

#### **CREDIT OPINION**

29 April 2020

## Update



#### RATINGS

#### Celulosa Arauco y Constitucion S.A.

Domicile	Chile
Long Term Rating	Baa3
Туре	Senior Unsecured - Fgn Curr
Outlook	Stable

Please see the <u>ratings section</u> 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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#### **CLIENT SERVICES**

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

## Celulosa Arauco y Constitucion S.A.

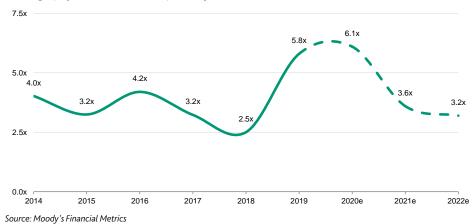
Update to credit analysis

#### **Summary**

Celulosa Arauco y Constitucion S.A.'s (Arauco) Baa3 rating reflects its position as the second-largest market pulp producer globally. Arauco is also one of the world's lowest-cost producers of softwood and hardwood market pulp because of the short harvest cycle of its trees relative to the Northern Hemisphere, its energy self-sufficiency and the proximity of its forests to pulp mills and pulp operations to ports. In the wood products segment, Arauco is the second-largest wood panel producer globally, with an important presence in well-established markets such as North America.

The rating, however, is constrained by Arauco's exposure to the volatility in the pricing of market pulp and the highly competitive landscape for the wood business. Although market pulp demand has been growing steadily, oversupply coming from large-scale projects can cause price disruptions, while the company's results are also exposed to the volatility in the housing market, particularly in the Americas. Lower pulp prices are straining leverage, in particular at a time of large capital spending. We expect leverage to start to show a more significant decline in 2021, and continue a clear path of deleveraging through 2022.

## Exhibit 1 Leverage (adjusted debt/EBITDA) is likely to reduce over the next 12-18 months



## **Credit strengths**

- » Strong market position in market pulp and panels, with low-cost operations
- » Good product and geographic diversification, which provide well-balanced sources of revenue and exposure to different market dynamics in distinct segments

**CORPORATES** MOODY'S INVESTORS SERVICE

Conservative financial management and adequate liquidity

#### Credit challenges

- Exposure to the inherent volatility of the pulp and wood products industries
- Execution risk arising from the MAPA project, which will continue to strain leverage and cash flow metrics in the short term but will enhance the company's production once it starts on second quarter 2021

#### Rating outlook

The stable outlook reflects our expectation that Arauco's credit metrics will remain relatively pressured over the next 12-18 months as a consequence of the low pulp prices, the increase in capital spending and the weakness in demand caused by the coronavirus outbreak. Still, our belief that Arauco will continue to manage capital spending and dividend distribution in a prudent manner and avoid any deterioration in liquidity or increase in refinancing risk supports the stable outlook.

#### Factors that could lead to an upgrade

Although not expected in the intermediate term during the MAPA project, an upgrade of Arauco's rating would occur if:

- leverage (total adjusted gross debt/EBITDA) remains below 3.0x on a sustained basis
- free cash flow (FCF) is positive

### Factors that could lead to a downgrade

Arauco's rating could be downgraded if its liquidity deteriorates and the perceived value of the company's timberlands declines significantly.

Quantitatively, downgrade pressure could arise if:

- leverage (total adjusted gross debt/EBITDA) exceeds 4.5x on a consistent basis
- » FCF remains persistently negative

#### **Key indicators**

Celulosa Arauco y Constitucion S.A.

US Billion	Dec-14	Dec-15	Dec-16	Dec-17	Dec-18	Dec-19	2020	2021
Revenue	\$5.3	\$5.1	\$4.8	\$5.2	\$6.0	\$5.3	\$4.9	5.9
EBITDA Margin %	23.8%	26.0%	22.6%	25.5%	30.5%	19.7%	18.4	25.1
RCF / Debt	14.7%	18.6%	13.7%	18.1%	23.9%	8.9%	14.9%	18.9%
(RCF - CAPEX) / Debt	2.9%	7.8%	2.1%	3.0%	4.2%	-13.2%	-10.1%	0.4%
Debt / EBITDA	4.0x	3.2x	4.2x	3.2x	2.5x	5.8x	6.1x	3.6x
EBITDA / Interest Expense	4.9x	5.2x	4.4x	4.9x	8.5x	3.9x	3.7x	4.7x

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 fiscal year-end unless indicated. LTM = Last 12 months.

