Welcome to the Jungle:

An impact analysis of the EU Deforestation regulation on listed Nordic companies.

WHITE PAPER

Executive summary

As a responsible investment manager, Danske Bank Asset Management is mindful of not only how sustainability factors impact investment performance but also how our investments may have positive or negative impacts on society, which is often referred to as double materiality. Deforestation is increasingly becoming material for both a societal and financial perspective.

Looking at the societal perspective, research show that between 1990 and 2020, the world lost about 420 million hectares of forest, accounting for 10% of global forest cover. This significant loss contributes to global warming and biodiversity decline. Despite the critical impact, deforestation continues at a rate of 10 million hectares annually, responsible for 11% of greenhouse gas emissions[1]. The European Union (EU) is a major consumer of commodities linked to deforestation. From 2008 to 2017, EU consumption was tied to 19% of tropical deforestation associated with the international trade of six key commodities: palm oil, soy, cattle, cocoa, coffee, and wood[2].

To combat global deforestation, the EU has developed the Regulation on Deforestation Free Products (EUDR) and this is one of the first deforestation regulations in the world that brings in the financial perspective as companies may get fined or excluded from the EU market, which makes deforestation issues even more material for investors as it no longer focuses on just the reputational issues. EUDR targets seven commodities driving deforestation, aiming to reduce forest loss, greenhouse gas emissions, and biodiversity decline while promoting sustainable production and consumption both within the EU and globally. The regulation requires operators and traders handling products linked to deforestation, either sold within the EU or exported, to ensure their products do not come from recently deforested land or contribute to forest degradation. This includes commodities such as cattle, wood, cocoa, soy, palm oil, coffee, rubber, and their derivatives, like leather, clothing, chocolate, tires, and furniture.

[1] The Food and Agriculture Organization of the United Nations (FAO): https://www.fao.org/forest-resources-assessment/2020/en/
[2] Pendrill, F., Persson, U. M., Kastner, T., & Richard Wood. (2022). Deforestation risk embodied in production and consumption of agricultural and forestry commodities 2005-2018 (1.1) [Data set]. Zenodo. https://doi.org/10.5281/zenodo.5886600

Mads Steinmüller
Head of Climate & Nature
Danske Bank Asset Management

Christian Hedlund
Nordic ESG advisor
Danske Bank Corporate & Institutional Banking

The introduction of the EUDR exemplifies how nature transition risks, driven by regulatory changes, can affect companies. Businesses unprepared for these new requirements face significant regulatory risks that may impact their financial performance. Historically, the costs of involvement in deforestation have been minimal, but the EUDR is poised to change this by imposing substantial requirements that carry financial and operational consequences for non-compliant companies.

Investors should particularly monitor companies sourcing commodities from high-risk regions[3] and ensure these companies have robust due diligence mechanisms. This white paper evaluates the impact of the EUDR on listed Nordic companies. As a responsible investment manager in the Nordics, understanding which companies are exposed to deforestation risk, how they will be affected by the EUDR, and which companies have adequate due diligence and traceability mechanisms is crucial. We believe that the attentiveness to sustainability dimensions such as deforestation when investing is a cornerstone of our fiduciary duty to create value for customers and to create a responsible investment product offering that supports the transition to a more sustainable society.

[3] High risk regions: EUDR will implement a country benchmarking system. This will determine the deforestation and degradation risk of each nation. The list of country rankings is scheduled for release end of 2024. However, we assume countries in tropical regions will be listed as high-risk regions.

These are the key findings:

Finding 1:
At least 144 listed Nordic companies face transition risk due to the forthcoming introduction of the EUDR. An analysis of their revenue streams reveals that €132 billion of revenues are potentially within scope of the EUDR.

Finding 2:
31% of listed Nordic companies affected by the forthcoming EUDR conduct deforestation-related reporting through CDP Forest, suggesting that many companies may need to invest or increase their efforts. Our analysis further indicates that companies with higher revenue exposure to the EUDR are more likely to report to CDP Forest.

