



# CFA Institute

## CFA Institute Research Challenge hosted by CFA Society Brazil

### Team 3

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## Investment Summary

**Money doesn't grow in trees? Actually, it does!** We issue a BUY recommendation for Suzano (SUZB3), with a 38.5% upside and a target price of BRL 73.32 per share (EoP 2024). The valuation was conducted using the Discounted Cash Flow (DCF) method, complemented by relative valuation and implicit BHKP price analysis. Our recommendation is based on three investment pillars: **(I)** favorable long-term perspectives for the BHKP price benefits well-located players like Suzano, which capitalizes on Brazil's competitive advantages; **(II)** a vast and vertically integrated portfolio that allows it to leverage economies of scale, positioning it as one of the world's lowest cash cost pulp producers; and **(III)** excellent track record of capital allocation, leaving us confident that the company will continue to generate value in capitalizing on future initiatives.

### Well-placed in a resilient sector

We see Suzano operating in a favorable scenario for hardwood pulp prices, as the coming years should have a combination of **(I)** a positive long-term outlook for end-use demand, driven by the increasing tissue consumption in developing countries, plastic substitution efforts and lack of recycled paper giving space for market pulp, which should more than compensate for the printing and writing decline; **(II)** ending of announced capacity expansions, as Cerrado's commissioning in 2024 marks the last significant addition; **(III)** strong price floors, coming from factors such as Chinese integrated producers becoming market buyers and some pulp producers incurring losses; and **(IV)** factors that can increase prices, such as the need for new projects, for which the incentive price is high, and potential supply disruptions resulting in shortages. In addition, we see the company operating in one of the most efficient regions, mainly due to geographical factors that increase wood productivity and decrease its costs.

### The largest tree in the forest

Suzano's merger with Fibria has elevated it to a position of unparalleled scale within the industry. The company possesses a vast and strategically located portfolio of assets that capitalizes on Brazil's advantageous edaphoclimatic conditions. Over the years, its forestry planning has resulted in highly productive farms near the mills, positioning its wood production costs among the most competitive worldwide. Furthermore, thanks to the significant volume of purchases and the influence with wood suppliers and landowners surrounding its mills, Suzano establishes favorable long-term wood supply and leasing agreements. These agreements further contribute to the reduction of its cash production costs.

Upon evaluating the projects underway, as well as the potential future announcements, it's evident that the upcoming 4 to 5 years hold no significant increases in supply. Regarding the post 2028 landscape, our land availability analysis suggests sufficient land in Latin America for new endeavors. However, these would entail a higher price per hectare compared to previous projects, requiring not only a pulp price elevation but also a financially and technically adapted company to fulfill this demand.

### Outstanding capital allocation

Suzano has proven expertise in delivering superior and profitable new projects for both pulp and paper. For pulp, the company stands as the leader in Latin America, best positioned to capture a global surge in demand. This success is largely credited to the management's strategic capital allocation, leading to high-quality projects. We believe this will continue, solidifying Suzano's position and competitiveness in the pulp market. In the paper segment, the company benefits from pulp integration, offering more stable returns through reduced volatility. Additionally, Suzano is strategic expanding into the tissue market through acquisitions and capacity expansion. Thus, for both pulp and paper, the company appears well-placed, and we're optimistic about management's ability to tackle their challenges and execute outstanding projects.

## Valuation

Our target price was based on a DCF model with a 3.5% perpetuity growth. 10 years of FCF were projected with a 10.9% WACC before perpetuity and a 10.4% WACC on perpetuity. The upside comes from our confidence on the delivery of new projects and also from the market being too bearish on future BHKP prices. Although we do not expect large increases from current levels, we also do not see reasons to project a lower long-term price. Furthermore, the Cerrado Project start-up should be a great catalyst for the stock to move: after 2024, Suzano will become a massive cash generator and consolidate even more its leadership position. Our relative valuation and IRR computation also confirm our view that SUZB3 is being underpriced.

## Investment Risks - What can go wrong?

The primary downside risks in our analysis include: **(I)** business and operational risks, primarily associated with the execution of the Cerrado Project, potential natural disasters, and the impact of climate change on Brazil's advantage; **(II)** macro risks, notably linked to the appreciation of the Brazilian Real and alterations in tax legislations affecting the company; and **(III)** market risks, chiefly concerning pulp prices. These prices can be affected by reduced end-use demand - especially in China -, and an oversupply due to economically irrational projects. Both scenarios can lead to price declines that significantly impact our valuation. Additionally, rising raw materials costs without pulp price increases can impact the company's profitability.

Highlights	Unit	2022A	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E	2031E	2032E
<b>Financial estimates</b>												
Net Revenue	[BRL mn]	49,831	38,222	44,445	49,000	53,392	55,261	57,195	59,197	61,269	62,924	64,625
Adj. EBITDA	[BRL mn]	28,195	17,024	21,619	23,646	26,228	27,246	28,316	29,449	30,662	31,563	32,340
FCF Yield	[%]	8.2%	-0.9%	3.0%	8.0%	9.7%	10.8%	11.3%	11.9%	12.6%	13.1%	13.5%
Net debt/EBITDA	[x]	1.94	3.43	2.81	2.40	2.13	1.99	1.86	1.74	1.63	1.54	1.46
Pulp price (export market)	[USD/ton]	756	580	605	580	610	626	641	658	675	692	709
<b>Margins</b>												
Gross margin	[%]	50.2%	31.8%	36.8%	37.3%	39.2%	39.6%	40.1%	40.6%	41.2%	41.5%	41.5%
Adj. EBITDA margin	[%]	56.6%	44.5%	48.6%	48.3%	49.1%	49.3%	49.5%	49.7%	50.0%	50.2%	50.0%
<b>Profitability</b>												
ROIC	[%]	19.7%	7.5%	8.0%	9.0%	10.6%	11.3%	11.9%	12.6%	13.4%	13.9%	14.3%
EBITDA/ton (pulp)	[BRL/ton]	2,463	1,349	1,581	1,546	1,699	1,766	1,838	1,913	1,995	2,053	2,101
EBITDA/ton (paper)	[BRL/ton]	2,698	2,344	2,627	2,684	2,698	2,788	2,881	2,976	3,075	3,171	3,270
<b>Operational</b>												
Pulp volume	[mn tonnes]	10.60	10.17	11.29	12.81	13.07	13.07	13.07	13.07	13.07	13.07	13.07
Paper volume	[mn tonnes]	1.31	1.41	1.43	1.43	1.49	1.49	1.49	1.49	1.49	1.49	1.49

Recommendation	BUY
Date	11/17/2023
Ticker	<b>SUZB3</b>
Current share price	BRL 52.94
Target Price	BRL 73.32
<b>Upside</b>	<b>38.50%</b>

Stock data	
Industry	Pulp and Paper
Stock Exchange	B3
Current market cap	BRL 70.1 bn
% Free Float	50.4%
Average daily volume (3M)	BRL 383.4 mn

Exhibit 1: Share price x IBOV

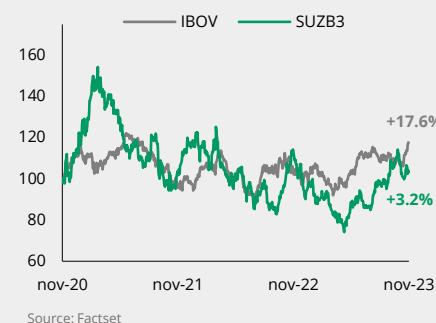
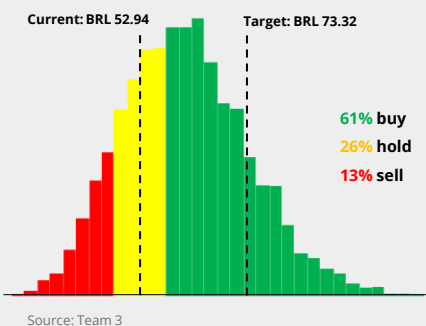


Exhibit 2: Monte Carlo simulation



## Business description

Established in 1924 by the Feffer family, the company took its first steps in São Paulo as a paper reseller. In the next decades, recognizing the vast potential of Brazil's forestry resources, Suzano embarked on a pioneering journey of eucalyptus pulp production. In the 1990s, Suzano expanded its global footprint, exporting to various countries and ensuring its presence in international markets. By the 2010s, Suzano had diversified its portfolio, delving into tissue paper and lignin products. It has also pioneered in digital innovation and genetic research and development in forestry, optimizing plantation yield and efficiency.

The company's significant breakthrough came in 2019 with the Fibria merger. This union has propelled it to the position of the world's largest pulp producer (Exhibit 3), reinforcing its dominance in the sector and enabling it to tap into even more economies of scale. Despite the clear consolidation, it remains investing in new projects and increasing its revenue, as shown in Exhibit 4. In addition to its core pulp business, Suzano has consistently been at the forefront of ESG initiatives, especially focusing on decarbonization, top-tier governance practices, inclusion in the workplace and projects of community upliftment in the cities where it operates.

Suzano remains firmly under the control of its founding family, holding over 40% of the company's shares. Since the company is centenary and the family has no plans to liquidate the position, we do not expect the long-term initiatives to be undermined by the whims of short-term market expectations. Therefore, despite a relative pressure from minority shareholders on quarterly results and more dividend payouts, it maintains a policy of continuous investments to strengthen profitability.

## Segments

**Pulp:** Suzano's primary focus lies in Bleached Eucalyptus Kraft Pulp (BEKP) production, mainly from its own eucalyptus forests, comprising 83% of its total sales as of 2022. Despite being part of a segment of low added value, it is the most profitable division, with a 63% EBITDA margin - a reflection of its many cost advantages.

**Paper:** comprises the company's papermaking - mainly composed by printing and writing paper and paperboard. Most of Suzano's paper production is sold to the domestic market. This segment benefits from a fully integrated pulp production, which cuts out extra freight expenses and helps maintain higher margins.

Although it represents less than 17% of the revenue, the paper segment is a key factor in stabilizing the company's revenue streams. Paper products have greater added value compared to pulp, and their prices don't decrease to the same extent as pulp during market fluctuations. This dynamic allows the company to partially maintain its margins when pulp prices decline, serving as a strategy against the core business volatility. It's important to notice, though, that Suzano's integration is less extensive than some competitors in the industry, potentially making it slightly more vulnerable to pulp price fluctuations and revenue volatility.

Furthermore, this division encompasses the tissue unit, which was boosted by the acquisition of Kimberly Clark Brazil in 2022, which is renowned for its flagship brand "Neve", top of mind in national toilet paper. In consequence of this acquisition, Suzano became the second largest Brazilian player in tissue, with 22% market share as of end 2022. Despite accounting for less than 3% of the company's total sales, the tissue segment plays a strategic role. It boosts the company's profit margins thanks to the efficiencies gained from integrating tissue production within existing factory operations. Additionally, it allows the company to make use of tax credits that come from exporting pulp, which might otherwise be difficult to utilize.

## Physical Structure

The company strategically operates 11 plants across Brazil's productive eucalyptus states and has administrative offices in Salvador and São Paulo. The overview of the main units is described in the table:

Mill	Major product	Port Destination	Distance to port (km)	Installed capacity (kton/year)	
				Paper	Pulp
Imperatriz-MA	Pulp	Itaqui	670	60	1,590
Jacareí-SP	Pulp	Santos/Domestic	150	-	1,100
Três Lagoas-MS	Pulp	Santos	750	-	3,250
Suzano-SP	Paper	Santos/Domestic	80	450	170
Limeira-SP	Paper	Santos/Domestic	250	290	400
Aracruz-ES	Pulp	Portocel	3	-	2,340
Mucuri-BA	Pulp	Portocel	250	200	1,480
Eunápolis-BA (Veracel)	Pulp	Portocel	482	-	560
Other smaller mills	Paper	-	-	400	-
<b>Total</b>				<b>1,400</b>	<b>10,890</b>

Source: Company

In addition to the units highlighted in the table above, the company also has a non-integrated paper production facility in the state of São Paulo (Rio Verde unit), and units in Cachoeiro do Itapemirim-ES and Maracanaú-CE and is constructing a 2.55 Mt/year mill in Ribas do Rio Pardo-MS (Cerrado project). For exports, Suzano has marine terminals and operations in three Brazilian ports: Itaqui port, Santos port and Barra do Riacho port (Portocel). All of its mills are located near the coast or have railway connections to ports (Exhibit 5). Additionally, the company owns a fleet of vessels and has established long-term contracts with major shipping companies. These strategic measures enhance its ability to meet market demand and substantially reduce freight-related expenses, which constitute a notable portion of operational costs.

The company also operates four regional distribution centers for its national paper business—two in São Paulo, one in Serra-ES, and one in São José dos Pinhais-PR. These hubs not only ensure faster and more reliable deliveries to its clients but also results in freight cost savings over time.

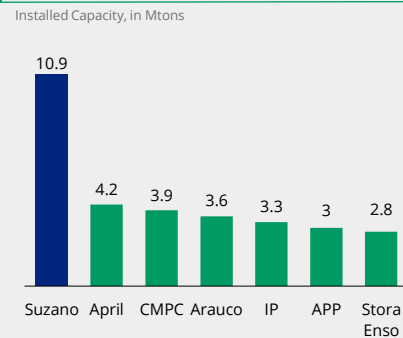
## Commercial Strategy

The company argues that its commercial strategy is built on the pillars of strong relationships, long-term partnerships, and personalized services. With sales teams strategically positioned in Brazil, China, Austria, and the United States, it aims to tailor its products to meet the specific needs of its clients in various regions. However, in this industry, since there is not relevant differentiation between the pulp produced by Suzano and by other large BEKP players, customers are very elastic to price changes and usually switch suppliers if more favorable pricing becomes available.

That being said, despite Suzano's dedication to relationship building and service quality, we believe client loyalty is quite limited. The company holds little to no bargaining power with them, as seen in the virtually zero spread between the prices charged by the company and the market price, shown in Exhibit 6. This was clearly demonstrated in 2019, when Suzano reduced exports to China to counter falling pulp prices, aiming for a rebound. Nonetheless, as others continued selling to China, market prices fell further, negatively impacting Suzano's results, leading to high inventory levels and significantly lower operational numbers.

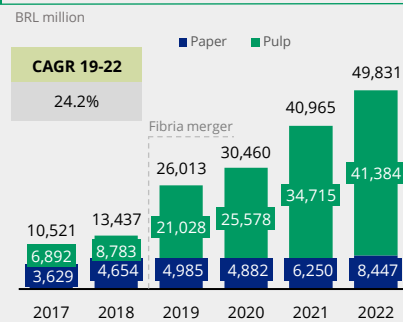
Therefore, in our opinion, having competitive production costs is the main driver to navigate the industry.

Exhibit 3: World's largest pulp producers



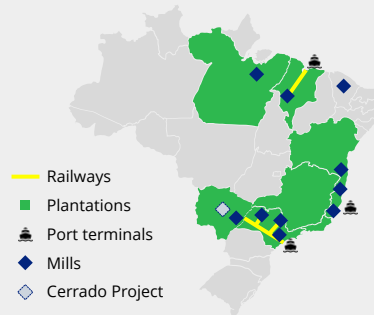
Source: Hawkins Wright

Exhibit 4: Historical revenue by segment



Source: Company

Exhibit 5: Overview of Brazilian operations



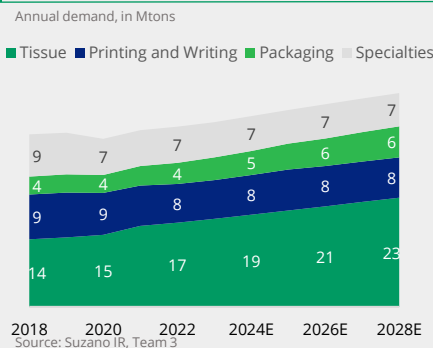
Source: Company

Exhibit 6: Suzano's BHKP vs market prices



Source: Company, Fastmarkets

Exhibit 7: BHKP demand by segment



Source: Suzano IR, Team 3

## Industry Outlook

Suzano's market BEKP represents only a small fraction of the world's fiber industry, which comes from many sources. From the 435 Mtons of world fiber consumption, 249 Mtons come from recycled paper (mainly from printing and writing office paper, which can be recycled and used again to produce packaging paper), and 10 Mtons come from non-wood sources, leaving 175 Mtons of demanded virgin wood pulp. From this demand, 106 Mtons are supplied directly through integrated players, which are companies that produce both pulp and paper, while the market pulp consumption of 69 Mtons is divided into 7 Mtons of non-chemical wood pulp, 6 Mtons of Fluff, 19 Mtons of BSKP and 36 Mtons of BHKP, where Suzano's BEKP is included.

To understand the demand rationale, first we need to differentiate the Hardwood pulp (BHKP) from the Softwood pulp (BSKP). The long fiber, BSKP, comes mainly from coniferous trees, such as Pine, which have longer rotation cycles and lower productivity. Having a greater resistance, this is the preferred one for packaging uses and serve as a reinforcement component when mixed with hardwood. The short fiber, BHKP, comes mainly from deciduous trees, such as Eucalyptus, having a shorter rotation cycle and higher productivity when compared to long fibers. It is characterized by its softness, but is also more fragile than the long ones, although its resistance is improving due to technological evolutions. Because of differences in the production process, hardwood pulp is more cost-effective than softwood. As technology advances, this cost advantage has driven its market share to grow and significantly increased the demand for BHKP.

### Resilient demand for a utility-like commodity

Looking at the end-use demand, it is typically divided into Packaging, Printing and Writing, Tissue and Specialties, each one with different dynamics and BHKP participation.

**Packaging:** fiber is used to package many things: from food to international shipments. Packaging is divided in Containerboard, which benefits from e-commerce growth, and boxboard, which benefits from food delivery trends. Although it represents a great fraction of the fiber demand, it uses mainly recycled paper and integrated pulp, but reduced recycled paper availability and legislation changes (such as recycled ban for food packaging and China's waste import ban) are drivers for market pulp. Another trend that generates potential upside is the single-use plastic substitution, already incorporated by some companies, such as McDonald's and Starbucks, leaving space for virgin fiber use, which we see as an optionality that can add 3 Mtons of demand until 2030. Another potential upside is the increasing use of hardwood fiber in packaging, due to technological innovations such as Klabin's Eukaliner, produced 100% from eucalyptus pulp.

**Printing and Writing (P&W):** it is the classic conception of paper, the A4 office paper, newsprint and others are in this category. P&W has a declining trend, mainly due to digitalization and sustainability concerns. Although declining, it will remain as one of the main uses of BHKP, as softer fibers help to absorb paint.

**Tissue:** refers to the use of paper on soft and comfortable products, such as hygiene paper, paper towel and napkins. The tissue segment has the greatest prospects among the fiber uses, benefiting not only from the hygiene focus in developing and highly populated countries like the BRICS, which drives its per capita usage, but also from urbanization, increasing demand exponentially. Though representing less than 10% of the total fiber market, the tissue market is responsible for 50% of BHKP demand as it requires more short fibers for softness. The market pulverization doesn't incentivize suppliers to integrate production, leading them to use market pulp to meet operations demand. Additionally, the higher price gap between BSKP and BHKP in recent years (as shown in [Appendix 7](#)), along with the increasing resilience of short fibers, encourages producers to use BHKP for their operations.

**Specialties:** represents the use of paper for other things that are not classified in the three segments above. It also occupy a relevant part of the BHKP demand, as it is versatile to these many uses.

Between consumer demand and pulp producer sales lie the paper makers, who primarily use pulp as their essential raw material. By closely examining the production and capacity of these producers, we can infer trends in pulp demand. In recent years, we observed an influx of new paper capacity, mirroring the trends in the pulp industry. This surge led to decreased capacity utilization, even with rising demand. The issue is that major Chinese companies persist in initiating new projects, reinforcing our confidence in the robust demand outlook for market pulp (as further detailed in [Appendix 8](#)).

Combining the four main segments, we arrive at a consistently growing demand for market pulp, as shown in [Exhibit 7](#), which characterizes more like a consumption commodity than a cyclical one, by the nature of its demand.

### Rapidly increasing supply challenges the industry

To meet the growing demand, pulp companies announced projects to increase their volumes, constructing mills with higher-than-ever volumes and lower cash costs when compared to the old mills that currently represent the marginal producer. These projects will result in a supply growth of 8.7Mtons from 2021-2025E only in South America, which shifts the cost curve down (See [Exhibit 10](#)). We expect demand to increase by only 4.1 Mtons in the same period (see [Appendix 6](#) for our S/D model), lowering the capacity utilization rate of the industry, which tends to imply in lower prices (See [Exhibit 8](#)). However, we have reasons to believe that the market will return to a healthy Supply and Demand and strong price equilibrium, which will be discussed in the following section.

### Why are we optimistic about pulp prices?

**Taking a deeper look at the recent movements:** recently, we have observed a considerably high volatility in BHKP prices. In 2022, there was a huge spike in prices (hitting more than USD 860/ton) and, due to new projects entering the market, BHKP dropped from a high in October 2022 to around USD 475/ton in April 2023. After that, there has been a recovery caused mainly by integrated producers, since it became economically rational to purchase pulp from third-parties rather than producing in-house. Also, there was a significant effect coming from restocking: after the announcement of new projects, players reduced inventory purchases, expecting to buy pulp at lower levels later. Since these record-low levels began to be observed in April, demand heated up, such that Suzano is now selling pulp to China at USD 630/ton. We see that, in the short-term, factors such as inventories play an important role, with the fundamentals of supply and demand driving the long-term price.

**Costs play more of a support role:** when looking at the past, we see that, as technology advanced, projects got larger and costs were reduced. Despite that, pulp prices remained stable (or even increasing in some times), which makes us comfortable about the future, since efficiency gains tend to be reflected as higher margins rather than lower prices (see [Exhibit 9](#)), as the costs act as a floor, not a ceiling.

