further improvement of the scorecard-indicated outcome to Ba1, in line with the actual rating assigned. Overall, the methodology outcome is negatively impacted by MAHLE's very low EBITA margins, which are, however, expected to improve gradually.

Exhibit 8

Rating Factors

MAHLE GmbH

Automotive Supplier Industry Scorecard [1][2]	Current FY 12/31/2019		Moody's 12-18 Month Forward View As of 4/7/2021 [3]	
Factor 1 : Scale (10%)	**Measure**	**Score**	**Measure**	**Score**
a) Revenue (USD Billion)	$13.5	Baa	$11.5 - $12.5	Baa
Factor 2 : Business Profile (15%)				
a) Business Profile	Ba	Ba	Ba	Ba
Factor 3 : Profitability and Efficiency (25%)				
a) EBITA Margin	1.6%	Ca	4% - 6%	B
b) Expected Free Cash Flow Stability	Ba	Ba	Ba	Ba
Factor 4 : Leverage and Coverage (30%)				
a) Debt / EBITDA	4.0x	B	3x - 4x	Ba
b) EBITA / Interest Expense	1.9x	B	3x - 6x	Baa
c) Retained Cash Flow / Net Debt	19.2%	Ba	15% - 25%	Ba
Factor 5 : Financial Policy (20%)				
a) Financial Policy	Baa	Baa	Baa	Baa
Rating:				
a) Scorecard-Indicated Outcome		Ba3		Ba2
b) Actual Rating Assigned				Ba1

(1) All ratios are based on 'Adjusted financial data and incorporate Moody's Global Standard Adjustments for Non-financial Corporations
(2) As of 12/31/2019, Source: Moody's Financial Metrics
(3) This represents Moody's forward view; not the view of the issuer; and unless otherwise noted in the text, does not incorporate significant acquisitions and divestitures
Source: Moody's Financial Metrics and Moody's Investors Service estimates

Ratings

Exhibit 9

Category	Moody's Rating
MAHLE GMBH	
Outlook	Stable
Corporate Family Rating	Ba1

Source: Moody's Investors Service

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Americas	1-212-553-1653
Asia Pacific	852-3551-3077
Japan	81-3-5408-4100
EMEA	44-20-7772-5454

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