

## CREDIT OPINION

21 July 2020

### Update

 Rate this Research

#### RATINGS

##### Mills Estruturas e Servicos de Engenharia

Domicile	Rio de Janeiro, Rio de Janeiro, Brazil
Long Term Rating	B2
Type	LT Corporate Family Ratings - Dom Curr
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.

#### Contacts

Carolina A Chimenti +55.11.3043.7318  
 AVP-Analyst  
[carolina.chimenti@moodys.com](mailto:carolina.chimenti@moodys.com)

Marianna Waltz, CFA +55.11.3043.7309  
 MD-Corporate Finance  
[marianna.waltz@moodys.com](mailto:marianna.waltz@moodys.com)

# Mills Estruturas e Servicos de Engenharia

## Update to credit analysis

### Summary

[Mills Estruturas e Servicos de Engenharia's](#) (Mills) B2/Ba1.br ratings are supported by the company's improved scale and business profile following its combination with Solaris Participações, Equipamentos e Serviços S.A. (Solaris); and its leading position in the Brazilian aerial work platform market and infrastructure engineering solutions, backed by its experienced team, and offering of innovative solutions and updated technology. The ratings are also supported by Mills' flexible business model, prudent financial management and adequate liquidity. Furthermore, the improvement observed in the company's credit metrics over the last three years, particularly leverage and interest coverage, stemming from an improved operating performance and continued debt reduction; and its ability to maintain adequate liquidity and generate cash even under adverse market conditions are credit positives.

The ratings are constrained by Mills' small size relative to its global peers; the concentration of its operations in Brazil and in the industrial sector; and the integration and execution risks associated with the business combination with Solaris. Our expectations that the conditions for the construction industry and Brazil's industrial sector will remain weak at least until the end of 2020 because of the coronavirus pandemic, and that Mills' operations will consequently deteriorate are additional rating constraints.

### Credit strengths

- » Scale and leadership position in the aerial work platform market and infrastructure engineering solutions in Brazil
- » Prudent financial management and flexible business model
- » Lower exposure to the construction market
- » Adequate liquidity and leverage, and positive free cash flow (FCF) generation even under adverse market conditions

### Credit challenges

- » Integration and execution risks associated with the business combination with Solaris
- » Small size and geographic concentration of operations
- » Weakened market conditions and operations in 2020 because of the pandemic

## Rating outlook

The stable rating outlook reflects our expectations that Mills will continue to prudently manage its liquidity to meet its debt obligations in the next 12-18 months, and that its credit metrics will remain adequate even during the pandemic.

## Factors that could lead to an upgrade

The ratings could be upgraded if there are clear signs of a sustained recovery in the construction industry and in Brazil's industrial sector that supports significant revenue growth for Mills, and if Mills successfully integrates its business with Solaris while maintaining adequate leverage and solid liquidity. Quantitatively, the ratings could be upgraded if Mills' credit metrics remain near the pre-coronavirus levels, with:

- » total adjusted debt/EBITDA below 3.5x (1.5x for the 12 months ended March 2020)
- » EBITDA/interest expense above 3.0x (7.2x for the 12 months ended March 2020)
- » an EBITDA margin above 20% (32.8% as of the 12 months ended March 2020) on a sustained basis

## Factors that could lead to a downgrade

The ratings could be downgraded if market conditions remain weak for a prolonged period without any prospects for improvement, or if Mills faces difficulties in integrating its business with Solaris. Quantitatively, the ratings could be downgraded if the company's:

- » leverage rises above 5.5x
- » interest coverage declines below 2.0x
- » EBITDA margin declines below 15% without any prospects for improvement

A deterioration in the company's liquidity or cash generation would also trigger a rating downgrade.

## Key indicators

Exhibit 1

### Mills Estruturas e Servicos de Engenharia

US Millions	Dec-15	Dec-16	Dec-17	Dec-18	Dec-19	LTM Q1 2020	Forward View Next 12-18 months
Revenue	175.7	114.3	92.8	83.8	111.6	120.8	85 - 120
EBITA Margin %	-6%	-10%	-43%	-23%	-4%	-1%	< 5%
Debt / EBITDA	4.6x	3.8x	12.4x	3.7x	1.1x	1.5x	1x - 2x
EBITA / Interest Expense	-0.3x	-0.5x	-2.7x	-2.4x	-0.7x	-0.2x	< 0x
RCF / Net Debt	42%	86%	30%	80%	470%	12475%	> 80%

All figures and ratios are calculated using Moody's estimates and standard adjustments. Moody's Forecasts (f) or Projections (proj.) are Moody's opinion and do not represent the views of the issuer. Periods are Financial Year-End unless indicated. LTM = Last 12 months.

Source: Moody's Financial Metrics™

This publication does not announce a credit rating action. For any credit ratings referenced in this publication, please see the ratings tab on the issuer/entity page on [www.moody's.com](http://www.moody's.com) for the most updated credit rating action information and rating history.

## Profile

Founded in 1952 and headquartered in Rio de Janeiro, Mills Estruturas e Serviços de Engenharia S.A. (Mills) is the largest aerial work platform rental company in Latin America and the largest provider of infrastructure engineering solutions in Brazil, having reported BRL495 million (\$121 million) in net revenue and an EBITDA margin of 32.8% for the 12 months ended March 2020. Solaris has been providing equipment rental solutions for the industrial sector in Brazil for more than 20 years, including the rental of telehandlers, aerial platforms, illumination towers, energy generators and air compressors. After the business combination with Solaris, Mills became the largest rental company for aerial work platforms in Brazil, with a 28% market share and a fleet of more than 9,000 equipment.