**Integrated producers as a price floor:** as one of the biggest pulp consumers in the world, China relies heavily in market pulp imports to supply its demand. In 2021 and 2022, when pulp prices hiked, several Chinese paper manufacturers who initially bought market pulp saw that they could increase profits by becoming integrated. By producing in-house, their costs were undercutting the market price (see [Exhibit 11](#)), prompting over 10 Mtons in potential projects. However, China's limited wood supply forces these manufacturers to import wood chips, primarily from Vietnam, making them heavily reliant on these import costs. We studied the financials of Sun Paper Holdings, a Chinese pulp producer, to delve deeper into the cost benefits of domestic pulp production versus market purchase. Our analysis revealed a cost of USD 615/ton in 2022, with wood accounting for USD 450/ton. As this wood cost is very volatile, we estimated it as a function of woodchip import prices for the other periods, maintaining the other costs as of Sun Paper's and

Exhibit 8: Capacity x Demand

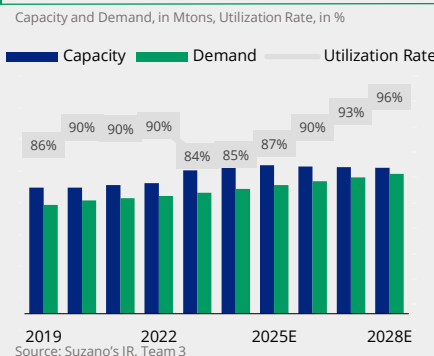


Exhibit 9: Price and marginal cash cost

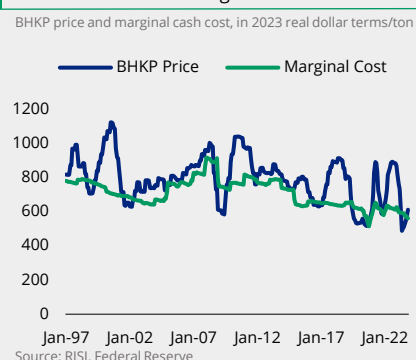


Exhibit 10: Cost curve for 2021 x 2028E

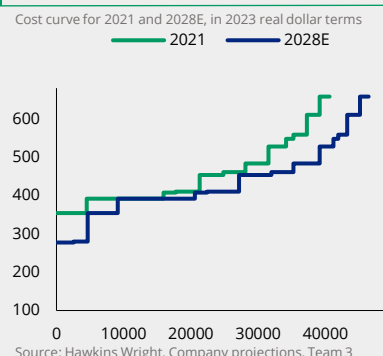


Exhibit 11: Integrated cost x BHKP Price

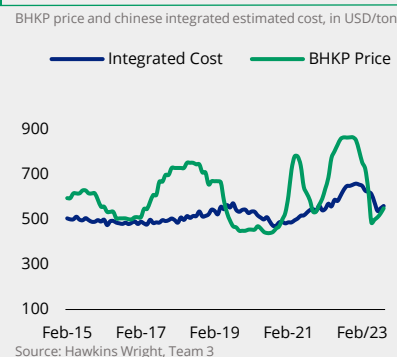
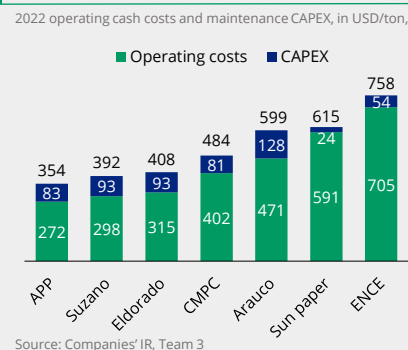


Exhibit 12: Minimum price to profit





excluding pulp delivery costs, as integrated producers don't have them. While this was profitable during the high prices of 2021/2022, it's no longer the case. Ultimately, in a scenario of declining prices, this elevated cost will compel integrated producers to use market pulp (further details on [Appendix 9](#)). We observed this shift earlier in the year when prices approached USD 500/ton, which we believe sets a price floor.

**Producers struggling at lower prices:** at the lower prices we saw at the beginning of 2023, even producers from the low end of the cost curve were operating on the red. Arauco has been delivering negative profits since 4Q22, while the wood and pulp division of UPM has even delivered a negative EBIT in 2Q23, whereas other companies reported lower margins. To better understand this dynamics, we calculated the minimum price for companies to pay for the operating costs and CAPEX, using 2022 data (see [Exhibit 12 and Appendix 10](#)). We concluded that even companies known to be in the low end of the cost curve can start to have losses if prices go down, what we see as unsustainable. The difference between this calculus and the cash cost curve is that the curve focus only on marginal costs, while we are looking at all the costs and expenses of the company, which better reflects the shareholder view.

**Growing demand requires more projects, for which the incentive price is high:** the escalating demand necessitates new projects, as we project a high capacity utilization rate in 2027 and 2028, assuming no new projects. Although new ventures, with efficiency on par with Cerrado, have low variable costs compared to commodity prices, a price of at least USD 620/ton is essential to cover a substantial CAPEX (see [Appendix 11](#) for details) and secure an IRR exceeding the cost of capital. This casts doubt on the feasibility of prices below this level. The recent surge in land and wood costs, which is likely to elevate CAPEX for new projects, further substantiates the need for higher incentive prices.

**Markets tend to overestimate supply capacity:** some other events, such as (I) higher supply disruptions in the following years, mainly due to climate changes and aging mills, which is not priced by the market due to its unexpected nature, (II) voluntary closure of low-scale obsolete and high-cost mills and (III) new projects delays create supply shortages, which should result in higher prices.

## Competitive Positioning

### South America is the best place to be

If we look at the recent launched projects - Arauco MAPA (Chile), UPM Paso de los toros (Uruguay), Bracell Star (Brazil) and Suzano Cerrado (Brazil) - which will shift the industry cost curve down in the next years (see [Exhibit 11](#)), as well as the probably next projects to be launched - Eldorado Vanguarda (Brazil), Arauco Sucuriu (Brazil) and Paracel (Paraguay) - they are all concentrated in South America. But why are companies from all parts of the globe, such as the Finnish UPM and the Asian RGE, focusing its new investments in this continent?

**Unmatchable cost structure:** in analyzing pulp companies, several costs are key for geographical competitiveness. The wood cost is crucial, factoring in everything from the initial expenses of planting and nurturing trees, to the costs associated with their harvest and transportation to the factory. In instances where lumber is outsourced, this shifts to the acquisition price. In both cases, land productivity is the main driver, in which Brazil outstands (see [Exhibit 13](#)). In the pulp production process, the costs of chemicals like caustic soda and chlorine dioxide are substantial, with bargaining power playing a key role in their procurement. Additionally, labor and freight are significant, while energy, maintenance, and stoppages are more about company efficiency than geographical factors. Comparing the countries' cost structures, and using Suzano as the South America ambassador, we can clearly see the wood cost driving the continent's advantage over its competitors (see [Exhibit 13 and Appendix 12](#) for details). Note that even when comparing to cheaper Indonesia, Brazil is still better in terms of wood costs. So, what gives Brazil this distinct edge?

**Great natural conditions:** although eucalyptus can grow in many environments, some characteristics drive its productivity, such as sun irradiation, temperature, rainfall and soil fertility (more details in [Appendix 14](#)). Through a proprietary analysis, we mapped the areas that follow the edaphoclimatic criterias established by Eucalyptus specialists using the geospatial programming language QGIS (See [Exhibit 15](#)). The ideal shape of these conditions are found mostly in the South Hemisphere, close to 20 degrees of longitude. The areas in green represent the best to plant Eucalyptus. By looking at the graph, we see great potential in Brazil, Subtropical Africa and Southeast Asia.

**Other continents do not look good:** among the assigned places, we see that Africa has a great natural potential, but it won't be unleashed due to (I) a very unstable political environment, (II) lack of technology to develop seed adaptivity and (III) bad logistics infrastructure. Looking at Southeast Asia, most of the areas with great potential are occupied by native forest, making the harm of planting eucalyptus higher. For instance, APP doesn't have the FSC Certificate due to deforestation accusations.

**Brazil has got it all:** in Brazil, notably in Mato Grosso do Sul, areas once used for livestock now offer potential for Eucalyptus cultivation. The region's proximity to the "Malha Oeste" and "Malha Paulista" railways, along with government support, enhances its logistic framework. Moreover, Brazil's advanced climate-adapted seeds, developed by companies like Futura Gene, are elevating productivity, although some genetically modified seeds await FSC approval. But how does Suzano stand out?

### Unmatching scale in pulp production

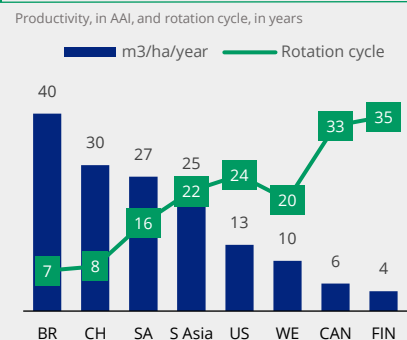
**A fruit of the union of titans:** in 2019, Suzano merged with Fibria Celulose, which, at the time, was the largest market pulp producer of the world. The company issued 255 million shares to accommodate the former Fibria shareholders and paid BRL 29 billion in cash. The M&A proved highly accretive, facilitating a more efficient utilization of both companies' forests and mills, which culminated in a total of BRL 1.3 billion in pre-tax synergies. These synergies were primarily driven by reductions in logistic costs and G&A expenses. This strategic move catapulted the company to become the world's leading eucalyptus pulp producer, boasting nearly 27% of the global BHKP installed capacity as of 2022. Being the leading player affords numerous advantages, which significantly reduce costs:

**(I) Higher bargain power with suppliers:** by being one of the largest companies in the sector, Suzano often serves as the primary, if not the exclusive, buyer for its suppliers. First, the company typically stands as the solitary major purchaser of wood close to the mill. Since the cost of long-distance transportation acts as a limiting factor, Suzano is nearly assured of acquiring this essential resource under favorable terms regarding both price and payment terms. Furthermore, Suzano has established partnership programs with local producers through initiatives as FuturaGene and the Semear Program, providing them free technical support and sharing technologies to enhance their productivity. In return, the company cultivates long-term contracts with these local producers, thereby securing a steady wood supply for several years.

On another cost front, chemicals, even though Suzano deals with sizable multinational corporations that also have respectful market power, like Bayer and BASF, it still has favorable conditions due to the substantial volume bought, which amounted over BRL 2.2 bn in 2022. This bargaining power with both wood and chemical suppliers significantly strengthened after the merger with Fibria, resulting in extended payment terms (see [Exhibit 16](#)).

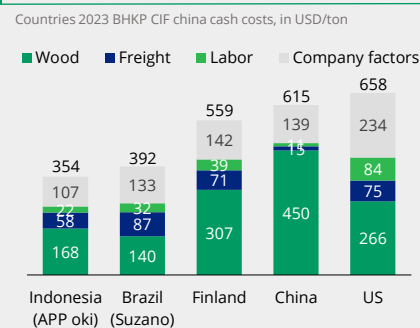
**(II) Energy autonomy and surplus:** one of the avenues for value creation in their factories lies in the harnessing of biomass derived from the cellulose production process. Around 30% of the organic material, which would otherwise be discarded, is now used to generate energy. This green initiative has not only made their factories energy self-sufficient (currently 85%) but has also enabled them to capitalize on surplus energy sales. This result in an important reduction in the company's cash cost. However, the company still sells less energy per ton of pulp sold than its peers, underscoring the potential for efficiency enhancements. In 2022, it

Exhibit 13: Productivity and rotation cycle



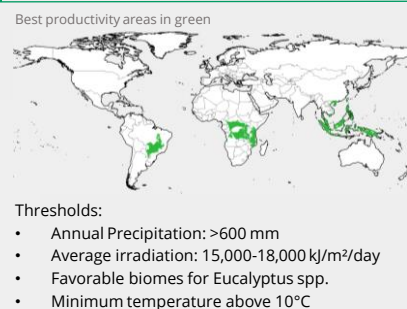
Source: Iba, Klabin's IR

Exhibit 14: CIF China cost by country



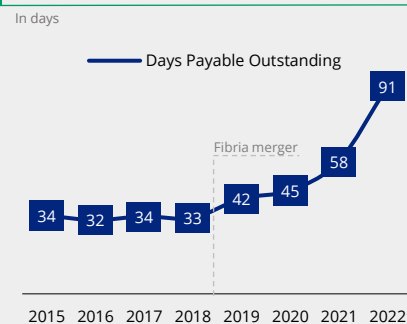
Source: Companies' IR (APP and Suzano), Hawkins Wright

Exhibit 15: Optimal areas for Eucalyptus



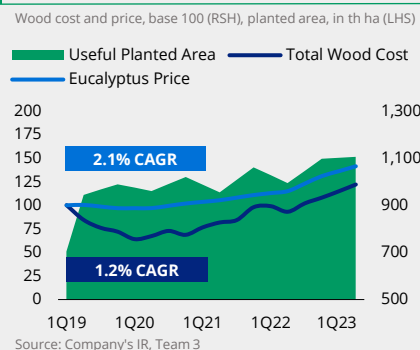
Source: NASA MODIS; (QUEIROZ et al., 2020); (Zhang, Wang, 2021)

Exhibit 16: Days payable outstanding



Source: Company

Exhibit 17: Wood cost



Source: Company's IR, Team 3

sold 142 MWh per ton, and 57% of its produced electric energy, while Arauco and Eldorado sold 404 MWh, 476 MWh per ton and traded 43% and 53% of their produced energy, respectively.

**III) Huge forests landbank:** it allows the company to produce most of its pulp using own wood (63%). The main component of the cash cost is the cost of wood, referring to all production costs of own wood and purchase of third-party harvested wood. Thus, the expansion of its productive lands was one of the strategies the company used throughout its history to protect itself from timber prices increase. Analyzing the total cost of wood (wood cash cost plus forest maintenance cost) in *Exhibit 17*, we can see how internalizing production contributed to reducing the index. And we can see ongoing investments in this area, acquiring in 2021 Vitex and Parkia, which representing the forest assets of these companies located in Mato Grosso do Sul, Bahia, Espírito Santo, and São Paulo.

**IV) High expertise in eucalyptus productivity:** this enables Suzano to develop clones highly adapted to the specific soil and climatic conditions of the regions where it has mills. This genetic expertise allied to Brazil's edaphoclimatic advantages has led it to achieve one of the world's highest **Annual Average Increment (AAI)** of its forests, at an average of 37 m<sup>3</sup> of wood per hectare per year in 2022, ahead most of its competitors, even the Latin America ones (see *Exhibit 18*). However, it's important to note that the company has a lower AAI compared to Klabin. This discrepancy is mostly because Klabin's forests are primarily concentrated in the South of Brazil, which benefits from more fertile soils and high pluviosity. In fact, maintaining consistently high forestry productivity becomes challenging because it operates across various regions across Brazil, and it doesn't always benefit from premium conditions like Klabin. However, when comparing Suzano's with the other Latin America big players like Arauco - it becomes evident that the company keeps sustaining a relatively high AAI, what makes us confident that the company can expand its operations without a significant loss in forestry productivity.

**V) Forest to mill freight savings:** The most direct advantage of this high AAI is a significant reduction in freight costs. Due to the abundant eucalyptus production per hectare, the company needs a smaller forest area to supply its mill. Consequently, the average distance the wood needs to travel (what we call **average radius**) is considerably shorter than most of its competitors. This leads to substantial savings in logistic expenses, as trucks must cover much shorter distances to transport the wood from the forest to the mill. To measure that, we analyzed the forest-to-mill freight per ton of each producing unit of Suzano (more details in *Appendix 15*), including loading and unloading costs and empty return, and noticed that a reduction of 10 kilometer in the average radius can yield cost savings of around BRL 8.6 per ton produced (see *Exhibit 19*).

**(VI) Maximizing factory output:** to retain competitiveness, it's essential for firms to maximize mill efficiency. To assess this: (I) we analyzed the technical age of their assets (*Exhibit 20*), revealing the company's assets as younger than peers' with significant pulp mill capacities, and (II) we examined the capacity utilization rate (*Exhibit 21*), indicating the extent to which facilities are used. Suzano is utilizing nearly its full mill capacity and emphasizing modernization, both vital for optimizing pulp production and minimizing costs from aged technologies.

## Unfolding the realm of future pulp projects

It's important to notice that this high wood productivity advantage primarily stems from the favorable topographic, climate, and soil conditions found in Latin America, particularly in Brazil. While Suzano's clone improvements may marginally enhance this advantage, any company operating in these regions can leverage these favorable conditions to achieve similar productivity gains.

**But why can't other players try to absorb the future demand too?** They actually can, and potentially they will. With this fact in mind, it becomes crucial to closely monitor potential new projects in Latin America that could lead to an increase in the global pulp supply, possibly pressuring prices down.

As outlined in the industry overview, many projects announced in recent years have already become operational. Among those still pending, Suzano's Cerrado is set to launch in June 2024, while Paracel is holding out for more favorable interest rate conditions. Both projects are on the industry's radar. Given the time it takes for a project of Cerrado's magnitude to go from approval to full operation (typically 30-40 months), and the current absence of any new announcements (except for Arauco's Sucuriú - expected to launch only in 1Q28), it is highly unlikely that there will be significant new increases in pulp supply over the next 4-5 years that aren't already priced by the market.

**However, what lies on the horizon beyond 2028?** Following the ramp-up of Arauco's Sucuriú project, there aren't currently new announced projects for after 2028. Nevertheless, several companies have been actively involved in new initiatives over recent years, like Paracel and Arauco, for example, and potentially would be in the coming years. For these prospective projects, two primary factors significantly influence the assessment of investment viability for these companies: prices - which should be maintained in stability due to the consistent growth in demand - and the availability of wood in proximity. The latter is particularly crucial since, as shown above, the logistic cost of transporting timber from forests to the factory plays a pivotal role in the overall cost structure. Consequently, it would be economically impractical to establish a factory in an area that lacks readily accessible and suitable locations for wood cultivation.

Taking this into account, we conducted an analysis of available land in Mato Grosso do Sul (*Exhibit 22*) by excluding areas that are not suitable for eucalyptus planting. Firstly, we excluded Pantanal areas due to excessive soil moisture, which makes eucalyptus cultivation impractical. Next, we considered restricted areas, such as legal reserves, permanent preservation areas, and areas near rivers, which have restrictions that prevent or limit deforestation. Additionally, we excluded areas within the influence radius of another completed or announced mill, as the high demand from both mills would drive wood prices in overlapping areas to prohibitive levels, rendering the project unviable. Moreover, the existing mill would hold a competitive advantage in this scenario, due to its established relationships and long-term contracts with most of the neighboring eucalyptus plantations.

Furthermore, we decided to exclude areas that are highly suitable for more profitable crops like soybeans and corn as they have significantly higher added value when used for these shorter-cycle crops. Eucalyptus cultivation has a longer cycle and is less profitable when compared to these crops, making it economically unfeasible to acquire and adapt these areas for eucalyptus planting. In this context, our analysis focused on livestock areas that are not within the influence radius of existing or potential industrial plants, such as the Cerrado and Sucuriú. These remaining areas represent an opportunity for the expansion of eucalyptus cultivation. When we calculate the total land available in these areas, it amounts to 9.8 million hectares, which, even considering the influence range of a mill like Cerrado (2.5 Mton/year), would be enough to new projects could be accommodated without causing undue stress on wood prices, as shown in *Exhibit 22*.

This aligns with the statement by Jaime Verruck, the State Secretary for Economic Development of Mato Grosso do Sul, who emphasized that "The state has the capacity for eight million metric tons of pulp production and holds the potential for up to 15 million". The pattern repeats when examining land availability in other viable states of Brazil or Latin American regions like Paraguay, Uruguay and Chile: while suitable land for new hardwood forests supporting large industrial facilities exists, most productive and economically viable areas are already in use.

In this context, we don't see land availability itself as a prohibitive barrier to establishing new factories that could potentially compete with Suzano, but these projects would require scenarios with a more substantial gap between market prices and cash costs to justify the high price paid for the forest land (*Exhibit 23*). However, increases in demand would boost Suzano's cash flows during the time it would take for competitors to construct the necessary units to meet this demand surge, so this scenario do not worry us. Moreover, even if opportunities arise for the establishment of additional mills, we believe Suzano stands as the most

Exhibit 18: Historical forest productivity

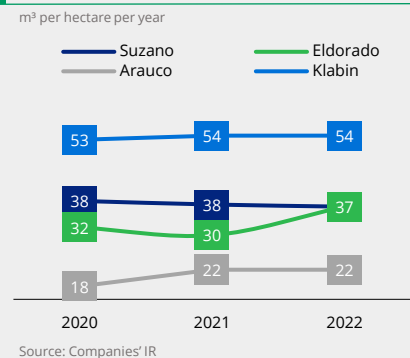


Exhibit 19: Forest to mill freight

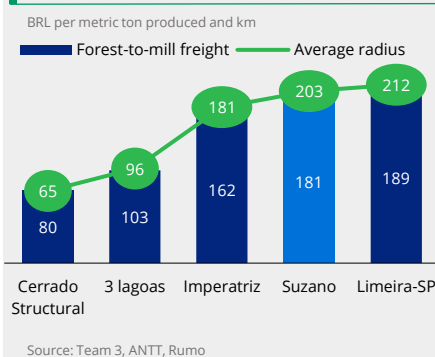


Exhibit 20: Age of assets

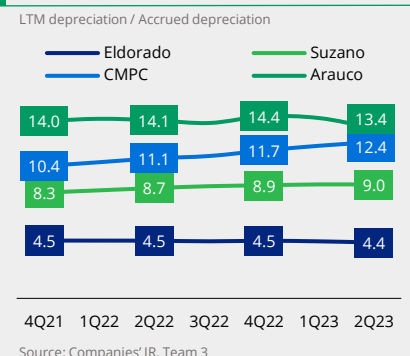


Exhibit 21: Utilization rate

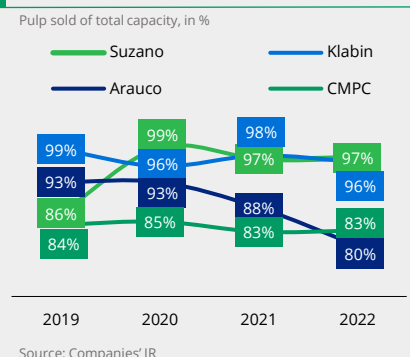


Exhibit 22: Available area in MS



favorably positioned player to accommodate this extra demand, due to the following factors:

**(I) Project execution excellence:** to assess Suzano's ability to execute its projects, we did an analysis focused on major projects that are either operational this year or will be shortly: Cerrado Project, Paso de Los Toros, and MAPA. To carry out this analysis we calculated their IRRs using the net cash per ton of the projects (Exhibit 24), revealing Suzano's best performance in this delivery. Calculations are detailed in [Appendix 18 and 19](#). We also evaluated management's adeptness at delivering and materializing these projects. Exhibit 23 reveals their proficiency in maintaining schedules, evident from the difference between projected and actual delivery times and the alignment between anticipated and actual CAPEX.

**(II) Scale at its best use:** the amount of CAPEX required and the level of indebtedness used are two significant risks present in any kind of large project. Thus, we compared the necessary CAPEX of recent projects to EBITDA (for both Suzano and its competitors), which shows how the company can accommodate large projects without taking on too much financial risk (see Exhibit 26).

**(III) Modernization efforts:** the benefits of projects aimed at modernizing production lines and boosting factory efficiency are evident. The company has recently implemented a fiberline upgrade in its Jacaréi unit, a boiler ash treatment overhaul, and enhanced energy efficiency, leading to savings of BRL 115 per ton. Given the BRL 600 million CAPEX, we project an 18.8% IRR for this brownfield venture. Also, the firm has declared a BRL 520 million investment for a biomass boiler replacement at its Aracruz unit, expected for completion by the end of 2025. Both projects highlight the company's drive to ensure its factories remain cost-competitive in production.

All these factors reinforce our belief that the additional demand in the coming years will be met by mills in Latin America, and Suzano emerges as the best-positioned player to lead these expansions.

## What about paper?

In our opinion, the company's paper operation, while constituting a smaller share of the revenue compared to the core business, holds strategic significance for the following reasons:

**Deep integration with pulp production:** most of Suzano's paper mills are integrated with pulp production, a synergy that eliminates the need for additional transportation costs of pulp to the paper mill. This setup also ensures a resilient and stable supply of in-house pulp, shielding the company from potential disruptions in paper production or from the impact of pulp price fluctuations in the market from competitors. Although this may not enable the company to compete on a global scale, given the highly competitive manufacturing units of American and Chinese players, it places it in a strong position within the Brazilian market.