Finding 3:
Packaged Food & Meats exhibit the highest revenue exposure to EUDR. Less than half of the Nordic Packaged Food & Meats companies report to CDP Forest. We note that most companies have a high level of certified commodities. However, certification alone is insufficient for EUDR compliance, which requires comprehensive traceability. Very few companies can demonstrate 100% traceability back to the origin of the commodity, with 55% reporting no traceability at all.

Introduction

Forests, home to most of Earth's terrestrial biodiversity, provide crucial environmental, economic, and social benefits. They support climate regulation, air purification, and water and soil purification. Notably, forests also provide livelihoods for a third of the global population. However, deforestation and forest degradation are alarmingly reducing these vital carbon sinks and increasing the risk of disease spread among wildlife, livestock, and humans. Between 1990 and 2020, the world lost about 420 million hectares of forest - 10% of global forests. These activities contribute significantly to global warming and biodiversity loss, yet every year, we continue to lose 10 million hectares of forest[4], deforestation alone accounts for 11% of global greenhouse gas emissions[5]. The loss of biodiversity due to climate degradation and its subsequent impact on climate change are inseparable. Minimizing deforestation and forest degradation and systematically restoring forests and other ecosystems present the largest nature-based opportunity for climate mitigation as well as the health of nature, which is vital for ecosystem resilience and their services at both local and global levels, and it highlights the urgent need to halt and reverse deforestation.

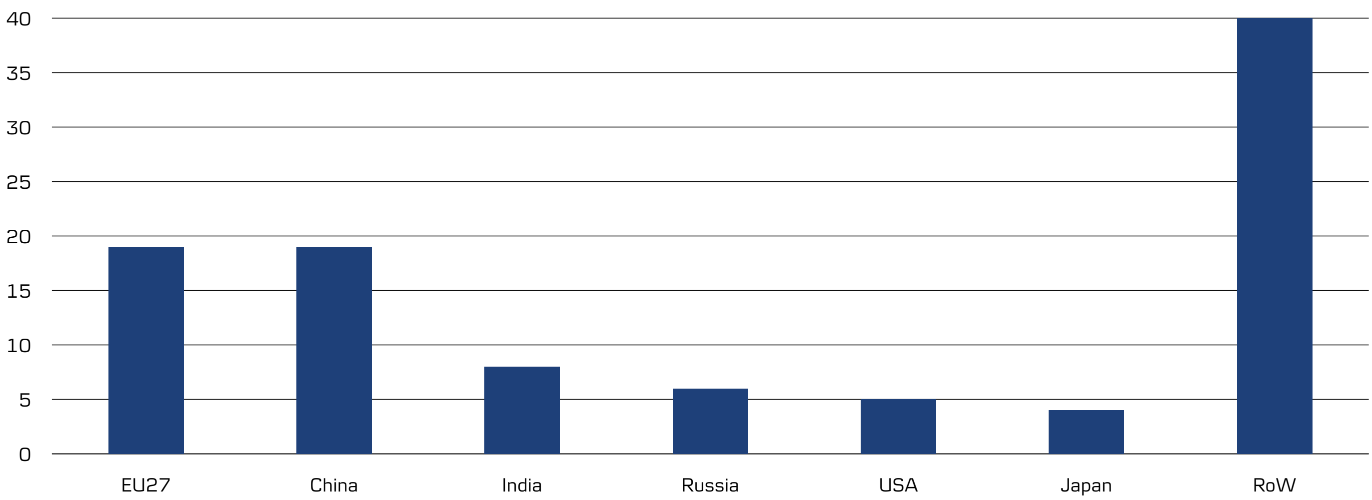
Pendrill et al. (2019)[6] identify agricultural production as the principal driver behind tropical deforestation. They pinpoint three main commodities—cattle, oil seeds (including palm oil and soybeans), and timber—as responsible for the majority of this ecological degradation. Together, these activities account for approximately three-quarters of global tropical deforestation.

