CLIMATE ADVISERS

June 3, 2022

Assistant Executive Secretary
Attention: Comments—RIN 3064-ZA32
Federal Deposit Insurance Corporation
550 17th Street NW Washington, DC 20429

Statement of Principles for Climate Related Financial Risk Management for Large Financial Institutions

Dear Mr. Sheesley,

Climate Advisers is an advocacy organization that works to strengthen climate action in the United States and around the world. Although we focus on all aspects of climate policy and climate risk, we specialize in forest conservation and other natural climate solutions. For the better part of a decade, we have analyzed material climate-related financial risks to investors and companies through such projects as Orbitas and Chain Reaction Research. We commend the FDIC on drafting principles that would provide a high-level framework to guide financial institutions in managing exposures to climate-related financial risks. Climate risk is global in scope and is not confined to any one sector.

In response to the FDIC's request for comment on climate-related financial risks, Climate Advisers recommends an economy-wide approach that incorporates all climate-related risks, including those connected to global supply chain emissions in the agriculture, forestry, and other land use (AFOLU) sector. A holistic approach is particularly important in the AFOLU sector since many U.S. financial institutions are exposed to climate risk from the production of globally traded agricultural commodities around the world.

U.S. financial institutions lending and providing credit to a range of industries face material climate-related financial risks from deforestation, including both physical and transition risks, but that information is not clearly and consistently presented in a reliable, comparable way. Therefore, it is important that the FDIC includes climate-related financial risks related to deforestation in its principles and develops a framework that provides the safe and sound management of these exposures. In particular, Climate Advisers recommends the following

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mechanisms for incorporating climate-related financial risk related to deforestation into the next iteration of the FDIC Principles:

1. Align guidance with internationally recognized frameworks like the Task Force on Climate-Related Financial Disclosures (TCFD), the Task Force on Nature-Related Financial Disclosures (TNFD), the Greenhouse Gas (GHG) Protocol, and CDP.
    a. We urge the FDIC to propose rules for expanded climate transparency and reduce reporting burden by aligning with recommendations from the TCFD, TNFD, GHG Protocol, and CDP.
    b. As a part of adopting best practices from the TNFD and TCFD, the FDIC should specifically include climate-related financial risks from deforestation in its risk management, governance, strategic planning, and goal setting principles.
    c. These frameworks enhance and standardize climate-related disclosures and will do much to protect the integrity of the capital markets, promote market efficiency, and protect banks through requiring more comparable, consistently presented, and reliable information about climate-related risks.

2. Given that sectors that represent about 40 percent of the U.S. economy are exposed to commodity-driven deforestation, all FDIC financial institutions should disclose how they are managing climate risks related to tropical deforestation in value chains.
    a. Since deforestation both generates GHG emissions in the current year and reduces carbon storage capacity in future years, institutions that finance sectors with high deforestation risk have an outsized impact on climate change.
    b. Tropical supply chains for imports of beef, palm oil, soy, timber, natural rubber, cacao, and coffee are located in regions with elevated risk of deforestation, putting financial institutions at particularly high risk of funding activities linked to illegal logging and deforestation, environmental damage, climate change impacts, human rights abuses, and biodiversity loss, as recognized by the $8.7 trillion Investors Policy Dialogue on Deforestation.
    c. Given the systemic material economic risks to financial institutions if temperature increases of 1.5 degrees Celsius or less is not achieved, specific climate disclosure related to deforestation risks needs to be clearly incorporated into FDIC rules.

3. As a part of assessing climate-related financial risks, financial institutions should monitor key forest ecosystems at particularly high risk of collapse and analyze potential impacts to financial stability.
    a. We agree with the Federal Deposit Insurance Corporation's (FDIC) statement: "Climate-related financial risks pose a clear and significant risk to the U.S. financial system and, if unmitigated, may pose a near-term threat to safe and sound banking and financial stability. Weaknesses in how institutions identify, measure, monitor, and control the physical and transition risks associated with a changing climate

could adversely affect a financial institution's safety and soundness, as well as the overall financial system."[1]

b. Climate Advisers has documented the material risks to U.S. financial stability that could result from continued deforestation and the potential collapse of the Amazon ecosystem, which is estimated to occur when 25 percent of the Amazon is deforested.[2]

These recommendations would effectively meet the needs of financial institutions and insurance companies that are exposed to climate-related risks from deforestation. In this comment (please see the Annex starting on the next page), we broadly explain the importance of forest protection and sustainable land management practices for meeting globally agreed climate goals, including in the Paris climate agreement, and then discuss the financially material risks posed by deforestation to financial institutions that lend across a range of industries.