**Revenue stabilization:** paper reduces the company's revenue fluctuations by providing diversification: while pulp is driven by global market fluctuations and has more volatile revenues, the paper division enjoys a steadier demand base. Consequently, the paper unit acts as a stabilizing factor, reducing overall revenue volatility (Exhibit 27) and improving the company's financial predictability and resilience.

**Tax credits monetization:** given its high export volume, Suzano currently accumulates BRL 2.8 billion in ICMS credits and other non-cumulative taxes. We see the company's paper operation as strategic for liquidating these tax credits that can be utilized whenever the company sells a product within Brazilian territory. It can also be transferred to pay suppliers, serving as one of the ways the company can finance its operation or future expansions.

**A new chapter in paper:** the company's paper division portfolio is categorized into consumer goods, cardboard, and P&W. In Q2 2023, these segments accounted for 11%, 13%, and 76% of total paper revenue, respectively. The high concentration in the P&W segment could pose a risk, given the declining trend in P&W paper consumption, with a CAGR of -3% annually from 2012 to 2023, as data from PPPC. Contrarily, the company has been increasing its presence in the consumer goods sector, the tissue category which mainly includes sales of toilet paper and paper towels. This shift is seen as strategic due to past successes in this segment and a promising outlook for this sector.

**Consolidating consumer goods:** Suzano entered the consumer goods sector in 2017 by launching a 60 kton/year production line in Mucuri and acquiring Facepa, a top toilet paper producer with brands like Mimmo, Scala, and Max Pure. This move, along with a consistent supply of raw materials, helped the company capture an 11% share of Brazil's tissue market in five years. By 2022, after acquiring Kimberly Clark's Brazilian operations and adding brands in the premium and corporate segments such as Neve, Kleenex, and WypAll, to its portfolio, its market share doubled to 22%. Suzano is also expanding its tissue production capacity, with a new plant in Aracruz with 60 kton/year to start in 2026.

**Positive Outlook:** Brazil's tissue paper consumption per capita (6kg) remains below the global average, trailing Mexico (9kg) and Chile (14kg) in 2021, as reported by RISI. The sector is highly concentrated in the country because of the ease of integration for paper producers, facilitated by abundant forest resources. However, market share is held by less sophisticated players, with CMPC being the main threat at 25% market share according to Fastmarkets. Besides Suzano's initiatives, Bracell entered this segment recently by acquiring OL Papéis in early 2023 and it is investing in a new factory set to begin in 2024 with a capacity of 240 kton/year. Given that it represents a significant capacity entering the market, this could pose a risk of market share loss for Suzano, especially in the Northeast region where OL Papéis operates. Nonetheless, the current landscape represents a window of opportunity for the company to enhance its market share in the future.

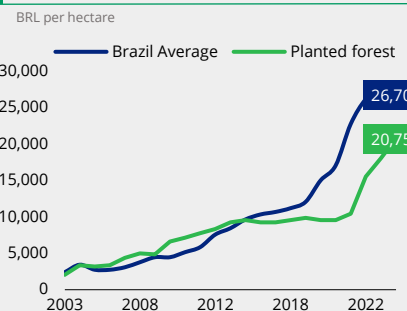
## ESG investment analysis

According to the S&P ESG Risk Atlas, the forestry industry (of which Pulp and Paper belongs) ranks as a sector of medium ESG risks (Exhibit 28). Some of the reasons for that are (I) the fact that Pulp companies are highly water- and energy-intensive; (II) the heavy use of chemicals in pulp bleaching, which can worsen the quality of air/water; and (III) relationships with local communities that may have worries about pollution. However, we believe that Suzano has become best-in-class in mitigating such risks, as well as creating great profit opportunities from its ESG policy. Also, the market already recognizes its proven track-record: in 2020, the company started integrating S&P's Dow Jones Sustainability Index (DJSI) for emerging markets, which is composed by the top 10% companies in each segment within emerging countries. To assess how the company stacks up against its peers in ESG matters, we reviewed its performance in key market indices (Appendix 25) and developed our own benchmark (Exhibit 29). Below, we enter in more detail on each ESG pillar, highlighting how its ESG credentials do create economic value for the company.

## Environment

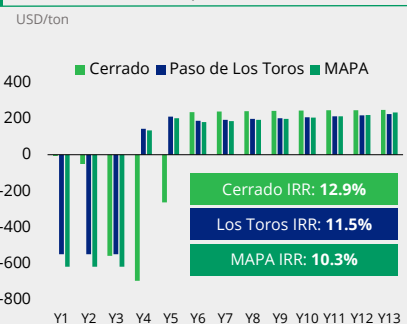
**ESG-linked bonds - when sustainability meets financial health:** as of 3Q23, Suzano had 39% of its gross debt tied to ESG instruments, via Green Bonds and Sustainability-Linked Bonds (SLBs). These bonds not only lower Suzano's overall debt cost (SLBs average cost is 3.2%, way below the company's overall 4.9% pre-tax Kd), but also provide incentives for the company to further improve its ESG metrics, attracting more capital from investors worried about the ESG agenda. SLBs require the company to meet a set of objectives that are measured by Key Performance Indicators (KPIs). These goals are monitored until their expected completion, and failure to achieve targets could lead to an increase in debt cost by up to 30 bps. Additionally, non-compliance can jeopardize the company's credibility in future fundraisings. Suzano's SLB issued in 2020 targets GHG emissions to drop to 0.181 tCO<sub>2</sub>e/ton (or less) by 2030. Despite having made progress in the past, it has stagnated from 2019 until today. However, we see reasons to anticipate further reductions following Cerrado's launch, since the project has a shorter forest-to-mill distance (leading to a ratio of

Exhibit 23: Historical land prices



Source: S&P Commodities Insights

Exhibit 24: Net cash per ton



Source: Companies' IR, Team 3

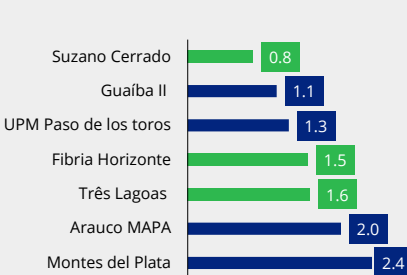
Exhibit 25: Projects duration and CAPEX

Projects	Project Delay Time	Difference to estimated CAPEX
Arauco MAPA	671	23%
UPM Paso de los toros	182	29%
Suzano Cerrado	-30	27%
Fibra Horizonte	-60	-23%
APP south sumatra	397	0%
Montes del Plata	457	32%

Source: Companies' IR

Exhibit 26: CAPEX / EBITDA LTM

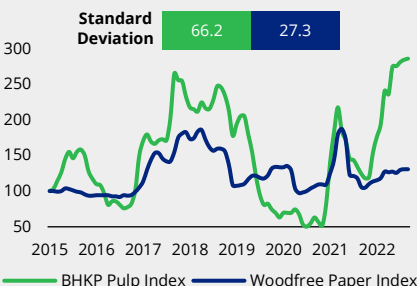
CAPEX/EBITDA LTM before the last project's conclusion, in x



Source: Companies' IR

Exhibit 27: Pulp and paper volatility

Both prices were set at an index value of 100 in January 2015



Source: Hawkins Wright



CO2/m<sup>3</sup> 15.0% lower than the current). As for the most recent SLBs, Suzano has agreed to cut water consumption in its factories by 2030 and increase female representation in leadership positions to 30% by 2025 (compared to the current 23.6%). Given the high benefits related to these bonds, we foresee minimal risks to Suzano in accomplishing these goals.

**Highly efficient on minimizing carbon footprint:** if we only looked at different players' emissions per ton, there wouldn't be much of a difference between Suzano and its peers. The appropriate metric to be analyzed, however, is the company's carbon balance, that is, removals minus emissions of CO<sub>2</sub>e. While most P&P players still emit more carbon than they capture, Suzano and Klabin have a negative carbon balance. By comparing the two, what we see is that the former has delivered better numbers than the latter on the last 3 years: Suzano shows an accumulated net carbon capture 68 Mtons of CO<sub>2</sub>e higher than Klabin (*Exhibit 30*). As for 2022's positive balance, it is not something to worry about. This variation comes from lower removals, and it is in line with the company's harvesting cycle. Furthermore, the company has reported an expressive planting in 2022, which should increase CO<sub>2</sub> captures in the next year.

**Opportunities in the carbon market:** while a regulated carbon market (cap-and-trade) may seem far off in Brazil, we believe progress is likely with a more sustainability-focused government. Indeed, on October 4th, the Brazilian Senate approved a bill to regulate the market. However, it's expected to take effect only 5 years post-approval, following a transition period. Regardless of the current situation of cap-and-trade, Suzano has made significant efforts to follow the so-called "additionality principle" (that is, the projected associated with the credits must go beyond usual business activities, generating extra social/environmental benefits) which resulted in two major initiatives: the Cerrado Carbon Project and the Horizon Carbon Project. Both projects involve the maintenance of environmental restoration areas, along with initiatives with local communities, ranging from circular economy to beekeeping. With this, the company estimates it has a 30 Mton CO<sub>2</sub>e potential pipeline for monetization, with 7.5 Mtons submitted for certification and 1.9 Mtons already certified by Verra. Given the uncertainties surrounding cap-and-trade, we anticipate the company will start by selling in the voluntary market. Further details on the financial impact are discussed in the valuation section.

**Initiatives for a greener economy:** Suzano has made a big move when announcing its intention to enter in the Micro Fibrillated Cellulose (MFC) market, where pulp is used for fiber production. Since 2017, the company has invested in Spinnova, a Finnish company specializing in an innovative type of fiber produced from MFC, with the potential to replace synthetic fibers and cotton. While the joint venture between the two companies, known as Wood Spin, may not yield immediate significant financial gains, it is strategically important. With a full production capacity estimated at 1 Mton by 2029, the venture has long-term potential. Suzano will be the exclusive supplier of MFC for this new factory and already operates a production line at their Limeira mill. We believe this partnership could be a great optionality, especially with the growing tendency of eco-conscious consuming.

**Waste and water management:** as mentioned before, residual management is a major risk for the Pulp and Paper industry, and Suzano has been improving by a lot in this issue. In the realm of waste management, an important indicator is the amount of waste sent to landfills. As seen in *Exhibit 31*, this number has been improving significantly since 2019 - a sign that the company is becoming increasingly efficient in reusing waste for agricultural purposes and energy generation. When it comes to water, Suzano also delivers good metrics, with a declining use of water in industrial operations over time.

## Social

**Community outreach:** in addition to naturally generating jobs and growth in the areas it operates, Suzano took extra steps in 2020 by setting targets regarding social transformation. The company has goals to uplift 200,000 people from poverty by 2032 and to increase the Basic Education Development Index (IDEB) by 40% in the municipalities it operates. Despite these efforts, the company still faces conflicts with communities, mainly due to occupations by the Movimento Sem Terra (MST) in areas belonging to Veracel. Although agreements were made in 2011 and 2018, challenges persist. The latest incident occurred in March 2023, when three of the company's farms in Bahia were occupied. Ten days later, however, the movement vacated the area following negotiations. In May, the company agreed to carry on with a 2015 agreement, which ensured that families who had taken possession of land would be settled. In any case, given the lack of a final resolution, our view on the conflict involving Veracel is it remains a risk for the company, and is also one of the factors that lowers Suzano's ESG indices.

**Good labor management indicators:** the company also maintains a strong relationship with its employees, as evidenced by its Glassdoor ratings (*Appendix 24*). This, coupled with a lack of labor issues such as strikes in its history, further boosts our confidence in the company's labor management practices. Thus, we believe that Suzano's excellence in governance extends beyond just the board and top management.

**Ethical sourcing:** wood traceability is essential to prevent deforestation and worker exploitation. In 2022, 100% of suppliers were contracted based on social criteria or environmental criteria. The company also seeks for the FSC and PEFC certifications in all wood purchased, performing external audits on suppliers with the highest socio-environmental risk.

**Diversity initiatives:** the inclusion of minorities within the company's management has progressed in recent years. One of the drivers behind this is the 2032 SLB, which mandates that Suzano achieve at least 30% female representation in leadership roles by 2025. In 2022, this figure stood at 23.6%, up from 18.7% in 2021 when the bond was issued. The company also has a similar goal for black people, though the current percentage is slightly lower, at 20.9%. However, there is still large room for improvement at the higher levels of Suzano: only 33% of board members are female, and there is just one woman in top management.

## Governance

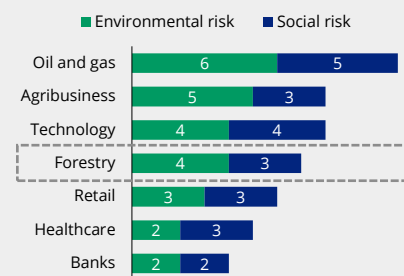
**Long-lasting ownership mentality:** despite being nearly a century old, Suzano remains a family-driven company, with the third generation in charge under Chairman David Feffer. This dynamic is set to continue, as a 2022 shareholders agreement restricts family shares transfers until 2042. We believe that the company's ownership mentality, which has been ingrained since its inception, has enabled it to launch a range of innovations. Examples of success are numerous: Suzano was the first to use eucalyptus pulp on an industrial scale, the first to produce P&W paper with 100% BEKP, and the first to make fluff-type pulp with short fiber. This strong track record boosts our confidence in more recent projects like Cerrado and CO<sub>2</sub> credits monetization. Also, while the founding family is still actively involved and holds significant shares (*Exhibit 32*), the company's management today is fully professional, which merges the family's innovative DNA with top-line management practices.

**High standards on corporate governance policy:** after David Feffer's entry as Chairman in 2001, the company has implemented a series of steps toward enhancing its corporate governance. In 2004, it moved to Level 1 governance on the Bovespa exchange, and in 2017, it joined B3's "Novo Mercado" - Brazil's gold standard for governance. Additionally, since 2018, Suzano's shares have been listed on the NYSE via ADRs, subjecting the company to stricter SEC regulations that demand higher levels of internal control. The company's excellence becomes even more evident when compared to, for example, Klabin. Until 2020, it paid royalties to the controlling family for the use of the "Klabin" surname and it is not part of the "Novo Mercado" category, lacking independent majority on the board (yet not showing intentions to change this current scenario), whereas Suzano has 56% of independent members.

**Top-notch management:** as mentioned before, Suzano stands out for its excellent capital allocation. This isn't by chance. We have observed that the company boasts a deeply experienced management team aligned with long-term objectives: the average tenure of each board member and director is 9 and 10.5 years,

Exhibit 28: ESG Risk Atlas (1 to 6)

Both prices were set at an index value of 100 in January 2015



Source: S&P Global Ratings

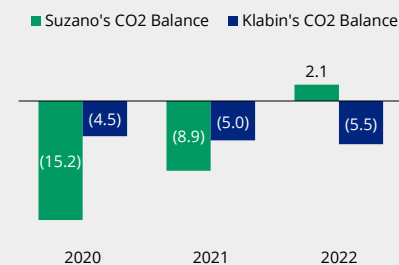
Exhibit 29: ESG Scoreboard

Company	ESG Score	E	S	G
Suzano	2.3	2.6	2.0	2.1
cmpe	1.4	1.2	1.2	1.7
Vera	1.8	2.0	1.9	1.4
Klabin	2.1	2.2	2.7	1.4
irani	2.2	1.7	2.6	2.2
UPM	2.0	1.3	2.1	2.5
ec	1.9	2.2	2.1	1.5
International Paper	2.0	2.1	2.2	1.8

Source: Team 3

Exhibit 30: Carbon balance comparison

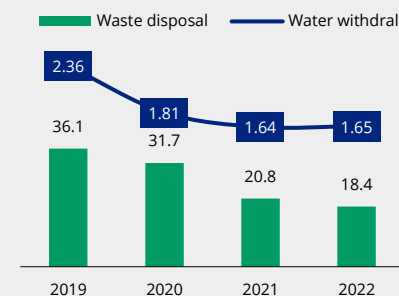
Carbon balance, in Mtons of CO<sub>2</sub>e, from Suzano and Klabin



Source: Company's data

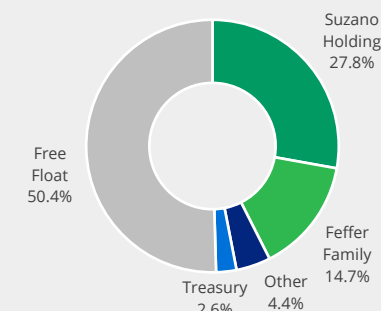
Exhibit 31: Waste disposal and water withdrawal

Solid waste to landfills, in kg/ton and water withdrawals, in 000' of m<sup>3</sup>



Source: Company's data

Exhibit 32: Shareholder structure



Source: Suzano's IR | Note: the Family owns ~85% of the Holding



respectively. While most of the top management is highly regarded by investors, a special mention goes to Walter Schalka, who has been the CEO since 2013. Schalka took the helm during a time when the company had a leverage ratio of 4.7 times, marking its fifth consecutive quarter of losses. This was primarily due to delays in the Maranhão plant, which even led to the need for asset sales to reduce leverage. Walter Schalka played a pivotal role in the company's economic recovery and spearheaded key projects, such as the successful merger with Fibria.

**Meritocratic compensation:** as shown in *Exhibit 33*, executives' compensations are closely linked to their performance – the average proportion of variable compensation stands at 69%. Notably, at least 10% of the short-term variable compensation is tied to ESG metrics. Also, although Suzano's total compensation in 2022 was BRL 78.9 million – significantly higher than its Brazilian counterpart, Klabin, at BRL 32.4 million – it's noteworthy that Suzano's revenue was more than double that of Klabin, providing context to the disparity.

## Financials

**Pulp's lowering cash cost driving profitability:** we expect a significant reduction in Suzano's pulp cash cost per ton, driven by lower transportation and chemical expenses, as well as efficiencies from the Cerrado Project. In 2022, the pulp cash cost stood at BRL 925/ton. Our estimate for 2027 is BRL 886/ton, slightly more conservative than the company's own projection of BRL 856/ton. To put this in perspective, if nothing were to be changed (that is, if costs were only adjusted for inflation), the 2027 cash cost would be of BRL 1,117/ton, 27% higher than our estimate. Our projection was made by separating (I) Suzano's current cash costs today and (II) Cerrado Project's cash costs alone.

(I) To compute the cash cost per ton ex-Cerrado, we divided it into (i) wood, (ii) inputs, and (iii) fixed. As for (i) wood, this cost is broken down equally into logistics and harvesting. Beginning by logistics, we projected a reduction, following the YoY decreases on Brent futures and average radius. Regarding harvesting, we considered inflation-adjusted numbers. As for (ii) inputs (mainly caustic soda), there was a significant increase of 55% from 2021 to 2022 – due to higher natural gas costs (primary input for soda) after the Russia-Ukraine conflict. This year, we already began to see price drops in chemicals (~30% reduction as of 2Q23 vs 2Q22). Therefore, we projected that the cash cost will return to normalized levels in 2024. Finally, for (iii) fixed costs, they were grown alongside inflation. The exact numbers are further detailed in *Appendix 26*.

(II) Moving to Cerrado, the management projects that it will start-off by operating with a cash cost of only BRL 500/ton until 2031 (and BRL 400/ton from 2032 onwards, on today's money). The decrease to BRL 400/ton should not be linear, since eucalyptus takes time to grow. Cerrado's cash cost must converge to BRL 400/ton exponentially from 2027 until 2032. It will only begin to lower in 2027 because this is the year in which it is possible to harvest wood from its own trees.

**Pulp freight cost:** just like the cash cost, the freight cost has favorable medium-long term trends. It involves, basically, the maritime and plant-to-port logistics costs (whereas forest-to-mill is included in the cash cost). The freight cost is a line indexed to dollar and highly related to oil prices (see *Exhibit 34*). Since the Brent Crude futures are pricing sequential drops, we expect the pulp freight cost per ton (in USD) to be below 2022 numbers for the next years. *Exhibit 35* shows the projections for the cash cost and for the freight cost, and the following increases in EBITDA/ton from 2023 onwards.

**Paper prices and costs:** due to the normalization of pulp prices, the paper segment should experience lower cash costs compared to 2022 levels. When it comes to the paper freight cost, we project it decreasing (same reason as the pulp segment). As for the future export paper prices, we kept them in line with BHKP prices, which is coherent given Suzano's past results. The price for the domestic market, however, was kept in line with inflation: since 2015, the company did not lower its domestic paper prices anytime, despite of the pulp volatility. Given that (I) most of the company's paper sales happen on the domestic market and (II) transportation costs are lowering, we did not project the paper EBITDA margin falling so much on the next years. However, it does fall a bit (from 42% in 2022 to 38% in 2024) due to a weaker export market.

**EBITDA margin:** as shown in *Exhibit 35*, despite future increases, pulp's EBITDA/ton is not expected to approach 2021/2022 levels anytime soon. The same applies to the EBITDA margin for the pulp segment. Even with decreasing costs for pulp, the normalization of BHKP prices is anticipated to result in lower structural margins compared to the last two years. Suzano's overall EBITDA margin is projected to remain lower than current levels. *Exhibit 36* shows the forecasted evolution of EBITDA, gross, and net margins for Suzano. While we are not concerned about the structurally lower margins compared to 2021/2022 (as this is already priced in), we are optimistic about future margin increases – a sign of efficiency gains and lower costs generating value for shareholders. It is important to see that, while EBITDA and gross margins have similar drivers, net margin is more volatile as it depends on financial results, which are affected by the outcomes of derivatives operations (something that varies significantly depending on the dollar variation).

**Understanding margin gains:** taking a closer look at the EBITDA margin, it goes from 45% in 23E to 50% in 32E. This 5% gain is decomposed as: (i) 1% coming from the normalization assumed on BHKP prices after 2025; (ii) 1.5% coming from Cerrado's lower cash costs; (iii) 1.5% coming from lower logistics/freight; and (iv) 1% coming from the normalization of inputs.

**Healthy leverage levels when compared to peers:** Suzano currently reports a more comfortable leverage position than most of its peers, as shown by *Exhibit 37* through the Net debt/EBITDA ratio. That is a very good indicator for the company, since this relatively low leverage is being reported in a moment of aggressive capital expenditures coming from the Cerrado Project. Arauco, for example, has recently delivered the Mapa Project in Chile, and its net debt/EBITDA ratio is more than twice as large as Suzano's. However, due to lower pulp prices compared to 21/22 and final capital expenditures related to Cerrado (BRL 2.42 bn in 23E and BRL 5.1 bn in 24E), we do expect Suzano's leverage ratio to increase for the next 2 years (3.4x in 23E and 3.1x in 24E). Another observation that makes us comfortable regarding the company indebtedness is its structurally lower debt cost. Moreover, Suzano has a good historical on managing its debt levels. In 2019, for example, due to the Fibria M&A and a 23% drop in BHKP, Suzano went from a 1.5x leverage in 2018 to 5.1x. Since then, the company has diligently worked to reduce its leverage, successfully bringing it back to the 2x range in 2021.

**Higher returns when compared to peers:** as previously explained, Suzano stands out in the industry as the largest and most efficient player, benefiting from scale gains and lower cash costs. As expected, these advantages lead the company to have a higher Return on Equity (ROE), generating better value to shareholders. To better understand ROE's dynamics, we decomposed this metric through a DuPont analysis (see *Exhibit 38*). What we can see is that Suzano really stands out in operational efficiency, with the highest net margin (NM), along with Eldorado. The equity multiplier (EM) – which refers to the amount of debt in the capital structure – also improves Suzano's ROE without putting too much pressure on leverage.