EU is a primary consumer

The expansion of agriculture is driven by various factors such as global demand for specific products and commodities, market dynamics, dietary inclinations, and inefficiencies in farming practices and waste management. The European Union (EU) is a primary consumer of commodities like cattle, oilseeds, and timber. However, parts of these commodities are sourced unsustainably, leading to deforestation, making the EU an indirect contributor to the global issue of deforestation and forest degradation via its import activities. A study by Pendrill et al. (2020) determined that between 2008 and 2017, EU consumption was tied to 19% of the tropical deforestation associated with the international trade of six commodities, namely palm oil, soy, cattle, cocoa, coffee, and wood[7].

[4] The Food and Agriculture Organization of the United Nations (FAO): https://www.fao.org/forest-resources-assessment/2020/en/
[5] IPCC: https://www.ipcc.ch/site/assets/uploads/2019/11/SRCCL-Full-Report-Compiled-191128.pdf
[6] Pendrill, Florence & Persson, U & Godar, Javier & Kastner, Thomas. (2019). Deforestation displaced: Trade in forest-risk commodities and the prospects for a global forest transition. Environmental Research Letters. 14. 10.1088/1748-9326/ab0d41.

Figure 1. Share of global deforestation (Palm oil, soy, cattle, cocoa, coffee and wood)

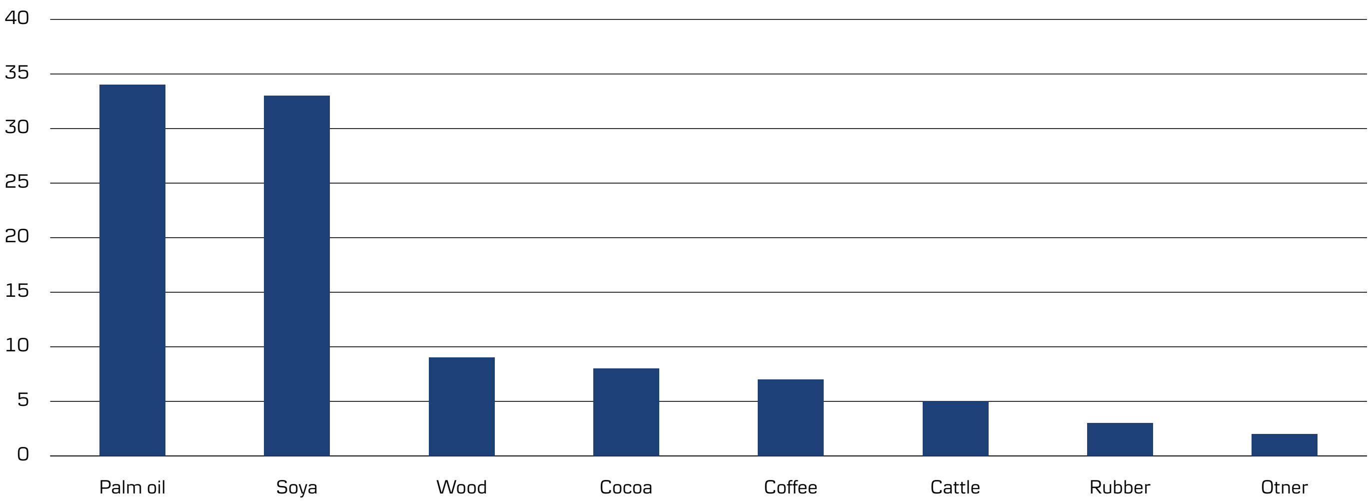


Pendrill et al. (2020)

An EU-conducted impact study projects that, absent appropriate regulatory measures, the EU's consumption and production of the aforementioned six commodities alone could escalate to an estimated annual deforestation of approximately 248,000 hectares by the year 2030[8,9]. The same study also concludes that the relative share of EU's consumption is decreasing because Asian countries have a high import growth, however EU's consumption is a disproportionally large driver of deforestation. As seen in figure 2, seven commodities represent the largest share of EU-driven deforestation, where palm oil and soya being the primary drivers.