## Detailed credit considerations

### Improved scale and business profile after the combination with Solaris

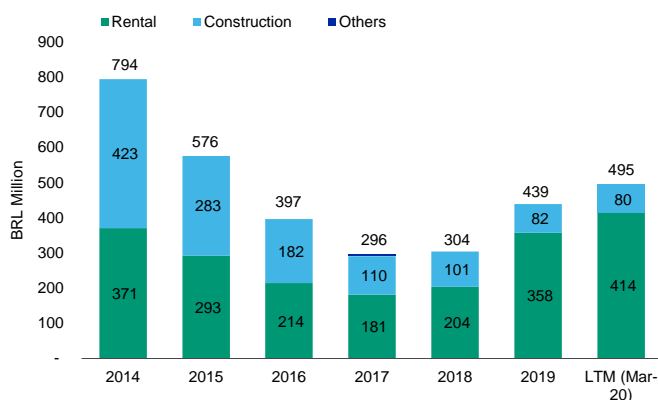
On 26 September 2018, Mills announced a preliminary, nonbinding agreement with Solaris to combine both companies' operations. After the approval of Mills' shareholders and creditors, the transaction was officially concluded on 10 May 2019. With the business combination, Mills increased its scale and market share in Brazil's industrial equipment rental industry, particularly in its main business line of aerial platforms (its market share increased to 28% from 19%), while improving its operational efficiency and returns.

Mills became the largest rental company for aerial work platforms in Brazil, with a fleet of more than 9,000 equipment, and its revenue increased to BRL495 million in the 12 months ended March 2020 from about BRL300 million prior to the merger. Also, the company's consolidated EBITDA margin reached 33% after collecting a few synergies, a record high level since 2015, as Mills benefited from additional demand while incurring minimal marginal costs. The company's operating margins will continue to benefit from significant cost synergies with Solaris after the integration is completed, including the optimization of processes and of its organizational structure, lower rental and maintenance expenses, and higher bargaining power with suppliers.

Furthermore, the company's product offering improved because in addition to aerial platforms, Solaris offers the rental of telehandlers, energy generators, illumination towers and air compressors. Mills' operations and margins were hit hard by the downturn in Brazil's homebuilding and heavy construction sectors in the last years. Since then, the company has been pursuing a diversification toward the industrial segment. The business combination with Solaris marked an important step toward its strategy of diversifying away from the construction segment. With the business combination, over 80% of Mills' revenue comes from the rental segment, up from about 65% prior to the merger and including more than eight different sectors of the economy, while less than 20% comes from the construction segment.

Exhibit 2

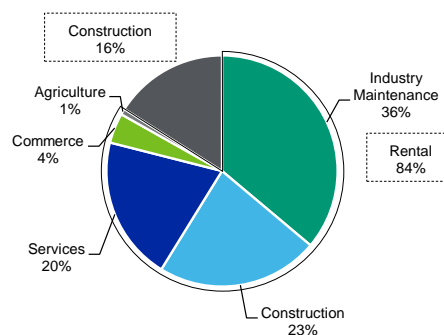
**Mills reduced its exposure to the cyclical construction industry after the business combination**  
Net revenue by segment



Sources: Moody's Investors Service and company's financials

Exhibit 3

**Revenue is diversified across different industrial segments**  
Net revenue breakdown for the 12 months ended March 2020



Sources: Moody's Investors Service and company's financials

### Small size and geographic concentration of operations

Mills is small in size, based on its net revenue compared with that of its global service providers, and its operations are geographically concentrated in Brazil, where it generates all of its revenue and cash flow, making the company vulnerable to the vagaries of a single country.

Up until 2013, Mills' revenue and operations benefited from the good performance of its core business areas, the heavy construction and real estate industries, as well as from the geographic expansion in Brazil. With the deterioration in the heavy construction and industrial sectors' fundamentals on the back of corruption scandals and the economic recession in Brazil, Mills' revenue contracted by 72% over 2014-17. To address the difficult market conditions, Mills downsized over the last few years, selling assets and keeping investments low to generate cash and meet debt obligations. The company has also successfully implemented new capital allocation and business strategies, and commercial changes, such as a gradual price recovery and the diversification of its client base toward non-construction segments.

However, despite its flexible business model that supports liquidity during downturns, Mills remains exposed to the conditions of Brazil's industrial and construction sectors. We have revised our estimates for Brazil's GDP growth to -6.2% in 2020 from +2% before the coronavirus pandemic. For 2021, we currently expect +3.6% growth. The duration and depth of the crisis are still unclear though, and its long-term effect on the Brazilian economy will depend on how it affects unemployment and consumption levels. According to Brazil's Central Bank, Brazil's industrial production will decline by 9% in 2020 because of the coronavirus outbreak, compared with a 2.2% growth expected at the beginning of the year. Brazil's industrial production will resume growth from 2021 onward (+4% in 2021 and about +2.5% in 2022-23 according to the latest market expectations), but the recovery will still be modest compared with the 24% expected accumulated decline over 2014-20. The performance of the country's heavy construction sector will also remain weak in the short term amid constrained public and private investments coming from limited fiscal space for the government and high idle capacity for companies. Some recovery could occur only after 2021, depending on Brazil's fiscal strength, corporate capacity utilization levels and policies to stimulate investment. In the real estate sector, weaker growth, unemployment levels and consumer confidence will translate into lower new home start growth rates, more sales cancellation and reduced business opportunities. As such, Mills' operating performance will remain weak at least until mid-2021.