**CAPEX slowdown unleashing FCF generation:** after the last significant Cerrado investment of BRL 5.1 bn in 2024, Suzano's total capital expenditures should decrease and stabilize. The only bad news is that maintenance CAPEX should be structurally higher due to increasing wood costs (purchase of standing wood enters in maintenance CAPEX), as shown in *Exhibit 39*. Also, it is important to state that, although CAPEX is lower than D&A in 2032, we projected that, on perpetuity, the former should be higher than the latter, following long-term inflation (this assumption is key to justify the chosen g, which will be detailed later). On *Appendix 27*, we detail how growth and maintenance CAPEX were projected on each year. The key message here is that the combination of lower CAPEX levels with Cerrado's large volume additions will make the company start to generate an impressive amount of cash, as shown by the FCF evolution on *Exhibit 40*.

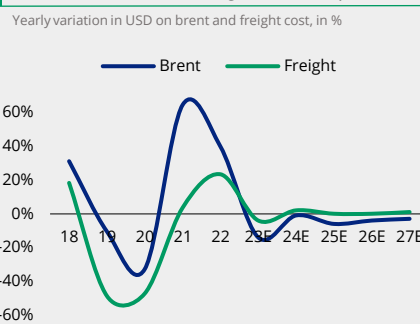
**But how will this future cash cow allocate all that liquidity?** On the base case, we do not expect Suzano

Exhibit 33: Management compensation



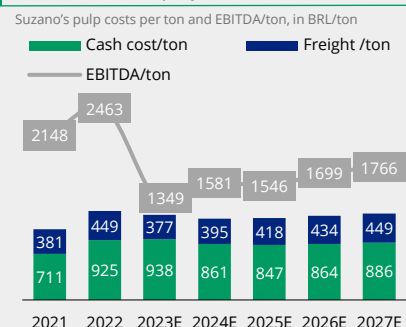
Source: Company IR

Exhibit 34: Brent and freight cost comparison



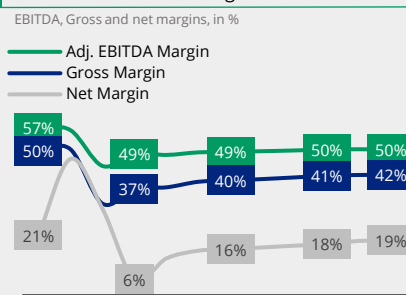
Source: Team 3, Company Data, Bloomberg

Exhibit 35: Costs projections and EBITDA/ton



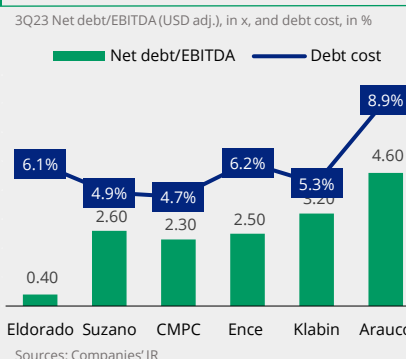
Source: Team 3

Exhibit 36: Suzano's margins evolution



Source: Team 3

Exhibit 37: Net debt/EBITDA and debt cost



Sources: Companies' IR

to announce any major project like Cerrado for the next years, since (i) there will be a break in new projects after the entry of new supply and (ii) it would be too much of a guess, due to the lack of information regarding potential new projects. Thus, we strongly believe that it will become a great dividend payer in the future. We projected dividends payouts such that the leverage levels are not too far from 3Q23 levels of ~2.7x net debt/EBITDA (*Exhibit 41*). For this to be achieved, we considered a payout ratio of 90% from 2026 onwards. Although the company has historically made share repurchases programs, we did not project them for the future because we believe that the stock should begin to be fairly priced on 2024/2025, since the start-up of Cerrado (combined with the end of CAPEX expansion) must be a trigger for an uptrend.

**Great prospects on surplus energy monetization:** Suzano currently generates ~0.14 MWh/ton of energy surplus, mainly from the Mucuri and Imperatriz units. With the upcoming Cerrado Project, which boasts a capacity of ~0.63 MWh/ton (more than 4 times higher than the company today), the gain coming from energy sales must increase a lot. In addition, the company won an energy auction in 2022, which will allow the sale of 50 MWh of energy from 2026 until 2045 at the price of R\$ 315/MWh (adjusted for inflation), while the rest of the surplus will be sold in the free market (~BRL 100/MWh). This volume will be a portion of the total surplus of 180 MWh from the Cerrado Project. When it comes to the valuation impact of Cerrado's energy surplus, we estimate that it should add ~3.5% to our upside. Since the sale of electric energy is a reducer of COGS, it is also a driver for our projected EBITDA and gross margins.

**Efficient plain vanilla hedging policy:** due to its natural condition of exporter, Suzano has a strong hedging operation with significant impacts on its Income Statement. The main instrument used by the company are NDFs and Zero Cost Collars, which provide a floor and a ceiling for the USD quotation. In years with strong dollar spikes, the company tends to have a more negative financial result (and in years of BRL appreciation, it tends to have a positive outcome). At first glance, some historical observations may seem scary. In 2020, for example, Suzano had a loss of more than BRL 9 bn with derivatives (while EBT was ~BRL 8.8 bn). However, this happened due to a combination of (i) the large hedge needed from the leverage taken in Fibria's acquisition with (ii) the BRL rapid depreciation on the Covid crisis. In other words, it was an inevitable necessary evil. Apart from that, Suzano also counts with a natural hedge since ~80% of its debt is denominated in USD. In summary, we do not see any major worry coming from the company on this point.

## Valuation

We reinforce our BUY recommendation for Suzano, with a target price of BRL 73.32 per share, representing a 38.50% upside from current levels. Our analysis was based on a 10-year DCF model, whose result is strengthened by comparing multiples and by analyzing the implicit pulp price on the stock. More details on valuation can be found in *Appendix 28*.

### Key assumptions

**New capacity driving top-line growth:** due to Cerrado Project and KC's acquisition, the company should experience growth on both pulp and paper (mainly pulp, due to Cerrado's large proportions). The only exception is the year of 2023, when Suzano has announced to cut pulp production in 4% due to weaker demand. Also, in the third quarter of 2023, Suzano announced two new capacity expansion projects. First, the company will build a tissue factory in Aracruz, which will add 60 ktons to its capacity by 2026. Second, Suzano is investing to increase its fluff production capacity in Limeira by 340 ktons. This will give the company the flexibility to produce both cellulose for paper and fluff.

**Pulp price:** as explained before, we do not see reasons to project decreases in the long-term pulp price. For our model, we use the value of USD 610/ton, starting in 2026: as seen in *Exhibit 42*, BHKP's pricing dynamics functions as a mean-reverting process which fluctuates around this average. However, in the short-run, it is prudent to consider a discounted price, due to coming additions. Thus, we used a USD 580/ton price in 2025 (a drop inversely proportional to the capacity addition). In 2024, we used a price of USD 605/ton, which is a middle ground between the current USD 630/ton and USD 580/ton. From 2026 onwards, we applied the long-term price of USD 610/ton.

**New tax legislation leading to higher effective tax rates:** in May/22, the Provisional Measure 1152 was passed by Brazilian legislators. The bill ends the tax benefit coming from transfer prices - until recently, Suzano could sell pulp to its Austrian subsidiary at a price similar to the marginal cost, paying ~20% of tax rate (compared to the statutory rate of 34% in Brazil). We expect that part of the burden from the new law will be offset by Sudam/Sudene tax benefits, which reduce the Income Tax by 75% on 45% of Suzano's capacity (when considering Cerrado), resulting in an effective tax rate of ~25% from 2024 onwards. These benefits are expected to expire between 2024 and 2031, depending on the asset. However, we are comfortable with projecting their preservation for the 10 years of projection, since (i) states with Sudam/Sudene benefits assemble a relevant stake of the current government voters, and (ii) tax reform discussions have not yet given signs that these benefits should end. On the other hand, our model does not include tax benefits on perpetuity, since it would be too aggressive to assume that benefits will remain forever. When it comes to the reform of direct taxes, we see no relevant impact to Suzano, since the bill will mainly harm services instead of industries. Aside from the Sudam/Sudene benefits, the company also counts with relevant EBT deductions - BRL 2 bn annually - coming from (i) goodwill amortization from Fibria's acquisition and (ii) other deductions from Fibria's assets.

**Projected return metrics:** by looking at the Return on Invested Capital (ROIC) at *Exhibit 43*, we see that it is a metric highly impacted by the variables which Suzano cannot control (USD and BHKP price). In 2019, for example, it went to 5% due to drops in BHKP (and also by the debt taken in Fibria's transaction). In 2021/2022, we saw record-high ROIC levels, as a consequence of higher BHKP prices. Since (i) we expect a pulp normalization from now on and (ii) there's still large capital expenditures to be done, the ROIC series for our projected years should start at a lower base (10.8% in 23E, lower than WACC). However, it is expected to improve over years mainly because of capacity additions and lower cash costs.

**Carbon credits:** to understand the economic potential of selling carbon credits, we use as a baseline the price of US\$5 per ton, which is the rate practiced in the voluntary market by Orizon, the country's leading publicly traded carbon credit generator. Based on these assumptions, and assuming that the company will successfully sell all 30 million tons by 2032, there is an additional upside of approximately 1.3% per share. However, if the regulated market comes into effect in 2028, where the estimated price of a carbon credit is \$50 per ton, this upside could increase on ~11.0% per share. Our calculations are further detailed on *Appendix 29*.

**2028 new project optionality:** while we haven't included any optionalities in our base case, we did analyse how a future pulp project would impact the company's valuation (*Appendix 21*). The company's guidance is to invest in projects that will maintain its market share, which is 34% in BHKP as of 2024 (accounting for the Cerrado Project's capacity). To keep this share, Suzano should invest in a 1.62 Mton project by 2028. Incorporating the associated free cash flows additions into the DCF, we found a 1.3 BRL increase in our TP relative to the base case. We used per-ton costs similar to the Cerrado Project for CAPEX and EBIT calculations, as our available area analysis shows there are still lands available in Mato Grosso.

### DCF methodology

**Cost of capital:** our FCF valuation was built considering a 10.9% WACC until 2032, and a 10.4% WACC on perpetuity. The difference comes from the exclusion of fiscal benefits on perpetuity, which lowers the leveraged beta (1.01 considering benefits versus 0.96 without benefits) and lowers the Kd after tax (5.68% versus 5.00%). To arrive at the different Ke's (15.2% versus 15.0%), we considered the 10-Y treasury bond (4.7%) as the risk-free; a 4.6% Equity Risk Premium (Damodaran); a 5.0% Country Risk Premium (Damodaran);

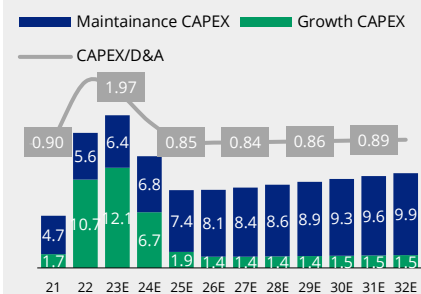
Exhibit 38: Dupont analysis

Company	ROE	NM	AT	EM
Suzano	97%	47%	0.37x	5.51x
Arauco	13%	13%	0.47x	2.14x
Klabin	50%	23%	0.42x	5.10x
Eldorado Brasil	56%	47%	0.51x	2.33x

Source: Team 3, companies's IR

Exhibit 39: Suzano's CAPEX breakdown

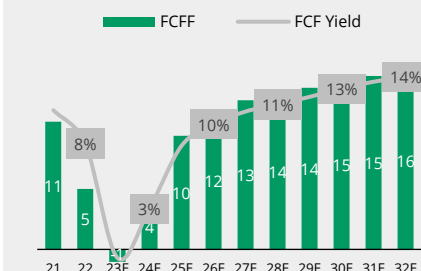
CAPEX breakdown, in BRL mn and CAPEX/D&A ratio, in x



Source: Team 3

Exhibit 40: Suzano's FCF and FCF yield

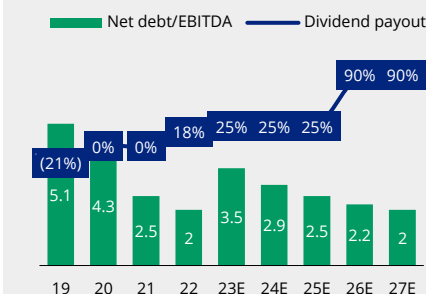
Suzano's FCF (BRL bn) and FCF margin (%)



Source: Team 3

Exhibit 41: Leverage and payout evolution

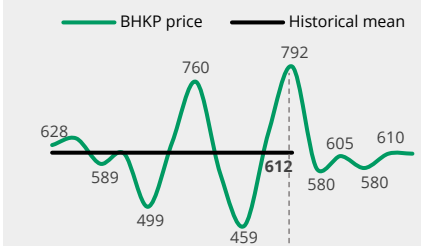
Net debt/EBITDA, in x, and dividend payout evolution, in %



Sources: Suzano's IR and Team 3

Exhibit 42: BHKP price dynamics

Historical and projected BHKP prices, in USD/ton



Sources: RISI and Team 3

a long-term inflation differential of 1.5%; and an unlevered industry beta of 0.61. As for the cost of debt before tax, we considered the number of 7.57%, which is the yield of Suzano's emissions with higher duration.

**Perpetuity growth:** we considered a 3.5% perpetuity growth rate, which is the long-term Brazilian inflation. The rationale is that, while 80% of the 2032 revenue is index to dollar, it should be reasonable to pick the g equal to the long-term US CPI (which is also the rate at which the BHKP price is increasing). However, since we built our model on Brazil's currency, we applied the inflation differential to consider the FX variation on the g. Thus, the perpetuity growth is equal to long-term US CPI + inflation differential between Brazil and United States, which, in turn, approximates to the long-term IPCA.

**Scenario analysis:** due to its natural condition of commodity exporter, Suzano's valuation is highly impacted by exogenous variables - transportation costs (oil prices); exchange rate; and BHKP price. Therefore, we performed a scenario analysis considering variations on these parameters during the projected years. As seen in Exhibit 45, the Brent Price is the variable which least influences the TP. Afterall, the relation of oil price increase to transportation costs is not 1:1 (there are other costs involved). The dollar price variation has a larger effect, but it is not as high as BHKP price. The explanation for that comes from the fact that some of the company's costs and expenses are index to dollar (thus, when revenue increases due to FX, some expenses also do).

**Multiple analysis:** when taking Suzano's 2025 EV/EBITDA side by side with other Pulp and Paper players, and comparing with the projected EBITDA CAGR, we still see the stock as underpriced (Exhibit 44). When comparing to the most similar players (CMPC and Klabin), we notice that Suzano has higher growth prospects and, despite that, a lower multiple. Thus, relative valuation supports our BUY recommendation for Suzano.

**Implicit BHKP price:** another insightful analysis is to compute what is the implicit pulp price at the stock's forward multiple. As shown in Appendix 30, by using the average 1Y Fwd EV/EBITDA multiple of 7.0x, we conclude that the implicit BHKP price in 2024 is around USD 549 - lower than our USD 605 expectation, which is another sign of mispricing. Therefore, if the market is implying a BHKP price lower than ours, it means that we see Suzano as undervalued. Also, it is important to remember that, for the computation, we added the remaining CAPEX for the Cerrado Project on our EV and (ii) we included Cerrado's upcoming volume. The intuition for that s the simple fact that Suzano must not me considered "as is" - any multiples analysis must take into account Cerrado's numbers.

## Investment Risks

The main risks in our view are summarized in Exhibit 46 and deeper explained in the sections below

### Macro risks (M)

**Brazilian real appreciation - (M1):** since the company has a relevant part of its costs on local currency and almost all revenues denominated in US dollar, its profitability decreases when real appreciates and increases when it depreciates. We, then, see the long-term currency levels both as an upside and as a downside risk, being an important value driver.

**Changes in tax legislations - (M2):** in the current environment, Suzano counts on tax benefits, in which changes could highly harm profits. (I) The company benefits from exports tax credits, which are used mainly to finance its paper operations, which would be thread in the case of a change. (II) Suzano has Sudam and Sudene fiscal benefits in some of its mills, which account for ~ BRL 11 of our TP, still subject to the risk of non-renewal. (III) Actually, Suzano sells its pulp to a subsidiary in Austria, by which it sells to the final consumers, generating profits in Austria, not in Brazil, making it pay less taxes. The Arms length legislation will make them sell for its subsidiary by market prices, accounting profits in Brazil and paying more taxes.

### Market risks (MK)

**Pulp prices can be lower than expected due to weaker demand - (MK1):** we can't discard the risk of the demand being considerably lower than we expect, which would change the marginal producer and consequently the commodity price, pushing the earnings and consequently the share price down. This lower market pulp demand can be driven by (I) paper producers becoming integrated, mainly in China, although we see that this movement happened only when prices got really high, (II) Tissue consumption growth being lower than expected, as it represents 63% of our projected demand growth, even though it is much more of a potential upside risk coming from demand growth in India, and (III) single-use items bans getting into paper as well, what could prevent it from becoming the main plastic substitutor.

**Pulp prices can be lower than expected due to cheaper supply - (MK2):** Historically, when pulp prices surged, some companies irrationally expanded their capacity. If this trend repeats, a significant rise in capacity could result in a drop in pulp prices. However, given the rising costs of wood and land and the efficiency demands of new mills, we believe that only well-established companies will make new projects.

**Rise in raw materials costs - (MK3):** Although Suzano operates with high efficiency, certain costs remain beyond its control. The company relies on raw materials like caustic soda, fertilizers, and various oil derivatives. Fluctuations in these commodities' prices can significantly impact the competitive landscape. For instance, an increase in Brent oil prices can lead to higher gas prices, which are a major factor in wood costs, and also elevate freight costs. These changes could adversely affect Suzano's profit margins if pulp prices don't adjust correspondingly. However, this risk is somewhat mitigated by industry-wide effects: if raw material costs increase, it affects all players in the sector, potentially leading to a collective push towards higher pulp prices due to the supply/demand dynamics.

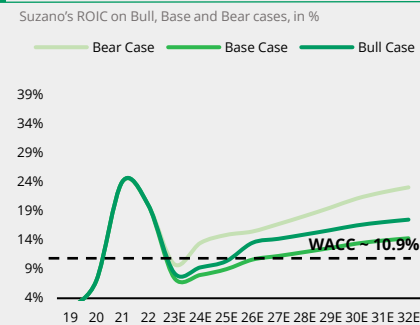
### Business and operational risks (B)

**Cerrado execution can be worse than our projections - (B1):** In our analysis, we attribute BRL 18.5 of our TP to the Cerrado Project. Although the Project start-up is less than one year away, its execution presents a notable risk for the company. This could arise from (I) a delay in the start-up or higher than anticipated capital expenditures, reducing the initiative's accretiveness, (II) a slower ramp-up which could adjust our projections downward, and (III) costs exceeding the company's estimates, which might significantly impact our valuation. However, the strong track record of Suzano (and Fibria before the acquisition) serves as effective risk mitigators, leading us to classify these concerns as low probability.

**Supply disruptions to affect Suzano directly - (B2):** in the recent years, supply disruptions caused by natural disasters had a great impact in the market supply, benefiting the company due to higher prices. However, we can't discard the possibility of this happening to Suzano's operations, which could greatly impact its wood availability. As the company is well-diversified in its supply sources, we see that this risk has a lower impact to Suzano than to other competitors. Other important mitigator are the massive investments in video surveillance and fire brigades to combat fire before it gets huge. We don't see great risk of strikes like UPM as the company has a great employee culture, as shown in the ESG section.

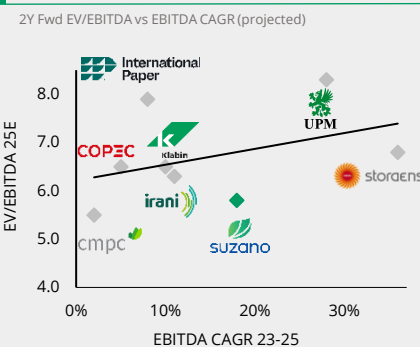
**Climate changes affecting productivity - (B3):** as seen in the competitive positioning segment, characteristics such as soil, rainfall, temperature and irradiation are the main reasons Brazil, and consequently Suzano, has a global competitive advantage. With climate changes, this situation could change, making the company lose its competitiveness if it is one of the affected or gain if it isn't. Looking at data from IPCC, UN's Intergovernmental Panel for Climate Change, we see that most of Suzano's mills are located in areas that have low impact in wood production due to climate change, a situation that is different in other South American regions such as Chile, where Arauco has its mills (see exhibit 47).

