

Deforestation exposure in corporate bond ETFs

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Deforestation is an increasing focus for investors. The financial risks are growing because of regulation and also litigation.[1] The theme is gaining prominence in investor engagement efforts.[2] Moreover, the next United Nations Climate Conference, COP30, will be held in Belém, Brazil, a city in the Amazon rainforest. This location will bring deforestation issues to the foreground of discussions on nature and climate change.

Table 1. Exposure to Deforestation Debt Universe for select ETFs. Source: AFII.

Ticker	Provider	Currency	ESG-labelled	Total exposure to Deforestation Debt Universe
PSFE	Invesco	EUR	Y	6.4%
LGNCRBI	L&G	EUR	Y	2.0%
SUOE	iShares	EUR	Y	6.8%
SSGAABP	State Street	EUR	Y	6.2%
V3RF	Vanguard	EUR	Y	6.2%
IEAC	iShares	EUR	N	6.2%
PUIG	Invesco	USD	Y	6.7%
USDC	L&G	USD	Y	3.4%
SUSC	iShares	USD	Y	6.4%
SPPU	State Street	USD	Y	7.2%
V3SU	Vanguard	USD	Y	6.8%
LQDE	iShares	USD	N	6.5%

Using the Anthropocene Fixed Income Institute Deforestation Debt Universe,[3] a comprehensive list of significant fixed income issuers that are substantially exposed to deforestation, we analyse corporate bond Exchange Traded Funds' (ETF) exposure to deforestation. We compare Environmental Social and Governance (ESG)-labelled funds to non-ESG counterparts, and explore the underlying indices that inform these funds' construction, leading to the following conclusions:

- ESG ETFs have on average 5.8% exposure to issuers in the Deforestation Debt Universe, with a majority having higher exposure than a non-ESG equivalent passive ETF. Exposure to higher risk names among USD funds vary considerably.
- ESG Index construction rules do not typically include deforestation concerns, and often rely on limited business exclusions and ESG ratings. For the higher risk issuers we have identified, ESG ratings, which reflect a broad assessment of the issuer's ESG performance, can be high, which can lead to substantial exposure.
- Investors may find this analysis helpful in selecting ETFs that better align with their deforestation risk objectives. **However, the universal level of exposure suggests an opportunity to develop index construction methods that reflect growing investor interest in minimising deforestation exposure.**[2]

[1] "Explainer: Why deforestation matters for investors", IIGCC, 16 Sep 2024.
[2] For some example reports please see "Engagement themes 2025: from deforestation to diversity", Robeco, 6 Jan 2025, "Rooting for change: Investor engagement and EM deforestation risk", Ashmore, May 2024 and "Deforestation: rising up the corporate and investor agenda", Janus Henderson, 21 Sep 2023.
[3] For the original white paper please see "Deforestation Debt Universe", AFII, 7 Jan 2025.

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Deforestation Debt Universe

AFII's Deforestation Debt Universe was created to support fixed income investors in understanding and managing their deforestation risk.[3] The output is a **comprehensive** list of issuers, with **substantial** deforestation exposure that are **significant** for fixed income investors.

To ensure the universe is comprehensive, the boundary for inclusion is derived from Forest 500 and ZSL SPOTT,[4] two data providers that identify the most exposed actors in deforestation. Six commodities are identified that are most linked to deforestation, (soy, palm, beef, leather, timber and pulp & paper), with both concentrated exposure to a single commodity or broad exposure across commodities are captured. To be significant for fixed income investors issuers are screened for G7-denominated outstanding debt.[5] The final universe contains 101 substantially exposed issuers, with a collective of nearly USD1.3trn of hard currency debt outstanding.

In this paper, we use the Deforestation Debt Universe to analyse corporate bond ETFs for exposure to deforestation. We compare absolute exposure, and exposure to a sub-population of highly exposed issuers. In addition, we analyse the underlying benchmark construction rules to see whether deforestation exposure plays a role in index design.

Funds for analysis

To choose a universe of funds for analysis we tried to identify a passive, ESG-themed corporate bond ETF from the major fund providers. These are detailed in Table 2 below.[6]

Table 2. Chosen funds for analysis with details. Source: AFII, provider websites.