### Operations improved in recent years, but will deteriorate with lower short-term demand

Mills' track record of high capacity utilization and efficient allocation of assets has translated into fairly robust operating margins, including an average adjusted EBITDA margin of 50% for 2012-14. However, since 2014, the lower level of activity in the Brazilian construction industry led to a decline in the company's revenue and profitability. Mills' revenue declined to BRL296 million in 2017 from BRL832 million in 2013 and, despite the company's efforts to reduce its operating expenses, the downward trend in profitability was only partially mitigated over time, and its adjusted EBITDA margins shrank to 10.2% from 52% over the same period.

After the business combination with Solaris, net revenue increased to BRL495 million and EBITDA margin to 32.8% in the 12 months ended March 2020. Mills has also been able to improve operations modestly as a result of its strategy to further diversify its revenue base toward non-construction sectors and increase prices in its rental segment. The share of rental business in the company's consolidated net revenue increased to 87% in Q1 2020 from 75% a year earlier.

In the construction business segment, Mills has been downsizing its operations, closing its warehouses and selling its idle equipment focused on the real estate segment to reduce the cash burn, while maintaining a national commercial presence. This segment has been generating negative EBITDA since early 2017 and was able to reach breakeven cash flow only in Q1 2020. As a result of cost reduction efforts and adjustments in the company's equipment fleet, the reported EBITDA margin for the construction segment reached 1.4% in Q1 2020, from -7.5% in 2019 and a bottom of -63.3% in 2017.

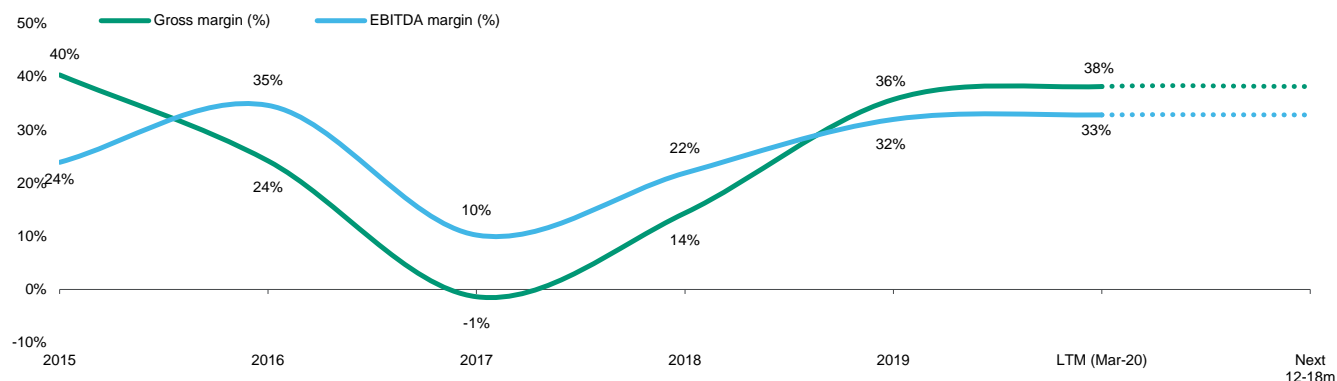
In the next 12-18 months, we expect Mills' operating performance to deteriorate as the coronavirus outbreak continues to hit the demand for Brazil's industrial and construction sectors. In April 2020, which was the worst month of the pandemic in Brazil so far, the demand for Mills' equipment rental declined by 30% while that for the demand for the company's construction segment fell 10%. Assuming a gradual recovery in the company's rental operations in the rest of 2020, its revenue and EBITDA will likely decline by about 10% annually. Mills' operating performance would return to year-end 2019 levels, with revenue of around BRL445 million and EBITDA of about BRL140 million, and any additional recovery in profitability would come only in 2021. In addition, Mills could still face integration and execution risks associated with the business integration, which could lead to higher-than-expected expenses and strained credit metrics. The assigned

ratings incorporate our expectation that the company will maintain its disciplined approach to leverage and liquidity to mitigate potential risks arising from weaker market conditions and the business combination.

Exhibit 4

### Flexible cost structure support stable profitability even amid lower demand environment

#### Gross and EBITDA margins (%)



All figures and ratios calculated using Moody's estimates and standard adjustments.  
Sources: Moody's Financial Metrics™ (historical) and Moody's Investors Service (forecast)

### Material deleveraging over the last years will support adequate debt-protection metrics even during the crisis

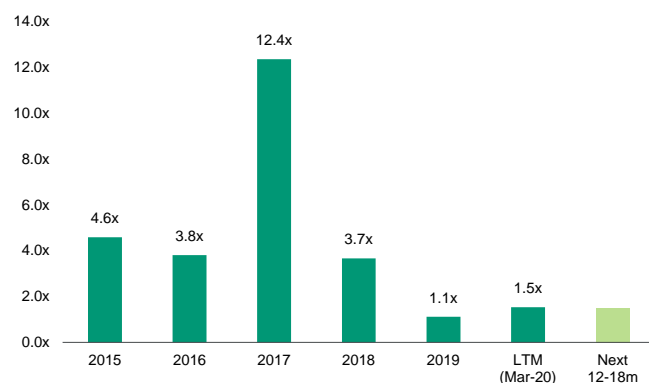
Mills' adjusted leverage increased sharply in 2017 because of its weak operating performance. However, with the improvement in the company's operating performance in recent years and its continued debt amortizations, Mills' adjusted leverage declined to 1.5x in the 12 months ended March 2020 from a peak of 12.4x in 2017, and the company turned net debt negative. Mills has been reducing its total debt over the last six years with proceeds from idle equipment sales and with the successful execution of its strategy in the rental business unit to generate cash to adjust its capital structure to the lower demand environment, which provided the company with significant financial flexibility to ride through downturns. The company paid down about BRL600 million in total debt during 2014-19 and has demonstrated its prudent financial management during tough market conditions.