### Exhibit 43: ROIC projections



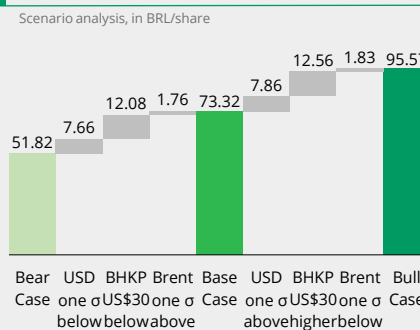
Sources: Team 3

### Exhibit 44: 2y Fwd EV/EBITDA X EBITDA CAGR



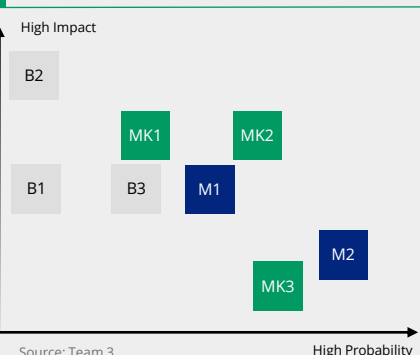
Source: Factset

### Exhibit 45: Scenario Analysis



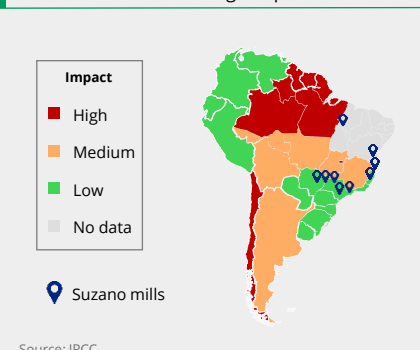
Source: Team 3

### Exhibit 46: Risk matrix



Source: Team 3

### Exhibit 47: Climate change impact





## Appendix 1 – Income Statement

Income Statement	Unit	2020A	2021A	2022A	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E	2031E	2032E
<b>Net Revenue</b>	[BRL mn]	<b>30,460</b>	<b>40,965</b>	<b>49,831</b>	<b>38,222</b>	<b>44,445</b>	<b>49,000</b>	<b>53,392</b>	<b>55,261</b>	<b>57,195</b>	<b>59,236</b>	<b>61,269</b>	<b>62,924</b>	<b>64,625</b>
YoY growth	[%]	17.10%	34.49%	21.64%	(23.30%)	16.28%	10.25%	8.96%	3.50%	3.50%	3.57%	3.43%	2.70%	2.70%
<b>COGS</b>	[BRL mn]	<b>(18,966)</b>	<b>(20,616)</b>	<b>(24,821)</b>	<b>(26,075)</b>	<b>(28,087)</b>	<b>(30,719)</b>	<b>(32,468)</b>	<b>(33,364)</b>	<b>(34,256)</b>	<b>(35,150)</b>	<b>(36,016)</b>	<b>(36,817)</b>	<b>(37,790)</b>
YoY growth	[%]	(8.57%)	8.70%	20.40%	5.05%	7.71%	9.37%	5.69%	2.76%	2.67%	2.61%	2.46%	2.23%	2.64%
<b>Gross profit</b>	[BRL mn]	<b>11,494</b>	<b>20,350</b>	<b>25,010</b>	<b>12,147</b>	<b>16,358</b>	<b>18,281</b>	<b>20,924</b>	<b>21,897</b>	<b>22,939</b>	<b>24,085</b>	<b>25,253</b>	<b>26,107</b>	<b>26,835</b>
Gross margin	[%]	37.73%	49.68%	50.19%	31.78%	36.81%	37.31%	39.19%	39.62%	40.11%	40.66%	41.22%	41.49%	41.52%
Operating expenses	[BRL mn]	(3,051)	(2,170)	(2,787)	(4,479)	(5,142)	(5,662)	(6,034)	(6,236)	(6,442)	(6,657)	(6,872)	(7,060)	(7,252)
<b>EBIT</b>	[BRL mn]	<b>8,443</b>	<b>18,180</b>	<b>22,223</b>	<b>7,667</b>	<b>11,216</b>	<b>12,619</b>	<b>14,890</b>	<b>15,661</b>	<b>16,496</b>	<b>17,428</b>	<b>18,381</b>	<b>19,048</b>	<b>19,583</b>
EBIT margin	[%]	27.72%	44.38%	44.60%	20.06%	25.24%	25.75%	27.89%	28.34%	28.84%	29.42%	30.00%	30.27%	30.30%
Financial result	[BRL mn]	(26,086)	(9,347)	6,433	3,814	(6,357)	(5,403)	(4,284)	(4,148)	(4,054)	(3,977)	(3,855)	(3,104)	(3,018)
<b>EBT</b>	[BRL mn]	<b>(17,642)</b>	<b>8,833</b>	<b>28,656</b>	<b>11,481</b>	<b>4,859</b>	<b>7,216</b>	<b>10,606</b>	<b>11,513</b>	<b>12,443</b>	<b>13,451</b>	<b>14,526</b>	<b>15,943</b>	<b>16,565</b>
Net income taxes	[BRL mn]	6,927	(197)	(5,261)	(300)	(1,215)	(1,804)	(2,651)	(2,878)	(3,111)	(3,363)	(3,632)	(3,986)	(4,141)
<b>Net Income</b>	[BRL mn]	<b>(10,715)</b>	<b>8,636</b>	<b>23,395</b>	<b>11,181</b>	<b>3,645</b>	<b>5,412</b>	<b>7,954</b>	<b>8,635</b>	<b>9,332</b>	<b>10,088</b>	<b>10,895</b>	<b>11,957</b>	<b>12,424</b>
Net margin	[%]	(35.20%)	21.10%	46.90%	30.10%	6.20%	13.30%	15.90%	16.40%	17.00%	17.60%	18.10%	19.20%	19.40%
<b>EBITDA</b>	[BRL mn]	<b>15,216</b>	<b>25,222</b>	<b>29,630</b>	<b>17,024</b>	<b>21,619</b>	<b>23,646</b>	<b>26,228</b>	<b>27,246</b>	<b>28,316</b>	<b>29,478</b>	<b>30,662</b>	<b>31,563</b>	<b>32,340</b>
(+/-) Non-recurring / PPA	[BRL mn]	(267)	(1,751)	(1,436)	-	-	-	-	-	-	-	-	-	-
<b>Adjusted EBITDA</b>	[BRL mn]	<b>14,949</b>	<b>23,471</b>	<b>28,195</b>	<b>17,024</b>	<b>21,619</b>	<b>23,646</b>	<b>26,228</b>	<b>27,246</b>	<b>28,316</b>	<b>29,478</b>	<b>30,662</b>	<b>31,563</b>	<b>32,340</b>
Adj. EBITDA margin	[%]	49.08%	57.29%	56.58%	44.54%	48.64%	48.26%	49.12%	49.30%	49.51%	49.76%	50.05%	50.16%	50.04%

## Appendix 2 – Income Statement (Pulp segment)

Income Statement (pulp)	Unit	2020A	2021A	2022A	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E	2031E	2032E
<b>Net Revenue</b>	[BRL mn]	<b>25,578</b>	<b>34,715</b>	<b>41,384</b>	<b>29,477</b>	<b>34,859</b>	<b>39,171</b>	<b>42,622</b>	<b>44,114</b>	<b>45,658</b>	<b>47,293</b>	<b>48,910</b>	<b>50,157</b>	<b>51,436</b>
YoY growth	[%]	21.64%	35.72%	19.21%	(28.77%)	18.26%	12.37%	8.81%	3.50%	3.50%	3.58%	3.42%	2.55%	2.55%
<b>COGS</b>	[BRL mn]	<b>(15,755)</b>	<b>(16,727)</b>	<b>(19,958)</b>	<b>(20,531)</b>	<b>(22,362)</b>	<b>(25,104)</b>	<b>(26,121)</b>	<b>(26,808)</b>	<b>(27,485)</b>	<b>(28,154)</b>	<b>(28,791)</b>	<b>(29,368)</b>	<b>(30,109)</b>
YoY growth	[%]	(9.66%)	6.17%	19.31%	2.87%	8.92%	12.26%	4.05%	2.63%	2.52%	2.44%	2.26%	2.00%	2.52%
<b>Gross profit</b>	[BRL mn]	<b>9,823</b>	<b>17,988</b>	<b>21,426</b>	<b>8,946</b>	<b>12,496</b>	<b>14,066</b>	<b>16,501</b>	<b>17,306</b>	<b>18,173</b>	<b>19,139</b>	<b>20,119</b>	<b>20,789</b>	<b>21,326</b>
Gross margin	[%]	38.41%	51.82%	51.77%	30.35%	35.85%	35.91%	38.71%	39.23%	39.80%	40.47%	41.14%	41.45%	41.46%
Operating expenses	[BRL mn]	(2,409)	(1,690)	(2,057)	(3,648)	(4,264)	(4,741)	(5,064)	(5,220)	(5,378)	(5,544)	(5,707)	(5,842)	(5,979)
<b>EBIT</b>	[BRL mn]	<b>7,414</b>	<b>16,298</b>	<b>19,370</b>	<b>5,298</b>	<b>8,232</b>	<b>9,326</b>	<b>11,437</b>	<b>12,086</b>	<b>12,795</b>	<b>13,595</b>	<b>14,412</b>	<b>14,948</b>	<b>15,347</b>
EBIT margin	[%]	28.98%	46.95%	46.80%	17.97%	23.62%	23.81%	26.83%	27.40%	28.02%	28.75%	29.47%	29.80%	29.84%
D&A	[BRL mn]	6,232	6,438	6,738	8,421	9,623	10,476	10,771	11,006	11,229	11,448	11,667	11,890	12,120
<b>EBITDA</b>	[BRL mn]	<b>13,646</b>	<b>22,735</b>	<b>26,107</b>	<b>13,719</b>	<b>17,855</b>	<b>19,801</b>	<b>22,208</b>	<b>23,092</b>	<b>24,024</b>	<b>25,043</b>	<b>26,079</b>	<b>26,838</b>	<b>27,467</b>
EBITDA margin	[%]	53.35%	65.49%	63.09%	46.54%	51.22%	50.55%	52.10%	52.35%	52.62%	52.95%	53.32%	53.51%	53.40%
<b>EBITDA/ton</b>	[BRL th]	<b>1,261</b>	<b>2,148</b>	<b>2,463</b>	<b>1,349</b>	<b>1,581</b>	<b>1,546</b>	<b>1,699</b>	<b>1,766</b>	<b>1,838</b>	<b>1,916</b>	<b>1,995</b>	<b>2,053</b>	<b>2,101</b>
<b>EBITDA/ton (US\$)</b>	[US\$ th]	<b>244</b>	<b>398</b>	<b>477</b>	<b>268</b>	<b>308</b>	<b>292</b>	<b>316</b>	<b>326</b>	<b>336</b>	<b>346</b>	<b>358</b>	<b>368</b>	<b>377</b>

## Appendix 3 – Income Statement (Paper segment)

Income Statement (paper)	Unit	2020A	2021A	2022A	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E	2031E	2032E
<b>Net Revenue</b>	[BRL mn]	<b>4,882</b>	<b>6,250</b>	<b>8,447</b>	<b>8,744</b>	<b>9,586</b>	<b>9,830</b>	<b>10,770</b>	<b>11,147</b>	<b>11,537</b>	<b>11,943</b>	<b>12,359</b>	<b>12,767</b>	<b>13,190</b>
YoY growth	[%]	(2.07%)	28.03%	35.14%	3.52%	9.63%	2.54%	9.56%	3.50%	3.50%	3.52%	3.48%	3.31%	3.31%
<b>COGS</b>	[BRL mn]	<b>(3,211)</b>	<b>(3,888)</b>	<b>(4,863)</b>	<b>(5,544)</b>	<b>(5,724)</b>	<b>(5,615)</b>	<b>(6,346)</b>	<b>(6,556)</b>	<b>(6,771)</b>	<b>(6,996)</b>	<b>(7,225)</b>	<b>(7,449)</b>	<b>(7,681)</b>
YoY growth	[%]	(2.79%)	21.07%	25.08%	14.00%	3.25%	(1.91%)	13.04%	3.29%	3.29%	3.32%	3.27%	3.11%	3.11%
<b>Gross profit</b>	[BRL mn]	<b>1,671</b>	<b>2,362</b>	<b>3,583</b>	<b>3,200</b>	<b>3,862</b>	<b>4,215</b>	<b>4,423</b>	<b>4,591</b>	<b>4,766</b>	<b>4,946</b>	<b>5,134</b>	<b>5,318</b>	<b>5,509</b>
Gross margin	[%]	34.22%	37.79%	42.42%	36.60%	40.29%	42.88%	41.07%	41.19%	41.31%	41.42%	41.54%	41.65%	41.76%
Operating expenses	[BRL mn]	(641)	(479)	(730)	(831)	(879)	(922)	(970)	(1,016)	(1,064)	(1,114)	(1,165)	(1,218)	(1,273)
<b>EBIT</b>	[BRL mn]	<b>1,030</b>	<b>1,883</b>	<b>2,853</b>	<b>2,369</b>	<b>2,984</b>	<b>3,294</b>	<b>3,454</b>	<b>3,575</b>	<b>3,702</b>	<b>3,833</b>	<b>3,969</b>	<b>4,100</b>	<b>4,236</b>
EBIT margin	[%]	21.09%	30.12%	33.78%	27.09%	31.12%	33.51%	32.07%	32.07%	32.09%	32.09%	32.11%	32.11%	32.11%
D&A	[BRL mn]	540	604	670	936	780	551	567	579	591	603	614	626	638
<b>EBITDA</b>	[BRL mn]	<b>1,570</b>	<b>2,486</b>	<b>3,523</b>	<b>3,305</b>	<b>3,764</b>	<b>3,845</b>	<b>4,020</b>	<b>4,154</b>	<b>4,293</b>	<b>4,435</b>	<b>4,583</b>	<b>4,726</b>	<b>4,874</b>
EBITDA margin	[%]	32.16%	39.78%	41.71%	37.79%	39.26%	39.11%	37.33%	37.27%	37.21%	37.14%	37.08%	37.01%	36.95%
<b>EBITDA/ton</b>	[BRL th]	<b>1,334</b>	<b>1,921</b>	<b>2,698</b>	<b>2,344</b>	<b>2,627</b>	<b>2,684</b>	<b>2,698</b>	<b>2,788</b>	<b>2,881</b>	<b>2,976</b>	<b>3,075</b>	<b>3,171</b>	<b>3,270</b>
<b>EBITDA/ton (US\$)</b>	[US\$ th]	<b>259</b>	<b>356</b>	<b>522</b>	<b>466</b>	<b>512</b>	<b>506</b>	<b>502</b>	<b>514</b>	<b>526</b>	<b>538</b>	<b>551</b>	<b>569</b>	<b>586</b>

## Appendix 4 – Balance Sheet

Balance Sheet (BRL mn)	2020A	2021A	2022A	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E	2031E	2032E
<b>Assets</b>	<b>101,801</b>	<b>118,975</b>	<b>133,198</b>	<b>137,269</b>	<b>143,945</b>	<b>150,310</b>	<b>152,548</b>	<b>154,545</b>	<b>156,592</b>	<b>158,701</b>	<b>160,868</b>	<b>162,500</b>	<b>164,210</b>
<b>Current assets</b>	<b>17,958</b>	<b>34,103</b>	<b>37,123</b>	<b>31,418</b>	<b>33,706</b>	<b>40,425</b>	<b>43,336</b>	<b>46,091</b>	<b>48,806</b>	<b>51,473</b>	<b>54,083</b>	<b>56,048</b>	<b>57,975</b>
Cash and equivalents	9,047	21,099	17,053	12,986	13,488	18,613	20,182	22,330	24,423	26,447	28,422	29,846	31,181
Accounts receivable	2,915	6,531	9,607	7,539	8,767	9,665	10,532	10,900	11,282	11,684	12,085	12,412	12,748
Inventories	4,009	4,637	5,728	6,342	6,832	7,472	7,897	8,115	8,332	8,550	8,760	8,955	9,192
Recoverable taxes	407	361	550	379	441	486	530	548	567	587	608	624	641
Derivative financial instruments	484	470	3,048	3,048	3,048	3,048	3,048	3,048	3,048	3,048	3,048	3,048	3,048
Advances to suppliers	43	60	108	94	102	111	118	121	124	127	130	133	137
Dividends receivable	8	7	7	7	7	7	7	7	7	7	7	7	7
Others assets	1,045	938	1,021	1,021	1,021	1,021	1,021	1,021	1,021	1,021	1,021	1,021	1,021
<b>Non-current assets</b>	<b>83,843</b>	<b>84,872</b>	<b>96,075</b>	<b>105,851</b>	<b>110,239</b>	<b>109,886</b>	<b>109,212</b>	<b>108,454</b>	<b>107,786</b>	<b>107,228</b>	<b>106,785</b>	<b>106,452</b>	<b>106,235</b>
Marketable securities	185	250	419	419	419	419	419	419	419	419	419	419	419
Recoverable taxes	835	1,269	1,406	1,079	1,254	1,383	1,507	1,560	1,614	1,672	1,729	1,776	1,824
Deferred taxes	8,677	8,730	3,986	3,986	3,986	3,986	3,986	3,986	3,986	3,986	3,986	3,986	3,986
Derivative financial instruments	857	972	1,825	1,825	1,825	1,825	1,825	1,825	1,825	1,825	1,825	1,825	1,825
Advances to suppliers	1,015	1,283	1,592	1,648	1,775	1,941	2,051	2,108	2,164	2,221	2,276	2,326	2,388
Judicial deposits	258	301	363	363	363	363	363	363	363	363	363	363	363
Other assets	235	297	280	280	280	280	280	280	280	280	280	280	280
Biological assets	11,161	12,249	14,632	15,300	16,328	17,509	18,867	20,114	21,279	22,387	23,457	24,502	25,537
Investments	359	524	613	613	613	613	613	613	613	613	613	613	613
PP&E	39,157	38,170	50,657	60,578	64,179	62,934	61,282	59,812	58,541	57,456	56,549	55,808	55,198
Right of use	4,344	4,794	5,109	5,434	5,755	6,036	6,287	6,508	6,701	6,870	7,018	7,148	7,262
Intangible	16,760	16,034	15,193	14,328	13,462	12,597	11,732	10,867	10,001	9,136	8,271	7,405	6,540
<b>Liabilities</b>	<b>94,463</b>	<b>103,800</b>	<b>100,032</b>	<b>95,717</b>	<b>99,660</b>	<b>101,965</b>	<b>103,408</b>	<b>104,541</b>	<b>105,655</b>	<b>106,755</b>	<b>107,832</b>	<b>108,269</b>	<b>108,737</b>
<b>Current liabilities</b>	<b>8,173</b>	<b>11,551</b>	<b>14,493</b>	<b>13,092</b>	<b>13,868</b>	<b>14,746</b>	<b>15,358</b>	<b>15,681</b>	<b>16,003</b>	<b>16,327</b>	<b>16,640</b>	<b>16,916</b>	<b>17,238</b>
Accounts payable	2,361	3,289	6,207	7,124	7,673	8,392	8,870	9,115	9,359	9,603	9,839	10,058	10,324
Loans, financing and debentures	2,043	3,656	3,335	3,276	3,329	3,350	3,360	3,371	3,381	3,392	3,403	3,403	3,403
Lease liabilities	620	623	672	536	565	590	613	634	653	670	685	699	711
Derivative financial instruments	1,991	1,563	668	668	668	668	668	668	668	668	668	668	668
Taxes payable	170	340	449	331	384	424	462	478	495	512	530	544	559
Payroll and charges	493	591	675	559	635	697	748	774	801	830	858	882	907
Liabilities for assets acquisitions and subsidiaries	102	99	1,857	0	0	0	0	0	0	0	0	0	0
Dividends payable	6	919	5	5	5	5	5	5	5	5	5	5	5
Advance from customers	25	104	131	99	115	127	138	143	148	153	158	163	167
Other liabilities	361	368	494	494	494	494	494	494	494	494	494	494	494
<b>Non-current liabilities</b>	<b>86,291</b>	<b>92,249</b>	<b>85,539</b>	<b>82,625</b>	<b>85,792</b>	<b>87,219</b>	<b>88,050</b>	<b>88,860</b>	<b>89,652</b>	<b>90,428</b>	<b>91,192</b>	<b>91,353</b>	<b>91,499</b>
Loans, financing and debentures	70,856	75,973	71,240	68,048	70,893	72,032	72,596	73,166	73,741	74,322	74,908	74,908	74,908
Lease liabilities	4,572	5,270	5,510	5,986	6,300	6,583	6,842	7,076	7,286	7,475	7,645	7,799	7,937
Derivative financial instruments	6,126	6,331	4,179	4,179	4,179	4,179	4,179	4,179	4,179	4,179	4,179	4,179	4,179
Liabilities for assets acquisitions and subsidiaries	401	307	206	-	-	-	-	-	-	-	-	-	-
Provision for judicial liabilities	3,256	3,233	3,256	3,256	3,256	3,256	3,256	3,256	3,256	3,256	3,256	3,256	3,256
Employee benefit plans	785	675	691	691	691	691	691	691	691	691	691	691	691
Deferred taxes	1	-	1	1	1	1	1	1	1	1	1	1	1
Share-based compensation plans	195	167	162	170	177	183	189	196	203	210	217	225	233
Advance from customers	-	150	136	136	136	136	136	136	136	136	136	136	136
Other liabilities	99	144	157	157	157	157	157	157	157	157	157	157	157
<b>Shareholders' Equity</b>	<b>7,337</b>	<b>15,175</b>	<b>33,166</b>	<b>41,552</b>	<b>44,286</b>	<b>48,345</b>	<b>49,140</b>	<b>50,004</b>	<b>50,937</b>	<b>51,946</b>	<b>53,035</b>	<b>54,231</b>	<b>55,473</b>
Share capital	9,236	9,236	9,236	7,115	7,115	7,115	7,115	7,115	7,115	7,115	7,115	7,115	7,115
Capital reserves	11	15	18	18	18	18	18	18	18	18	18	18	18
Treasury shares	(218)	(218)	(2,120)	-	-	-	-	-	-	-	-	-	-
Earnings reserves	-	3,928	24,208	32,594	35,327	39,386	40,182	41,045	41,979	42,987	44,077	45,273	46,515
Other reserves	2,130	2,115	1,720	1,720	1,720	1,720	1,720	1,720	1,720	1,720	1,720	1,720	1,720
Retained earnings	(3,926)	-	-	-	-	-	-	-	-	-	-	-	-
Non-controlling shareholders' participation	106	100	105	105	105	105	105	105	105	105	105	105	105

## Appendix 5 – Cash Flow Statement

Cash Flow Statement	Unit	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E	2031E	2032E
<b>Cash from operating activities</b>	<b>[BRL mn]</b>	<b>18,371</b>	<b>16,168</b>	<b>17,189</b>	<b>19,546</b>	<b>21,077</b>	<b>22,025</b>	<b>23,016</b>	<b>24,081</b>	<b>24,882</b>	<b>25,590</b>
Net income	[BRL mn]	11,181	3,645	5,412	7,954	8,635	9,332	10,088	10,895	11,957	12,424
(+) D&A	[BRL mn]	9,357	10,403	11,027	11,338	11,585	11,820	12,050	12,281	12,516	12,757
(-) Δ WK assets	[BRL mn]	1,638	(1,786)	(1,594)	(1,342)	(608)	(621)	(644)	(655)	(541)	(593)
(+) Δ WK liabilities	[BRL mn]	(1,206)	695	832	578	292	293	296	288	262	310
(-) Δ Other non-current assets	[BRL mn]	272	(303)	(295)	(234)	(109)	(111)	(114)	(112)	(97)	(110)
(+) Δ Other non-current liabilities	[BRL mn]	(198)	7	6	6	7	7	7	7	8	8
(+) Lease interest	[BRL mn]	577	609	641	670	696	720	741	760	778	793
FX variation	[BRL mn]	(3,251)	2,898	1,159	575	580	586	591	597	0	0
<b>Cash from investing activities</b>	<b>[BRL mn]</b>	<b>(18,449)</b>	<b>(13,496)</b>	<b>(9,386)</b>	<b>(9,433)</b>	<b>(9,720)</b>	<b>(10,044)</b>	<b>(10,380)</b>	<b>(10,728)</b>	<b>(11,088)</b>	<b>(11,434)</b>
Growth CAPEX	[BRL mn]	(12,089)	(6,719)	(1,942)	(1,364)	(1,368)	(1,400)	(1,434)	(1,469)	(1,505)	(1,542)
Maintenance CAPEX	[BRL mn]	(6,360)	(6,777)	(7,444)	(8,069)	(8,352)	(8,644)	(8,946)	(9,260)	(9,584)	(9,892)
Intangibles additions	[BRL mn]	-	-	-	-	-	-	-	-	-	-
<b>Cash from financing activities</b>	<b>[BRL mn]</b>	<b>(3,989)</b>	<b>(2,170)</b>	<b>(2,678)</b>	<b>(8,543)</b>	<b>(9,210)</b>	<b>(9,887)</b>	<b>(10,612)</b>	<b>(11,377)</b>	<b>(12,369)</b>	<b>(12,821)</b>
Lease payments	[BRL mn]	(1,193)	(1,259)	(1,325)	(1,384)	(1,439)	(1,488)	(1,532)	(1,572)	(1,608)	(1,640)
Dividends	[BRL mn]	(2,795)	(911)	(1,353)	(7,159)	(7,771)	(8,399)	(9,079)	(9,805)	(10,762)	(11,181)
<b>Net change in cash</b>	<b>[BRL mn]</b>	<b>(4,067)</b>	<b>502</b>	<b>5,125</b>	<b>1,569</b>	<b>2,147</b>	<b>2,094</b>	<b>2,024</b>	<b>1,975</b>	<b>1,424</b>	<b>1,335</b>



