

SECOND PARTY OPINION (SPO)

Sustainability Quality of the Issuer and Sustainability-Linked Securities

JBS S.A.
22th October 2021

VERIFICATION PARAMETERS

Type(s) of instruments contemplated	Sustainability-Linked Securities
Relevant standard(s)	Sustainability-Linked Bond Principles, as administered by ICMA
Lifecycle	Pre-issuance verification
Validity	As long as JBS's Sustainability-Linked Securities Framework and benchmarks for the Sustainability Performance target(s) remain unchanged

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SCOPE OF WORK

JBS S.A and its subsidiaries (“JBS” or the “issuer”) commissioned ISS ESG to assist with its Sustainability-Linked Securities by assessing three core elements to determine the sustainability quality of the instrument:

1. The sustainability credibility of the KPI selected and Sustainability Performance Target (SPT) calibrated – whether the KPI selected is core, relevant and material to the issuer’s business model and sector, and whether the associated target is ambitious.
2. JBS’s Sustainability-Linked Securities Framework (22.10.2021 version) and structural components of the transaction – benchmarked against the Sustainability-Linked Bond Principles (SLBPs), as administered by the International Capital Market Association's (ICMA).
3. Sustainability-Linked Securities link to JBS’s sustainability strategy – drawing on JBS’s overall sustainability profile and related objectives.

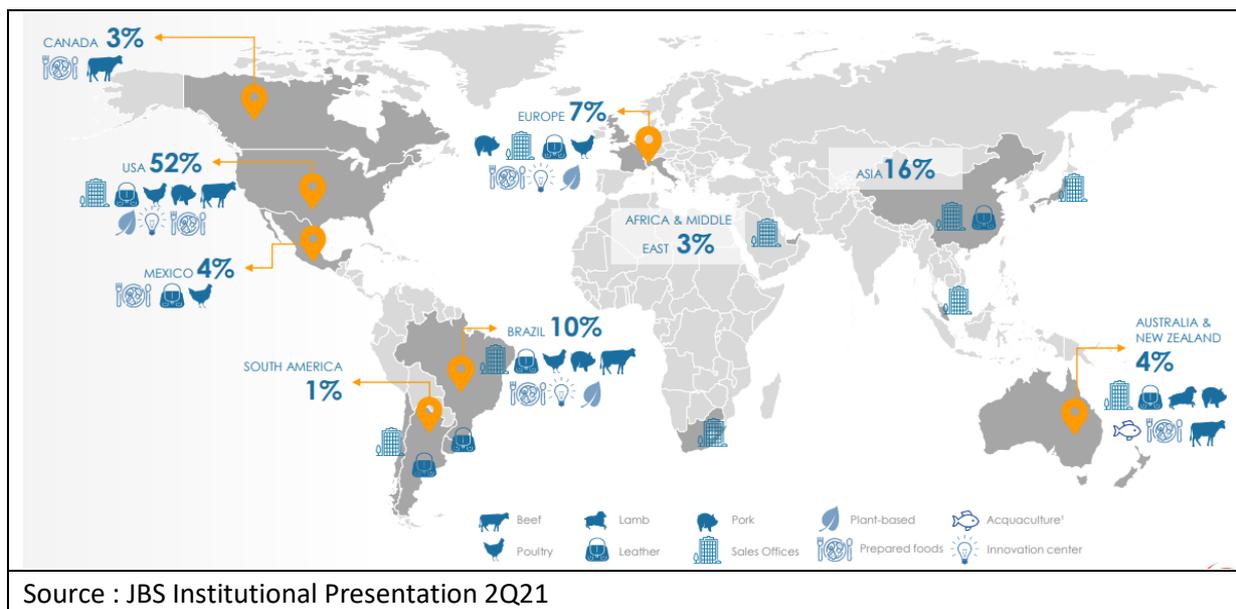
JBS’ BUSINESS OVERVIEW

JBS is one of the world’s largest food companies that processes and trades in animal protein worldwide. Through acquisitions and capital investment, JBS has created a diversified global platform that allows the company to prepare, package and deliver fresh, processed and value-added beef, poultry, pork, lamb and plant-based protein products and animal by-products to more than 275,000 retail and foodservice customers in approximately 190 countries on six continents. JBS primarily sells their products, which include their proprietary brands, to retailers (such as supermarkets, club stores and other retail distributors), and foodservice companies (such as restaurants, hotels, foodservice distributors and additional processors).

As the world’s second largest food company, JBS operates via its global business platform of diversified food production and sales operations that includes:

- Beef operations in Australia, Brazil, Canada and the United States;
- Poultry operations in Brazil, Europe, Mexico, Puerto Rico, the United Kingdom and the United States;
- Pork operations in Brazil and the United States;
- Lamb and sheep operations in Australia;
- Consumer-ready and value-added operations in Australia, Brazil, Canada, Europe, Mexico, New Zealand, the United Kingdom and the United States;
- Retail stores in Brazil, Mexico and the United States; and
- Alternative protein and plant-based operations in Brazil, Europe and the United States.

JBS operates mainly in the United States (52% of total revenues), Brazil (accounting for 10% of total revenues in 2Q21) and Asia.



JBS reports their financials in the following primary segments: 1) Brazil; 2) Seara; 3) Beef USA; 4) Pork USA; 5) Chicken USA; and 6) Others. Their primary segments include amongst other business units:

The segment “Brazil”, which includes all the operating activities from Company and its subsidiaries, mainly represented by slaughter facilities, cold storage and meat processing, fat, feed and production of beef by-products such as leather, collagen and others products produced in Brazil.

ISS ESG SPO ASSESSMENT SUMMARY

SECTION	EVALUATION SUMMARY ¹
<p>Part 1:</p> <p>KPI selection and SPT calibration</p>	<p>KPI selection: Relevant, core and material to issuer’s business model and sustainability profile</p> <p>Sustainability Performance Target (SPT) calibration:</p> <ul style="list-style-type: none"> • Ambitious against issuer’s past performance, based on limited evidence • Limited information available to assess the level of ambition against issuer’s sectorial peer group • Limited information to assess the level of ambition of the target against international target <hr/> <p>The KPI is relevant, core and material to the issuer’s overall business, consistent with its sustainability strategy and of high strategic significance to the issuer’s current and/or future operations. The KPI is appropriately measurable, quantifiable, externally verifiable and benchmarkable with limitations not attributable to the issuer. It is well quantified and calculated on a consistent methodological basis. The baseline selected for improvement as well as the rationale for that baseline, is well defined. The applicable scope and perimeter for the KPI includes 100% of JBS’s direct and tier-2 suppliers in all Brazilian biomes (Amazon, Cerrado, Pantanal, Mata Atlântica and Caatinga).</p> <p>SPT is ambitious against the company’s past performance in terms of defining an innovative KPI based on sophisticated technology and an unprecedented initiative of JBS, however the assessment is limited since we lack some historical data. No conclusion on the ambition of the SPT against international target is possible since there are currently no existing international targets, which cannot be attributed to the issuer. Yet, JBS timeline to achieve this goal is beyond United Nation deforestation and the New York Declaration on Forests targets’ timeline. No assessment on the level of ambition with respect to sectorial peers can be provided by ISS ESG at this point, due limited information. The target is set in a clear timeline, the calculation methodology is clearly defined and the target is supported by a strategy and action plan with a transparent roadmap with intermediate targets to benchmark progress from now until 2025.</p>
<p>Part 2:</p> <p>Alignment with the SLBPs</p>	<p>Aligned with ICM sustainability-linked bond principles; the spt ambition levels can only be evaluated by peer comparisons</p> <p>The Issuer has defined a formal framework for its Sustainability-Linked Securities regarding the selection of KPI, calibration of Sustainability Performance Target (SPT), sustainability-linked securities characteristics, reporting and verification. The framework is in line with the Sustainability-Linked Bond Principles (SLBPs) administered by the ICMA.</p>
<p>Consistent with issuer’s sustainability strategy</p>	

¹ ISS ESG’s evaluation is based on JBS sustainability report, on JBS’s Sustainability-Linked Securities Framework (21.10.2021 version) and on the ISS ESG Corporate Rating applicable at the SPO delivery date (updated on the 08.06.2021).