With the issuance of BRL100 million in debentures in March 2020, its adjusted gross leverage increased mildly to 1.5x from 1.1x as of year-end 2019. Mills will amortize about BRL65 million in debentures due in August 2020, which will offset the expected decline in EBITDA over the next 12-18 months and support stable leverage ratios, even with the expected decline in revenue and profitability. Likewise, interest coverage will benefit from the lower debt balance and lower interest rates in Brazil, declining by roughly 50%, or about BRL8 million, in the next 12-18 months and supporting a strong interest coverage (measured by EBITDA/ interest expense) during the pandemic.

Exhibit 5

### Mills' adjusted leverage significantly declined from its peak of 12.4x in 2017

#### Adjusted debt/EBITDA

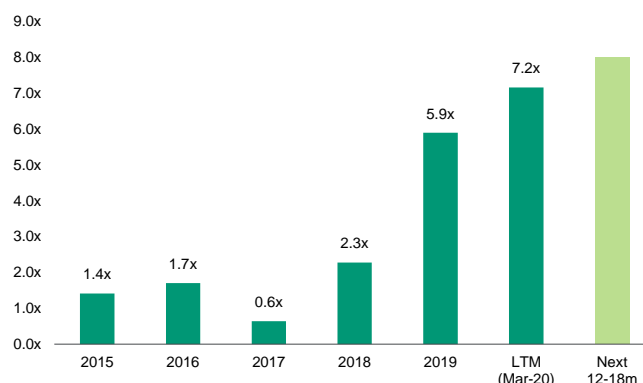


All figures and ratios calculated using Moody's estimates and standard adjustments.  
Source: Moody's Financial Metrics™

Exhibit 6

### Mills' interest coverage improved with debt reduction and lower interest rates

#### Adjusted EBITDA/interest expense



All figures and ratios calculated using Moody's estimates and standard adjustments.  
Source: Moody's Financial Metrics™

### Adequate liquidity and flexible business model

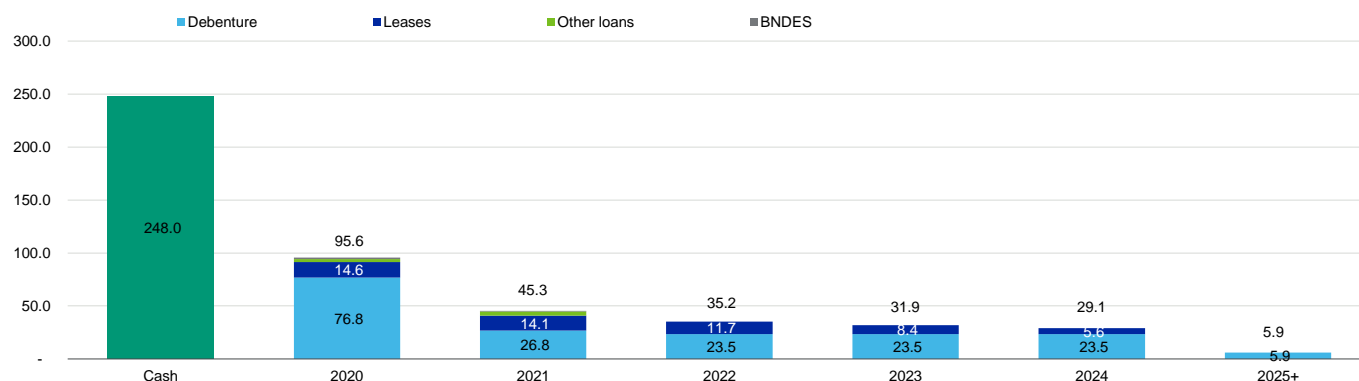
Despite the sharp deterioration in its operating performance over the past few years, Mills has illustrated its ability to generate cash and maintain adequate liquidity. The company's cash position as of the end of March 2020 totaled BRL248 million, higher than the BRL130 million average for 2017-19 because of the issuance of BRL100 million in debentures in March 2020. Its cash position at the end of March 2020 was sufficient to cover short-term debt by 2.3x and its total debt by 1x.

The company originally planned to use part of the proceeds from the debentures issued in March 2020 to fund the acquisition of new equipment to support growth after the business combination, but then decided to suspend all investments and keep proceeds in cash to improve liquidity during the coronavirus crisis.