Fund Name	Provider	Active / Passive	Currency of underlying debt	Benchmark	Ticker
Invesco EUR IG Corporate Bond ESG UCITS ETF Dist	Invesco	Passive	EUR	Bloomberg MSCI Euro Liquid Corporate ESG Weighted SRI Bond Index	PSFE GY Equity
Invesco USD IG Corporate Bond ESG UCITS ETF Dist	Invesco	Passive	USD	Bloomberg MSCI USD Liquid Corporate ESG Weighted SRI Bond Index	PUIG LN Equity
iShares € Corp Bond ESG UCITS ETF	iShares	Passive	EUR	Bloomberg MSCI Euro Corporate Sustainable SRI Index	SUOE LN Equity
iShares ESG Aware USD Corporate Bond ETF	iShares	Passive	USD	Bloomberg MSCI US Corporate ESG Focus Index	SUSC US Equity
L&G ESG Euro Corporate Bond Fund	L&G	Active	EUR	iBoxx MSCI ESG EUR Corporates Index	LGNCRBI LX Equity
L&G ESG USD Corporate Bond UCITS ETF - EUR Hedged Acc	L&G	Passive	USD	JPMorgan ESG Global Credit (GCI) Investment Grade USD Custom Maturity Index	USDC LN Equity
State Street Euro Corporate Bond ESG Screened Index Fund P EUR	State Street	Passive	EUR	BLOOMBERG EURO-AGGREGATE: CORPORATES	SSGAABP LX Equity
SPDR® Bloomberg SASB U.S. Corporate ESG UCITS ETF (Acc)	State Street	Passive	USD	Bloomberg SASB US Corporate ESG Ex-Controversies Select Index	SPPU GY Equity
ESG EUR Corporate Bond UCITS ETF	Vanguard	Passive	EUR	Bloomberg MSCI EUR Corporate Liquid Bond Screened Index	V3RF LN Equity
ESG USD Corporate Bond UCITS ETF	Vanguard	Passive	USD	Bloomberg MSCI USD Corporate Float-Adjusted Liquid Bond Screened Index	V3SU LN Equity

[4] This data is as of 2 Oct 2024 and was obtained under license from Global Canopy as part of its proprietary Forest IQ project https://forestiq.com. More up-to-date data may be available from Forest IQ.
[5] The threshold of $2.5bn of outstanding debt in G7 currencies at entity or parent level is used.
[6] This list is not exhaustive but designed to capture a selection of available funds with different benchmarks. Please contact the authors for further analysis.

Being passive funds, it is expected that their allocations do not deviate meaningfully from their underlying indices. Therefore, we choose a selection of benchmarks to build a varied universe of funds. Here, three providers use Bloomberg MSCI indices, although from different families. One provider uses Bloomberg SASB, and one uses both an iBoxx and a JPMorgan index. Interestingly, the State Street EUR fund included is the only one that seems to reference a non-sustainable benchmark.[7]

Deforestation exposure

We map our comprehensive universe of deforestation-exposed fixed income issuers[3] to the holdings of the selected ETFs to calculate their total exposure.

The fund holdings have been downloaded either from the respective provider websites or Bloomberg, effective 25 Feb 2025, and the total size invested in issuers within the Deforestation Debt Universe has been calculated on a market value basis.[8]

Portfolio exposures

Table 3 shows the total exposure for each fund we have analysed. For comparison we have included IEAC and LQDE, the non-ESG iShares benchmark EUR and USD corporate bond ETFs. The findings show variations between funds, but also a degree of homogeneity.

Most funds share similar exposures – apart from the L&G funds, which are the only ones that reference a non-Bloomberg benchmark. The EUR fund (the only active fund in the universe) has the lowest exposure at 2.0%. The USD fund has the second lowest at 3.4%.

Among the other funds, the exposure variations do not seem to follow a discernible pattern. Invesco EUR has lower exposure than iShares EUR, but Invesco USD has higher exposure than iShares USD, suggesting any differences in those benchmarks is specific to the underlying currency of debt. Moreover, the State Street USD fund has the highest overall exposure, but its EUR fund the second lowest.

Table 3. Deforestation exposure for each fund. Source: AFII.