Part 3:

According to the ISS ESG Corporate Rating published 08.06.2021, the company currently shows a medium sustainability performance against peers on key ESG issues faced by Food Products sector and obtains a Decile Rank relative to industry group of 4, given that a decile rank of 1 indicates highest relative ESG performance out of 10. The issuer is rated 73rd out of 217 companies within its sector as of 15.10.2021.

Link to issuer's sustainability strategy

The KPI selected by the issuer is related to deforestation mitigation. Impact on soil and biodiversity across the value chain has been defined as one of the key priorities of the issuer in terms of sustainability strategy and ISS ESG finds that this is a material sustainability topic for the issuer. The rationale for issuing sustainability-linked bond is clearly described by the issuer. The issuer is exposed to 2 severe controversies related to labor standards (e.g. failure to respect the right to safe and healthy working conditions in the United States) and environmental protection of its supply chain (e.g. failure to prevent deforestation in the supply chain in Brazil) and 1 very severe controversy related to labour rights (i.e. failure to respect the right to safe and healthy working conditions in Brazil).

ISS ESG SPO ASSESSMENT

PART 1: KPI SELECTION & SPT CALIBRATION

1.1. KPI selection

KPI selected by the issuer

FROM ISSUER'S FRAMEWORK

KPI: Number of heads of cattle reported in the JBS Transparent Livestock Platform.

This amount will be calculated based on the sum of heads of cattle slaughtered in the previous year that were supplied by suppliers registered in the JBS Transparent Livestock Platform.

SPT: results in a number of heads of cattle related to the direct suppliers registered into the JBS Transparent Livestock Platform by the end of 2025 equal 100% of the number of heads of cattle slaughtered by the Company in Brazil in 2024.

Long-term goal: Advance the traceability of the cattle supply chain in Brazil to achieve a deforestation-free cattle supply chain in Brazil as defined by the criteria from the JBS Responsible Procurement Policy

Rationale:

Illegal deforestation is one of the most pressing issues facing society today and especially in Brazil it has caused serious negative impacts such as harming native fauna and flora, leading to extinction dozens of native species; polluting rivers and springs; invading indigenous lands or environmental conservation units, among others. Illegal deforestation is also directly linked to climate change, as forests are a significant carbon stock. This will negatively impact future generations if bold action is not taken immediately. This issue also poses significant risks to JBS business, their producer partners, customers and consumers. JBS 2015 CMA identified environmental stewardship and product Integrity, including food safety, quality assurance, guarantee of origin and supplier relationship as two of their material issues.

In response, over the last 10 years, JBS has developed a sophisticated and large supplier monitoring system, which uses satellite images and supplier farm geo-referencing data to ensure the company only buys raw-material from

producers who fully meet its social and environmental criteria, including zero tolerance to illegal deforestation and invasion of protected areas such as indigenous lands or environmental conservation areas; not having areas embargoed by IBAMA (the Brazilian Environmental Agency); not being on the Brazilian Ministry of Economy Forced Labour Blacklist. The system also blocks livestock purchases from farmers involved in rural violence or land conflicts. As a result, the company has blocked more than 11,000 livestock supplying farms for non-compliance to date.

In 2020, the Company launched its own, privately-funded blockchain platform, the Transparent Livestock Platform, which allows JBS to advance cattle traceability and monitor its entire cattle supply chain, including suppliers of their suppliers.

Direct cattle suppliers have been requested to provide information on their suppliers through the Transparent Livestock Platform that analyzes suppliers of their suppliers' farm compliance, which will be validated by third parties. The outcome of the analysis will be sent directly to the JBS supplier who will be able to view socioenvironmental compliance throughout his entire supply chain. Thanks to blockchain technology, it is possible to maintain the commitment to the security and confidentiality of third-party information throughout the process.

Until the end of 2025, direct suppliers' membership into the Transparent Livestock Platform will be made in voluntary basis, therefore non-compliant suppliers of their suppliers will not be blocked immediately. Instead, JBS is providing legal and environmental advisory services to support producers' efforts to resolve their property's environmental liabilities and enhance sustainable production. These services are available free of charge to all ranchers who join the platform through the JBS Green Offices.

JBS has opened 13 "Green Offices" to assist ranchers in these efforts and to provide bespoke advice around the issues they face which can range from paperwork complications, to the need for a conservation plan or the need to reforest part of their property according to the Brazilian law.

From January 1, 2026, it will be mandatory for all JBS direct cattle suppliers to join the Transparent Livestock Platform and demonstrate their own supply chain meets the company's Responsible Procurement Policy. Suppliers that fail to cooperate and comply will be blocked from selling to the company.

Baseline: 7 million heads of cattle slaughtered in 2020

Baseline year: 2020

2025 goal: Number of heads of cattle related to the direct suppliers registered into the JBS Transparent Livestock Platform by the end of 2025 equal 100% of the number of heads of cattle slaughtered by the Company in Brazil in 2024..

Scope: The KPI covers ~44% of JBS' total beef production as of 2021

Calculation methodology : JBS used a proprietary methodology with clear metrics and assess it annually thanks to the Livestock Transparency Platform, an in-house technology. Annual traceability targets will be adjusted based on the total slaughter of the previous year and expressed in number of heads of cattle.

Annual targets - $AT_T = \alpha_T \cdot S_{T-1}$

where: AT_T = annual target in year T, with T assuming values from 2021 to 2025

α_T = percentage set for year T

S_{T-1} = total slaughtering of the previous year (T-1), measured in number of head of cattle

Amount of Heads of cattle reported annually in the Livestock Transparent Platform –

$Q_T = [DS_{(1)(T-1)} + DS_{(2)(T-1)} + DS_{(3)(T-1)} + \dots + DS_{(N)(T-1)}]$

where: Q_T = amount of cattle "reported" in the Platform in year T, with T assuming the values from 2021 to 2025

$DS_{(N)(T-1)}$ = amount of heads of cattle slaughtered in the previous year (T-1) from each direct suppliers registered

into the Platform

External verification: JBS Brazil's number of heads of cattle has been reported into the JBS TLP since April 27th, 2021 but not verified by a third-party verification provider yet.

Materiality and relevance

Deforestation mitigation, within the soil and biodiversity management, is considered a key ESG issue faced by the Food Products sector according to key ESG standards² for reporting and ISS ESG assessment. Conventional agricultural production takes a toll on the climate, biodiversity, soil health and water bodies. Specifically, the food sector is strongly exposed to deforestation concerns in Brazil in the aftermath of the 2019 wildfires in Amazon. Furthermore, the meatpacking sector in Brazil is exposed to reputation and financial risks after a group of 30 institutional investors from Europe signaled their intent to divest from Brazilian asset given their role in driving deforestation.

ISS ESG finds that deforestation mitigation and KPI selected by the issuer are:

- **Relevant** to JBS's business as deforestation is a key ESG issue for companies in the Food Products sector and they are exposed to deforestation mitigation solutions.
- **Core** to the issuer's business as deforestation-free value chain solutions affects key processes and operations that are core to the business model of the issuer (e.g. beef supply chain).
- **Material** to JBS from an ESG perspective as it is one of the key ESG issues faced by the Food Products industry and hence JBS can have material impact on the issue. JBS' Brazilian beef production accounts for 44% of total beef produced globally and the Brazilian beef value chain is the most exposed business unit to deforestation among JBS' activities. Indeed, from 2001 to 2020, Brazil lost 59.8Mha of tree cover³, out of which 64% in areas where the dominant driver is deforestation ; while United States lost less than 0.1% of its humid primary forest between 2002 and 2020. Furthermore, recent statistics⁴ show that it takes around 18 and 16 times as much land to produce 1000 kilocalories of beef versus poultry meat and pig meat, respectively. Finally, the KPI will cover by 2025, JBS' direct suppliers and 100% of the suppliers of their direct suppliers across all Brazilian Biomes (Amazon, Cerrado, Pantanal, Mata Atlantica and Caatinga).