Exhibit 7

#### Good liquidity supported by increased cash position after the issuance of debentures in early 2020

In BRL millions

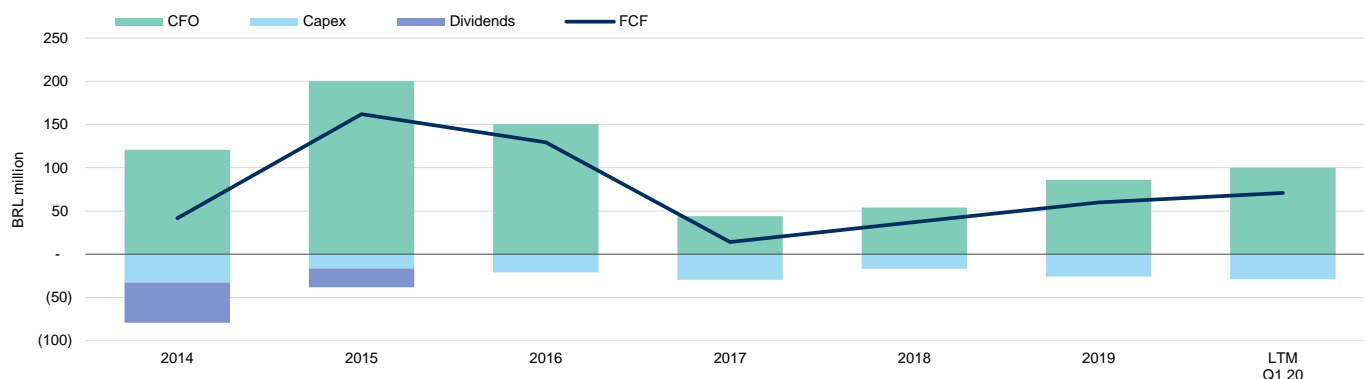


Source: Mills Estrutura e Serviços de Engenharia S.A.

The company's cash position has been benefitting from positive FCF generation since 2014, as a result of lower capital spending, no dividend payouts, the liberalization of working capital requirements related to the lower level of activity, and proceeds from the sale of idle equipment. Both Mills and Solaris have good flexibility to manage investments according to market dynamics and are able to anticipate or postpone capital spending within around three months because of the very short-term cycle of investments. Accordingly, the company's capital spending averaged BRL8 million per year since 2015 and was funded with internal cash generation, including proceeds received from asset sales, reducing the strain on the company's liquidity.

We expect Mills' liquidity to remain adequate and the company to continue to prudently manage investments and operating cash outflows. Even during the most severe reduction in industrial activity in Brazil in April 2020, the company's operations did not burn cash and we estimate that its cash position remains close to the March 2020 levels. While we acknowledge that Mills will likely need to spend cash in equipment maintenance and rebuild in the future to support growth, any cash outflow should match its internal cash generation, thus supporting its cash position. Also, we expect Mills to continue to balance creditors and shareholders' interests, potentially pursuing additional liability management initiatives to lengthen its debt amortization schedule after a material debt reduction in the past years.

Exhibit 8

**Mills generates positive FCF even amid tough market conditions**

Sources: Mills Estruturas e Serviços de Engenharia S.A. and Moody's Investors Service

Mills has financial covenants applicable to its debentures, which represent 72% of its total debt. In 2017, the company amended its debentures' indentures to change the calculation of the financial covenants, replacing the EBITDA metric with operating cash flow generation before interest paid; imposing restrictions regarding dividend payments and related party transactions; increasing the coupon of the debentures; and providing collateral for the debentures through the fiduciary assignment of proceeds representing 50% of the outstanding amount, which were kept in an escrow account. In Q2 2019, Mills was able to achieve the original covenant measure and released the cash collateral assigned in 2017. With that, the covenants for Mills' existing debentures returned to the original measure of reported net debt/EBITDA below 3.0x (-0.5x for the 12 months ended March 2020) and reported EBITDA/net interest expense above 2.0x (14.4x for the 12 months ended March 2020). The new debentures issued in March 2020 have stricter covenants setting a maximum reported net debt/EBITDA limit of below 2.0x, but the company will remain compliant with the measures since Mills has negative net debt (net cash).

### Environmental, social and governance considerations

Mills is a public company since 2010, with only one class of shares listed on [B3 S.A. - Brasil, Bolsa, Balcão](#)'s (Ba1 stable, formerly Bovespa) Novo Mercado, the level with the highest standards of corporate governance in Brazil.

The Nacht family, which founded the company more than 65 years ago, still maintains control through a shareholders' agreement (with 24% of the shares). After the business combination with Solaris, the private equity firm Southern Cross Group holds around 20.5% and [Sullair Argentina S.A.](#) (Caa3/Caa2.ar negative) holds around 8.8% of the combined entity's total shares. Free float represents 45.5% of total shares, and the remaining 1.2% of shares are held by the company's treasury.

The company is ruled by a shareholder agreement signed by the Nacht family, Sullair Argentina and Southern Cross Group, valid through 2034. The company is run by professional executives with many years of experience in the sector, and its board of directors is composed of eight members. The Nacht family appoints five members of the board of directors (including one independent member), while Southern Cross Group and Sullair Argentina appoint one each. There is also one independent member appointed by the company's minority shareholders. Under the shareholders' agreement, Sullair Argentina and Southern Cross Group have veto power over investment decisions, new debt issuances and changes to the current dividend policy (of payout of 25% of net income), among other matters.