Thank you in advance for considering our comments. We would be pleased to discuss any questions that you may have on our feedback.

Sincerely,

Climate Advisers

[1] "Request for Comment on the Statement of Principles for Climate-Related Financial Risk Management for Large Financial Institutions," FDIC, https://www.fdic.gov/news/board-matters/2022/2022-03-29-notational-mem.pdf.

[2] Climate-Related Forest, Food, and Land Risk Threaten U.S. Financial Stability. https://www.climateadvisers.org/insightsfeed/climate-related-forest-food-and-land-risks-threaten-us-financial-stability/

ANNEX

Section 1: Relevance of Forest Protection and Sustainable Land Management to Risk Analysis

Rules to mitigate climate-related financial risks would be ineffective without specific requirements directed to agriculture, forestry, and other land use (AFOLU). Globally, the Agriculture, Forestry, and Other Land Use (AFOLU) sector is responsible for almost a quarter (23 percent) of net anthropogenic global greenhouse gas (GHG) emissions, according to the Intergovernmental Panel on Climate Change (IPCC).[3] Moreover, if activities in the pre- and post-production food systems such as processing, distribution, consumption, and food waste are included, the contribution to net anthropogenic global GHG from AFOLU emissions could be as high as 37 percent.[4]

A major reason that the forest, food, and land sector contributes so substantially to anthropogenic GHG emissions is through deforestation, which alone is responsible for 11 percent of global emissions.[5] Maintaining healthy forests and reforesting degraded forest land are critical to achieving the goals of the Paris Agreement and the United Nations Sustainable Development Goals. Every IPCC pathway leading to average temperature increases of 1.5 degrees Celsius or less compared to pre-industrial temperatures is premised on no new deforestation after 2030.[6] The Paris Agreement emphasizes the importance of combating deforestation, and the AFOLU sector is the only economic sector with its own chapter in that accord. Political support for conserving and restoring forests globally was also on display in 2021 when President Joe Biden joined more than 140 world leaders in endorsing the Glasgow Leaders Declaration on Forests and Land Use, which committed nations representing more than 90 percent of the world's forests to ending natural forest loss this decade.

Section 2: Financial material risks from deforestation

Financial markets have already signaled that they consider deforestation a financial material climate risk. A recent initiative with $8.5 trillion in assets under management, the Investors Policy Dialogue on Deforestation (IPDD) is indicative of financial institutions' growing understanding of the risks of AFOLU risks.[7] IPDD was established in 2020, and is comprised of 58 financial institutions and investors concerned about the "financial impacts that deforestation and the

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[3] Intergovernmental Panel on Climate Change, "Special report on climate change and land use," Summary for Policy Makers, A.3, p. 10, 2019, https://www.ipcc.ch/srccl.

[4] *Id.*

[5] "REDD+ Reducing Emissions from Deforestation and Forest Degradation," Food and Agriculture Organization of the United States, https://www.fao.org/redd/en/.

[6] *Citing* Rogelj, J., et al. (2018). Mitigation pathways compatible with 1.5°C in the context of sustainable development. https://www.ipcc.ch/sr15/chapter/chapter-2/.

[7] *See* IPDD, https://www.tropicalforestalliance.org/en/collective-action-agenda/finance/investors-policy-dialogue-on-deforestation-ipdd-initiative/. IPDD has a secretariat established by the World Economic Forum, and is supported by PRI (U.N. Principles for Responsible Investment).

violation of the rights of indigenous peoples and local communities may have on their clients and investee companies by potentially increasing reputational, operational and regulatory risks."[8] It identifies three channels by which deforestation risks create financial risk for issuers and investors: ESG risks; supply chain risks; and finance sector risks.[9]

The financial risks of deforestation are particularly acute with respect to seven commodity products–cattle (exported as processed beef), palm oil, soy, timber, natural rubber, cacao, and coffee.[10] A CDP analysis of 187 companies potentially affected by climate and deforestation commodity risk found that nearly 25 percent of those companies' revenue depended on four commodities linked to deforestation: beef, soy, timber, and palm oil.[11]

In addition to company-specific risks, U.S. financial institutions face material physical and transition climate risks from forest, food, and land sectors that are currently not being adequately addressed, which in turn threaten the entire U.S. financial system. The material risk of significant ecosystem service losses in tropical regions and the broad cross-section of U.S. sectors exposed increase the likelihood of political, economic, and social instability. On the other hand, action by the Biden administration and U.S. regulators can mitigate this risk and have outsized climate benefits while protecting U.S. financial firms. Climate-related forest, food, and land risks are squarely at the intersection of national security, financial stability, and human rights.