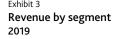
Sources: Moody's Financial Metrics™ (historical) and Moody's Investors Service (forecast)

#### **Profile**

Headquartered in Santiago, Chile, Celulosa Arauco Y Constitución S.A. is engaged primarily in the production of pulp, wood products and forestry products. Arauco is one of the world's largest producers of pulp and wood products in terms of production capacity and it is among Latin America's largest forest plantation owners. The company has industrial operations in Chile, Argentina, Brazil, Mexico, the

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.moodys.com for the most updated credit rating action information and rating history.

United States and Canada. Arauco also has industrial operations in Uruguay, through a 50% joint venture in the Montes del Plata pulp mill, and in Spain, Portugal, Germany and South Africa, through a 50% joint venture with Sonae. As of December 31, 2019, Arauco had more than 1.0 million hectares of plantations in Chile, Argentina, Brazil and Uruguay combined. In 2019, the company generated \$5.3 billion of total revenue, with about 44% coming from pulp, 53% coming from wood products and 3% from the forestry segment.



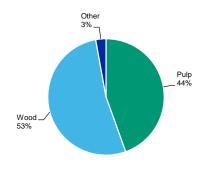
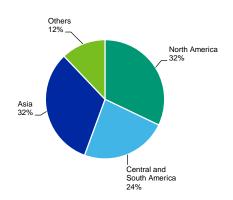


Exhibit 4
Revenue by region
2019



Source: Celulosa Arauco y Constitucion S.A.

Source: Celulosa Arauco y Constitucion S.A.

#### **Detailed credit considerations**

#### Coronavirus outbreak will strain demand for pulp and wood products

The rapid and widening spread of the coronavirus outbreak, the deteriorating global economic outlook and asset price declines are creating a severe and extensive credit shock across many sectors, regions and markets. The combined credit effects of these developments are unprecedented. The paper and forest products sector is affected by this shock given its sensitivity to consumer demand and sentiment. However, in most jurisdictions, the paper and forest products industry has been deemed an essential service. This designation allows Arauco to continue its operations across Latin America and in the United States. Nonetheless, the impact on Arauco's credit profile could leave it vulnerable to shifts in market sentiment in these unprecedented operating conditions as the outbreak continues to spread. Production or logistics disruptions may temporarily slow the distribution of raw materials and products in the affected areas, while weaker demand will likely put downward pricing pressure on some of Arauco's products.

# Strong market position in pulp and wood panels, and well-balanced sources of revenue partially offset the exposure to the volatility in pulp prices

Arauco has a well-balanced revenue base, mostly between pulp and wood products, and benefits from its strong market position in both segments — as the second-largest market pulp producer worldwide (after <u>Suzano papel e Celulose S.A.</u>, Ba1 stable) and the second-largest producer of wood panels globally (after Kronospan).

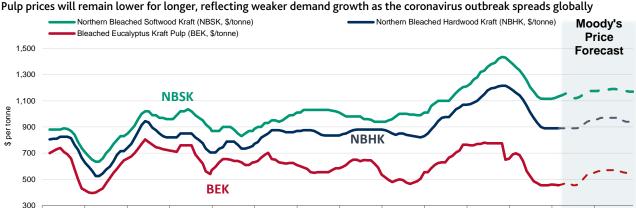
Arauco's financial performance strongly relies on the performance of its pulp and wood panel segments. While pulp is a relatively volatile commodity in the paper and forest products sector, wood panels tend to have more stability as demand and prices are driven by local market trends in the different regions where Arauco operates.