[8] https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32023R1115
[9] https://www.euractiv.com/wp-content/uploads/sites/2/2021/09/Leaked-impact-assessment-imported-deforestation.pdf

Figure 2. Commodities linked to deforestation sourced by the EU



Pendrill et al. (2020)

The EU Deforestation Regulation on Deforestation-free products (EUDR) explained
To address the global deforestation issue, EU is taking action by introducing the EUDR[10], which will focus on the seven commodities that are EU-driven deforestation factors. The EUDR aims to reduce deforestation, greenhouse gas emissions, biodiversity loss as well as promoting sustainable production and consumption patterns not only in the EU but globally. The EUDR targets operators and traders dealing in products tied to deforestation, either placed on the European market or exported from it. Companies involved with cattle, wood, cocoa, soy, palm oil, coffee, rubber, and their derivatives, such as leather, clothing, chocolate, tires, or furniture, must verify that their products do not originate from recently deforested land or contribute to forest degradation. The EUDR entered into force in the summer of 2023, providing companies in scope of the EUDR an 18-month window to adapt to the new requirements. By the end of 2024, the EUDR will enter into application for the initial set of companies, while smaller enterprises are granted a 24-month adaptation period until 30 June 2025. In short, the EUDR requires companies to:

- Conduct due diligence to ensure that products covered by the EUDR, placed on or exported from the EU market, are free from deforestation.
- Supply chain operators and traders must provide evidence that their products comply with the legal requirements of the country of production and are supported by a due diligence statement.
- In case of any uncertainty concerning a product or commodity, operators are required to perform a risk assessment to confirm there is no risk of deforestation. No products produced on land subjected to deforestation after 2020 may be placed on the EU market.

It's interesting to note that a company cannot bypass due diligence by merely certifying all commodities. While certification plays a pivotal role in risk assessment, it cannot substitute these three steps.

[10] https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32023R1115&qid=1687867231461

Non-compliance with EUDR may result in penalties as per local regulation, with the EU suggesting penalties including fines up to at least 4% of the company's total annual union-wide turnover, confiscation of the relevant products, temporary exclusion from public procurement processes and public funding, temporary prohibition from the EU market, and prohibition from exercising simplified due diligence.

This regulation will impose tighter requirements on companies, both inside and outside the EU, that deal with the targeted commodities. They will need to demonstrate that their products are deforestation-free through due diligence and supply chain traceability, which is expected to pose a challenge for many.

Other regions are also contemplating similar measures. The UK has already announced that mandatory due diligence on forest-risk commodities such as cattle, cocoa, palm oil, and soy will be introduced[11]. The US is considering the FOREST Act, which includes several provisions to reduce the country's impact on global forests and address foreign corruption and crime[12, 13].

Transition risk

The adverse impacts of deforestation not only affect ecosystems and people but also companies and the economic system which are exposed to physical, transition and systemic risk. The introduction of the EUDR is a clear case of how nature transition risk may affect companies. Companies that are not ready for these changes face regulatory risks, which may impact the financial performance and the valuation of the company, which makes it an investment risk for investors[14]. While the price of being involved in deforestation have been fairly limited historically the EUDR is set to change that as it will have financial and operational consequence for companies implementing the regulation.

According to Sustainalytics, an ESG data provider, companies linked to deforestation in their own operations and supply chains face reputational and business risks. They have tracked 1,639 incidents related to deforestation between February 2014 and February 2024, 91% of which occurred at the supply chain level. According to the same analysis only 20% of the assessed global companies have implemented a strong or very strong deforestation program into their business. They further conclude that most deforestation programs lack the proper traceability mechanisms necessary to comply with the EUDR requirements. Increased traceability and access to plot-level information can enable better decision making in supply chains to avoid forest loss[15].