## Methodology and scorecard

Mills' scorecard-indicated outcome under our Business and Consumer Service Industry rating methodology, published in October 2016, maps to a B1 rating for the 12 months ended March 2020, one notch above the assigned ratings. Prospectively, Mills' scorecard-indicated outcome continues to map to a B1 rating, with stability across all subfactors. The scorecard-indicated outcome reflects Mills' improved leverage after a material debt reduction, conservative financial policies and adequate competitive position within Brazil, while the assigned ratings are constrained by the company's small size, the integration and execution risks associated with the business combination, and the expected deterioration in market conditions following the coronavirus outbreak.

Exhibit 9

### Rating factors

Mills Estruturas e Servicos de Engenharia

Business and Consumer Service Industry Scorecard [1][2]			Current LTM 3/31/2020		Moody's 12-18 Month Forward View As of 7/15/2020 [3]	
Factor 1 : Scale (20%)	Measure	Score	Measure	Score	Measure	Score
a) Revenue (USD Billion)	\$0.1	Ca	\$0.1	Ca	\$0.1	Ca
Factor 2 : Business Profile (20%)						
a) Demand Characteristics	B	B	B	B	B	B
b) Competitive Profile	Ba	Ba	Ba	Ba	Ba	Ba
Factor 3 : Profitability (10%)						
a) EBITA Margin	-0.7%	Ca	< 5%	Ca	< 5%	Ca
Factor 4 : Leverage and Coverage (40%)						
a) Debt / EBITDA	1.5x	A	1x - 2x	A	1x - 2x	A
b) EBITA / Interest	-0.2x	Ca	< 0%	Ca	< 0%	Ca
c) RCF / Net Debt	12,475.2%	Aaa	> 80%	Aaa	> 80%	Aaa
Factor 5 : Financial Policy (10%)						
a) Financial Policy	Ba	Ba	Ba	Ba	Ba	Ba
Rating:						
a) Scorecard-Indicated Outcome		B1		B1		B1
b) Actual Rating Assigned				B2		B2

[1] All ratios are based on 'Adjusted' financial data and incorporate Moody's Global Standard Adjustments for Non-Financial Corporations.

[2] As of 3/31/2020(L).

[3] This represents Moody's forward view, not the view of the issuer, and unless noted in the text, does not incorporate significant acquisitions and divestitures.

Source: Moody's Financial Metrics™



## Appendix

Exhibit 10

### Peer comparison

	Mills Estruturas e Servicos B2 Stable			Herc Holdings Inc. B1 Stable			H&E Equipment Services, Inc. B1 Stable		
(in US millions)	FYE Dec-18	FYE Dec-19	LTM Mar-20	FYE Dec-18	FYE Dec-19	LTM Mar-20	FYE Dec-18	FYE Dec-19	LTM Mar-20
Revenue	\$84	\$112	\$121	\$1,977	\$1,999	\$1,960	\$1,239	\$1,348	\$1,321
EBITDA	\$18	\$36	\$40	\$709	\$765	\$773	\$429	\$495	\$494
Total Debt	\$63	\$39	\$48	\$2,463	\$2,442	\$2,439	\$1,277	\$1,352	\$1,326
Cash & Cash Equiv.	\$32	\$31	\$48	\$28	\$33	\$56	\$17	\$14	\$12
EBITA Margin	-22.8%	-4.0%	-0.7%	12.3%	13.0%	13.7%	14.7%	15.7%	15.6%
EBITA / Int. Exp.	-2.4x	-0.7x	-0.2x	1.7x	2.1x	2.3x	2.5x	2.7x	2.6x
Debt / EBITDA	3.7x	1.1x	1.5x	3.5x	3.2x	3.2x	3.0x	2.7x	2.7x
RCF / Net Debt	80.3%	470.5%	12475.2%	24.7%	29.3%	30.3%	22.0%	25.1%	25.4%
FCF / Debt	15.2%	38.3%	28.4%	-0.3%	6.5%	3.7%	-10.4%	3.9%	6.4%

All figures and ratios are calculated using Moody's estimates and standard adjustments. FYE = Financial year-end. LTM = Last 12 months. RUR\* = Ratings under review, where UPG = for upgrade and DNG = for downgrade.

Source: Moody's Financial Metrics™

Exhibit 11

### Moody's-adjusted debt breakdown

#### Mills Estruturas e Servicos de Engenharia

(in US Millions)	FYE Dec-15	FYE Dec-16	FYE Dec-17	FYE Dec-18	FYE Dec-19	LTM Ending Mar-20
<b>As Reported Debt</b>	<b>156.9</b>	<b>138.3</b>	<b>90.3</b>	<b>46.7</b>	<b>37.3</b>	<b>46.9</b>
Operating Leases	0.0	19.5	20.0	14.3	0.0	0.0
Non-Standard Adjustments	2.6	3.0	2.7	2.0	1.6	1.2
<b>Moody's-Adjusted Debt</b>	<b>159.5</b>	<b>160.7</b>	<b>112.9</b>	<b>63.1</b>	<b>39.0</b>	<b>48.1</b>

All figures are calculated using Moody's estimates and standard adjustments.

Source: Moody's Financial Metrics™

Exhibit 12

### Moody's-adjusted EBITDA breakdown

#### Mills Estruturas e Servicos de Engenharia

(in US Millions)	FYE Dec-15	FYE Dec-16	FYE Dec-17	FYE Dec-18	FYE Dec-19	LTM Ending Mar-20
<b>As Reported EBITDA</b>	<b>42.2</b>	<b>26.3</b>	<b>-4.3</b>	<b>3.4</b>	<b>32.8</b>	<b>36.3</b>
Operating Leases	0.0	6.1	6.9	5.1	0.0	0.0
Unusual	-0.2	7.1	6.8	9.9	2.9	3.3
<b>Moody's-Adjusted EBITDA</b>	<b>42.0</b>	<b>39.6</b>	<b>9.5</b>	<b>18.3</b>	<b>35.7</b>	<b>39.6</b>

All figures are calculated using Moody's estimates and standard adjustments.