Arauco's pulp production base is concentrated in South America (predominantly Chile), posing some geographic concentration risk to its credit profile, but volumes are well distributed across its seven mills — five in Chile, one in Argentina and one in Uruguay. Arauco has an annual production capacity of four million tons, with sales predominantly directed to Asia and Oceania (about 72% of total sales volume in 2019), followed by Europe (17.5%) and the Americas (North and South America; 10.5%). Arauco's softwood (BSKP, UKP and fluff) production capacity accounts for 53% of total, while hardwood pulp capacity accounts for 47%. After the conclusion of the Modernización y Ampliación de Planta Arauco (MAPA) and dissolving pulp project, the relative share of hardwood capacity will increase to about 63%. As of December 31, 2019, Arauco's planted forests consisted of 64.3% radiata, taeda and elliottii pine and 33.6% eucalyptus.

**CORPORATES MOODY'S INVESTORS SERVICE** 

Arauco is one of the world's lowest-cost producers of softwood and hardwood pulp. The company's consolidated cash cost for softwood pulp production of \$416 per ton is significantly lower than the peers average cost in the US and Canada (\$563 per ton), particularly with respect to timber and energy costs. With a capacity of 779 megawatt (MW), Arauco is self-sufficient in electricity consumption and sells a surplus of 277 MW to the national grids in Chile, Argentina and Uruguay. Arauco expects MAPA to generate an additional surplus of nearly 132 MW.

The pulp market is among the most volatile within the paper and forest industry. Pulp prices have declined since October 2018, and although pulp demand in China has been supported by overall solid paper production operating rates, in particular in tissue and packaging producers, global pulp demand will be strained in 2020 as a result of the coronavirus outbreak, with weaker printing and writing (P&W) consumption and demand for tissue and packaging returning to pre-crisis levels over time. Although resumption of economic activity in China will help support incremental growth in pulp demand, it will not be enough to offset the declines in other regions, in particular Europe.



2014

2013

Pulp prices correspond to the pulp (effective list price) delivered to the US.

2010

2008

2009

Arauco's wood products segment, which includes fiberboard panels, plywood, sawn timber and remanufactured wood products, is more diversified in terms of production profile, with manufacturing plants spread over 11 countries in South and North America, Europe and Africa (including the joint venture Sonae Arauco). Because over 50% of panel revenue is generated in North America, the company is well positioned to benefit from the recovery in the homebuilding sector in the region after the coronavirus crisis subsides.

2015

2016

2018

2019

2020

2021

The performance of the wood panel segment is driven by local economic activity in each country where Arauco operates. With the coronavirus outbreak, we will see weaker fundamentals for the homebuilding industry, affected by lower disposable income and higher unemployment rates, as well as weaker economic growth in Arauco's main markets.

# Weak pulp prices and growth projects will strain credit metrics in 2020, but expansion will enhance production profile once

Over the last few decades, Arauco has made numerous organic investments and acquisitions, which increased the company's geographic reach and further diversified its operating business model. Accordingly, in 2019, Arauco concluded the acquisition of Masisa's assets in Mexico for \$160 million and Prime-Line in the United States for around \$20 million, both in the wood products segment. Still in this segment, Arauco started operations of its MDP Grayling (medium-density particle board) in April 2019, a greenfield project in the state of Michigan, in the United States, with total capital spending of \$450 million, which added an annual capacity of 800,000 cubic meters.

In the pulp segment, Arauco has two projects — the dissolving pulp project at the Valdivia mill and the MAPA project at the Arauco mill. With total capital spending of \$195 million, the dissolving pulp project allows for diversification of the type of pulp produced

at the Valdivia mill. The project was completed as of February 2020 and started production will start production during the second quarter of 2020.

Arauco has a major brownfield project in the pulp segment, which is the modernization and expansion of the Arauco Mill (Proyecto Modernización y Ampliación de la Planta Arauco, or MAPA project). The MAPA project, which has capital spending of \$2.4 billion, consists of the construction and start of a new production line of 1.56 million tons of bleached hardwood kraft pulp (Line 3). Once this line comes online, Line 1 of the Arauco Mill will cease operations and therefore the net increase in production capacity of this mill will be 1.27 million tons on an annual basis, for a total pulp capacity of 5.27 million tons. The expected start of Line 3 is in the second quarter of 2021. With the coronavirus outbreak, there has been some delay in construction, which was 44.6% completed as of March 2020.