[11] https://questions-statements.parliament.uk/written-statements/detail/2023-12-12/hcws117
[12] https://www.worldwildlife.org/pages/forest-act
[13] https://www.whitecase.com/insight-alert/us-congress-reintroduces-bill-restrict-imports-linked-illegal-deforestation
[14] https://assets.bbhub.io/professional/sites/24/BNEF_Nature-Risk.pdf
[15] https://www.sustainalytics.com/esg-research/resource/investors-esg-blog/navigating-the-eu-regulation-on-deforestation-free-products--5-key-eudr-questions-answered-about-company-readiness-and-investor-risk

The impact of EUDR on listed Nordic companies

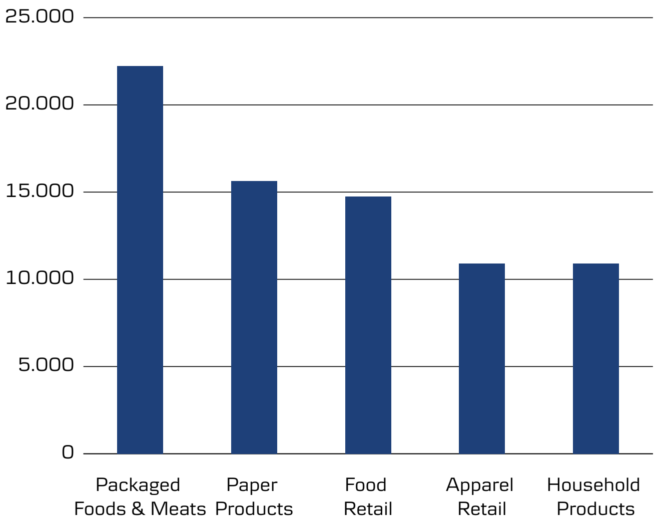
Finding 1:
We estimate that at least 144 listed Nordic companies face transition risk due to the forthcoming introduction of the EUDR[16]. Currently, there is no standardized method or framework to pinpoint companies associated with deforestation risk. To identify listed Nordic companies potentially exposed to the EUDR, we employ data from multiple sources, including CDP Forest, ForestIQ, Sustainalytics, and product revenue figures as well as region revenue data from Factset.

By identifying companies' product revenue streams and their revenue exposure to European countries[17] we estimate that €132 billion[18] of revenues in the Nordics are potentially in scope of the forthcoming EUDR.

Of the company's identified Swedish companies exhibits the highest exposure to EUDR as 45% of the total Nordic revenue exposure stems from Swedish companies. Only five Swedish companies make up 50% of the total Swedish EUDR exposure. Swedish companies are followed by Finland (32%), Norway (17%) and Denmark (6%).

Not surprisingly, Packaged Food & Meats exhibit the highest revenue exposure to EUDR as they are reliant on commodities such as soy, palm oil, cattle and others. The industry is followed by Paper Products and Food Retail.

Figure 3: Top 5 sectors exposed to EUDR



[16] It is important to note there are more Nordic companies in scope for the EUDR, however we are only focusing on listed companies.
[17] We identified product revenue streams and country revenue exposure through Factset
[18] Revenue exposure may be overstated as the number includes all European countries and not only EU member countries e.g. UK and Norway are included in the revenue exposure numbers.

Finding 2:
Our assessment shows that only 31% of listed Nordic companies affected by the forthcoming EUDR conduct deforestation-related reporting through CDP Forest, suggesting that many companies may need to invest or increase their efforts. Disclosing to the CDP Forest questionnaire offers numerous benefits. Firstly, it allows companies to stay ahead of regulations by using a robust framework to eliminate commodity-driven deforestation from their supply chains, supporting the due diligence process required by the EUDR. Secondly, it enhances transparency, building trust with stakeholders such as investors, communities, regulators, and others. This transparency can also boost competitive advantage by enabling stakeholders to benchmark company performance. Additionally, it helps companies identify risks and opportunities within their operations.