According to recent data from Forests and Finance, U.S. financial institutions provided over $2 billion in financing to forest risk companies in 2020 and more than 12 billion in 2021.[12] However, direct financing to forest risk companies, alone, significantly underestimates the systemic threats of tropical deforestation to the U.S. financial system. To illustrate the scale of potential financial impacts, sectors directly exposed to tropical commodity supply chain risk include food and beverage processing and production, automobile manufacturing, textiles, chemicals,

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[8] *Id.*

[9] *Id.* Among ESG risks, IPDD identifies GHG emissions, biodiversity loss, flood and soil erosion, and rainfall reduction among environmental risks; land rights violations, Indigenous peoples' rights violations; and health hazards from increased exposure to haze as among social risks of concern; and illegality of the deforestation, bribery to reduce enforcement of limits on permissible forestry or agriculture, and financial crimes, including tax evasion and money laundering, as among governance concerns. Supply chain risks include productivity declines; property damage; increased security staff costs, inability to adapt to changes in regulation, litigation for failure to manage ESG risks, and cancellation of contracts and reduced demand from consumers concerned about deforestation. Finance sector risks include losses to investors from stranded assets or negative returns on investments; banks' losses from nonperforming loans, increased default risk and loss of revenues; regulatory risks from the inability of companies to meet new regulatory requirements, such as due diligence/ESG requirements and risk weightings; failure to disclose ESG risks in portfolios; possible litigation against investors for breach of fiduciary duty due to failure to integrate ESG; increased accountability for ESG impacts under the new OECD guidelines; and reputational risks from damage to brand value and loss of credibility as a responsible investor or bank. *Id.*

[10] CDP, "The Collective Effort to End Deforestation: A Pathway for Companies to Raise their Ambitions," p. 5, March 2021, https://cdp.net/en/forests.

[11] CDP, "Revenues in jeopardy as companies reliant on commodities linked to deforestation underestimate risk," December 2016, https://www.cdp.net/en/articles/media/press-release-revenues-in-jeopardy-as-companies-reliant-on-commodities-linked-to-deforestation-underestimate-risk.

[12] Forests and Finance, https://forestsandfinance.org/data/.

pharmaceuticals, retail, food service, personal care products, print publishing, forestry, construction, energy and biofuels, and finance.[13] Using data from the Bureau of Economic Analysis, Climate Advisers calculates that these sectors generate about 45 percent of US private-sector GDP and 40 percent of total U.S. GDP—but more broadly the nation's entire financial system is also exposed in more systemic ways due to the interconnected nature of global climate impacts.[14] [15]

The supply chain risks are particularly concentrated in commodities coming from Indonesia and Brazil, which together generate roughly 60 percent of the GHG emissions generated from tropical deforestation, but a broad cross-section of industrial and retail sectors in the United States is directly exposed to tropical commodity risk in these countries.[16] As noted earlier, at COP26 in Glasgow, 142 countries, including major forested nations Brazil, Canada, China, Indonesia, Russia, and the United States, committed to stopping deforestation.[17] As deforestation, particularly tropical deforestation, is driven predominantly by the expansion of industrial agriculture, this agreement presents regulatory risk, and will have implications for costs and availability of agricultural commodities across supply chains. There may be stranded assets if enforcement is robust: In Indonesia, as much as 76 percent of unplanted palm oil concessions may become stranded by 2040 if conservation efforts proceed in line with these international commitments and the country's Nationally Determined Contribution to the Paris Agreement.[18]

Section 3: Importance of Mitigating Risks Associated with the Forest, Food, and Land Sector

Increased transparency through FDIC regulation would move toward achieving the following goals:

1. Natural capital and tropical commodity supply chain disclosures and assurances would allow financial institutions to compare results across companies. Currently, quantitative metrics, reporting frameworks, topics, and formats vary widely, which creates a barrier for financial institutions without deep subject matter expertise or resources to access paid analysis. Standardized climate-related disclosures, including tropical agriculture dependencies, would

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[13] Ellen Heimpel, "Industries and sectors driving deforestation: what you need to know," *Ecologi*, May 14, 2021, https://ecologi.com/articles/blog/industries-and-sectors-driving-deforestation-what-you-need-to-know.