We expect the company to present a higher EBITDA margin after the construction and full ramp-up of MAPA, given the stronger contribution of pulp to the company's cash flow. As a result of weaker pulp prices in 2019 (BEK prices have fallen 26%, while NBSK prices have fallen 7%), Arauco's EBITDA (including our adjustments) declined to \$1 billion in 2019 from \$1.8 billion in 2018. This, combined with the incremental debt raised to fund the MAPA project, has driven leverage (total adjusted debt/EBITDA) to a record high of 5.9x. We expect leverage to trend toward 4.5x after the project is completed in 2021, assuming that our expectation of lower average pulp prices in 2020 (compared with 2019 average prices) materializes.

#### **ESG** considerations

Arauco is wholly owned by Empresas Copec S.A., a public company listed on the Santiago Stock Exchange and the Chilean Electronic Stock Exchange, therefore the governance risk is low with clear and transparent reporting. Empresas Copec is a holding company and its principal interests are in Arauco, gasoline distribution, electricity, gas distribution, fishing and mining. Arauco is also indirectly owned by AntarChile, through its 60.8% ownership in Empresas Copec S.A., and is ultimately owned by Angelini Group, through its 74.7% stake (Inversiones Angelini with 63.4% and other related investors with 11.27%) in AntarChile.

According to Arauco's bylaw, the board of directors has nine members, who cannot be executives of the company and are elected at regular shareholder meetings for a three-year period and can be re-elected for any number of periods. Scheduled meetings of the board of directors are generally held once a month.

As a manufacturing company, Arauco faces environmental risks, such as air and water emissions and social risks, such as labor relations, and health and safety issues. The company has established expertise in complying with these risks and has incorporated procedures to address them in their operational planning and business models.

In October 2019, Arauco issued \$1 billion in sustainable bonds, with net proceeds allocated to finance eligible green projects and eligible social projects. A Sustainable Bond Coordination Group, with members from different business units of Arauco, will oversee the process of project selection, while the finance department will approve the projects and oversee the effective allocation of funds. Arauco is the first forestry company in Latin America to ever issue sustainable bonds.

Arauco is committed to safety and follows global best practices and standards, such as OSHAS 18001, in workplace safety. It is also committed to international oversight and world-class environmental standards and certifications, such as ISO 9001 and 14001 and Chain of Custody FSC. Arauco's products are certified as compliant with FSC Chain-of-Custody standards, verifying that they can trace the wood fiber used in production back to responsible sources.

Arauco has a long-term program to restore native forests in Chile. The areas targeted for restoration include large areas of plantations that are going to be restored with native vegetation and other areas of native forests damaged by forest fires.

To reduce the impact of carbon emissions, Arauco generates clean energy from forestry biomass through its five cogeneration power plants in Chile and one in Uruguay. Arauco announced its commitment to achieve carbon neutrality by 2020. Moreover, Arauco's biofuel-based electricity cogeneration plants provide energy for most of its production facilities while freeing surplus capacity (37% of the total capacity of 779 MW, or 277 MW) to be sold in the open market.

Additionally, Arauco has numerous programs to foster community development, which include the construction houses for Arauco's employees and subcontractors every year, the activities of Arauco Educational Foundation, environmental education, among many other projects.

#### Liquidity analysis

Arauco maintains adequate liquidity, supported by a cash balance of \$1.6 billion as of year-end 2019 and availability of \$375 million under five-year committed credit facilities contracted in February 2020, which together are enough to cover debt maturities through 2023. Liquidity is also supported by strong access to local and international debt markets, and solid banking relationships to raise funding when needed. Arauco has a liquidity policy, approved by the board of directors, which maintains conservative criteria regarding the company's liquidity management.