Consistency with overall company's sustainability strategy

JBS identified deforestation mitigation as one of its priority long-term goals. In early 2021, JBS became the first major global protein company to commit to net zero emissions by 2040. That is why performance against environmental goals including GHG emissions reduction and deforestation targets is part of their senior executive compensation considerations. The definition of a % of traced cattle listed in JBS' Transparent Livestock Platform KPI is consistent with JBS's long-standing strategy of Supply Chain monitoring.

² Key ESG Standards include SASB and TCFD, among others.

³ <https://www.globalforestwatch.org/>

⁴ <https://ourworldindata.org/land-use-diets>

For over ten years, JBS has been making significant investment to efficiently monitor their cattle supply chain. To enforce this, the JBS Geo-Monitoring System assesses almost 80,000 farms daily using advanced satellite imaging and supplier farm geo-referencing data to monitor a production area of more than 850,000 km² across the Amazon, Cerrado, Pantanal, Mata Atlântica e Caatinga biomes in Brazil. Any farm involved in illegal deforestation, invasion of protected areas such as indigenous lands or environmental conservation areas, or that has areas embargoed by IBAMA is automatically blocked from JBS supply chain.

Carrying out a third-party audit annually to verify the compliance level of JBS direct cattle acquisitions. In the most recent independent audit, it was found that 100% of direct cattle purchases assessed by the auditors met the company's social-environmental criteria established by their policy on Responsible Raw Material Purchase⁵. In April 2021, JBS launched the Transparent Livestock Platform, which uses blockchain technology and allows the company to advance cattle traceability and monitor their entire supply chain, including suppliers of suppliers.

In June 2021, JBS anticipated by five years its cattle traceability target for the Cerrado, Pantanal, Atlantic Forest and Caatinga biomes from 2030 to 2025. Besides, a roadmap to benchmark progress has been defined by JBS.

ISS ESG finds that the KPI selected by the issuer is consistent with the overall company's sustainability strategy.

Measurability

- **Scope and perimeter:** The scope and perimeter selected is covering 44% of JBS' total beef production at group level and 100% of their direct suppliers as well as the suppliers of their suppliers in all Brazilian biomes (Amazon, Cerrado, Pantanal, Mata Atlântica and Caatinga) at country level.
- **Quantifiable:** The KPI selected is measurable and quantifiable. The calculation methodology refers to clear accounting metrics.
- **Externally verifiable** The KPI selected is externally verifiable as the protocol JBS has set up allows for an annual independent and external verification. Within the Transparent Livestock Platform, the company's direct suppliers have to scan their GTA documentation (Animal Transit Permit) that includes information on the farms from the secondary suppliers (those livestock producers that provide animals to the direct suppliers). The external verifier will verify the match between the number of cattle related to the direct suppliers registered in the tool vs. the number of cattle the company's commercial department has listed to those specific group of suppliers. Given that the technology is groundbreaking and has been launched only in 2021 the KPI has not been verified by a third-party verifier. However, the issuer commits to getting a third-party verification of its performance level of the stated KPI considered under this transaction annually from 2021 until March 2026 after the SPT achievement.
- **Benchmarkable:** The KPI is benchmarkable with strong limitations since the software has only been implemented at JBS' level (privately-funded blockchain platform). Although the industry

⁵ <https://jbs.com.br/en/sustainability/product-integrity/cattle-responsible-purchase/>

has been working on designing and perfecting open-source tools to improve tracking system that uses computational intelligence and automation to dodge roadblocks and access the public GTA (Animal Transport Permit) and CAR (Rural Environmental Registry) database systems, JBS's Green Platform rely on ranchers' voluntary supply of information up to 2025 (as of January 1, 2026, it will be mandatory for direct suppliers to join the Livestock Transparent Platform and report information). In the Food industry for example, Nestle, has been adopting a combination of tools certification and satellite monitoring system to address deforestation risk within their supply chain. In the Agriculture industry, some companies are also developing deforestation and conversion-free solutions such as Cargill with 'Smart Soy' that utilize satellite technology. Overall, the CDP (Carbon Disclosure Project)⁶ report concluded that the cattle farming sector is characterized by extremely weak traceability among suppliers.

In the case of JBS, the company currently monitors 100% of its direct cattle suppliers in Brazil (almost 80,000 supplier's farms) through analysis of satellite images and georeferenced data from the farms. The new blockchain platform is responsible for managing information from secondary suppliers throughout the company's supply chain.

Opinion on KPI selection: *The KPI is relevant, core and material to the issuer's overall business, consistent with its sustainability strategy and of high strategic significance to the issuer's current and/or future operations. The KPI is appropriately measurable, quantifiable, externally verifiable and benchmarkable with limitations not attributable to the issuer. It is well quantified and calculated on a consistent methodological basis. The baseline selected for improvement as well as the rationale for that baseline, is well defined. The applicable scope and perimeter for the KPI includes 100% of JBS's direct and tier-2 suppliers in all Brazilian biomes (Amazon, Cerrado, Pantanal, Mata Atlântica and Caatinga).*

1.2. Calibration of SPT

SPT set by the issuer

FROM ISSUER'S FRAMEWORK⁷

Sustainability Performance Target: The number of heads of cattle related to the direct suppliers registered into the JBS Transparent Livestock Platform by the end of 2025 equal to 100% of the number of heads of cattle slaughtered by the Company in Brazil in 2024.

* The direct suppliers are responsible for registering their own suppliers (that is, JBS' secondary suppliers) into the platform. The direct suppliers will collect their data through a specific app – developed by JBS - that will screen the necessary information from official documents into the platform. The platform will then automatically send over the results of social-environmental secondary suppliers' property analysis to the direct suppliers and, thus, enabling them to manage their own supply-chain, according to the company's procurement policy.

⁶ [CDP research highlights deforestation risk in consumer goods supply chains - CDP](#)

⁷ This table is displayed by the issuer in its Sustainability-Linked Bond Framework and have been copied over in this report by ISS ESG for clarity.

* JBS' Transparent Livestock Platform will cover Tiers 1 and 2 suppliers. According to the Environmental Conduct Guide from TNC⁸, Tiers 1 and 2 meatpacking suppliers are responsible for 84% of the total deforestation and a study from Indirect Suppliers Working Group in Brazilian Livestock (GTFI)⁹ in 2019 shows that direct suppliers and Level1 (indirect suppliers - first link in the supply chain) account for 89% of the deforestation in livestock supply chain.

Sustainability Performance Target Trigger: The trigger will be achieving the target above by May 31st 2026. It is calculated as follows: sum of heads of cattle slaughtered in the previous year that were supplied by suppliers already registered in the JBS Transparent Livestock Platform

Sustainability Performance Target Observation Date: December 31, 2025 and intermediary Target Observations Date December 31 of 2021, 2022, 2023 and 2024.

2020 Baseline : 7'000'000 heads of cattle slaughtered in Brazil

*The 2020 baseline was deliberately selected considering that it is the most recent full year for which the Transparent Livestock Platform was not yet operational.

Strategic 2025 Goal and selection of methodology for calculating the SPT: This SPT aligns with JBS's 2030 vision and to have a deforestation-free cattle supply chain in Brazil by the end of 2025.

Indeed, the platform went into operation in April 2021 with good acceptance from suppliers, which allowed JBS to bring forward its target of achieving a deforestation-free supply chain in all Brazilian biomes where it operates from 2030 to 2025.

The annual targets are defined based on a percentage of the previous year total slaughtering . This percentage is expected to increase year by year and reach 100% in 2025 Annual targets are measured in number of heads of cattle. The Amount of Heads of Cattle "Reported" Annually on the Livestock Transparent Platform will be calculated based on the sum of heads of cattle slaughtered in the previous year that were supplied by suppliers registered in the JBS Transparent Livestock Platform.

Rationale for target selection & ambition

The Sustainability Performance Target has been selected based on the JBS global commitment to having a deforestation-free supply chain, more specifically by tracing 100% of its cattle purchases in all biomes it operates in Brazil. One of the main challenges for monitoring the entire cattle supply chain (direct and suppliers of our suppliers) is the unavailability of information that allows tracking of all supply chain movements. However, the company has acted independently to establish its own, privately-funded blockchain platform, the Transparent Livestock Platform (<https://www.pecuariatransparente.org.br/>), to advance cattle traceability and monitor our entire supply chain, including suppliers of their suppliers.