Fund	Total Deforestation exposure
Invesco EUR	6.4%
L&G EUR (active)	2.0%
iShares EUR	6.8%
State Street EUR	6.2%
Vanguard EUR	6.2%
IEAC (non-ESG)	6.2%
Invesco USD	6.7%
L&G USD	3.4%
iShares USD	6.4%
State Street USD	7.2%
Vanguard USD	6.8%
LQDE (non-ESG)	6.5%

Comparing the exposure figures for the ESG ETFs to those for the non-ESG ETFs gives some unintuitive results. On average the deforestation exposure of the ESG ETFs is lower, but this is only because of the low exposure of the L&G funds. Only these two funds, and the iShares USD fund, have exposure lower than the non-ESG benchmark; all other funds have equal or higher exposure. This may be the result of non-deforestation-related ESG exclusions among the ESG ETFs. For example, when fossil fuel or weapons issuers (which are not exposed to deforestation) are

[7] Note we were not able to identify a passive EUR corporate bond ETF provided by L&G.
[8] This exposure does not consider different duration or credit risk of securities, which may form part of a further analysis.

removed by ESG exclusions, the result is a smaller investment universe but one which still includes issuers exposed to deforestation. A higher weight is assigned to each security as a result, and higher deforestation exposures ensue.

The total investment in deforestation-exposed debt by ESG ETFs is material, averaging 5.8% across this fund universe, with a majority of funds having increased exposure compared to a non-ESG fund.

Risk to poorer performing companies

The Deforestation Debt Universe identifies a wide range of issuers with substantial deforestation exposure. Inclusion does not necessarily indicate that an issuer is poor at managing the risks in its supply chain, however. Therefore, we identify a sub-population that represents issuers that have higher risk.

A universe of higher risk issuers

Forest IQ, the main underling data source for the Deforestation Debt Universe, provides an additional metric designed to assess the progress made towards "*eliminating deforestation, conversion and associated human rights abuses in their supply chains*."[9] This is done by assessing the commitments and reporting of issuers, and so does not offer an independent measure of performance.

To identify an illustrative smaller list of targeted higher risk issuers, we have:

1) Restricted analysis to soy or beef exposure

2) Selected issuers with an exposure score of 'Very High' or 'Critical'

3) Considered issuers with a performance rated 'Laggard' or 'Weak'.[10]

This results in a target population of 31 issuers (for a full list please see Table 7 in Appendix), on which we can compare exposure.

Portfolio exposures

Table 4 (overleaf) shows our ETF universe's exposure to the population of 31 poorest performing issuers. Once again, only three funds (L&G EUR, State Street EUR, and Invesco USD) have lower exposure than the non-ESG funds.

Most notably, the L&G EUR fund has zero exposure to these issuers. As an active fund, the manager has more discretion to choose investments. While the fund appears to have no direct deforestation-related investment criteria, its prospectus does mention promoting support of biodiversity and responsible land use.[11]

[9] Please see metric 3 in "Forest IQ Methodology", Forest IQ, 2 Oct 2024.
[10] These are significantly tighter than the criteria to create the 101 sized total universe, as detailed in "Deforestation Debt Universe", AFII, 7 Jan 2025.
[11] P438 of "Legal & General SICAV", LGIM, 25 Nov 2024.

The other significant observation is that the L&G USD fund, which has the second-lowest exposure to the total universe, has the fourth-highest exposure to the higher risk sub-population, and by far the highest ratio between the two. This shows that deforestation exposure is most focused amongst the poorest performing issuers.

Table 4. Exposure to higher risk issuers. Source: AFII.

Fund	Exposure to higher risk issuers	Exposure to higher risk issuers / total exposure
Invesco EUR	0.8%	11.8%
L&G EUR (active)	0.0%	0.0%
iShares EUR	0.9%	13.0%
State Street EUR	0.7%	11.7%
Vanguard EUR	0.8%	13.2%
IEAC (non-ESG)	0.8%	13.0%
Invesco USD	0.9%	14.1%
L&G USD	1.6%	47.7%
iShares USD	2.0%	31.1%
State Street USD	2.1%	29.7%
Vanguard USD	1.8%	26.2%
LQDE (non-ESG)	1.5%	23.1%

Amongst the USD funds, the Invesco fund has the largest delta between its exposure to the total deforestation universe and the high-risk sub-population. The USD fund's exposure is also in-line with the exposure of its EUR fund. The iShares, State Street, and Vanguard funds have the highest exposure with 1.8%-2.1% of funds invested in these high-risk issuers. In the next section we analyse the index construction rules to further understand the reason for these different levels of exposure.