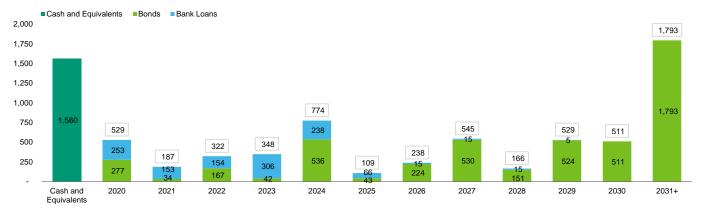
Additionally, on April 28, 2020, Arauco's Board Meeting agreed on holding an Extraordinary Shareholders meeting on May 19 to discuss a capital increase of up to \$700 million - \$250 million in 2020 and \$450 million in 2021, subject to the needs of the company. The capital increase is a positive credit consideration, as it enhances liquidity.

As of December 2019, Arauco had about \$529 million in short-term debt maturities, of which \$277 million related to local bonds due in September 2020 (\$232 million) and about \$45 million related to interest payments. The remaining \$252 million relates to bank loans, most of which (\$173 million) corresponded to a loan for the Montes del Plata mill in Uruguay.

Arauco's liability management initiatives in 2019 included the issuance of \$1 billion in cross-border bonds in April (\$500 million due in 2029 and \$500 million due in 2049) and \$1 billion in October (\$500 million due in 2030 and \$500 million due in 2050). Proceeds from both issuances were used to finance the MAPA project and to repurchase part of the bonds due in 2019, 2021 and 2022.

To further finance the MAPA project, Arauco raised €555 million under an export credit agreement with Finnvera and three banks (BNP Paribas, JP Morgan and Santander). Disbursement will occur during the construction of the MAPA project, with an 8.5-year maturity period. As of December 31, 2019, the total amount disbursed under this agreement was €112.4 million.





Source: Celulosa Arauco y Constitucion S.A.

After generating positive FCF since 2015, Arauco posted negative FCF in 2019, as a result of weaker funds from operations and higher capital spending. Its total capital spending totaled \$1.3 billion in 2019, mostly related to the MAPA project (\$500 million) and \$107 million for the dissolving pulp project. Although we expect about \$400 million in negative FCF in 2020, we expect 2021 to show slightly negative FCF, which will become positive in 2022.

Arauco has ample room under financial covenants applied to local bond agreements and certain bank loans, which require leverage (debt/book capitalization) to remain below 120% and interest coverage (EBITDA/net interest expense) above 2.0x. There are no covenants applicable to cross-border bonds.

**CORPORATES** MOODY'S INVESTORS SERVICE

Arauco had a dividend policy, approved in 2002, which sets a minimum dividend payout of 40% of consolidated net income. In October 2019, the extraordinary shareholders' meeting of Arauco approved an amendment to the company's bylaws to establish that the ordinary shareholders' meeting will determine on an annual basis the dividend distribution amount for the respective period, without being subject to the 30% distributable minimum indicated in the Chilean legislation. Subsequently, in January 2020, Arauco's board of directors agreed to modify the company's dividend policy, which was approved in the shareholders meeting held on April 21, 2020, with the suspension of dividends distribution related to 2019 earnings. This reinforces our expectation that the company will manage dividends prudently, in particular during periods of expansion.

### Rating methodology and scorecard

Arauco's scorecard-indicated outcome under our Paper and Forest Products Industry rating methodology maps to a Ba1. Our forwardlooking view over the next 18-24 months yields a scorecard-indicated outcome of Baa3, reflecting the lower leverage and improving cash flow metrics due to start up of MAPA project. The final outcome Baa2 includes a half-notch uplift from the timberland value, based on the more than 1 million hectares of forests that Arauco has in Latin America.

Exhibit 7 **Rating factors** Celulosa Arauco y Constitucion S.A.