# Appendix 6 - Supply and Demand Model, in kton

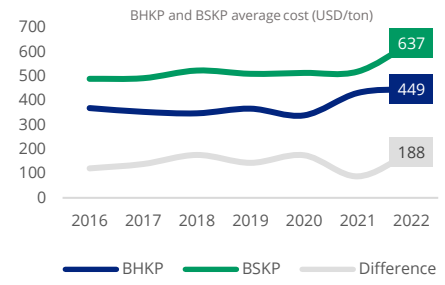
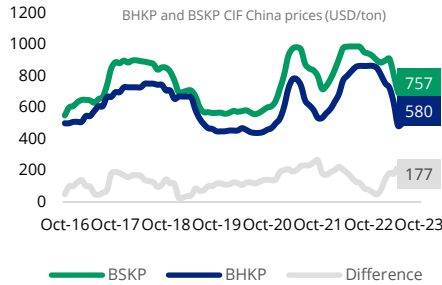
Demand		2021	2022	2023	2024	2025	2026	2027	2028
Tissue									
China		10,700	11,075	11,462	11,863	12,278	12,708	13,153	13,613
Japan		1,800	1,836	1,873	1,910	1,948	1,987	2,027	2,068
India		157	173	418	664	909	1,155	1,400	1,400
Asia ex-China/Japan/India		4,350	4,568	4,796	5,036	5,287	5,552	5,829	6,121
RoW		5,000	5,100	5,202	5,306	5,412	5,520	5,631	5,743
North America		9,000	9,072	9,145	9,218	9,291	9,366	9,441	9,516
Europe		9,000	9,315	9,641	9,978	10,328	10,689	11,063	11,451
<b>Total</b>		<b>40,007</b>	<b>41,138</b>	<b>42,537</b>	<b>43,975</b>	<b>45,455</b>	<b>46,977</b>	<b>48,544</b>	<b>49,912</b>
YoY Growth			2.8%	3.4%	3.4%	3.4%	3.3%	3.3%	2.8%
BHKP as % of tissue		47.0%	47.5%	48.0%	48.5%	49.0%	49.5%	50.0%	50.5%
% increase(decrease)			0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
Total BHKP		18,803	19,541	20,418	21,328	22,273	23,254	24,272	25,206
Market % of BHKP		89.1%	89.1%	89.1%	89.1%	89.1%	89.1%	89.1%	89.1%
<b>Market BHKP</b>		<b>16,750</b>	<b>17,407</b>	<b>18,188</b>	<b>18,999</b>	<b>19,841</b>	<b>20,715</b>	<b>21,622</b>	<b>22,453</b>
YoY Growth			3.9%	4.5%	4.5%	4.4%	4.4%	4.4%	3.8%
<b>Packaging</b>									
Total Containerboard		188,000	191,439	194,953	198,545	202,217	205,971	209,809	213,735
YoY Growth			1.8%	1.8%	1.8%	1.8%	1.9%	1.9%	1.9%
Total cartonboard		47,000	47,976	48,980	50,013	51,076	52,171	53,297	54,457
YoY Growth			2.1%	2.1%	2.1%	2.1%	2.2%	2.2%	2.2%
<b>Total Packaging</b>		<b>235,000</b>	<b>239,415</b>	<b>243,933</b>	<b>248,559</b>	<b>253,294</b>	<b>258,142</b>	<b>263,107</b>	<b>268,192</b>
YoY Growth			1.9%	1.9%	1.9%	1.9%	1.9%	1.9%	1.9%
Market BHKP %		1.7%	1.8%	1.9%	2.0%	2.1%	2.2%	2.3%	2.4%
<b>Market BHKP</b>		<b>4,019</b>	<b>4,333</b>	<b>4,659</b>	<b>4,996</b>	<b>5,344</b>	<b>5,705</b>	<b>6,078</b>	<b>6,463</b>
<b>Specialties</b>									
Total Specialties		54,000	52,000	52,000	53,000	55,000	54,000	54,000	54,000
YoY Growth			-3.7%	0.0%	1.9%	3.8%	-1.8%	0.0%	0.0%
Market BHKP %		15.4%	15.4%	15.4%	15.4%	15.4%	15.4%	15.4%	15.4%
<b>Market BHKP</b>		<b>8,316</b>	<b>8,008</b>	<b>8,008</b>	<b>8,162</b>	<b>8,470</b>	<b>8,316</b>	<b>8,316</b>	<b>8,316</b>
<b>P&amp;W</b>									
Total P&W		84,000	85,000	83,000	82,000	79,000	80,000	79,000	78,000
YoY Growth			1.2%	-2.4%	-1.2%	-3.7%	1.3%	-1.3%	-1.3%
Market BHKP %		8.8%	8.8%	8.8%	8.8%	8.8%	8.8%	8.8%	8.8%
<b>Market BHKP</b>		<b>7,392</b>	<b>7,480</b>	<b>7,304</b>	<b>7,216</b>	<b>6,952</b>	<b>7,040</b>	<b>6,952</b>	<b>6,864</b>
<b>Total Market BHKP</b>		<b>36,477</b>	<b>37,228</b>	<b>38,159</b>	<b>39,373</b>	<b>40,607</b>	<b>41,775</b>	<b>42,967</b>	<b>44,097</b>
<b>Supply</b>	<b>Cost 2022 (BRL/ton)</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>2025</b>	<b>2026</b>	<b>2027</b>	<b>2028</b>
<b>Brazil</b>		<b>18,230</b>	<b>19,130</b>	<b>20,648</b>	<b>21,698</b>	<b>22,173</b>	<b>22,048</b>	<b>22,048</b>	<b>22,048</b>
Suzano	392	170	170	170	170	170	170	170	170
Aracruz	392	2,340	2,340	2,340	2,340	2,340	2,340	2,340	2,340
Imperatriz	392	1,590	1,590	1,590	1,590	1,590	1,590	1,590	1,590
Jacareí	392	1,100	1,100	1,100	1,100	1,100	1,100	1,100	1,100
Limeira	392	400	400	400	400	400	400	400	400
Mucuri	392	1,480	1,480	1,480	1,480	1,480	1,480	1,480	1,480
Três Lagoas	392	3,250	3,250	3,250	3,250	3,250	3,250	3,250	3,250
Veracel (50% of Suzano)	392	560	560	560	560	560	560	560	560
Cerrado	239				700	2,275	2,550	2,550	2,550
Total Suzano		10,890	10,890	10,890	11,890	13,165	13,440	13,440	13,440
<b>CMPC</b>									
Guaíba 1	484	430	430	548	548	548	548	548	548
Guaíba 2	484	1,500	1,500	1,500	1,850	1,850	1,850	1,850	1,850
<b>Klabin</b>									
Total Klabin	362	1,100	1,100	1,100	1,100	1,100	1,100	1,100	1,100
<b>Eldorado</b>									
Total Eldorado	378	1,800	1,800	1,800	1,800	1,800	1,800	1,800	1,800
<b>Bracell</b>									
Bahia	410	250	250	250	250	250	250	250	250
São Paulo	410	500	1,800	2,800	2,420	2,115	1,910	1,700	1,700
<b>Veracel (50% of Stora Enso)</b>									
Total Veracel	392	560	560	560	560	560	560	560	560
<b>Cenibra</b>									
Total Cenibra	410	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200
<b>Chile/Uruguay</b>									
<b>CMPC</b>									
Santa fe 1	484	370	370	370	370	370	370	370	370
Santa fe 2	484	1,126	1,126	1,126	1,126	1,126	1,126	1,126	1,126
<b>UPM</b>									
UPM Fray Bentos	454	1,305	1,305	1,305	1,305	1,305	1,305	1,305	1,305
Paso de los Toros	280	2,100	2,100	2,100	2,100	2,100	2,100	2,100	2,100
<b>Arauco</b>									
Arauco mill (MAPA)	454	290	1,940	3,500	3,500	3,500	3,500	3,500	3,500
Valdivia*	454			1,560	1,560	1,560	1,560	1,560	1,560
Montes del Plata	454	1,420	1,420	1,420	1,420	1,420	1,420	1,420	1,420
Nueva Aldea	454	520	520	520	520	520	520	520	520
<b>Indonesia</b>									
Pangkalan Kerinci	342	1,132	1,132	1,132	1,132	1,132	1,132	1,132	1,132
APP	354	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000
Other	342	270	270	270	270	270	270	270	270
<b>Other Asia</b>									
Total Other Asia	410	500	500	500	500	500	500	500	500
<b>Iberia</b>									
ENCE	528	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200
Other	528	1,400	1,320	1,240	1,160	1,080	1,000	920	840
<b>West Europe</b>									
Finland	559	362	362	362	362	362	362	362	362
UPM Hardwood	559	362	362	362	362	362	362	362	362
Other	559	1,638	1,538	1,438	1,338	1,238	1,138	1,038	938
<b>China</b>									
RGE Asia Symbol	611	1,900	1,900	1,900	1,900	1,900	1,900	1,900	1,900
Other	611	164	164	164	164	164	164	164	164
<b>Canada</b>									
Total Canada	548	1,100	1,050	1,000	950	900	850	800	750
<b>East Europe</b>									
Total East Europe	461	3,300	3,300	3,300	3,300	3,300	3,300	3,300	3,300
<b>US</b>									
Total US	658	900	710	710	710	710	710	710	710
<b>Japan</b>									
Total Japan	658	600	600	600	600	600	600	600	600
<b>Total</b>		<b>40,663</b>	<b>41,253</b>	<b>45,276</b>	<b>46,241</b>	<b>47,281</b>	<b>46,721</b>	<b>46,281</b>	<b>46,051</b>
Disruptions		307	0	865	865	865	865	865	865
<b>Actual Capacity</b>		<b>40,356</b>	<b>41,253</b>	<b>44,411</b>	<b>45,376</b>	<b>46,416</b>	<b>45,856</b>	<b>45,416</b>	<b>45,186</b>



## Appendix 7 – BHKP vs BSKP price gap

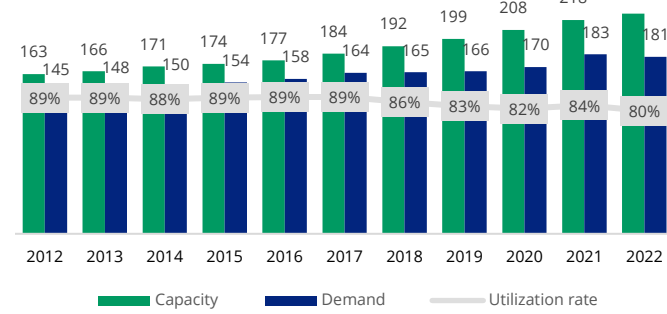
Due to technological factors and mainly eucalyptus productivity, we saw the difference in costs between BHKP and BSKP rising, which resulted in a rising difference in prices between the two fibers. As BHKP also got more resistant, this price gap incentivized paper producers to use BHKP in its operations, which made it gain share from the long fiber.

We see that with BSKP mills aging and few new projects, its space is going to be filled with BHKP, helping its demand to increase and price gap to keep high.

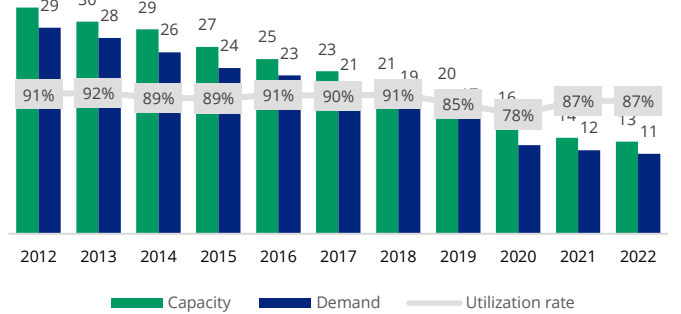


## Appendix 8 – Paper capacity

Packaging global Capacity (Mton), Demand (Mton) and Utilization Rate (%)



Newsprint global Capacity (Mton), Demand (Mton) and Utilization Rate (%)



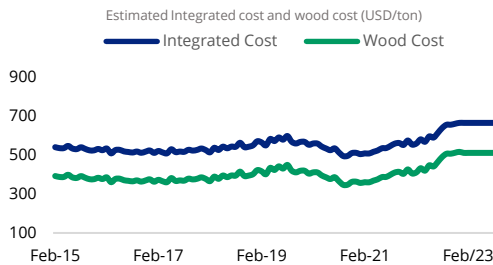
The above graphs show how looking only to the utilization rate can be misleading. During these years, packaging utilization rate showed a decline, while newsprint stayed relatively stable. However, what we saw was a demand increase in packaging, followed by huge capacities additions due to higher growth expectations. We expect this trend to continue in the following years, as we see an increasing demand combined with fast supply increases, which should lower the utilization rates for packaging and tissue markets, but provide a lot of demand for pulp usage, which can be illustrated by the still increasing supply growth. Besides that, in its latest report, China's National Household Paper Industry Association has urged its companies to invest "rationally", showing that companies are planning on continued capacity increases.

New chinese capacity additions

Tissue		Packaging	
Company	Capacity	Company	Capacity
APP Rudong	3.96 Mton	Nine Dragons	6.25 Mtons
Hengan	~260 ktons	Sun Paper	2.55 Mtons
C&S	25 ktons	Shanying	1.8 Mtons

## Appendix 9 – Integrated costs

To calculate the integrated producer cost, we first needed to arrive at the ex-Wood cost. To get this number, we used Sun Paper 2022 cost breakdown. As it groups wood and other materials, such as chemicals, in raw materials, we estimated a USD 25/ton costs for them, what we see as conservative, as other companies have much higher costs in chemicals (see Appendix 12). We then, arrive at USD 149/ton of ex-wood pulp production cost. As 2 tons of woodchips are needed for a ton of pulp, we multiply the effective cost by two to get the wood cost. By adding them, we get the total production cost.



Cost per ton	USD
Raw materials	475.5
Depreciation	23.7
Labor cost	10.8
Energy	44.3
Other Manufacturing	45.2
Product shipping	15.3

## Appendix 10 - Minimum to profit calculus

	Unit	APP	Suzano	Eldorado	CMPC	Arauco	Sun Paper	ENCE
EBITDA	[USD mn]	969	4,864	884	1,402	1,196	86	138
EBITDA Margin	[%]	60.2%	60.6%	60.5%	44.6%	39.8%	17.2%	19.3%
Net Revenues	[USD mn]	1,609	8,020	1,461	3,144	3,004	500	713
Production	[ktons]	2,356	10,600	1,832	4,036	3,175	700	816
Average Price	[USD/ton]	682.8	756.6	797.4	779.0	946.3	713.8	873.3
EBITDA/ton	[USD/ton]	411.1	458.9	482.7	347.4	376.7	122.9	168.7
Costs/ton	[USD/ton]	(271.7)	(297.7)	(314.7)	(431.6)	(569.6)	(591.0)	(704.6)
Costs BHKP/ton	[USD/ton]	(271.7)	(297.7)	(314.7)	(402.2)	(470.6)	(591.0)	(704.6)
Maintenance Capex	[USD mn]	(195.0)	(195.0)	(195.0)	(195.0)	(195.0)	(195.0)	(195.0)
Capex/ton	[USD/ton]	(82.8)	(18.4)	(106.4)	(48.3)	(61.4)	(278.6)	(238.9)
<b>(Costs + Capex)/ton</b>	[USD/ton]	<b>(354.5)</b>	<b>(390.4)</b>	<b>(421.2)</b>	<b>(450.6)</b>	<b>(532.0)</b>	<b>(869.5)</b>	<b>(977.5)</b>

To arrive at the minimum BHKP price for companies to profit, we used data from 2022 results. As we want to know not only the cash cost, but all the costs and expenses the firms have to pay (Costs/ton), we went directly to the EBITDA of each company (or the pulp division for companies that have other businesses). Some companies produce not only BHKP, but also other pulp types, such as BSKP. To account for that, we used the historical BHKP/BSKP ratio to adjust, using each company share between both products. This difference is the cause of the lines Costs/ton and Costs BHKP/ton, that is the same for companies that produces only BHKP. This data about the average costs also illustrates the technological and geographical benefits of BHKP over BSKP, as the ratio between both is in its historical high (as shown in Appendix 7).

## Appendix 11 – New projects IRR (LHS) and Cerrado projections (RHS)

Basic Assumptions		Unit										Cerrado TOD estimates		
CAPEX/ton	[USD/ton]	2250	2250	2250	2250	2250	2250	2250	2250	2250	2250	TOD Suzano 2022	[BRL/ton]	2022
Depreciable Life	[Years]	30	30	30	30	30	30	30	30	30	Inflation + FX	[BRL/ton]	91	
Economic Life	[Years]	25	25	25	25	25	25	25	25	25	Commodities	[BRL/ton]	-149	
Tax Rate	[%]	34%	34%	34%	34%	34%	34%	34%	34%	34%	Competitiveness	[BRL/ton]	-134	
Leverage	[%]	0%	0%	0%	0%	0%	0%	0%	0%	0%	Suzano 2027 ex-Cerrado	[BRL/ton]	1,830	
Kd	[%]	5%	5%	5%	5%	5%	5%	5%	5%	5%	Capacity ex-cerrado	[Mtons]	10.89	
<b>Pulp price sensibility</b>														
<b>Income Statement</b>														
Pulp price	[USD/ton]	500	520	540	560	580	600	620	640	660	<b>TOD total ex-cerrado</b>	<b>[BRL mn]</b>	<b>19,929</b>	
Cash cost + Expenses	[USD/ton]	228	228	228	228	228	228	228	228	228	TOD Suzano + Cerrado	[BRL/ton]	1,750	
EBITDA/ton	[USD/ton]	272	292	312	332	352	372	392	412	432	Capacity with Cerrado	[Mtons]	13.44	
Depreciation	[USD/ton]	75	75	75	75	75	75	75	75	75	<b>TOD total</b>	<b>[BRL mn]</b>	<b>23,520</b>	
EBT	[USD/ton]	197	217	237	257	277	297	317	337	357	<b>TOD total Cerrado</b>	<b>[BRL mn]</b>	<b>3,591</b>	
Taxes	[USD/ton]	(67)	(74)	(81)	(87)	(94)	(101)	(108)	(115)	(121)	Capacity Cerrado	[Mtons]	2.55	
Accounting Profit	[USD/ton]	130	143	156	170	183	196	209	222	236	<b>TOD Cerrado</b>	<b>[BRL/ton]</b>	<b>1,408</b>	
<b>Cash Flow Analysis</b>														
EBITDA/ton	[USD/ton]	272	292	312	332	352	372	392	412	432	TOD Cerrado USD	[USD/ton]	282	
Taxes	[USD/ton]	(67)	(74)	(81)	(87)	(94)	(101)	(108)	(115)	(121)	Sustaining CAPEX projection	[BRL/ton]	270	
Sustaining CAPEX	[USD/ton]	(90)	(90)	(90)	(90)	(90)	(90)	(90)	(90)	(90)	Sustaining CAPEX projection	[USD/ton]	54	
WK Variation	[USD/ton]	(5)	(5)	(5)	(5)	(5)	(5)	(5)	(5)	(5)	<b>Costs + Expenses Cerrado</b>	<b>[USD/ton]</b>	<b>228</b>	
Net Cash/ ton	[USD/ton]	110	123	136	150	163	176	189	202	216				
<b>Project IRR</b>	<b>[%]</b>	<b>7.4%</b>	<b>8.0%</b>	<b>8.6%</b>	<b>9.2%</b>	<b>9.8%</b>	<b>10.4%</b>	<b>11.0%</b>	<b>11.7%</b>	<b>12.3%</b>				

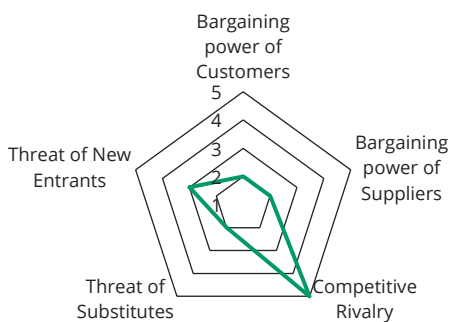
In our new Project IRR analysis, we assumed a Project similar do Suzano's Cerrado in efficiency. We used the Cerrado Project CAPEX/ton, correcting by the land price increases and CPI. In the cash cost + expenses, we used Cerrado's projections, as is shown in the right-side figure, already incorporating forestal maintenance CAPEX in these expenses, as it goes on COGS after the exhaustion, also accounting for inflation. We, then, used as sustaining CAPEX only the non-forestal use of capital, which was estimated as 4% of the original CAPEX. For the maturation of the Project, we were optimistic and projected the CAPEX to be distributed equally in three years, with the project already operating in full-capacity and structural costs in the fourth year. We also didn't impute a risk premium for the riskness of the Project, what would push the WACC and the incentive price up. As the main points of concern, we were conservative by assuming Cerrado's projected efficiency to the new project, which we view as almost irreplicable, while a lower tax rate could also change the results. To estimate Cerrado Project's financials, we used the most-recent Total Operational Disbursement estimation for Suzano as a whole, estimated what comes from the actual operations and what should come from the Cerrado Project.

## Appendix 12 - Cost division by country

Here we explicitly have the cash costs by country in all categories. From these categories, we grouped maintenance, energy, chemicals and other costs in other company factors. It is important to remember that these costs are accounted as of 2022 results and can differ by quarter due to some seasonality. For costs denominated in BRL (Suzano), we used an Exchange rate of 5.16 BRL/USD, as used in the company presentations for the year. From the data in this table, only Finland and US come from Hawkins Wright, while for Brazil, Indonesia and China we used the main market pulp companies as proxies (Suzano, APP and Sun Paper, respectively).

Cost division	Suzano	US	China	Finland	Indonesia
Wood	140.0	265.5	450.5	307.1	167.7
Freight	87.0	75.0	14.1	70.9	57.5
Chemicals	73.6	82.5	45.8	63.0	42.1
Labour	31.6	83.7	21.1	39.4	21.7
Maintenance	26.3	53.7	25.8	27.6	23.8
Energy	(7.4)	35.8	18.8	3.9	17.3
Other costs	31.7	49.6	27.8	39.4	14.2
Sales	9.0	12.1	6.2	7.9	10.0
<b>Total</b>	<b>391.9</b>	<b>658.0</b>	<b>610.0</b>	<b>559.0</b>	<b>354.4</b>

## Appendix 13 – Porter Five Forces



**Conclusion:** in the market pulp industry, as a typical commodity environment, both producers and consumers are price takers. Although relatively easy to build new plants, the low part of the cost curve is concentrated in players at South America and Indonesia, where productive and cheap lands are scarce, what benefits the incumbents.