Our analysis further indicates that companies with higher revenue exposure to the EUDR are more likely to report to CDP Forest, suggesting that resourceful companies are better positioned to comply with the EUDR. This regulation could potentially pose challenges for smaller companies due to the additional compliance costs. Companies may need to shift to certified commodities, adjust their supply chains, and increase traceability efforts, all of which require substantial investments if not already in place. Non-compliance with the EUDR could result in substantial financial penalties, as outlined in the introduction.

Finding 3:
As mentioned in finding 1, the Packaged Food & Meats industry has the highest revenue exposure to the EUDR due to its reliance on deforestation-related commodities such as soy, palm oil, cattle and others. We estimate that €22.2 billion in revenues will potentially be in scope within the forthcoming EUDR.

To assess how well companies are positioned to comply with the EUDR, we examined the 20 largest listed Nordic Packaged Food & Meat companies based on market cap, focusing on their reporting efforts and their ability to trace the origin of deforestation-related commodities. Our analysis reveals that 40% of these companies report to CDP Forest, which could indicate varying levels of readiness for EUDR implementation among them.

Our assessment also notes that while many companies aim for a high level of certified commodities, current certifications will not be sufficient to comply with the EUDR. For example, the Roundtable on Sustainable Palm Oil (RSPO), the leading certifier for palm oil, states that certification schemes may assist in risk assessments but are not alone adequate to prove compliance with EUDR requirements[19].

[19] https://rspo.org/wp-content/uploads/RSPO-Report-Gap-Analysis-EU-Deforestation-Regulation-05.04.2023-1.pdf

To avoid fines or other penalties under the EUDR, companies must demonstrate traceability of commodities back to their origin. However, traceability remains a significant challenge. As shown in Figure 4, very few companies can demonstrate 100% traceability back to the commodity's origin, with 55% reporting no traceability at all. The traceability challenge is not a Nordic problem. CDP reports that only 24% of the companies reporting to CDP Forest are able to trace commodities back to their origin[20].

[20] https://cdn.cdp.net/cdp-production/cms/reports/documents/000/007/182/original/CDP_Global_Forest_Report_2023.pdf?1688396252

Figure 4: Summary of the Nordic Packaged Food & Meat industry

Company	Revenue in Europe (2023)	Reporting to CDP Forest	Revenue potentially affected by EUDR	Certified	Traceability
Company 1	71%	No	71%	Soy: 100%	Traceability to regions
Company 2	58%	No	58%	Soy: 100%	Traceability to regions
Company 3	93%	Yes	65%	Cattle: 100%, Palm oil: 100%, Soy: 98%, Cocoa: Not known, Timber: 100%	No reported traceability
Company 4	39%	Yes	2%	Palm oil: 83%, Soy: 25%	Soy: 99% traceability to country of origin, Palm oil: 91 traceability to plantation in palm
Company 5	72%	Yes	7%	Soy: 100%	No reported traceability
Company 6	80%	Yes	80%	Soy: 100%	Soy: 100% Traceability
Company 7	50%	No	37%	Soy: 90%, Palm oil: 94%	No reported traceability
Company 8	77%	No	77%	No reported certification	No reported traceability
Company 9	58%	Yes	58%	Soy: 100%, Palm oil: 100%	Soy & Palm oil: Traceability to region of origin
Company 10	100%	No	94%	Palm oil: 100%, Cocoa: No reported certification, Coffee: No reported certification	No reported traceability
Company 11	19%	No	8%	No reported certification	No reported traceability
Company 12	94%	Yes	94%	Palm oil: 100%, Cocoa: 100%	No reported traceability
Company 13	99%	Yes	99%	Soy: 70.8%	Traceability to regions
Company 14	76%	No	76%	Soy: 100%	Traceability to regions
Company 15	79%	No	79%	Palm oil: 100%, Soy: 100%, Cocoa: 100%	Traceability, however no details
Company 16	30%	No	30%	No reported certification	No reported traceability
Company 17	100%	No	100%	Soy: 100%	No reported traceability
Company 18	0%	Yes	0%	No reported certification	No reported traceability
Company 19	99%	No	99%	Palm oil: 100%, Soy: Not reported, Cocoa: 87%	Part traceability
Company 20	100%	No	100%	Soy: 100%, Palm oil: Not reported	No reported traceability