[14] Niamh McCarthy and Matthew Piotrowski, "Climate-Related Forest, Food, and Land Risks Threaten US Financial Stability," Climate Advisers, January 2021, https://www.climateadvisers.org/wp-content/uploads/2022/01/Climate-Advisers-Climate-Related-Forest-Food-and-Land-Risks-Threaten-US-Financial-Stability.pdf

[15] Bureau of Economic Analysis, https://www.bea.gov/data.

[16] Pendrill, Florence, U. Martin Persson, Javier Godar, Thomas Kastner, Daniel Moran, Sarah Schmidt, et al. 2019. Agri-cultural and forestry trade drives large share of tropical deforestation emissions. Global Environmental Change 56:1-10. https://doi.org/10.1016/j.gloenvcha.2019.03.002.

[17] Georgina Rannard & Francesca Gillett, BBC News, "COP26: World leaders promise to end deforestation by 2030," Nov. 2, 2021. https://www.bbc.com/news/science-environment-59088498.

[18] Orbitas, "Climate Transition Risk Analyst Brief: Indonesian Palm Oil", August 2021, https://orbitas.finance/2021/08/27/indonesian-palm-oil-deforestation-climate-transition-risk/.

provide a more complete picture of long-term risk for financial institutions. If the negative social and environmental externalities associated with some tropical commodity producers are internalized over time (carbon adjustments, changing water cycles, temperature increases, government conservation efforts), financial institutions will face increasing risk.

2. Natural capital and tropical commodity supply chain disclosure and assurance requirements would allow financial institutions to better understand the misallocation of resources toward activities that worsen the climate crisis, including deforestation and land use change. Standardized, consistent, comparable, and accurate disclosures would prevent information asymmetries for financial institutions. Currently, only some companies have the resources to use satellite monitoring services and conduct extensive research to be assured that they are not sourcing commodities from producers linked to deforestation, fires, land disputes, or human rights abuses. This represents a market failure that disadvantages financial institutions that lend to or provide credit to companies that do not have these transparency measures.

3. Failing to address the climate crisis is likely to result in clear physical and transition risks across sectors, limiting long-term capital formation in the U.S. economy. If FDIC regulations are not broad enough to include AFOLU, tropical commodities produced on deforested land will enter the U.S. economy and expose the financial system to undisclosed risk. Furthermore, the related greenhouse gas emissions and destruction of carbon sinks will heighten exposure of unrelated U.S. sectors to physical and transition risks, due to the global impacts of climate change.

Section 4: Impact pathways of forest, food, and land risk

There is growing evidence that forest-related risks are negatively affecting the financial sector. Investors have seen material impact from company connections to deforestation. Companies that operate in tropical forest commodities have experienced suspensions from sustainability organizations, loss of buyers for their products, divestment from investors, substantial reputation risk, and loss in equity value. Consumer-facing downstream companies that source from tropical commodity supply chains contend with reputation risks, changing consumer demand, and increasing risk of supply chain disruptions. Below is a brief summary of the types of climate change risks in forest, food, and land, according to TCFD classifications.

Physical risk:

1. Deforestation exacerbates the physical risk from climate change by reducing the capacity of carbon sinks, eroding fertile soil, changing local precipitation patterns, and increasing the

likelihood of more extreme weather events. These changes are, in turn, likely to lead to lower agricultural yields and stranded assets.[19]

2. North America is reliant on ecosystem services from healthy intact tropical forests to regulate precipitation patterns vital to agricultural production, inspire medical breakthroughs, prevent mass migration, and curb the emergence of infectious diseases like Covid-19, and much more.[20]

Transition risk:

1. Policy and legal risks result from government policy changes, litigation, or law enforcement.
    a. The COP26 agreement that resulted in pledges from over 140 countries to halt deforestation by 2030 is likely to accelerate conservation efforts for high conservation value and high carbon stock land.[21] For example, in Indonesia, as much as 76 percent of unplanted palm oil concessions may experience legal or economic stranding by 2040 due to conservation efforts in line with international pledges and the country's Nationally Determined Contribution. [22]
    b. *Orbitas Finance* estimates that conservation efforts globally will result in a 52 percent decrease in the availability of agricultural land, which would increase the cost of agricultural expansion and, in turn, global commodity prices.[23]
    c. International momentum on carbon pricing is estimated to further increase operating costs of emissions-intensive agricultural producers by as much as 14 percent.[24] Similarly, carbon border adjustments will have ripple effects across supply chains.
    d. Supply chain due diligence obligations in Europe are also likely to require businesses to prove their products and services are deforestation-free, which could negatively impact global businesses if they are not prepared or have not developed the resources to do so.[25]
    e. Legal actions are increasingly being taken against high emitting companies that are responsible for escalating climate-related damages.[26]