- 2 Bargaining Power of Customers (Low):** We see a low bargaining power coming from the customers in this industry. As the supply side is much more concentrated than the demand side, the prices tend to follow the market, as there isn't a single customer that concentrates great share like Suzano does in the supply side.
- 2 Bargaining Power of Suppliers (Low):** The main materials used for pulp production that come from suppliers are chemicals, such as Caustic Soda and Carbon dioxide, and third-party wood. In chemicals, we see that they are commodities traded in international markets, making the bargaining power low for both parties. About the wood, we see that forests next to the big mills may have some bargaining power due to better logistics.
- 5 Competitive Rivalry (Very high):** In a commodity market, we see a high competitive rivalry between the industry players, as we have little to none product differentiation and all companies want to maximize its profits, sometimes lowering the market price, as we have seen in the last years with many capacity additions in the industry.
- 2 Threat of Substitutes (Low):** BHPK poses a significant competitive threat to other fiber materials like BSKP and Recycled Paper, as well as to plastics. This dominance is due to the fact that recent innovations predominantly leverage cellulose to supplant these alternatives, thereby favoring Suzano's subsegment.
- 3 Threat of New Entrants (Moderate):** We see a low availability of land combined with the time it takes to make high productivity clones and the scale needed for a new project as risk mitigators.

## Appendix 14 – Explanation of Optimal Eucalyptus Areas

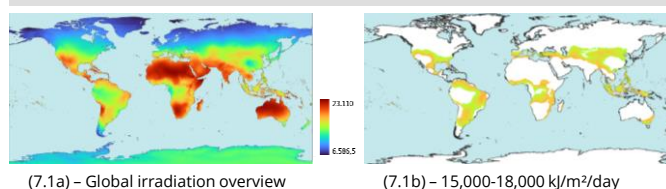
In our effort to identify optimal areas for the plantation of eucalyptus, we utilized data derived from NASA's MODIS (Moderate Resolution Imaging Spectroradiometer), an instrument aboard the Terra and Aqua satellites, designed to collect data across various wavelengths, enabling the monitoring and study of Earth's atmosphere, land, and oceans. Our analysis was based in academic papers (QUEIROZ, et al., 2020; Zhang, Wang, 2021) and online research. Through these sources, we identified some of the main variables affecting eucalyptus plantation: **Radiation, Precipitation, Temperature, and biomes.**

Considering these studies and findings, our analysis suggests the following thresholds to maximize the suitability for eucalyptus plantation: an average radiation of 15,000-18,000 kJ/m<sup>2</sup>/day (7.1b), annual precipitation greater than 600 mm (7.2b), a minimum average monthly temperature above 10°C (7.3b), and favorable biomes for Eucalyptus spp. that feature fertile and not overly humid soils (7.4).

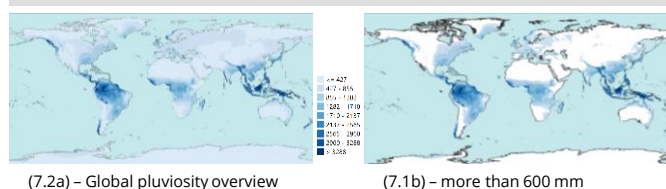
The final result of our analysis is visually represented in Exhibit 15, where the green areas denote the intersection of all these criteria. The highlighted areas include the eastern region of Paraguay, a majority of the Brazilian Cerrado, portions of São Paulo and Paraná, several countries in Central Africa, and a substantial part of Southeast Asia.

It is noteworthy that some regions in Latin America with significant eucalyptus plantations, such as Uruguay and Chile, as well as parts of China, do not fall within the intersection of these criteria. This does not mean that these areas are unsuitable for cultivation; rather, according to the thresholds identified, they may not be the most optimal. It's crucial to acknowledge that this study employs a limited set of parameters and aims to provide an overview of some of the promising areas for eucalyptus plantation globally.

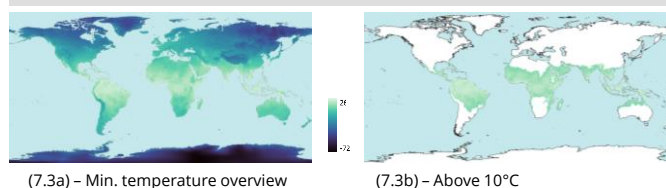
### 7.1 Average daily radiation (kJ/m<sup>2</sup>)



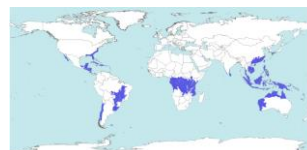
### 7.2 Average annual precipitation (mm)



### 7.3 Minimum temperature (graus C)



### 7.4 Favorable biomes for Eucalyptus spp.



## Appendix 15 – Forest-to-mill freight

Since one of Suzano's major expenditures is the transportation of wood from the forest to the mill, which comprises a substantial portion of the wood cost, we have estimated the company's expenditure per ton produced, using the reference values provided by the Agência Nacional de Transportes Terrestres (ANTT) for the freight cost per ton per kilometer. The freight cost structure is composed by a fixed component for loading and unloading, amounting to approximately 13 BRL per ton, while the rest of the freight cost is based on the distance traveled. The average radius of each disclosed mill was employed for this calculation. In cases of Ribas do Rio Pardo Initial, Mucuri, Jacareí, Aracruz, and Veracel, where the average radius hasn't been disclosed, the company average radius was utilized. Our computations indicate that a reduction of 10 km in the average radius, for instance, **would yield a savings of BRL 8.6 per ton produced.** By multiplying the average freight per ton of each mill (b) with our production projections for Suzano, we have determined the total freight cost (c) from the forest to each mill for the period spanning 2023E to 2032E. The results are shown in the table below:

(a) Premises		Unit	2022	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E	2031E	2032E
For 65 km	[BRL/(ton.km)]		0.49	0.4786	0.4794	0.4789	0.4796	0.4824	0.4874	0.4973	0.5060	0.5148	0.5148
For 96 km	[BRL/(ton.km)]		0.43	0.4159	0.4165	0.4161	0.4167	0.4191	0.4235	0.4321	0.4396	0.4473	0.4473
For 203 km	[BRL/(ton.km)]		0.35	0.3465	0.3471	0.3467	0.3472	0.3492	0.3529	0.3600	0.3663	0.3727	0.3727
Volume of eucalyptus per ton of pulp	[m <sup>3</sup> /ton pulp]		3.50										
Eucalyptus average density (30% humidity)	[ton wood/m <sup>3</sup> ]		0.72										
Mass of wood necessary for pulp produced	[ton wood/ton pulp]		2.52										
(b) Freight per ton		Unit	2022	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E	2031E	2032E
<b>Mill</b>	<b>Mean radius (km)</b>												
Ribas do Rio Pardo-MS Initial	203	[BRL/ton]	181	177	178	177	178	179	181	184	187	191	191
Ribas do Rio Pardo-MS Structural	65	[BRL/ton]	80	78	79	78	79	79	80	81	83	84	84
3 lagoas-MS	96	[BRL/ton]	103	101	101	101	101	102	102	105	106	108	108
Imperatriz-MA	181	[BRL/ton]	162	158	158	158	158	159	161	164	167	170	170
Mucuri-BA	168	[BRL/ton]	150	147	147	147	147	148	149	152	155	158	158
Aracruz-ES	203	[BRL/ton]	181	177	178	177	178	179	181	184	187	191	191
Jacareí-SP	203	[BRL/ton]	181	177	178	177	178	179	181	184	187	191	191
Veracel (Eunápolis-BA)	203	[BRL/ton]	181	177	178	177	178	179	181	184	187	191	191
Limeira-SP	212	[BRL/ton]	189	185	185	185	186	187	189	192	196	199	199
Suzano-SP	212	[BRL/ton]	189	185	185	185	186	187	189	192	196	199	199
(c) Total freight		Unit	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E	2031E	2032E	
<b>Mill</b>													
Ribas do Rio Pardo-MS Initial	[BRL thous]		-	172,701	392,501	440,611	443,131	447,748	456,835	464,829	472,964	472,964	
Ribas do Rio Pardo-MS Structural	[BRL thous]		-	76,378	173,586	194,863	195,978	198,020	202,038	205,574	209,171	209,171	
3 lagoas-MS	[BRL thous]		318,057	318,552	318,233	318,714	320,537	323,876	330,449	336,232	342,116	342,116	
Imperatriz-MA	[BRL thous]		244,455	244,835	244,590	244,960	246,361	248,928	253,979	258,424	262,946	262,946	
Mucuri-BA	[BRL thous]		255,201	255,597	255,341	255,727	257,190	259,870	265,143	269,783	274,504	274,504	
Aracruz-ES	[BRL thous]		560,407	561,277	560,716	561,563	564,775	570,660	582,240	592,429	602,797	602,797	
Jacareí-SP	[BRL thous]		189,676	189,971	189,781	190,067	191,155	193,146	197,066	200,515	204,024	204,024	
Veracel (Eunápolis-BA)	[BRL thous]		96,562	96,712	96,616	96,762	97,315	98,329	100,324	102,080	103,867	103,867	
Limeira-SP	[BRL thous]		72,031	72,143	72,071	72,180	72,593	73,349	74,837	76,147	77,480	77,480	
Suzano-SP	[BRL thous]		30,613	30,661	30,630	30,676	30,852	31,173	31,806	32,362	32,929	32,929	

Sources: Company and ANTT



## Appendix 18: Cerrado Project IRR

To calculate the Internal Rate of Return (IRR) for each new project, we aimed to consolidate the main operational and financial assumptions into a model reflecting the project's performance per ton, enabling us to determine its IRR. We initiated the process by defining the capital expenditure per ton, derived from dividing a total CAPEX of BRL 22.2 billion by its capacity of 2.5 million tons per year. We also set the tax rate as used by Suzano in the model, the project's leverage, and the debt cost based on the company's disclosures for the funds used in the project.

Cerrado		Unit	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10	Y11	Y12	Y13	Y14	Perpetuity			
CAPEX/ton	[BRL/ton]	(8,707)																		
Tax rate	[%]	27%																		
Leverage	[%]	85%																		
Debt Cost	[%]	4.3%																		
Depreciable Life	[years]	30																		
Economic Life	[years]	25																		
Pulp Prices	[BRL/ton]		2,919	3,107	3,076	3,279	3,393	3,512	3,635	3,762	3,858	3,957	4,057							
<b>Income Statement</b>																				
Percent of completion	[%]					39%	97%	97%	97%	97%	97%	97%	97%	97%	97%					
Net revenues	[BRL/ton]					1,218	2,984	3,180	3,292	3,407	3,526	3,649	3,742	3,838	3,936					
Costs + Expenses	[BRL/ton]					(580)	(1,485)	(1,537)	(1,591)	(1,646)	(1,704)	(1,764)	(1,825)	(1,889)	(1,955)					
EBITDA/ton	[BRL/ton]					638	1,499	1,643	1,701	1,760	1,822	1,886	1,917	1,949	1,980					
Depreciation	[BRL/ton]					(290)	(290)	(290)	(290)	(290)	(290)	(290)	(290)	(290)	(290)					
EBT	[BRL/ton]					18	863	1,040	1,136	1,237	1,344	1,456	1,539	1,625	1,690					
Tax	[BRL/ton]					(15)	(227)	(271)	(294)	(318)	(344)	(371)	(390)	(410)	(423)					
Accounting Profit	[BRL/ton]					23	1,078	1,299	1,420	1,546	1,679	1,820	1,924	2,031	2,113					
<b>Cash Flows</b>																				
EBITDA/ton	[BRL/ton]					638	1,499	1,643	1,701	1,760	1,822	1,886	1,917	1,949	1,980					
Sustaining CAPEX	[BRL/ton]					(106)	(271)	(281)	(290)	(301)	(311)	(322)	(333)	(345)	(357)					
Taxes	[BRL/ton]					(15)	(227)	(271)	(294)	(318)	(344)	(371)	(390)	(410)	(423)					
Cash Disbursement	[BRL/ton]					(39)	(275)	(2,889)	(3,505)	(2,000)										
Net Cash/ton Project	[BRL/ton]					(39)	(275)	(2,889)	(3,505)	(1,483)	1,013	1,103	1,127	1,151	1,175	1,200	1,199	1,198	1,201	12,688
<b>Unleveraged IRR 12.97%</b>																				
Debt Borrowings	[BRL/ton]		(33)	(233)	(2,456)	(2,979)	(600)													
Debt Value	[BRL/ton]		(33)	(268)	(2,735)	(5,832)	(6,683)	(6,970)	(6,269)	(5,446)	(4,564)	(3,619)	(2,608)	(1,527)	(399)	0				
Interest Accrued	[BRL/ton]		(1)	(12)	(118)	(251)	(287)	(300)	(270)	(234)	(196)	(156)	(112)	(66)	(17)	0				
Interest Payments	[BRL/ton]							1001	1092	1116	1141	1167	1193	1194	416	0				
Net Cash/ton leveraged	[BRL/ton]		(6)	(41)	(433)	(526)	(883)	-	0	0	0	0	0	0	778	1,201				8,523
<b>Leveraged IRR 17.59%</b>																				

For constructing the income statement, we used projected pulp prices from the model, multiplied by the utilization rate (percentage of completion), to arrive at the net revenue per ton yearly. For costs and expenses, we followed the company's guidance to reach BRL 1,424 per ton, also multiplied by the utilization rate and annually increased by the IPCA projection. The net revenue per ton minus this figure results in the project's EBITDA per ton. Depreciation is estimated by dividing the CAPEX per ton by a depreciable life of 30 years, which, when deducted, results in the accounting profit per ton yearly. From this, we calculate the annual cash flow, starting from the EBITDA per ton, deducting both the sustaining CAPEX (estimated by dividing the CAPEX per ton by its economic life and grown through IPCA projections) and taxes to obtain the net cash per ton for the project.

For the leveraged IRR calculation, we multiplied the project's leverage level by its CAPEX per ton to find the Debt Borrowings. This, when multiplied by the project's debt cost, gives the Interest Accrued for the Project. We then estimated that all debt would be paid off before entering perpetuity because, for its calculations, the project's own IRR was used as the discount rate.

## Appendix 19: Other projects IRR

In analyzing the Paso de Los Toros (UPM) and MAPA (Arauco) projects, we employed a consistent methodology. The Paso de Los Toros project was assigned a CAPEX of USD 3.47 billion with a capacity of 2.1 million tons per year, while MAPA was allocated USD 2.9 billion for a capacity of 1.56 million tons per year. The tax rate was determined as the average of the companies over the past eight quarters. For both projects, leverage was assessed based on recent bond issuances and financial commitments specific to the project. The interest rate was based on the average borrowing rate during the construction phase. For the income statement, both projects used USD 280 for Cost + Expenses, arrived at by company guidance and our estimates. Along with the sustaining CAPEX, these are expected to grow in line with CPI projections. We applied similar logic to the Cerrado Project for estimating Net Cash/Ton and performing IRR calculations.

MAPA		Unit	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10	Y11	Y12	Y13	Perpetuity
CAPEX/ton	[BRL/ton]	(1,859)														
Tax rate	[%]	22%														
Leverage	[%]	18%														
Debt Cost	[%]	4.5%														
Depreciable Life	[years]	30														
Economic Life	[years]	25														
Pulp Prices	[USD/ton]		580	605	580	610	626	641	658	675	692	709				
<b>Cash Flows</b>																
EBITDA/ton	[USD/ton]		240	308	277	299	306	314	322	330	339	356				
Sustaining CAPEX	[USD/ton]		(59)	(74)	(76)	(78)	(80)	(82)	(84)	(86)	(88)	(88)				
Taxes	[USD/ton]		(39)	(54)	(47)	(52)	(54)	(55)	(57)	(59)	(61)	(65)				
Cash disbursement	[USD/ton]		(620)	(620)	(620)											
Net Cash/ton Project	[USD/ton]		(620)	(620)	(620)	141	180	154	169	173	177	181	185	190	203	2989
<b>Unleveraged IRR 10.29%</b>																
Net Cash/ton leveraged	[USD/ton]		(508)	(508)	(508)	28	36	11	169	173	177	181	185	190	203	2927
<b>Leveraged IRR 10.44%</b>																
Paso de Los Toros		Unit	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10	Y11	Y12	Y13	Perpetuity
CAPEX/ton	[BRL/ton]	(1,652)														
Tax rate	[%]	20%														
Leverage	[%]	50%														
Debt Cost	[%]	2%														
Depreciable Life	[years]	30														
Economic Life	[years]	25														
Pulp Prices	[USD/ton]		580	605	580	610	626	641	658	675	692	709				
<b>Cash Flows</b>																
EBITDA/ton	[USD/ton]		240	308	277	299	306	314	322	330	339	348				
Sustaining CAPEX	[USD/ton]		(53)	(66)	(67)	(69)	(71)	(73)	(75)	(76)	(78)	(78)				
Taxes	[USD/ton]		(37)	(51)	(44)	(49)	(50)	(52)	(53)	(55)	(57)	(58)				
Cash disbursement	[USD/ton]		(551)	(551)	(551)											
Net Cash/ton Project	[USD/ton]		(551)	(551)	(551)	150	192	165	181	185	190	194	199	204	211	2635
<b>Unleveraged IRR 11.49%</b>																
Net Cash/ton leveraged	[USD/ton]		(273)	(273)	(273)	30	38	33	36	37	38	110	199	204	211	2158
<b>Leveraged IRR 13.26%</b>																

## Appendix 20: Cerrado sensitivity

For the Cerrado Project's leveraged IRR sensitivity analysis, we considered two external variables: global pulp price variations and project Cost + Expenses changes. These variables were inputted into the model annually, affecting all lines up to the leveraged IRR. It was noted that in only three instances did the IRR fall below the company's WACC (Weighted Average Cost of Capital), demonstrating the project's robust profitability and resilience.

	WACC		Leveraged IRR				
	10.9%		Δ Pulp Prices				
	100	50	0	-50	-100		
A Costs + Expenses	20	15	0	-5	-10	-20	
	21.0%	20.3%	18.0%	17.8%	17.6%	17.4%	
	20.3%	20.1%	19.9%	19.9%	19.7%	19.5%	
	18.0%	17.8%	17.6%	17.4%	17.3%		
	15.3%	15.1%	15.0%	12.0%	8.0%		
	14.3%	14.1%	11.4%	6.9%	-0.5%		

## Appendix 21: New project 2028

In our post-2028 projection, we plan to maintain the pulp market share similar to the 2024 Cerrado Project, aiming for a scale of 1.62 million tons per year.

New Capacity	Unit	2021	2022	2023E	2024E	2025E	2026E	2027E	2028E
BHKP Market	[mn ton]	36.5	37.3	38.2	39.4	40.6	41.8	43.0	44.1
Suzano Capacity	[mn ton]	10.9	10.9	10.9	13.4	13.4	13.4	13.4	13.4
Market Share	[%]	30%	29%	29%	34%	33%	32%	31%	30%
Additional capacity	[mn ton]	0	0	0	0	0	0	0	1.6
New Market Share	[%]	30%	29%	29%	34%	33%	32%	31%	34%
New Project	Unit	2025	2026	2027	2028	2029	2030	2031	2032
CAPEX/ton	[BRL/ton]	(11,624)							
Tax rate	[%]	25%							
Leverage	[%]	85%							
Debt Cost	[%]	8%							
Depreciable Life	[years]	30							
Economic Life	[years]	25							
Mill Capacity	[mn/tons]	1,62							
Pulp Prices	[BRL/ton]				3,602	3,731	3,858	3,957	4,057
<b>Income Statement</b>									
Utilization Rate					80%	97%	97%	97%	97%
Net revenues	[BRL/ton]				2,810	3,536	3,660	3,753	3,849
Costs + Expenses	[BRL/ton]				(-1,076)	(-1,354)	(-1,401)	(-1,450)	(-1,501)
Depreciation	[BRL/ton]				(-387)	(-387)	(-387)	(-387)	(-387)
<b>EBIT addition [BRL mn]</b>									
					2,181	2,907	3,031	3,103	3,176
<b>Cash Flows</b>									
Sustaining CAPEX	[BRL/ton]				780	807	835	864	895
Cash disbursement	[BRL/ton]				6,062	6,274	6,494		
<b>Total CAPEX [BRL mn]</b>									
					6,062	6,274	6,494	780	807
					835	864	895		

## Appendix 22 – Board and Management composition

### Executive Officers

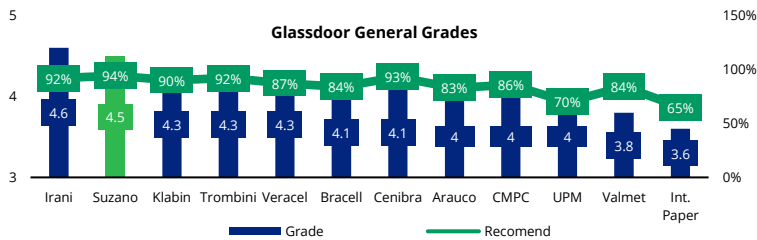
Name	Position	Professional Highlights
Walter Schalka	CEO	He currently serves as the CEO of the company, with prior tenures at Citibank and the Klabin-Maepar Group.
Aires Galhardo	Pulp Operation	Mr. Gallardo was an executive at Fibria Celulose S.A., overseeing the forestry sector.
Carlos Anibal	Forestry, Logistics and Procurement	In 2008, he transitioned to paper commercial operations and later took on executive roles in both Paper and Pulp Business Units.
Leonardo Girmaldi	Commercial Pulp, People & Management	He affiliated with Suzano Pulp and Paper in 2000, managing the company's global paper sales.
Christian Orgmeister	New Business, IT, Digital and Communication	Christian Orgmeister holds an engineering degree and pursued postgraduate studies at esteemed institutions.
Fernando Bertolucci	Research and Development	His academic credentials include a B.Sc. in Agronomy and a master's in Plant Genetic Enhancement from ESAL/UFLA.
Marcelo Bacchi	Finance and Investor Relations	Marcelo Bacchi holds the position of CFO at Suzano, spearheading multiple departments such as Treasury, M&A, and Compliance.

### Board of Directors

Name	Position	Professional Highlights
David Feffer	President	Attended non-degree programs at renowned institutions including Harvard, IMD, and Stanford.
Daniel Feffer	Vice-President	Pursued non-degree studies at Getúlio Vargas Foundation, Harvard, and MIT; earned a doctorate from Unisulmap.
Nildemar Secches	Vice-President	Holds a B.Sc. from London Business School.
Maria Priscila Vansetti	Member (Independent)	Initiated career at DuPont Brazil in 1981 and held various roles in Wilmington, DE, USA.
Ana Paula Pessoa	Member (Independent)	Co-founder and marketer of Kunumi AI; affiliated with News Corporation since 2013.
Rodrigo Calvo	Member (Independent)	Served as CEO of Cogna Educação S.A. since 2011, with over 28 years in educational management.
Paulo Caffarelli	Member (Independent)	Was the President of Cielo SA from 11/2018 to 05/2021 and joined Banco do Brasil in 1981.
Paulo Kakinoff	Member (Independent)	Holds board memberships in companies including Porto Seguro S.A., Grupo Vamos S.A., and Tembici S.A.
Gabriela Feffer	Member	Sits on the board of MD and ELF, and is a member of the Committee of Bionexo.