Average exposure to the poorest performing issuers is significantly lower than for the total Deforestation Debt Universe. As a percentage of total deforestation exposure, it is under 10% on average for EUR funds, and just under 30% for USD funds, although we note this is not adjusted for total debt outstanding. Once again, the majority of funds have higher exposure compared to a non-ESG ETF.

There also seems to be greater disparity between funds, suggesting that index construction rules could play a role in selection for these issuers.

Index construction rules

All the ETFs analysed, with the exception of the L&G EUR fund, are passive ETFs. This means investment decisions are designed to minimise tracking error from the underlying benchmark indices (detailed in Table 2).

Index construction rules can vary, and this may account for some of the varied deforestation exposure we have observed. We will now analyse the underlying benchmarks to see how they may potentially impact deforestation investment decisions.

Bloomberg MSCI ESG Fixed Income Family

Four of the funds use indices from the Bloomberg MSCI family: Invesco, iShares, State Street, and Vanguard (full details in Table 2).

Bloomberg MSCI ESG Fixed Income indices fall into a few different groups. The three main categories that are not related to ESG-labelled debt are.[12]

1) **Socially Responsible Indices (SRI)**: these indices use negative screens to exclude issuers with undesirable business lines from a parent index, using MSCI Business Involvement Screening Research and ESG Controversy flags.

2) **ESG-weighted indices**: these indices apply different weights to issuers based on MSCI ESG Ratings (which are relative to industry peers) and are based on an existing parent index.

3) **Sustainability Indices**: these indices positively screen issuers from existing parent indices using MSCI ESG Ratings, i.e. only above a given threshold. Note ESG Ratings are relative to industry peers.

Other index providers

The techniques for constructing ESG benchmarks are similar among the other index providers: negative business screens, ESG ratings, and ESG-focused weightings. Only the JPMorgan ESG GCI index (used by the L&G USD fund), uses a different approach. It uses data from Sustainalytics and RepRisk to construct JESG scores which are used in similar ways to MSCI ESG ratings for index construction.

1) Business screenings

Several ESG-indices exclude investment from companies exposed to specific businesses, with significant overlap between the sectors considered. Full details are shown in Table 8 in the Appendix.

There are two potential areas of interest to deforestation.

First is Tobacco, which as a sector is exposed to some agricultural production. However, while some tobacco issuers may have deforestation exposure in their supply chains, however none of the Deforestation Debt Universe issuers are in the Tobacco sector.[13]

The second is Genetic Engineering, which also potentially has exposure to agriculture. The threshold used is 5% of revenue from genetic engineering related businesses, which would seem not to cover business as usual agricultural production, even if that is of genetically modified crops.

Therefore, we conclude none of the sectors considered for exclusion are directly linked to deforestation.

1) ESG ratings

A large number of Bloomberg indices rely on MSCI ESG Ratings. The ratings of deforestation-exposed issuers under this rubric vary widely. Five issuers (Ajinomoto, Clorox, General Mills, Kellanova and Marubeni) have received AAA ratings, the highest possible score. (MSCI ESG Ratings are included in Table 7 in the Appendix).

[12] "Bloomberg MSCI ESG Fixed Income Indices", Bloomberg, 19 Aug 2024.
[13] As classified by Bloomberg Level 3 Industry Name.

The rating methodology is broad, and considers factors across ESG themes.[14] It is therefore possible for an issuer performing poorly on deforestation risk to score a high overall rating, as evidenced by the above five examples.

Given the sectoral exclusion criteria for these funds are quite broad, with nothing specific on deforestation or land use, it is likely that ESG ratings play a significant role in relative investment eligibility and fund inclusion.

2) Index weightings

There is a further criterion which has the potential to impact exposure; how securities are weighted within the index. The standard method for parent indices is to weight by market value. However, some ESG indices make further weighting adjustments in addition to pure exclusions.