Factors that support the achievement of the target:

- Significant transformation of cattle supply chain in Brazil by which mid-sized and large producers are consolidating their positions given increased compliance requirements, heightened production standards and consequently higher costs.

Risks to the target:

- If the totality of JBS' suppliers do not join the Transparent Livestock Platform in due time, or there is a low adherence to join the platform

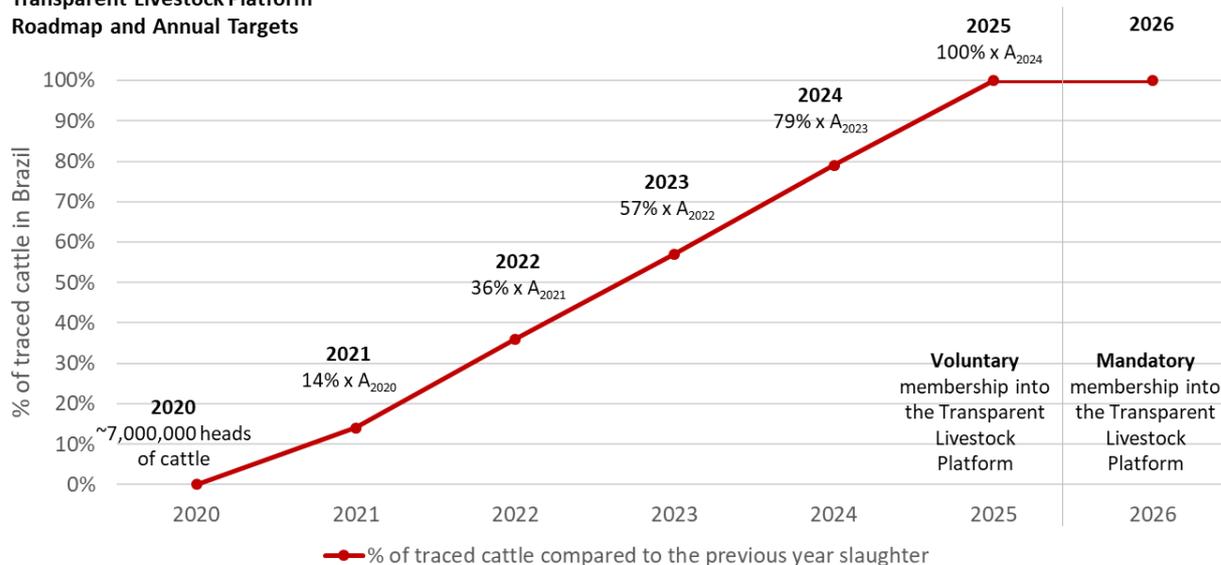
⁸ <https://www.tnc.org.br/content/dam/tnc/nature/en/documents/brasil/tnc-guiadecondutaambientalgado.pdf>

⁹ JBS_Deforestation-free Supply Chain report from a GTFI study from 2019

- If suppliers of suppliers face difficulties to correct/regularize their situation in case of non-compliance, change in regulatory environment or other operational disruptions and force majeure events

Source: JBS - SPO Framework 21th October 2021

**Transparent Livestock Platform
Roadmap and Annual Targets**



A_{Year} = annual target defined in terms of the previous year slaughter, measured in heads of cattle.
This amount will be calculated based on the sum of heads of cattle slaughtered in the previous year that were supplied by suppliers registered in the JBS Transparent Livestock Platform.

Ambition

Against company’s past performance

JBS has developed its own privately-funded blockchain platform to advance cattle traceability and monitor their supply chain, that went into operation in April 2021. Consequently, the level of ambition against past performance can only be partially judged due to the lack of historical data. On the other hand, we note that JBS is starting from scratch to address the deforestation issue by implementing this new ambitious platform, Transparent Livestock Platform. SPT is ambitious from a quantitative perspective given the annual targets are linearly increasing by 22% year over year and reaching 100% by the end of 2025.

Furthermore, JBS is developing and supporting sectoral approaches to drive changes across the entire beef industry in Brazil. JBS is founder and co-developer of the Beef on Track platform (www.beefontrack.org) enforced by the Brazilian Federal Prosecutor’s Office, and followed by around 100 beef processing companies operating in the Amazon.

Factors that can influence the achievement of the target is linked to JBS’ commitment to drive suppliers transformation. Indeed, JBS is providing legal and environmental advisory services to support producer’s efforts to resolve their property’s environmental liabilities and enhance sustainable production. These services are available free of charge to all ranchers who join the platform through the JBS Green Offices. JBS has opened 13 “Green Offices” to assist ranchers in these efforts and to provide bespoke advice around the issues they face which can range from paperwork

complications, to the need for a conservation plan or the need to reforest part of their property according to the Brazilian law. The Green Offices are located at 13 JBS processing units in the states of Pará, Mato Grosso, Rondônia, Mato Grosso do Sul and Goiás.

Over a transition period, the direct suppliers membership into the platform will be made on a voluntary basis and non-compliant suppliers of the suppliers will not be blocked immediately. JBS could have implemented a more ambitious timeline for this SPT with a shorter transition period in order to have a deforestation-free cattle supply chain (tier 1 and 2 suppliers) before 2025.

In this context and compared to the baseline year, the SPT set by JBS is perceived by ISS ESG as ambitious against the company's past performance with strong limitations due to the lack of historical data and SPT's timeline could have been more ambitious.

Against company's sectorial peers

ISS ESG conducted a benchmarking of the SPT set by JBS against the major Brazilian beef companies, including Marfrig, Minerva and JBS.

The Transparent Livestock Platform is pioneering and only few competitors have made similar commitments.

- Marfrig through Marfrig Green+¹⁰ has committed to have 100% of their supply chain free of any taint of deforestation by 2030, thanks to tracking capabilities for all suppliers (including indirect suppliers) located in the Brazilian Savanna and other biomes. Marfrig also uses a personalized tool which brings together satellite monitoring with blockchain technology, Conecta Platform.
- Minerva¹¹ is already monitoring 100% of its direct suppliers in the Brazilian territory. The technology that guarantees full traceability of the cattle suppliers make use of official data from environmental and labor agencies (IBAMA). We note that the company monitors more than 9.6 million hectares in the Amazon compared to 85 million hectares for JBS. In 2020, Minerva was testing a new tool for screening indirect suppliers using data for the Animal Movement permits (GTAs) and the goal is to have all indirect suppliers screened by the end of the year.

More globally, data from Global Canopy's Forest 500 project¹², which assesses the 350 most influential companies on their forest-related policy and action shows that 20% of companies had forest-related commitments in 2019 in the beef and soy sectors.

However, the assessment against sectorial peer performance is limited due to very small peer group and insufficient information. Therefore, no assessment of the target with respect to sectorial peers can be provided by ISS ESG.

Against international targets

¹⁰ Marfrig Sustainability Progress Report 2020 [here](#)

¹¹ Minerva Sustainability report 2020 [here](#)

¹² Rogerson, S. (2019). Forest 500 annual report 2018 - the countdown to 2020 [Annual]. Global Canopy

The United Nations Strategic Plan¹³ for Forests 2017-2023 set up the following target : ‘By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally’.

Similarly, the New York Declaration on Forests (NYDF)¹⁴ goal is to ‘ support and help meet the private-sector goal of eliminating deforestation from the production of agricultural commodities such as palm oil, soy, paper, and beef products by no later than 2020, recognizing that many companies have even more ambitious targets.’

Consequently, by committing to a deforestation-free value-chain only by 2025, JBS is on track to achieve this goal but was a non-ambitious timeline. JBS had to overcome some feasibility limitations due to traceability constraints of their indirect suppliers, partially linked to lack of technologies such as block chain and availability of public data.

Besides, the Beef Moratorium that has been signed by JBS, no evidence on alignment with international targets has been provided by the issuer.

ISS ESG finds that we are currently not able to conclude on the ambitious of the SPT against international targets.