Source: Moody's Financial Metrics™

## Ratings

Exhibit 13

Category	Moody's Rating
<b>MILLS ESTRUTURAS E SERVICOS DE ENGENHARIA</b>	
Outlook	Stable
Corporate Family Rating -Dom Curr	B2
Senior Unsecured -Dom Curr	B2
NSR Corporate Family Rating	Ba1.br
NSR Senior Unsecured	Ba1.br

Source: Moody's Investors Service

© 2020 Moody's Corporation, Moody's Investors Service, Inc., Moody's Analytics, Inc. and/or their licensors and affiliates (collectively, "MOODY'S"). All rights reserved.

CREDIT RATINGS ISSUED BY MOODY'S INVESTORS SERVICE, INC. AND/OR ITS CREDIT RATINGS AFFILIATES ARE MOODY'S CURRENT OPINIONS OF THE RELATIVE FUTURE CREDIT RISK OF ENTITIES, CREDIT COMMITMENTS, OR DEBT OR DEBT-LIKE SECURITIES, AND MATERIALS, PRODUCTS, SERVICES AND INFORMATION PUBLISHED BY MOODY'S (COLLECTIVELY, "PUBLICATIONS") MAY INCLUDE SUCH CURRENT OPINIONS. MOODY'S INVESTORS SERVICE DEFINES CREDIT RISK AS THE RISK THAT AN ENTITY MAY NOT MEET ITS CONTRACTUAL FINANCIAL OBLIGATIONS AS THEY COME DUE AND ANY ESTIMATED FINANCIAL LOSS IN THE EVENT OF DEFAULT OR IMPAIRMENT. SEE MOODY'S RATING SYMBOLS AND DEFINITIONS PUBLICATION FOR INFORMATION ON THE TYPES OF CONTRACTUAL FINANCIAL OBLIGATIONS ADDRESSED BY MOODY'S INVESTORS SERVICE CREDIT RATINGS. CREDIT RATINGS DO NOT ADDRESS ANY OTHER RISK, INCLUDING BUT NOT LIMITED TO: LIQUIDITY RISK, MARKET VALUE RISK, OR PRICE VOLATILITY. CREDIT RATINGS, NON-CREDIT ASSESSMENTS ("ASSESSMENTS"), AND OTHER OPINIONS INCLUDED IN MOODY'S PUBLICATIONS ARE NOT STATEMENTS OF CURRENT OR HISTORICAL FACT. MOODY'S PUBLICATIONS MAY ALSO INCLUDE QUANTITATIVE MODEL-BASED ESTIMATES OF CREDIT RISK AND RELATED OPINIONS OR COMMENTARY PUBLISHED BY MOODY'S ANALYTICS, INC. AND/OR ITS AFFILIATES. MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND PUBLICATIONS DO NOT CONSTITUTE OR PROVIDE INVESTMENT OR FINANCIAL ADVICE, AND MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND PUBLICATIONS ARE NOT AND DO NOT PROVIDE RECOMMENDATIONS TO PURCHASE, SELL, OR HOLD PARTICULAR SECURITIES. MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND PUBLICATIONS DO NOT COMMENT ON THE SUITABILITY OF AN INVESTMENT FOR ANY PARTICULAR INVESTOR. MOODY'S ISSUES ITS CREDIT RATINGS, ASSESSMENTS AND OTHER OPINIONS AND PUBLISHES ITS PUBLICATIONS WITH THE EXPECTATION AND UNDERSTANDING THAT EACH INVESTOR WILL, WITH DUE CARE, MAKE ITS OWN STUDY AND EVALUATION OF EACH SECURITY THAT IS UNDER CONSIDERATION FOR PURCHASE, HOLDING, OR SALE.

MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS, AND PUBLICATIONS ARE NOT INTENDED FOR USE BY RETAIL INVESTORS AND IT WOULD BE RECKLESS AND INAPPROPRIATE FOR RETAIL INVESTORS TO USE MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS OR PUBLICATIONS WHEN MAKING AN INVESTMENT DECISION. IF IN DOUBT YOU SHOULD CONTACT YOUR FINANCIAL OR OTHER PROFESSIONAL ADVISER. ALL INFORMATION CONTAINED HEREIN IS PROTECTED BY LAW, INCLUDING BUT NOT LIMITED TO, COPYRIGHT LAW, AND NONE OF SUCH INFORMATION MAY BE COPIED OR OTHERWISE REPRODUCED, REPACKAGED, FURTHER TRANSMITTED, TRANSFERRED, DISSEMINATED, REDISTRIBUTED OR RESOLD, OR STORED FOR SUBSEQUENT USE FOR ANY SUCH PURPOSE, IN WHOLE OR IN PART, IN ANY FORM OR MANNER OR BY ANY MEANS WHATSOEVER, BY ANY PERSON WITHOUT MOODY'S PRIOR WRITTEN CONSENT.

MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND PUBLICATIONS ARE NOT INTENDED FOR USE BY ANY PERSON AS A BENCHMARK AS THAT TERM IS DEFINED FOR REGULATORY PURPOSES AND MUST NOT BE USED IN ANY WAY THAT COULD RESULT IN THEM BEING CONSIDERED A BENCHMARK.

All information contained herein is obtained by MOODY'S from sources believed by it to be accurate and reliable. Because of the possibility of human or mechanical error as well as other factors, however, all information contained herein is provided "AS IS" without warranty of any kind. MOODY'S adopts all necessary measures so that the information it uses in assigning a credit rating is of sufficient quality and from sources MOODY'S considers to be reliable including, when appropriate, independent third-party sources. However, MOODY'S is not an auditor and cannot in every instance independently verify or validate information received in the rating process or in preparing its Publications.

To the extent permitted by law, MOODY'S and its directors, officers, employees, agents, representatives, licensors and suppliers disclaim liability to any person or entity for any indirect, special, consequential, or incidental losses or damages whatsoever arising from or in connection with the information contained herein or the use of or inability to use any such information, even if MOODY'S or any of its directors, officers, employees, agents, representatives, licensors or suppliers is advised in advance of the possibility of such losses or damages, including but not limited to: (a) any loss of present or prospective profits or (b) any loss or damage arising where the relevant financial instrument is not the subject of a particular credit rating assigned by MOODY'S.

To the extent permitted by law, MOODY'S and its directors, officers, employees, agents, representatives, licensors and suppliers disclaim liability for any direct or compensatory losses or damages caused to any person or entity, including but not limited to by any negligence (but excluding fraud, willful misconduct or any other type of liability that, for the avoidance of doubt, by law cannot be excluded) on the part of, or any contingency within or beyond the control of, MOODY'S or any of its directors, officers, employees, agents, representatives, licensors or suppliers, arising from or in connection with the information contained herein or the use of or inability to use any such information.

NO WARRANTY, EXPRESS OR IMPLIED, AS TO THE ACCURACY, TIMELINESS, COMPLETENESS, MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE OF ANY CREDIT RATING, ASSESSMENT, OTHER OPINION OR INFORMATION IS GIVEN OR MADE BY MOODY'S IN ANY FORM OR MANNER WHATSOEVER.

Moody's Investors Service, Inc., a wholly-owned credit rating agency subsidiary of Moody's Corporation ("MCO"), hereby discloses that most issuers of debt securities (including corporate and municipal bonds, debentures, notes and commercial paper) and preferred stock rated by Moody's Investors Service, Inc. have, prior to assignment of any credit rating, agreed to pay to Moody's Investors Service, Inc. for credit ratings opinions and services rendered by it fees ranging from \$1,000 to approximately \$2,700,000. MCO and Moody's investors Service also maintain policies and procedures to address the independence of Moody's Investors Service credit ratings and credit rating processes. Information regarding certain affiliations that may exist between directors of MCO and rated entities, and between entities who hold credit ratings from Moody's Investors Service and have also publicly reported to the SEC an ownership interest in MCO of more than 5%, is posted annually at [www.moody.com](http://www.moody.com) under the heading "Investor Relations — Corporate Governance — Director and Shareholder Affiliation Policy."

Additional terms for Australia only: Any publication into Australia of this document is pursuant to the Australian Financial Services License of MOODY'S affiliate, Moody's Investors Service Pty Limited ABN 61 003 399 657AFSL 336969 and/or Moody's Analytics Australia Pty Ltd ABN 94 105 136 972 AFSL 383569 (as applicable). This document is intended to be provided only to "wholesale clients" within the meaning of section 761G of the Corporations Act 2001. By continuing to access this document from within Australia, you represent to MOODY'S that you are, or are accessing the document as a representative of, a "wholesale client" and that neither you nor the entity you represent will directly or indirectly disseminate this document or its contents to "retail clients" within the meaning of section 761G of the Corporations Act 2001. MOODY'S credit rating is an opinion as to the creditworthiness of a debt obligation of the issuer, not on the equity securities of the issuer or any form of security that is available to retail investors.

Additional terms for Japan only: Moody's Japan K.K. ("MJKK") is a wholly-owned credit rating agency subsidiary of Moody's Group Japan G.K., which is wholly-owned by Moody's Overseas Holdings Inc., a wholly-owned subsidiary of MCO. Moody's SF Japan K.K. ("MSFJ") is a wholly-owned credit rating agency subsidiary of MJKK. MSFJ is not a Nationally Recognized Statistical Rating Organization ("NRSRO"). Therefore, credit ratings assigned by MSFJ are Non-NRSRO Credit Ratings. Non-NRSRO Credit Ratings are assigned by an entity that is not a NRSRO and, consequently, the rated obligation will not qualify for certain types of treatment under U.S. laws. MJKK and MSFJ are credit rating agencies registered with the Japan Financial Services Agency and their registration numbers are FSA Commissioner (Ratings) No. 2 and 3 respectively.

MJKK or MSFJ (as applicable) hereby disclose that most issuers of debt securities (including corporate and municipal bonds, debentures, notes and commercial paper) and preferred stock rated by MJKK or MSFJ (as applicable) have, prior to assignment of any credit rating, agreed to pay to MJKK or MSFJ (as applicable) for credit ratings opinions and services rendered by it fees ranging from JPY125,000 to approximately JPY250,000,000.

MJKK and MSFJ also maintain policies and procedures to address Japanese regulatory requirements.

REPORT NUMBER

1236824