Paper and Forest Products Industry Grid [1][2]	Curre FY 12/31		Moody's 18-24 Month Forward View As of 4/24/2020 [3]		
Factor 1 : Scale (10%)	Measure	Score	Measure	Score	
a) Revenue (USD Billion)	\$5.3	Baa	\$5.9	Baa	
Factor 2 : Business Profile (30%)	-				
a) Product Line Diversification	Baa	Baa	Baa	Baa	
b) Geographic and Operational Diversification	Baa	Baa	Baa	Baa	
c) Market Position, Cyclicality and Growth Potential	Baa	Baa	Baa	Baa	
Factor 3 : Profitability and Efficiency (15%)					
a) EBITDA Margin	19.7%	Ba	25.1%	А	
b) Fiber and Energy Flexibility and Cost	A	A	А	Α	
Factor 4 : Leverage and Coverage (30%)					
a) RCF / Debt	8.9%	В	18.9%	Ва	
b) (RCF - CAPEX) / Debt	-13.2%	Ca	0.4%	В	
c) Debt / EBITDA	5.8x	В	3.6x	Ва	
d) EBITDA / Interest	3.9x	В	4.7x	Ва	
Factor 5 : Financial Policy (15%)					
a) Financial Policy	Baa	Baa	Baa	Baa	
Rating:	,				
Indicated Outcome before Notching Adjustments	•	Ba1		Baa3	
Notching Adjustments	*	0.5	0.5	0.5	
a) Indicated Outcome from Scorecard		Ba1		Baa2	
b) Actual Rating Assigned		Baa3		Baa3	

<sup>[1]</sup> 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. [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 8