Measurability & comparability

- **Historical data:** The issuer does not provide historical data since the Transparent Livestock Platform has only been in operation since April 2021. Yet, for information JBS has carried out a third party verification on an annual basis to verify the compliance level of their direct cattle acquisition.
- **Benchmarkable:** There is currently no industry standards and protocol, the KPI is therefore not comparable with the data reported by other companies.
- **Timeline:** The issuer defined a precise timeline related to the SPT achievement, including the target observation date, the trigger event and the frequency of SPTs measurement.

Supporting strategy and action plan

Currently JBS has 100% of the company’s direct cattle suppliers in accordance with the Responsible Raw Material Sourcing Policy. To meet with its deforestation-free value chain by 2025¹⁵, JBS has :

- In September 2020, JBS launched its “JBS Fund for the Amazon” to promote the sustainable development of the Amazon biome by financing conservation, projects to promote the sustainable use of the forest, scientific research on forest assets and initiatives to improve the quality of life of the population living there. JBS will contribute R\$ 250 million over the first 5 years, and as much R\$ 500 million by 2030. The JBS Fund for the Amazon has announced six projects approved to receive investment.

¹³ [Global-Forest-Goals-Report-2021-Overview-of-Progress.pdf \(un.org\)](https://www.un.org/forests/2017-2023-strategic-plan)

¹⁴ <https://forestdeclaration.org/wp-content/uploads/2021/08/2020NYDFGoal2.pdf>

¹⁵ More information in the Institutional Presentation 2Q21 [here](#)

- In April 2021, initiated the operations of the Transparent Livestock Farming Platform that extends socioenvironmental monitoring to suppliers of its suppliers of cattle using blockchain technology to guarantee data security and reliability.
- With a network of Green Offices, JBS is pushing ahead in assisting and including producers looking to conform their socioenvironmental status of their properties, engaging in actions of partnership and inclusion in order to contribute to the advance of the Brazilian livestock farming.

Opinion on SPT calibration: *SPT is ambitious against the company's past performance in terms of defining an innovative KPI based on sophisticated technology and an unprecedented initiative of JBS, however the assessment is limited since we lack some historical data. No conclusion on the ambition of the SPT against international target is possible since there are currently no existing international targets, which cannot be attributed to the issuer. Yet, JBS timeline to achieve this goal is beyond United Nation deforestation and the New York Declaration on Forests targets' timeline. No assessment on the level of ambition with respect to sectorial peers can be provided by ISS ESG at this point, due limited information. The target is set in a clear timeline, the calculation methodology is clearly defined and the target is supported by a strategy and action plan with a transparent roadmap with intermediate targets to benchmark progress from now until 2025.*

PART 2: ALIGNMENT WITH ICMA SUSTAINABILITY-LINKED BOND PRINCIPLES

Rationale for Framework

FROM ISSUER'S FRAMEWORK

JBS states that it intends to issue Sustainability-Linked Securities ("SLs"), which include Sustainability-Linked Bonds ("SLBs") in order to demonstrate its commitment to being the first global protein company to set a 2025 deadline to trace its entire cattle supply-chain in Brazil and achieving a deforestation-free value chain that is fundamental to reduce GHG emissions across the businesses (scope 3) under the company Net Zero 2040 commitment. Through its issuance, the company commits to specific environmental outcomes with "skin-in-the-game", leveraging ambitious timelines to achieve sustainability performance that is relevant and core to its business.

The framework links the company's global sustainability strategy for Climate Changes issue and efforts against illegal deforestation in Brazil with their funding needs. JBS is committed to its long-term sustainability strategy, and sustainability-linked financing is a key element of increasing coordination throughout the entire organization.

Opinion: ISS ESG considers the Rationale for Issuance description provided by JBS as aligned with the SLBPs.

2.1. Selection of KPI

ISS ESG conducted a detailed analysis of the sustainability credibility of KPI selection available in section 1 of this report.

Opinion: ISS ESG considers the KPI selected as per the description provided by JBS as aligned with the SLBPs. The KPI is relevant, core and material to the issuer's overall business, consistent with its sustainability strategy and of high strategic significance to the issuer's current and/or future operations. The KPI is appropriately measurable, quantifiable, externally verifiable and benchmarkable with limitations not attributable to the issuer. It is well quantified and calculated on a consistent methodological basis. The baseline selected for improvement as well as the rationale for that baseline, is well defined. The applicable scope and perimeter for the KPI includes 100% of JBS's direct and tier-2 suppliers in all Brazilian biomes (Amazon, Cerrado, Pantanal, Mata Atlântica and Caatinga).

2.2. Calibration of Sustainability Performance Target (SPT)

ISS ESG conducted a detailed analysis of the sustainability credibility of SPT is available in section 1 of this report.

Opinion: SPT is ambitious against the company's past performance in terms of defining an innovative KPI based on sophisticated technology and an unprecedented initiative of JBS, however the assessment is limited since we lack some historical data. No conclusion on the ambition of the SPT against international target is possible since there are currently no existing international targets, which cannot be attributed to the issuer. Yet, JBS timeline to achieve this goal is beyond United Nation deforestation and the New York Declaration on Forests targets' timeline. No assessment on the level of ambition with respect to sectorial peers can be provided by ISS ESG at this point, due limited information. The target is set in a clear timeline, the calculation methodology is clearly defined and the target is

supported by a strategy and action plan with a transparent roadmap with intermediate targets to benchmark progress from now until 2025.

2.3. Sustainability-Linked Securities Characteristics

FROM ISSUER'S FRAMEWORK

The proceeds of JBS's Sustainability-Linked instruments (covering bonds, loans or any other type of financing instruments) will be used to purchase cattle. Its Sustainability-Linked Securities have a sustainability-linked feature that will result in a coupon adjustment, a one-time coupon step-up of 25bps, if its performance does not achieve the stated Sustainability Performance Target.

If, for any reason, the KPI cannot be calculated, observed or reported in a timely manner (as defined in the instrument's documentation), the defined bond characteristic change will be triggered as if the target was not met (with effective dates aligned with the original SPT).

Opinion: ISS ESG considers the Sustainability-Linked Securities Characteristics description provided by JBS as aligned with the SLBPs. The issuer gives a detailed description of the potential variation of the financial characteristics of the securities, while clearly defining the KPI and SPT and its calculation methodologies.

2.4. Reporting

FROM ISSUER'S FRAMEWORK

Annually, and for any date/period relevant for assessing the trigger of the SPT performance, JBS will publish and make readily available and accessible on their IR website (<https://ri.jbs.com.br/en/>) ;

- up-to-date information on KPI performance, including the baseline where relevant;
- a verification assurance report ("Limited Assurance") outlining the performance of the KPI against the SPT
- and any other relevant information that enables investors to monitor the progress of the selected KPI.

Information may also include when feasible and possible:

- Qualitatively or quantitatively explanation of the contribution of the main factors, including M&A activities, behind the evolution of the performance/KPI on an annual basis;
- Illustration of the positive sustainability impacts of the performance improvement; and/or
- any re-assessments of KPIs and/or restatement of the SPT and/or pro-forma adjustments of baselines or KPI scope based on changes in calculation / approach as recommended by a qualified external reviewer.

Opinion: ISS ESG considers the Reporting description provided by JBS as aligned with the SLBPs. This will be made publicly available annually and include valuable information, as described above.

2.5. Verification

FROM ISSUER'S FRAMEWORK

Pre-issuance: JBS has obtained and made publicly available a Second Party Opinion ("SPO") from ISS ESG to provide an opinion on the sustainability benefit of this SLB Framework as well as the alignment to the SLBP 2020. The SPO will be available on JBS's IR website (<https://ri.jbs.com.br/en/>).

Post-issuance: Annually, and for any date/period relevant for assessing the trigger of the SPT performance and until after the KPI trigger event of a bond has been reached, JBS will seek independent and external verification of the performance level for the stated KPI by a qualified external reviewer with relevant expertise. The verification will be in the form of a "Limited Assurance." The verification of the performance will be made publicly available on our website.