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[19] Niamh McCarthy and Matthew Piotrowski, "Climate-Related Forest, Food, and Land Risks Threaten US Financial Stability," Climate Advisers, January 2021, https://www.climateadvisers.org/wp-content/uploads/2022/01/Climate-Advisers-Climate-Related-Forest-Food-and-Land-Risks-Threaten-US-Financial-Stability.pdf
[20] Id.
[21] Jake Spring and Simon Jessop, "Over 100 global leaders pledge to end deforestation by 2030," Reuters, November 2021, https://www.reuters.com/business/environment/over-100-global-leaders-pledge-end-deforestation-by-2030-2021-11-01/
[22] Orbitas, "Climate Transition Risk Analyst Brief: Indonesian Palm Oil", August 2021, https://orbitas.finance/2021/08/27/indonesian-palm-oil-deforestation-climate-transition-risk/
[23] Orbitas, "Agriculture in the Age of Climate Transitions: Stranded Assets. Less Land. New Costs. New Opportunities," December 2020, https://orbitas.finance/2020/12/03/ag-climate-transitions-risk-opportunities/
[24] Id. 23
[25] Chain Reaction Research, "The Chain: EU Proposal on Deforestation-Linked Products Poses Risks for Companies, Investors," November 2021, https://chainreactionresearch.com/the-chain-eu-proposal-on-deforestation-linked-products-poses-risks-for-companies-investors/
[26] FP, Climate & Systemic Risk: The financial sector's role in managing risk and accelerating the transition to net-zero," https://foreignpolicy.com/2021/11/29/global-finance-and-management-of-climate-related-risk/

2. Technology risks originate from disruptive innovations or the rise of substitute products.
    a. In a world with land availability constraints due to forest conservation, supply chains that prioritize emissions reduction technologies and investments that increase productivity will be more resilient to supply chain disruptions.[27]
    b. Alternatively, a lack of investment into new agroforestry techniques and technologies may also lead to lower yields than competitors or reduced resilience to climate change.
3. Market risks arise from quickly changing market dynamics.
    a. Consumer demand for low carbon and deforestation-free sourcing has increased No Deforestation, No peat, No Exploitation (NDPE) requirements in consumer goods companies, manufacturers, and retailers. In turn, NDPE policies now cover around 83 percent of palm oil refineries.[28] On the other hand, companies without effective mechanisms to prevent deforestation in supply chains risk market access declines as trends in consumer preferences continue.
    b. As countries committed to halting deforestation, 10 of the largest global agricultural commodity traders, including Cargill, JBS, Bunge, Marfrig, Golden Agri-Resources, and Wilmar International, also announced deforestation pledges.[29] As the industry moves toward no-deforestation policies and monitoring, climate laggards risk a declining market and rising input costs due to upstream physical and operational risks.
    c. Over 30 financial institutions with USD 8.7 trillion in assets under management committed to ending investment in deforestation-linked activities, which may jeopardize access to credit for companies that do not mitigate these risks.[30]
4. Reputational risks are driven by actions that damage a company's public image.
    a. These risks are on the rise as investors and consumers alike are demanding that companies align products and services with global emissions-reduction goals and no-deforestation policies.
    b. Companies face increased scrutiny from NGOs, consumers, and governments if deforestation risk is not disclosed.
    c. In a world where news of controversies spreads quickly and more than 50 percent of consumers in Western countries are willing to pay a premium for sustainable products, companies risk material financial impacts when links to deforestation and human rights abuses emerge.[31]

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[27] Orbitas, "Agriculture in the Age of Climate Transitions: Stranded Assets. Less Land. New Costs. New Opportunities," December 2020, https://orbitas.finance/2020/12/03/ag-climate-transitions-risk-opportunities/
[28] Chain Reaction Research, "NDPE Policies Cover 83% of Palm Oil Refineries; Implementation at 78%," April 2020, https://chainreactionresearch.com/report/ndpe-policies-cover-83-of-palm-oil-refineries-implementation-at-75/
[29] UN Climate Change Conference 2021, "Agricultural commodities companies corporate statement of purpose," November 2021, https://ukcop26.org/agricultural-commodity-companies-corporate-statement-of-purpose/
[30] Global Canopy, "Thirty financial institutions commit to tackle deforestation," November 2021, https://globalcanopy.org/press/thirty-financial-institutions-commit-to-tackle-deforestation/
[31] Accenture Chemicals, Global Consumer Sustainability Survey, 2019: https://www.slideshare.net/