#### Peer comparison

FYE	FYE	Ba1 Stable			aa3 Stable			B1 Stable	
		FYE	FYE	FYE	FYE	FYE	FYE	FYE	FYE
									Dec-19
\$5,329	\$3,295	\$3,701	\$6,607	\$5,143	\$6,274	\$5,670	\$1,048	\$1,273	\$1,085
\$417	\$971	\$1,434	\$1,520	\$635	\$1,367	\$640	\$460	\$685	\$429
\$1,030	\$1,532	\$2,007	\$2,762	\$1,136	\$1,871	\$1,152	\$628	\$813	\$545
\$6,050	\$3,926	\$10,061	\$17,408	\$4,263	\$4,074	\$4,137	\$2,752	\$2,164	\$1,856
\$1,560	\$816	\$6,576	\$2,337	\$833	\$968	\$615	\$114	\$158	\$209
1.9x	2.8x	3.6x	1.5x	2.9x	6.1x	3.2x	1.7x	2.9x	2.1x
5.9x	2.7x	5.4x	6.4x	3.8x	2.2x	3.6x	4.6x	2.8x	3.5x
12.0%	26.1%	35.0%	9.7%	25.0%	36.4%	18.4%	11.1%	30.5%	16.5%
-14.0%	5.5%	6.5%	2.1%	11.4%	8.9%	-2.9%	5.3%	21.1%	11.3%
	\$1,030 \$6,050 \$1,560 1.9x 5.9x 12.0%	Dec-19         Dec-17           \$5,329         \$3,295           \$417         \$971           \$1,030         \$1,532           \$6,050         \$3,926           \$1,560         \$816           1.9x         2.8x           5.9x         2.7x           12.0%         26.1%	Dec-19         Dec-17         Dec-18           \$5,329         \$3,295         \$3,701           \$417         \$971         \$1,434           \$1,030         \$1,532         \$2,007           \$6,050         \$3,926         \$10,061           \$1,560         \$816         \$6,576           1.9x         2.8x         3.6x           5.9x         2.7x         5.4x           12.0%         26.1%         35.0%	Dec-19         Dec-17         Dec-18         Dec-19           \$5,329         \$3,295         \$3,701         \$6,607           \$417         \$971         \$1,434         \$1,520           \$1,030         \$1,532         \$2,007         \$2,762           \$6,050         \$3,926         \$10,061         \$17,408           \$1,560         \$816         \$6,576         \$2,337           1.9x         2.8x         3.6x         1.5x           5.9x         2.7x         5.4x         6.4x           12.0%         26.1%         35.0%         9.7%	Dec-19         Dec-17         Dec-18         Dec-19         Dec-17           \$5,329         \$3,295         \$3,701         \$6,607         \$5,143           \$417         \$971         \$1,434         \$1,520         \$635           \$1,030         \$1,532         \$2,007         \$2,762         \$1,136           \$6,050         \$3,926         \$10,061         \$17,408         \$4,263           \$1,560         \$816         \$6,576         \$2,337         \$833           \$1.9x         \$2.8x         \$3.6x         \$1.5x         \$2.9x           \$5.9x         \$2.7x         \$5.4x         \$6.4x         \$3.8x           \$12.0%         \$26.1%         \$35.0%         \$9.7%         \$25.0%	Dec-19         Dec-17         Dec-18         Dec-19         Dec-17         Dec-18           \$5,329         \$3,295         \$3,701         \$6,607         \$5,143         \$6,274           \$417         \$971         \$1,434         \$1,520         \$635         \$1,367           \$1,030         \$1,532         \$2,007         \$2,762         \$1,136         \$1,871           \$6,050         \$3,926         \$10,061         \$17,408         \$4,263         \$4,074           \$1,560         \$816         \$6,576         \$2,337         \$833         \$968           \$1.9x         \$2.8x         \$3.6x         \$1.5x         \$2.9x         \$6.1x           \$5.9x         \$2.7x         \$5.4x         \$6.4x         \$3.8x         \$2.2x           \$12.0%         \$26.1%         \$35.0%         \$9.7%         \$25.0%         \$36.4%	Dec-19         Dec-17         Dec-18         Dec-19         Dec-17         Dec-18         Dec-19           \$5,329         \$3,295         \$3,701         \$6,607         \$5,143         \$6,274         \$5,670           \$417         \$971         \$1,434         \$1,520         \$635         \$1,367         \$640           \$1,030         \$1,532         \$2,007         \$2,762         \$1,136         \$1,871         \$1,152           \$6,050         \$3,926         \$10,061         \$17,408         \$4,263         \$4,074         \$4,137           \$1,560         \$816         \$6,576         \$2,337         \$833         \$968         \$615           \$1.9x         \$2.8x         \$3.6x         \$1.5x         \$2.9x         \$6.1x         \$3.2x           \$5.9x         \$2.7x         \$5.4x         \$6.4x         \$3.8x         \$2.2x         \$3.6x           \$12.0%         \$26.1%         \$35.0%         \$9.7%         \$25.0%         \$36.4%         \$18.4%	Dec-19         Dec-17         Dec-18         Dec-19         Dec-17         Dec-18         Dec-19         Dec-17           \$5,329         \$3,295         \$3,701         \$6,607         \$5,143         \$6,274         \$5,670         \$1,048           \$417         \$971         \$1,434         \$1,520         \$635         \$1,367         \$640         \$460           \$1,030         \$1,532         \$2,007         \$2,762         \$1,136         \$1,871         \$1,152         \$628           \$6,050         \$3,926         \$10,061         \$17,408         \$4,263         \$4,074         \$4,137         \$2,752           \$1,560         \$816         \$6,576         \$2,337         \$833         \$968         \$615         \$114           \$1.9x         \$2.8x         \$3.6x         \$1.5x         \$2.9x         \$6.1x         \$3.2x         \$1.7x           \$5.9x         \$2.7x         \$5.4x         \$6.4x         \$3.8x         \$2.2x         \$3.6x         \$4.6x           \$12.0%         \$26.1%         \$35.0%         \$9.7%         \$25.0%         \$36.4%         \$18.4%         \$11.1%	Dec-19         Dec-17         Dec-18         Dec-19         Dec-17         Dec-18         Dec-19         Dec-18         Dec-19         Dec-17         Dec-18           \$5,329         \$3,295         \$3,701         \$6,607         \$5,143         \$6,274         \$5,670         \$1,048         \$1,273           \$417         \$971         \$1,434         \$1,520         \$635         \$1,367         \$640         \$460         \$685           \$1,030         \$1,532         \$2,007         \$2,762         \$1,136         \$1,871         \$1,152         \$628         \$813           \$6,050         \$3,926         \$10,061         \$17,408         \$4,263         \$4,074         \$4,137         \$2,752         \$2,164           \$1,560         \$816         \$6,576         \$2,337         \$833         \$968         \$615         \$114         \$158           \$1.9x         \$2.8x         \$3.6x         \$1.5x         \$2.9x         \$6.1x         \$3.2x         \$1.7x         \$2.9x           \$5.9x         \$2.7x         \$5.4x         \$6.4x         \$3.8x         \$2.2x         \$3.6x         \$4.6x         \$2.8x           \$1.00         \$2.00         \$2.00         \$2.00         \$2.00         \$2.00         \$