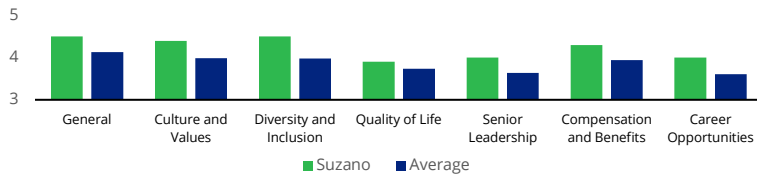
We view the composition of the company's management and the Board of Directors positively. Their long-term directional efforts for the company are reflected in national awards. In 2023, the company won the award for the Best Company of the Year in Época Negócios 360° Yearbook, which evaluated 410 companies across Brazil. It was also crowned the Most Innovative Company of the country in 2023 by the Valor Inovação ranking. Moreover, Walter Schalka personally received the Person of the Year award for 2023 from the Brazilian-American Chamber of Commerce.

## Appendix 24 - Glassdoor grades



Compared to peers in the pulp industry, the company outperforms in overall evaluations and employee recommendations as a workplace. Excelling in all Glassdoor criteria, it averages scores 2.6 units higher than its competitors. This high rating reflects the views of thousands of its current and former workers. The management's dedication to work environment contributes significantly to its operational and financial results.

### Glassdoor Criteria Grades

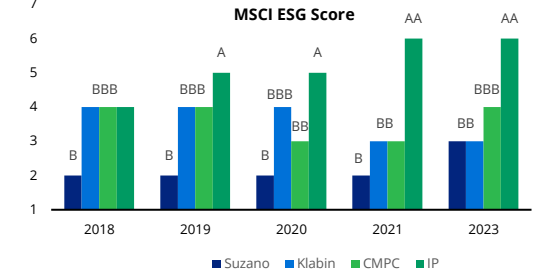
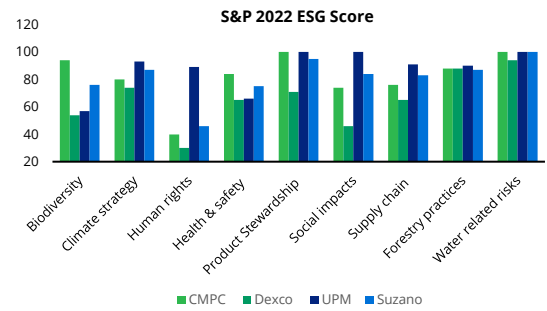


## Appendix 25 - ESG Data Score

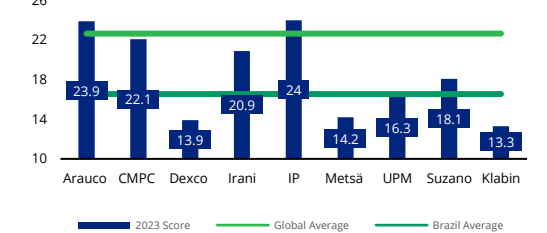
To create our proprietary ESG index, we utilized in-depth data from Bloomberg, focusing on specific themes within the environmental, social, and governance spheres. This allowed us to conduct a detailed comparison of companies based on these critical criteria, ensuring a comprehensive evaluation of their ESG performance and commitments.

Indicator	Weight	Suzano	CMPC	Irani	Copec	IP	UPM	Cenibra	Klabin	Grade Criteria
<b>ESG Score</b>		<b>2.3</b>	<b>1.4</b>	<b>1.8</b>	<b>2.1</b>	<b>2.2</b>	<b>2.0</b>	<b>1.9</b>	<b>2.0</b>	
<b>Environmental</b>		<b>2.6</b>	<b>1.2</b>	<b>2.0</b>	<b>2.2</b>	<b>1.7</b>	<b>1.3</b>	<b>2.2</b>	<b>2.1</b>	
Emissions responsibility	3	2.9	1.9	2.9	2.8	1.5	1.5	3.0	2.8	Manage and significantly reduce harmful greenhouse gas emissions from operations
Resource use	3	2.5	0.5	2.4	2.4	1.1	1.0	3.0	2.2	Prioritize sustainable, responsible consumption and utilization of natural resources
Renewable energy use	2	2.4	1.2	0.0	0.9	3.0	1.2	0.0	0.7	Use of renewable sources within total energy consumption
<b>Social</b>		<b>2.0</b>	<b>1.2</b>	<b>1.9</b>	<b>2.7</b>	<b>2.6</b>	<b>2.1</b>	<b>2.1</b>	<b>2.2</b>	
Women in workforce	3	2.1	2.1	2.0	3.0	2.0	2.5	2.2	2.0	Advocate and ensure equal opportunities, representation for female professionals
Chain management	3	3.0	1.0	3.0	3.0	3.0	3.0	3.0	3.0	Comprehensive oversight and ethical optimization of the supply chain process
Community investment	2	0.6	0.0	0.1	1.6	3.0	0.1	0.5	1.2	Community spending as percentage of EBITDA
<b>Governance</b>		<b>2.1</b>	<b>1.7</b>	<b>1.4</b>	<b>1.4</b>	<b>2.2</b>	<b>2.5</b>	<b>1.5</b>	<b>1.8</b>	
Board Representation	3	2.1	1.4	1.1	1.4	2.3	2.8	1.4	1.6	Ensure diverse, inclusive, and equitable representation in leadership roles
Family influence on the company	3	1.0	1.0	1.0	2.0	3.0	3.0	1.0	1.0	Family shareholders impact company culture and decision-making
ESG linked remuneration and committee	2	3.0	2.0	1.0	1.0	2.0	1.0	1.0	2.0	Financial incentives directly tied to environmental, social, governance outcomes
Alignment with global organizations	2	3.0	3.0	3.0	1.0	1.0	3.0	3.0	3.0	Cooperate with global entities for shared sustainability goals

## Appendix 23 - ESG Scores



### Sustainalytics ESG Risk Score



We analyzed the company's position across various ESG indices to understand how the market perceives its practices compared to other industry players. While Suzano generally scores well, a recurring pattern emerges across all indicators: it performs poorly in social and human rights areas. In the S&P Global index, Suzano scores 46 out of 100, substantially lower than the sector's highest score and indicating a significant weakness. The MSCI Rating flags Suzano as an ESG underachiever in corporate behavior, particularly regarding its impact on local communities. Additionally, the Morningstar Sustainalytics tool rates the company's disputes with communities near the Veracel mill as a level 3 out of 5 in controversy impact, signifying a major issue. These problems mainly involve conflicts with indigenous and quilombola communities along roads heavily used by Suzano's operations, and the conflict with the MST social movement in Veracel's land. Addressing these issues is crucial for Suzano to enhance its standing in these ESG indices.

## Appendix 26 – Pulp Cash Cost Build-Up

Pulp cash cost build-up	Unit	2022A	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E	2031E	2032E
<b>Pulp total cash cost</b>	<b>[BRL mn]</b>	<b>(9,805)</b>	<b>(9,537)</b>	<b>(9,727)</b>	<b>(10,848)</b>	<b>(11,289)</b>	<b>(11,577)</b>	<b>(11,859)</b>	<b>(12,124)</b>	<b>(12,359)</b>	<b>(12,580)</b>	<b>(12,956)</b>
/ton	[BRL/ton]	925	938	861	847	864	886	907	927	945	962	991
<b>Cash cost ex-Cerrado</b>	<b>[BRL mn]</b>	<b>(9,805)</b>	<b>(9,537)</b>	<b>(9,324)</b>	<b>(9,528)</b>	<b>(9,757)</b>	<b>(10,002)</b>	<b>(10,259)</b>	<b>(10,531)</b>	<b>(10,811)</b>	<b>(11,125)</b>	<b>(11,450)</b>
Cash cost per ton (ex-Cerrado)	[BRL/ton]	925	938	880	899	921	944	969	994	1021	1050	1081
Wood (denominated in BRL)	[BRL/ton]	339	364	370	372	375	379	383	389	394	402	410
Logistics <sup>1</sup>	[BRL/ton]	211	182	182	176	173	170	167	164	162	161	161
Harvesting	[BRL/ton]	128	182	189	195	202	209	217	224	232	240	249
Average radius ex-Cerrado	[km]	203	201	198	194	191	187	184	180	177	173	170
YoY	[%]		(1%)	(2%)	(2%)	(2%)	(2%)	(2%)	(2%)	(2%)	(2%)	(2%)
Yearly Brent increase (decrease)	[%]	40%	(14%)	(1%)	(6%)	(4%)	(3%)	(3%)	(3%)	(3%)	0%	0%
Inputs (denominated in US\$) <sup>2</sup>	[BRL/ton]	420	378	320	331	343	355	367	380	393	407	421
Yearly caustic soda price increase (decrease)	[%]	99%	(41%)	(28%)	38%	4%	3%	3%	3%	3%	0%	0%
Fixed (denominated in BRL)	[BRL/ton]	164	183	190	197	204	211	218	226	234	242	250
Energy sale	[BRL/ton]	(37)	(36)	(38)	(40)	(41)	(42)	(44)	(45)	(47)	(49)	(50)
Stops	[BRL/ton]	21	40	49	38	40	41	42	44	45	47	49
<b>Cerrado cash cost</b>	<b>[BRL mn]</b>			<b>(404)</b>	<b>(1,320)</b>	<b>(1,532)</b>	<b>(1,575)</b>	<b>(1,599)</b>	<b>(1,593)</b>	<b>(1,548)</b>	<b>(1,455)</b>	<b>(1,506)</b>
Cerrado cash cost per ton	[BRL/ton]			576	597	618	635	645	642	624	587	607
Cerrado cash cost per ton (until 2031)	[BRL/ton]			576	597	618	639	662	685	709	733	759
Cerrado structural cash cost per ton (2031 onwards)	[BRL/ton]			461	477	494	511	529	548	567	587	607
% of structural cash cost (eucalyptus growth)	[%]			0.00%	0.00%	0.00%	3.24%	12.73%	30.86%	59.60%	100.00%	100.00%

<sup>1</sup> As stated in the financials section, there are two drivers for the reduction in the forest-to-mill logistics line: a decrease in Brent prices and a reduction in the average radius. The reduction in the average radius primarily comes from the purchase of new forest and tree areas (and also by the growth of existing forests). We know that, by 2032, Suzano's overall average radius is expected to go from 203km to 150km. We also know that the average radius guidance for the Cerrado Project is 65 km. From this, with a bit of algebra, we can infer that the ex-Cerrado Company should reduce its radius by 33km (since the Cerrado Project alone wouldn't be enough to reduce the overall radius to 150 km). Also, we know that ~50% of the logistics line is associated to costs that are more associated with inflation than with Brent (such as personnel). Therefore, to project the future logistics, we decreased half of it with Brent and increased half of it with inflation (while the overall is reduced by the YoY decreases on average radius)

<sup>2</sup> For the inputs line, we assume that chemicals will return to a normalized level in 2024. For this normalization, we are using the 2021 figures (pre-Russia-Ukraine) adjusted for inflation.

## Appendix 27: CAPEX projections

CAPEX build-up	Unit	2021A	2022A	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E	2031E	2032E
<b>Total CAPEX</b>	<b>[BRL mn]</b>	<b>6,305</b>	<b>16,310</b>	<b>18,449</b>	<b>13,496</b>	<b>9,386</b>	<b>9,433</b>	<b>9,720</b>	<b>10,044</b>	<b>10,380</b>	<b>10,728</b>	<b>11,088</b>	<b>11,434</b>
<b>Maintenance CAPEX</b>	<b>[BRL mn]</b>	<b>4,652</b>	<b>5,632</b>	<b>6,360</b>	<b>6,777</b>	<b>7,444</b>	<b>8,069</b>	<b>8,352</b>	<b>8,644</b>	<b>8,946</b>	<b>9,260</b>	<b>9,584</b>	<b>9,892</b>
<b>Forest maintenance</b>	<b>[BRL mn]</b>	<b>3,777</b>	<b>4,449</b>	<b>4,809</b>	<b>5,448</b>	<b>5,920</b>	<b>6,465</b>	<b>6,691</b>	<b>6,925</b>	<b>7,167</b>	<b>7,418</b>	<b>7,678</b>	<b>7,947</b>
/tonnes	[BRL/ton]	318	374	415	453	492	535	554	573	593	614	635	658
Real increase in eucalyptus price	[%]	26%	74%	21%	5%	5%	5%	-	-	-	-	-	-
<b>Industrial maintenance</b>	<b>[BRL mn]</b>	<b>778</b>	<b>1,042</b>	<b>1,301</b>	<b>1,070</b>	<b>1,255</b>	<b>1,326</b>	<b>1,373</b>	<b>1,421</b>	<b>1,471</b>	<b>1,522</b>	<b>1,575</b>	<b>1,603</b>
/tonnes	[BRL/ton]	73	98	112	95	98	101	105	109	112	116	121	123
<b>Others</b>	<b>[BRL mn]</b>	<b>97</b>	<b>141</b>	<b>250</b>	<b>260</b>	<b>269</b>	<b>278</b>	<b>288</b>	<b>298</b>	<b>308</b>	<b>319</b>	<b>330</b>	<b>342</b>
<b>Growth CAPEX</b>	<b>[BRL mn]</b>	<b>1,653</b>	<b>10,678</b>	<b>12,089</b>	<b>6,719</b>	<b>1,942</b>	<b>1,364</b>	<b>1,368</b>	<b>1,400</b>	<b>1,434</b>	<b>1,469</b>	<b>1,505</b>	<b>1,542</b>
<b>Lands and forest acquisition <sup>1</sup></b>	<b>[BRL mn]</b>	<b>444</b>	<b>2,635</b>	<b>2,420</b>	<b>722</b>	<b>848</b>	<b>896</b>	<b>927</b>	<b>959</b>	<b>993</b>	<b>1,028</b>	<b>1,064</b>	<b>1,101</b>
/tonnes	[BRL/ton]	42	249	238	64	66	69	71	73	76	79	81	84
Forest land price increase	[%]	48%	16%	14%									
<b>Cerrado project</b>	<b>[BRL mn]</b>	<b>700</b>	<b>7,367</b>	<b>8,937</b>	<b>5,100</b>	-	-	-	-	-	-	-	-
<b>Modernization / other</b>	<b>[BRL mn]</b>	<b>509</b>	<b>676</b>	<b>732</b>	<b>439</b>	<b>439</b>	<b>441</b>	<b>441</b>	<b>441</b>	<b>441</b>	<b>441</b>	<b>441</b>	<b>441</b>
/tonnes	[BRL/ton]	0.04	0.06	0.06	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
<b>CAPEX for 3Q23 new projects</b>	<b>[BRL mn]</b>	-	-	-	<b>458</b>	<b>655</b>	<b>27</b>	-	-	-	-	-	-
New tissue mill (Aracruz) <sup>2</sup>	[BRL mn]				308	315	27						
Biomass boiler (Aracruz)	[BRL mn]				214	306	-						
Fluff capacity addition (Limeira)	[BRL mn]				196	294	-						
(-) ICMS credits monetization	[BRL mn]				(260)	(260)	-						

<sup>1</sup> **Lands and forest acquisition:** We believe that Suzano should continue purchasing new lands and forests in the coming years to meet its guidance of reducing the average radius and using its own wood. We know that the numbers for 2022 and 2023 are inflated due to the acquisition of Vitex and Parkia lands. Therefore, for our projection years, we have considered the 2021 numbers per tonne, adjusted for the strong real increases in forest land prices in 2022 and 2023.

<sup>2</sup> **Aracruz tissue plant:** an important feature regarding the Aracruz tissue plant on the "growth CAPEX" section is the use of ICMS tax credits. The actual CAPEX associated to the project is BRL 650 mn. Since Suzano has accumulated ICMS tax credits for a long period of time, it will be able to use BRL 520 mn in credits for the project. Therefore, the amount of cash spent on the plant will be only BRL 130 mn (adjusted for inflation) between 2024 and 2025.

## Appendix 28 - Valuation

Discounted Cash Flow	Unit	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E	2031E	2032E
EBIT	[BRL mn]	7,667	11,216	12,619	14,890	15,661	16,496	17,428	18,381	19,048	19,583
NOPAT	[BRL mn]	7,467	8,412	9,464	11,168	11,746	12,372	13,071	13,786	14,286	14,687
(+) D&A	[BRL mn]	9,357	10,403	11,027	11,338	11,585	11,820	12,050	12,281	12,516	12,757
(-) CAPEX	[BRL mn]	(18,449)	(13,496)	(9,386)	(9,433)	(9,720)	(10,044)	(10,380)	(10,728)	(11,088)	(11,434)
(-) Δ WK	[BRL mn]	432	(1,091)	(762)	(763)	(316)	(328)	(348)	(347)	(279)	(283)
(-) Δ Other non-current assets	[BRL mn]	272	(303)	(295)	(234)	(109)	(111)	(114)	(112)	(97)	(110)
(+) Δ Other non-current liabilities	[BRL mn]	(198)	7	6	6	7	7	7	7	8	8
<b>Free Cash Flow to Firm</b>	<b>[BRL mn]</b>	<b>(1,119)</b>	<b>3,932</b>	<b>10,055</b>	<b>12,081</b>	<b>13,192</b>	<b>13,715</b>	<b>14,286</b>	<b>14,887</b>	<b>15,344</b>	<b>15,627</b>

Discounted FCFE	[BRL mn]	9,549	10,346	10,188	9,552	8,973	8,432	7,838	7,198
Discount period	[x]	0.5	1.5	2.5	3.5	4.5	5.5	6.5	7.5

Sum of discounted FCFEs	72,091
Normalized FCFE 2032E <sup>1</sup>	12,140
Perpetuity growth rate	3.50%
Terminal value 32E using FCFE	181,226
PV of TV	83,546
Enterprise Value	155,637,228
(-) Net debt	(60,734,158)
(-) Minority interest	(105,333)
(=) Tgt. Equity Value (000' BRL)	94,797,737
Shares outstanding	1,289,352,015
Tgt. Price	R\$ 73.32
Current Price (11/17/2023)	R\$ 52.94
<b>Upside (%)</b>	<b>38.50%</b>

	With fiscal benefits	W/O fiscal benefits
<b>WACC</b>	<b>10.9%</b>	<b>10.4%</b> <sup>2</sup>
<b>Ke</b>	<b>15.2%</b>	<b>15.0%</b>
Beta	1.01	0.96
Country Risk Premium	4.6%	4.6%
Equity Risk Premium	5.0%	5.0%
US Risk-Free	4.9%	4.9%
<b>Kd after-tax</b> <sup>3</sup>	<b>5.7%</b>	<b>5.0%</b>

<sup>1</sup> The normalized 2032 FCFE was made to incorporate (i) the exclusion of fiscal benefits on perpetuity, and (ii) the fact that CAPEX should be higher than D&A on perpetuity. Basically, we adjusted capital expenditures such that it grows above D&A according to inflation.

<sup>2</sup> We used the 10.4% WACC to discount the cash flows from 2033 onwards. It reflects our assumption of removing SUDENE/SUDAM benefits on perpetuity, which (i) lowers Kd after tax and (ii) lowers the levered Beta.

<sup>3</sup> Kd before tax equals to 7.57% (the yield of the bond with higher duration).

## Appendix 29 - CO<sub>2</sub> Credits

Scenario 1: Cap-and-Trade starts in 2028	Unit	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E	2031E	2032E
Upside addition (%)		3.2%									

Credits sold	[# of Credits]	0	1,700,000	2,131,250	2,131,250	2,131,250	2,131,250	2,131,250	2,131,250	2,131,250	2,131,250
CO2 credit price	[US\$/ton]	5	5	5	5	6	59	60	62	63	65
Incremental revenue	[BRL th]	0	44,737	59,406	61,731	63,892	684,415	708,924	733,162	751,853	771,020

Scenario 1: Voluntary market prevails	Unit	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E	2031E	2032E
Upside addition (%)		0.9%									

Credits sold	[# of Credits]	0	1,700,000	2,131,250	2,131,250	2,131,250	2,131,250	2,131,250	2,131,250	2,131,250	2,131,250
CO2 credit price	[US\$/ton]	5	5	5	5	6	6	6	6	6	6
Incremental revenue	[BRL th]	0	44,737	59,406	61,731	63,892	66,128	68,496	70,838	72,644	74,496

Potential pipeline:	22,500,000
Final certification phase:	5,800,000
Approved credits:	1,700,000

To estimate annual CO<sub>2</sub> credit sales, we projected that all certified credits will be sold in the voluntary market in 2024. From 2025 to 2032, we expect to sell the credits from the final phase and half from the potential pipeline, distributed evenly each year. Also, in Scenario 1, we used a cap-and-trade price of USD 50, reflecting the established price in Canada's mature carbon market.

## Appendix 30 - Implicit BHPK Price

Suzano	Unit	2023E	2024E	2025E	2026E	2027E
Current equity value	[BRL mn]	68,258	68,258	68,258	68,258	68,258
(+) Cerrado remaining Capex	[BRL mn]	7,716	7,716	7,716	7,716	7,716
(+) Net debt	[BRL mn]	60,734	60,734	60,734	60,734	60,734
(=) EV	[BRL mn]	136,708	136,708	136,708	136,708	136,708
EV/EBITDA 2024E	[x]	6	6.5	7.0	7.5	8
Implicit EBITDA 2024E	[BRL mn]	22,785	21,032	19,530	18,228	17,089
(-) Paper EBITDA	[BRL mn]	3,764	3,764	3,764	3,764	3,764
(=) <b>Implicit pulp EBITDA</b>	<b>[BRL mn]</b>	<b>19,021</b>	<b>17,268</b>	<b>15,766</b>	<b>14,464</b>	<b>13,325</b>
<b>Pulp volume</b>	<b>[000' of ton]</b>	<b>13,073</b>	<b>13,073</b>	<b>13,073</b>	<b>13,073</b>	<b>13,073</b>
EBITDA/ton	[USD/ton]	1,455	1,321	1,206	1,106	1,019
FX	[BRL/USD]	4.91	4.91	4.91	4.91	4.91
EBITDA/ton	[USD/ton]	296	269	246	225	208
Pulp cash cost	[USD/ton]	175	175	175	175	175
Pulp freight cost	[USD/ton]	77	77	77	77	77
SG&A	[USD/ton]	51	51	51	51	51
(=) <b>Total costs</b>	<b>[USD/ton]</b>	<b>303</b>	<b>303</b>	<b>303</b>	<b>303</b>	<b>303</b>
<b>Implicit pulp price</b>	<b>[USD/ton]</b>	<b>599</b>	<b>572</b>	<b>549</b>	<b>528</b>	<b>511</b>

The rationale for computing the stock's implicit pulp price is to first understand what is the implicit EBITDA for the pulp segment in 2024. To do that, we simply divide the EV of ~BRL 137 bn by the average 1-Y Fwd EV/EBITDA of 7.0x and subtract the estimated paper EBITDA of ~BRL 3.8bn. Notice that we adjusted the EV for the remaining Cerrado CAPEX.

Since the pulp volume (in which we considered the full Cerrado volume, by way of consistency) is quite predictable, we can easily arrive at the implicit EBITDA/ton in USD. After subtracting all costs and expenses that are not deducted in EBITDA (that is, cash cost, freight and SG&A), we arrive at the implicit pulp price of USD 549 per ton, a number USD 81 below the current price of USD 630.

In other words, the market is more bearish than us regarding Suzano's future pulp price. As mentioned before, we have reasons to believe that BHPK should have a minimum of USD 580/ton in 2025, and we do not expect it to fall much further than that.

We have also sensitized the EV/EBITDA multiple for 2024, given the uncertainty regarding the correct number.