Conclusion

The EUDR mandates that companies sourcing commodities within its scope must prove they are obtaining deforestation-free commodities. This requires full traceability through their value chain via rigorous due diligence processes. Non-compliance with the EUDR could result in various penalties from authorities. From both a corporate and investment perspective, the introduction of the EUDR shifts deforestation-related issues from being primarily reputational concerns to becoming significant financial material issues. Companies may face fines and penalties if they fail to comply with the regulation, elevating deforestation-related risks on their materiality ladder.

In this white paper, we focus on the impact of the EUDR on listed Nordic companies. We estimate that at least 144 listed Nordic companies will be affected by the EUDR, with approximately €132 billion[21] in revenues potentially at risk. Currently, fewer than one-third of these companies conduct deforestation-related reporting through CDP Forest, which could indicate varying levels of readiness for EUDR implementation among them. Our analysis shows that companies with higher revenue exposure to the EUDR are more likely to report to CDP Forest, indicating that better-resourced companies are in a stronger position to comply with the EUDR.

The Packaged Food & Meats industry has the highest revenue exposure to the EUDR due to its reliance on deforestation-related commodities such as soy, palm oil, and cattle. We estimate that €22.2 billion in revenues from this industry will be affected by the EUDR. However, achieving full traceability remains a significant challenge, with very few companies able to demonstrate 100% traceability to the commodity's origin and 55% reporting no traceability at all.

Compliance with the EUDR is a global issue, not limited to Nordic companies. It is not our impression that Nordic companies are lagging behind their global counterparts operating within the European market. Similar research from CDP and Sustainalytics reports this as a global issue.

As a Nordic responsible investment manager, we aim to understand the transition risks Nordic companies face. Identifying companies with deforestation-related risks and assessing their reporting and traceability capabilities is crucial for fulfilling our fiduciary duty and safeguarding our customers' assets, as environmental and regulatory issues can pose investment risks.

[21] Revenue exposure may be overstated as the number includes all European countries and not only EU member countries e.g. UK and Norway are included in the revenue exposure numbers.

Disclaimer

This publication has been prepared as marketing communication by Danske Bank Asset Management – a division of Danske Bank A/S ("Danske Bank). Danske Bank is under supervision by the Danish Financial Supervisory Authority (Finanstilsynet).

The publication has solely been prepared for selected, potential and current retail customers and professional customers in EEA and may not be further distributed or shared with any third party without Danske Bank's prior written consent.

The publication has been prepared for information purposes only and it is not a recommendation, offer or solicitation of an offer to trade a financial instrument. It is not to be relied upon as investment, legal, tax, or financial advice. Always consult with professional advisors as to the legal, tax, financial or other matters relevant to the suitability and appropriateness of an investment.

Reasonable care has been taken to ensure that the content is fair, true, and not misleading. Danske Bank makes no representation to the content's accuracy or completeness, including information obtained from a third party, and accepts no liability for any loss arising from relying on it.

Neither this publication nor any copy of it may be taken or transmitted into the United States of America, its territories or possessions (the 'United States') or distributed directly or indirectly in the United States or to any U.S. person (as defined in Regulation S under the U.S Securities Act of 1933, as amended), including any national or resident of the United States, or any corporation, partnership or other entity organised under the laws of the United States.

Danske Bank Asset Management –
a division of Danske Bank A/S
Bernstorffsgade 40 | 1577 København V
Denmark
Company reg. no.: 61 12 62 28
Tel. +45 45 13 96 00
Fax +45 45 14 98 03
https://danskebank.dk/asset-management