All figures are calculated using Moody's estimates and standard adjustments. Source: Moody's Financial Metrics  $^{\text{TM}}$ 

Exhibit 9

#### Moody's-adjusted debt breakdown

(in US Millions)	FYE Dec-14	FYE Dec-15	FYE Dec-16	FYE Dec-17	FYE Dec-18	FYE Dec-19
As Reported Debt	5,078	4,305	4,481	4,274	4,510	6,050
Operating Leases	31	41	40	43	43	0
Moody's-Adjusted Debt	5,109	4,346	4,521	4,316	4,553	6,050

All figures are calculated using Moody's estimates and standard adjustments. Source: Moody's Financial Metrics  $^{\text{TM}}$ 

Exhibit 10

#### Moody's-adjusted EBITDA breakdown

(in US Millions)	FYE Dec-14	FYE Dec-15	FYE Dec-16	FYE Dec-17	FYE Dec-18	FYE Dec-19
As Reported EBITDA	1,185	1,154	907	932	1,544	826
Operating Leases	10	14	13	14	14	0
Unusual	74	170	156	390	259	204
Moody's-Adjusted EBITDA	1,270	1,338	1,077	1,336	1,817	1,030

All figures are calculated using Moody's estimates and standard adjustments. Source: Moody's Financial Metrics  $^{\text{TM}}$ 

Exhibit 11

#### Key financial metrics

(in USD Million)	2015	2016	2017	2018	2019
INCOME STATEMENT					
Revenue	5,147	4,761	5,238	5,955	5,329
EBITDA	1,338	1,077	1,336	1,817	1,030
EBIT	926	656	902	1,398	511
BALANCE SHEET					
Cash & Cash Equivalents	500	592	590	1,076	1,560
Total Debt	4,346	4,521	4,316	4,553	6,050
CASH FLOW					
Capex = Capital Expenditures	469	523	650	896	1,336
Dividends	143	131	122	257	182
Retained Cash Flow	810	618	781	1,089	537
RCF / Debt	18.6%	13.7%	18.1%	23.9%	8.9%
Free Cash Flow (FCF)	253	146	458	143	-849
FCF / Debt	5.8%	3.2%	10.6%	3.1%	-14.0%
PROFITABILITY					
% Change in Sales (YoY)	-3.7%	-7.5%	10.0%	13.7%	-10.5%
SG&A % of Sales	20.9%	20.3%	19.9%	18.7%	21.4%
EBIT Margin %	18.0%	13.8%	17.2%	23.5%	9.6%
EBITDA Margin %	26.0%	22.6%	25.5%	30.5%	19.3%
INTEREST COVERAGE					
EBIT / Interest Expense	3.6x	2.7x	3.3x	6.5x	1.9x
EBITDA / Interest Expense	5.2x	4.4x	4.9x	8.5x	3.8x
(EBITDA - CAPEX) / Interest Expense	3.4x	2.3x	2.5x	4.3x	-1.1x
LEVERAGE					
Debt / EBITDA	3.2x	4.2x	3.2x	2.5x	5.9x
Debt / (EBITDA - CAPEX)	5.0x	8.2x	6.3x	4.9x	-19.8x
Avg.Assets / Avg.Equity	2.1x	2.0x	2.0x	2.0x	2.1x

All figures are calculated using Moody's estimates and standard adjustments. Source: Moody's Financial Metrics  $^{\text{TM}}$ 

## **Ratings**

Exhibit 12

Category	Moody's Rating
CELULOSA ARAUCO Y CONSTITUCION S.A.	
Outlook	Stable
Senior Unsecured	Baa3
Source: Moody's Investors Service	

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REPORT NUMBER

1223218

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