Opinion: ISS ESG considers the Verification description provided by JBS as aligned with the SLBPs. The issuer plans on having all annual values of the SPT published and verified. This will outline the performance against the SPT, the related impact and timing of such impact on the securities financial characteristics.

PART 3: LINK TO JBS'S SUSTAINABILITY STRATEGY

The ISS ESG Corporate Rating provides material and forward-looking environmental, social and governance (ESG) data and performance assessments.

COMPANY	SECTOR	DECILE RANK	TRANSPARENCY LEVEL
JBS	FOOD PRODUCTS	4	VERY HIGH

This means that the company currently shows a medium sustainability performance against peers on key ESG issues faced by Food Products sector and obtains a Decile Rank relative to industry group of 4, given that a decile rank of 1 indicates highest relative ESG performance out of 10.

ESG performance

As of 16.09.2021, this Rating places JBS 72th out of 217 companies rated by ISS ESG in the Food Products sector.

Key Challenges faced by companies in term of sustainability management in this sector are displayed in the chart on the right, as well as the issuer's performance against those key challenges in comparison to the average industry peers' performance.

Key Issue Performance



Sustainability Opportunities

JBS is a major processor of animal protein including beef, poultry, pork and lamb but also produces leather products. The consumption of highly processed food products, such as fried chicken, as well as red meat is associated with the aggravation of health- and nutrition-related problems (e.g. obesity, heart diseases or cancer). While a some of JBS' brands offer organic products, these products still seem to constitute only a small share of the total product portfolio.

Sustainability Risks

As JBS is a major producer of meat products, it faces a range of sustainability-related risks, especially in the areas of food safety, health and nutrition, occupational safety, labor rights, climate change and water use. The company has implemented a food safety management system which is certified to an international standard in most operations. Moreover, JBS has measures in place to address further relevant social matters such as labor rights and working conditions in its own operations and supply chain (e.g., freedom of association and health and safety). At some of its operations, the company seems to have implemented a health and safety system certified to an international standard. Nevertheless, the company is facing major allegations of failing to prevent health and safety incidents regarding recurrent incidents of ammonia gas leaks in its operations in Brazil as well as regarding the prevention of the spread of the Coronavirus in its facilities in the USA, Brazil, and Canada. In addition,

the company is involved in controversies with regard to working conditions in Brazil and New Zealand. Furthermore, in 2017, the company was found to having systematically bribed several hundred Brazilian politicians and government officials over several years, including health officials, in return for falsified sanitary documentation and other favors. Since then, the company has worked on its compliance program. In addition, the company is facing allegations of having failed to conduct human rights due diligence in its beef supply chain with regard to the Colniza massacre in Mato Grosso, Brazil, in 2017. Regarding environmental sustainability, JBS has taken steps to address climate change. The company is committed to set science-based targets. Its current emission reduction targets, however, do not seem to cover JBS' agricultural value chain. The company is further committed to eliminate deforestation in its supply chain and has implemented measures to better monitor its supply chains. Nonetheless, JBS has been accused of having sourced large amounts of cattle from areas affected by illegal deforestation practices in Brazil. Furthermore, there is still little information on measures to implement and promote sustainable agriculture along the company's value chain. While the company has set water reduction targets for own operations, there are no further indications of sufficient actions to convincingly handle water conservation in agriculture and farming practices in the company's feed supply chain. JBS has also been involved in a water pollution controversy in the US

Governance opinion

There are significant risks arising from the company's governance structure as the majority of the board of directors are non-independent. Moreover, the chair of the board (Jeremiah Alphonsus O'Callaghan, as at April 15, 2021) is also not considered independent as he currently holds a management position within the company. While there is an audit committee in place, only half of the members is independent. In addition, JBS has set up committees in charge of nomination and remuneration, but the majority of the members are not independent. The company does not disclose its remuneration policy for the executive management. Thus, it also remains unclear if the compensation schemes include long-term incentives. Regarding the governance of sustainability, the company has set up a sustainability committee which, however, is not independent. The company states that senior executive compensation will be influenced by performance against environmental goals such as emission reduction targets. It remains unclear what impact these performance objectives will have. JBS has established a code of ethics covering several topics in detail such as insider dealings and conflicts of interest, and several other issues, such as antitrust violations and corruption, in general terms. Compliance procedures such as employee awareness training, compliance training and third party due diligence are implemented. Non-compliance reporting is facilitated. In 2017, the company was found guilty of having systematically bribed several hundred Brazilian politicians and government officials over several years. Since then, the company has worked on its compliance program. Furthermore, the company is accused of tax evasion in Brazil and anticompetitive behavior in the US.

Sustainability impact of products and services portfolio

Using a proprietary methodology, ISS ESG assessed the contribution of the JBS current products and services portfolio to the Sustainable Development Goals defined by the United Nations (UN SDGs). This analysis is limited to evaluation of final product characteristics and does not include practices along JBS's production process.

PRODUCT/SERVICES PORTFOLIO	ASSOCIATED PERCENTAGE OF REVENUE	DIRECTION OF IMPACT	UN SDGS
Food products (highly processed and/or critical nutrient level), products based on non-ruminant red meat, products based on ruminant red meat	70%	OBSTRUCTION	 
Products based on non-ruminant red meat, products based on ruminant red me	60%	OBSTRUCTION	
Food/agricultural products (certified organic)	1%	CONTRIBUTION	 
Others	N/A	NO NET IMPACT	N/a

Breaches of international norms and ESG controversies

The company is facing 1 very severe and 2 severe controversies:

- Severe controversies relating to labour standards linked to alleged failure to respect the right to safe and healthy working conditions in the United States and environmental protection of its supply chain have been revealed.
- Very severe controversy relating to Labour rights linked to alleged failure to respect the right to safe and healthy working conditions in Brazil.

JBS S.A. is failing to prevent and remediate health and safety incidents at its operations in Brazil, according to repeated rulings by labour courts from 2016 to 2018 concerning ongoing lethal risks, including recurrent incidents of ammonia gas. Brazilian authorities found that JBS failed to put in place remediation measures as required by authorities following earlier incidents. Leaks of ammonia gas – which can be lethal if inhaled at concentrated levels – have occurred, most recently in February 2021. In April 2021, local media raised similar concerns and referred to a survey in November 2020 which found that more than 300 employees had been exposed to ammonia since 2014. It also stated that the company has failed to prevent further accidents and did not elaborate on actions taken in response to labour citations. Although JBS stated to ISS ESG in 2017 that its health and safety policies and processes are aligned with local legislation, in August 2019 the Labour Prosecution Office (MPT) declared that JBS has deliberately refused to comply with labour norms, referencing the company’s disregard of previous court rulings on workers’ health and safety. According to these rulings, JBS lacks mandatory accident prevention requirements in many of its facilities and neglects regulations established by labour agencies. In an investor dialogue facilitated by ISS ESG in March 2021, the company stated that it has not had any “severe” problems with ammonia leaks over the past three years, including no fatalities related to ammonia at any facilities. In April 2021, the company reiterated that it has invested BRL550 million in occupational health and safety across Brazilian facilities, for structural enhancements to prevent such incidents and safety trainings. Repeated court rulings

against JBS and the continued stakeholder concerns indicate that it has yet to demonstrate the efficacy of measures to resolve recurrent incidents of ammonia leaks.