Physical climate risks are already being felt by companies and will intensify if deforestation tipping points are surpassed and global water cycle disruptions impact agricultural outputs. Climate transition risks are quickly materializing as governments, international organizations, private sector players, and consumers take action to prevent deforestation. Below are a few examples of companies that have experienced significant financial impacts as a result of of deforestation risks:

1. Palm Oil Companies Suspended From Sustainability Markets. From 2015-2019, the equity value of four palm oil companies fell by $1.1 billion due to suspensions from No Deforestation, No Peat, No Exploitation (NDPE) supply chains.[32] The four palm oil companies, Sawit Sumbermas Sarana (SSMS), Austindo Nusantara Jaya (ANJ), Tunas Baru Lampung, and Indofood Agri Resources, were suspended for deforestation, peatland clearing, or worker abuses. Under NDPE supply chain rules, buyers and sellers commit to sustainability standards or risk being suspended. Analysis from Chain Reaction Research shows that the four companies saw $8 million to $50 million in quarterly revenues, gross profit, EBITDA, and net profit per company, while also experiencing higher receivables, inventories, and net debt.[33] The suspensions cut the companies off from selling to market actors – such as Unilever, Nestle, and Wilmar – with strict sustainability criteria, limiting their options and market access.
2. IOI Corporation. IOI Corporation, a Malaysian palm oil company, saw material impact after being suspended from the Roundtable on Sustainable Palm Oil (RSPO) for illegally clearing forested land. After the RSPO suspended IOI Corporation, its share price fell by 18 percent and 27 companies – including major commodity traders and large food companies like Mondelez, Procter & Gamble, and Kellogg's – halted purchases of IOI Corporation's palm oil.[34] Once IOI Corporation addressed its deforestation-related sustainability issues in its supply chains, it regained its RSPO membership, saw its equity value recover, and re-established its relationship with its buyers.
3. JBS. Brazilian meatpacker JBS has seen repeated material impacts from its ties to deforestation in the Amazon rainforest. In 2020, Nordea Asset Management sold its shares in JBS over ESG concerns, including deforestation. The action by Nordea reflected longstanding concerns that NGOs and financiers have had over the company's corruption and environmental record. These reputation risks have also contributed to increased scrutiny, which have undermined JBS' multiple attempts to launch an initial public offering in the United States. JBS had initially wanted to launch the U.S. IPO in 2017.[35] But scandals prompted the

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accenture/accenture-chemicals-global-consumer-sustainability-survey-2019; Toluna, 2019 Sustainability Report: Consumers Hold Brands Responsible: http://go.toluna-group.com/l/36212/2019-10-30/5p7ppd; First Insight, The State of Consumer Spending 2020: https://www.firstinsight.com/white-papers-posts/gen-z-shoppers-demand-sustainability.

[32] Chain Reaction Research, "Palm Oil Growers Suspended Over Deforestation Lose USD 1.1B in Equity Value," August 2019, https://chainreactionresearch.com/report/palm-oil-growers-suspended-over-deforestation-lose-usd-usd-1-1b-in-equity-value/

[33] Id.

[34] Chain Reaction Research, "The Chain: IOI Corporation Commits To Improving its Supply Chain Risk Management," May 2017, https://chainreactionresearch.com/2278-2/

[35] United States Securities and Exchange Commission, "JBS Foods International B.V., 2011, https://www.sec.gov/Archives/edgar/data/1691004/000119312516785274/d304020df1.htm

company to drop its plans.[36] JBS revived its plans in late 2019 with the anticipation of launching the IPO in 2020, but remains delayed in large part because of the combination of COVID-19 and NGO pressure on the company and its investors due to ESG violations.[37]

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[36] Chain Reaction Research, "The Chain: JBS Cancels 2018 subsidiary IPO, Suspends Slaughter at 7 Locations while Investigations Continue," October 2017, https://chainreactionresearch.com/the-chain-jbs-cancels-2018-subsidiary-ipo-suspends-slaughter-at-7-locations-while-investigations-continue/

[37] Forests & Finance, "Beefing Up Risk: The Exposure Of JBS' Financiers To Financial, Regulatory And Reputational Risks," February 2021, https://forestsandfinance.org/news/beefing-up-risk-the-exposure-of-jbs-financiers-to-financial-regulatory-and-reputational-risks/