JBS SA's wholly owned subsidiary JBS USA LLC (JBS) is facing allegations that it has failed to implement adequate and timely health and safety measures on the Coronavirus disease 2019 (COVID-19) pandemic at its operations in the United States (U.S.). Stakeholders have highlighted the spread of the virus within the U.S. meat processing industry, where hazardous work is performed by vulnerable workers in close proximity on busy production lines. According to a February 2021 Congressional letter, JBS is one of the meatpacking companies being investigated by the U.S. House Select Subcommittee on the Coronavirus following reports of inadequate COVID-19 measures since April 2020 resulting in at least 18 fatalities and more than 3,000 infected employees across its facilities. In September 2020, the U.S. Occupational Safety and Health Administration (OSHA) issued a "serious" health and safety citation against the company for failing to prevent the outbreak at a facility in Colorado which recorded at least six fatalities. Allegations include failure to enforce physical distancing protocols and sanitation measures, lack of personal protective equipment, failure to share information on infections within its operations, failure to provide employee testing and screening, and forcing sick employees to continue working. In a series of investor dialogues and communication with ISS ESG, most recently in April 2021, JBS disclosed comprehensive information on its health and safety measures such as full coverage of COVID-19 health expenses for all workers, regular testing of asymptomatic workers, increased sanitation efforts, and incentive bonuses for any workers willing to get vaccinated. ISS ESG remains vigilant of the continued stakeholder concerns and the efficacy of policies put in place to protect workers from associated health risks in the United States

Since 2009, and most recently in March 2021, JBS SA has faced repeated allegations by multiple stakeholders of sourcing cattle from suppliers involved in illegal deforestation in the Brazilian Amazon rainforest and the Cerrado biome. According to the NGO Greenpeace, cattle ranching is the main driver of deforestation in Brazil - the country's main contributor to climate change. Following a Greenpeace report detailing allegations of deforestation in 2009, JBS signed multiple agreements to end deforestation in its cattle supply chain. However, in 2017 the Brazilian Institute of Environment and Renewable Natural Resources (IBAMA) fined JBS \$7.7 million for allegedly purchasing cattle from land blacklisted by IBAMA due to illegal deforestation. JBS denied the allegations and reiterated its commitment to a deforestation-free beef supply chain. While a 2018 third-party audit of the company's cattle acquisitions from direct suppliers concluded that it was 100% compliant with environmental and social standards, recent criticism has focused on deforestation in its indirect supply chain, where ranchers move cattle illegally raised on deforested land to compliant farms. In September 2020, JBS launched the Green Platform, a blockchain based platform to monitor indirect suppliers which would allow direct suppliers to only source from compliant suppliers. While the company has made considerable efforts to monitor its direct suppliers and has started a program to monitor indirect suppliers, JBS continues to face allegations of sourcing cattle from farms involved in illegal deforestation.

Contribution of KPIs to sustainability objectives and priorities

ISS ESG mapped the KPI selected by the issuer for its SLB with the sustainability objectives defined by the issuer, and with the key ESG industry challenges as defined in the ISS ESG Corporate Rating methodology for the Food Products sector. Key ESG industry challenges are key issues that are highly

relevant for a respective industry to tackle when it comes to sustainability, e.g. climate change and labour standards and working conditions in the Food Products sector. From this mapping, ISS ESG derived a level of contribution to the strategy of each KPI selected.

KPI SELECTED	SUSTAINABILITY OBJECTIVES FOR THE ISSUER	KEY ESG INDUSTRY CHALLENGES	CONTRIBUTION
Number of heads of cattle reported in the JBS Transparent Livestock Platform	✓	✓	Contribution to a material objective

Opinion: ISS ESG finds that the KPI linked to this bond is consistent with the issuer’s sustainability strategy and material ESG topics for the issuer’s industry. The rationale for issuing a SLB is clearly described by the issuer.

DISCLAIMER

1. Validity of the SPO: For JBS's Sustainability-Linked Securities issuances as long as the Sustainability-Linked Securities Framework (22.10.2021), SPTs benchmarks and structural securities characteristics described in this document do not change.
2. ISS ESG uses a scientifically based rating concept to analyse and evaluate the environmental and social performance of companies and countries. In doing so, we adhere to the highest quality standards which are customary in responsibility research worldwide. In addition, we create a Second Party Opinion (SPO) on bonds based on data from the issuer.
3. We would, however, point out that we do not warrant that the information presented in this SPO is complete, accurate or up to date. Any liability on the part of ISS ESG in connection with the use of these SPO, the information provided in them and the use thereof shall be excluded. In particular, we point out that the verification of the compliance with the selection criteria is based solely on random samples and documents submitted by the issuer.
4. All statements of opinion and value judgements given by us do not in any way constitute purchase or investment recommendations. In particular, the SPO is no assessment of the economic profitability and credit worthiness of a bond but refers exclusively to the social and environmental criteria mentioned above.
5. We would point out that this SPO, in particular the images, text and graphics contained therein, and the layout and company logo of ISS ESG and ISS-ESG are protected under copyright and trademark law. Any use thereof shall require the express prior written consent of ISS. Use shall be deemed to refer in particular to the copying or duplication of the SPO wholly or in part, the distribution of the SPO, either free of charge or against payment, or the exploitation of this SPO in any other conceivable manner.

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ANNEX 1: ISS ESG Corporate Rating

The following pages contain extracts from JBS's 2021 ISS ESG Corporate Rating.

Methodology - Overview

The ESG Corporate Rating methodology was originally developed by Institutional Shareholder Services Germany (formerly oekom research) and has been consistently updated for more than 25 years.

ESG Corporate Rating - The ESG Corporate Rating universe, which is currently expanding from more than 8,000 corporate issuers to a targeted 10,000 issuers in 2020, covers important national and international indices as well as additional companies from sectors with direct links to sustainability and the most important bond issuers that are not publicly listed companies.

The assessment of a company's social & governance and environmental performance is based on approximately 100 environmental, social and governance indicators per sector, selected from a pool of 800+ proprietary indicators. All indicators are evaluated independently based on clearly defined performance expectations and the results are aggregated, taking into account each indicator's and each topic's materiality-oriented weight, to yield an overall score (rating). If no relevant or up-to-date company information with regard to a certain indicator is available, and no assumptions can be made based on predefined standards and expertise, e.g. known and already classified country standards, the indicator is assessed with a D-.

In order to obtain a comprehensive and balanced picture of each company, our analysts assess relevant information reported or directly provided by the company as well as information from reputable independent sources. In addition, our analysts actively seek a dialogue with the assessed companies during the rating process and companies are regularly given the opportunity to comment on the results and provide additional information.

Analyst Opinion - Qualitative summary and explanation of the central rating results in three dimensions:

- (1) Opportunities - assessment of the quality and the current and future share of sales of a company's products and services, which positively or negatively contribute to the management of principal sustainability challenges.
- (2) Risks - summary assessment of how proactively and successfully the company addresses specific sustainability challenges found in its business activity and value chain, thus reducing its individual risks, in particular regarding its sector's key issues.
- (3) Governance - overview of the company's governance structures and measures as well as of the quality and efficacy of policies regarding its ethical business conduct.

Norm-Based Research - Severity Indicator - The assessment of companies' sustainability performance in the ESG Corporate Rating is informed by a systematic and comprehensive evaluation of companies' ability to prevent and mitigate ESG controversies. ISS ESG conducts research and analysis on corporate involvement in verified or alleged failures to respect recognized standards for responsible business conduct through Norm-Based Research.

Norm-Based Research is based on authoritative standards for responsible business conduct such as the UN Global Compact, the OECD Guidelines for Multinational Enterprises, the UN Guiding Principles for Business and Human Rights and the Sustainable Development Goals.

As a stress-test of corporate disclosure, Norm-Based Research assesses the following:

- Companies' ability to address grievances and remediate negative impacts
- Degree of verification of allegations and claims
- Severity of impact on people and the environment, and systematic or systemic nature of malpractices

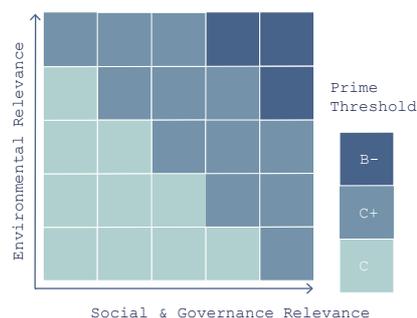
Severity of impact is categorized as Potential, Moderate, Severe, Very severe. This informs the ESG Corporate Rating.

Decile Rank - The Decile Rank indicates in which decile (tenth part of total) the individual Corporate Rating ranks within its industry from 1 (best – company's rating is in the first decile within its industry) to 10 (lowest – company's rating is in the tenth decile within its industry). The Decile Rank is determined based on the underlying numerical score of the rating. If the total number of companies within an industry cannot be evenly divided by ten, the surplus company ratings are distributed from the top (1 decile) to the bottom. If there are Corporate Ratings with identical absolute scores that span a division in decile ranks, all ratings with an equal decile score are classified in the higher decile, resulting in a smaller number of Corporate Ratings in the decile below.

Distribution of Ratings - Overview of the distribution of the ratings of all companies from the respective industry that are included in the ESG Corporate Rating universe (company portrayed in this report: dark blue).

Industry Classification - The social and environmental impacts of industries differ. Therefore, based on its relevance, each industry analyzed is classified in a Sustainability Matrix.

Depending on this classification, the two dimensions of the ESG Corporate Rating, the Social Rating and the Environmental Rating, are weighted and the sector-specific minimum requirements for the ISS ESG Prime Status (Prime threshold) are defined (absolute best-in-class approach).



Industry Leaders - List (in alphabetical order) of the top three companies in an industry from the ESG Corporate Rating universe at the time of generation of this report.

Key Issue Performance - Overview of the company's performance with regard to the key social and environmental issues in the industry, compared to the industry average.

Performance Score - The ESG Performance Score allows for cross-industry comparisons using a standardized best-in-class threshold that is valid across all industries. It is the numerical representation of the alphabetic ratings (D- to A+) on a scale of 0 to 100 with 50 representing the prime threshold. All companies with values greater than 50 are Prime, while companies with values less than 50 are Not Prime. As a result, intervals are of varying size depending on the original industry-specific prime thresholds.

Rating History - Development of the company's rating over time and comparison to the average rating in the industry.

Rating Scale - Companies are rated on a twelve-point scale from A+ to D-:

A+: the company shows excellent performance.

D-: the company shows poor performance (or fails to demonstrate any commitment to appropriately address the topic).

Overview of the range of scores achieved in the industry (light blue) and indication of the grade of the company evaluated in this report (dark blue).

Sources of Information - A selection of sources used for this report is illustrated in the annex.

Status & Prime Threshold - Companies are categorized as Prime if they achieve/exceed the sustainability performance requirements (Prime threshold) defined by ISS ESG for a specific industry (absolute best-in-class approach) in the ESG Corporate Rating. Prime companies are sustainability leaders in their industry and are better positioned to cope with material ESG challenges and risks, as well as to seize opportunities, than their Not Prime peers. The financial materiality of the Prime Status has been confirmed by performance studies, showing a continuous outperformance of the Prime portfolio when compared to conventional indices over more than 14 years.

Transparency Level - The Transparency Level indicates the company's materiality-adjusted disclosure level regarding the environmental and social performance indicators defined in the ESG Corporate Rating. It takes into consideration whether the company has disclosed relevant information regarding a specific indicator, either in its public ESG disclosures or as part of the rating feedback process, as well as the indicator's materiality reflected in its absolute weight in the rating. The calculated percentage is classified in five transparency levels following the scale below.

0% - < 20%: very low

20% - < 40%: low

40% - < 60%: medium

60% - < 80%: high

80% - 100%: very high

For example, if a company discloses information for indicators with a cumulated absolute weight in the rating of 23 percent, then its Transparency Level is "low". A company's failure to disclose, or lack of transparency, will impact a company's ESG performance rating negatively.

ANNEX 2: Methodology

ISS ESG Corporate Rating

The ESG Corporate Rating universe, which is currently expanding from more than 8,000 corporate issuers to a targeted 10,000 issuers in 2020, covers important national and international indices as well as additional companies from sectors with direct links to sustainability and the most important bond issuers that are not publicly listed companies.

The assessment of a company's social & governance and environmental performance is based on approximately 100 environmental, social and governance indicators per sector, selected from a pool of 800+ proprietary indicators. All indicators are evaluated independently based on clearly defined performance expectations and the results are aggregated, taking into account each indicator's and each topic's materiality-oriented weight, to yield an overall score (rating). If no relevant or up-to-date company information with regard to a certain indicator is available, and no assumptions can be made based on predefined standards and expertise, e.g. known and already classified country standards, the indicator is assessed with a D-.

In order to obtain a comprehensive and balanced picture of each company, our analysts assess relevant information reported or directly provided by the company as well as information from reputable independent sources. In addition, our analysts actively seek a dialogue with the assessed companies during the rating process and companies are regularly given the opportunity to comment on the results and provide additional information.

Alignment of the concept set for transactions against the Sustainability-Linked Bond Principles, as administered by ICMA

ISS ESG reviewed the Sustainability-Linked Securities Framework of JBS, as well as the concept and processes for issuance against the Sustainability-Linked Bond Principles administered by the ICMA. Those principles are voluntary process guidelines that outline best practices for financial instruments to incorporate forward-looking ESG outcomes and promote integrity in the development of the Sustainability-Linked Bond market by clarifying the approach for issuance.

ISS ESG reviewed the alignment of the concept of the JBS's issuance with mandatory and necessary requirements as per the Appendix II - SLB Disclosure Data Checklist of those principles, and with encouraged practices as suggested by the core content of the Principles.

Analysis of the KPI selection and associated SPT

In line with the voluntary guidance provided by the Sustainability-Linked Bond Principles, ISS ESG conducted an in-depth analysis of the sustainability credibility of the KPI selected and associated SPT. ISS ESG analysed if the KPI selected is core, relevant and material to the issuer's business model and consistent with its sustainability strategy thanks to its long-standing expertise in evaluating corporate sustainability performance and strategy. ISS ESG also reviewed if the KPI is appropriately measurable by referring to key GHG reporting protocols and against acknowledged benchmarks.

ISS ESG analysed the ambition of the SPT against JBS's own past performance (according to JBS's reported data), against JBS's Food Products peers (as per ISS ESG Peer Universe and data), and against the UN SDGs (according to the ISS ESG proprietary methodology). Finally, ISS ESG evaluated the measurability & comparability of the SPT, and the supporting strategy and action plan of JBS.

ANNEX 3: Quality management processes

SCOPE

JBS commissioned ISS ESG to compile a Sustainability-Linked Financing SPO. The Second Party Opinion process includes verifying whether the Sustainability-Linked Financing Framework aligns with the ICMA Sustainability-Linked Bond Principles and to assess the sustainability credentials of its Sustainability-Linked Securities, as well as the issuer's sustainability strategy.

CRITERIA

Relevant Standards for this Second Party Opinion

- Sustainability-Linked Bond Principles, administrated by the ICMA

ISSUER'S RESPONSIBILITY

JBS's responsibility was to provide information and documentation on:

- JBS's Sustainability-Linked Securities Framework (22.10.2021 version)

ISS ESG'S VERIFICATION PROCESS

ISS ESG is one of the world's leading independent environmental, social and governance (ESG) research, analysis and rating houses. The company has been actively involved in the sustainable capital markets for over 25 years. Since 2014, ISS ESG has built up a reputation as a highly-reputed thought leader in the green and social bond market and has become one of the first CBI approved verifiers.

ISS ESG has conducted this independent Second Party Opinion of the Sustainability-Linked Securities to be issued by JBS based on ISS ESG methodology and in line with the ICMA Sustainability-Linked Bond Principles administrated by the ICMA.

The engagement with JBS took place in August 2021.

ISS ESG'S BUSINESS PRACTICES

ISS has conducted this verification in strict compliance with the ISS Code of Ethics, which lays out detailed requirements in integrity, transparency, professional competence and due care, professional behaviour and objectivity for the ISS business and team members. It is designed to ensure that the verification is conducted independently and without any conflicts of interest with other parts of the ISS Group.

About ISS ESG SPO

ISS ESG is one of the world's leading rating agencies in the field of sustainable investment. The agency analyses companies and countries regarding their environmental and social performance.

As part of our Sustainable (Green & Social) Bond Services, we provide support for companies and institutions issuing sustainable bonds, advise them on the selection of categories of projects to be financed and help them to define ambitious criteria.

We assess alignment with external principles (e.g. the ICMA Green / Social Bond Principles), analyse the sustainability quality of the assets and review the sustainability performance of the issuer themselves. Following these three steps, we draw up an independent SPO so that investors are as well informed as possible about the quality of the bond / loan from a sustainability perspective.

Learn more: <https://www.isscorporatesolutions.com/solutions/esg-solutions/green-bond-services/>

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