Some apply a tilt based on ESG ratings; with better-rated issuers receiving a higher weight. For example, the Bloomberg MSCI Euro Liquid Corporate ESG Weighted SRI Index applies a 2.0x weighting for ratings AAA or AA.[15]

Others use a "PORT optimisation", which is a Bloomberg algorithm for maximising an ESG score and minimising the active total risk compared to the parent index.[16]

Summary

Table 5 gives a summary of our interpretation of the index construction rules, along with links to the methodology documents.

Table 5. Index construction criteria. Source: AFII, index providers.

Fund	Total Deforestation exposure	Exposure to poorest performing issuers	Index documentation	Business Screening exclusions	Rating Minimum	Weightings adjustment
Invesco EUR	6.4%	0.8%	Link	11	BB	ESG rating tilt
L&G EUR (active)	2.0%	0.0%	Link	12	No	
iShares EUR	6.8%	0.9%	Link	11	BBB	
State Street EUR	6.2%	0.7%	Link	6	No	
Vanguard EUR	6.2%	0.8%	Link	9	No	
Invesco USD	6.7%	0.9%	Link	11	BBB	ESG rating tilt
L&G USD	3.4%	1.6%	Link	5	JESG 20	
iShares USD	6.4%	2.0%	Link	5	No	PORT optimisation
State Street USD	7.2%	2.1%	Link	4	No	PORT optimisation
Vanguard USD	6.8%	1.8%	Link	8	No	

[14] "ESG Ratings Methodology", MSCI, Apr 2024.
[15] "Bloomberg MSCI Euro Liquid Corporate ESG Weighted SRI Index", Bloomberg, 30 Aug 2023.
[16] As an example, some more details are given in "Bloomberg Barclays MSCI US Corporate ESG Focus Index", Bloomberg, 27 Mar 2018.

Among the USD funds, the PORT optimised vehicles have the highest exposure to the poorer performers. In contrast, the ESG rating tilt produces the lowest exposure to the poorest performing issuers.

Among the EUR funds, however, there seems little linkage between index construction rules and the ultimate deforestation exposure. This may reflect the fact that deforestation is not explicitly considered in ESG index creation.

For investors focused on deforestation exposure, it may be that the current suite of index offerings do not address their concerns.

Key issuers driving deforestation exposure

Table 6 shows the individual fund exposure to the eight issuers with the highest maximum deforestation exposure. Any individual exposure above 0.2% is highlighted.

The EUR funds, aside from the actively managed L&G fund, show a similar pattern of exposure, although the iShares and Vanguard funds have higher risk to Johnson & Johnson and Mondelez.

The USD funds have a more varied deforestation risk profile. For example, the only fund with exposure to Cargill is L&G USD, which has 0.24% of its portfolio invested in this name. The iShares USD stands out for its exposure to Kellanova, with 0.54% invested – nearly 5x the second-most invested fund which is State Street USD.

Table 6. Individual exposure to most significant higher risk issuers. Source: AFII.

Issuer	Ticker	Invesco EUR	L&G EUR	iShares EUR	State Street EUR	Vanguard EUR	Invesco USD	L&G USD	iShares USD	State Street USD	Vanguard USD
Campbell Soup Co	CPB	0.00%	0.00%	0.00%	0.00%	0.00%	0.08%	0.12%	0.12%	0.41%	0.07%
Cargill Inc	CARGIL	0.00%	0.00%	0.02%	0.02%	0.07%	0.00%	0.24%	0.00%	0.00%	0.00%
Clorox Co/The	CLX	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.04%	0.34%	0.00%	0.00%
General Mills Inc	GIS	0.13%	0.00%	0.14%	0.08%	0.07%	0.12%	0.07%	0.42%	0.29%	0.16%
Hormel Foods Corp	HRL	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.23%	0.02%	0.00%	0.04%
JBS S/A	JBSSBZ	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.02%	0.00%	0.33%
Johnson & Johnson	JNJ	0.20%	0.00%	0.29%	0.17%	0.27%	0.41%	0.34%	0.18%	1.06%	0.53%
Kellanova	K	0.00%	0.00%	0.04%	0.06%	0.00%	0.00%	0.04%	0.54%	0.11%	0.07%
Mondelez International Inc	MDLZ	0.18%	0.00%	0.27%	0.17%	0.26%	0.00%	0.00%	0.01%	0.10%	0.08%

1) Cargill

Cargill is a US-based global commodity trader, with very high exposure to soy and weak deforestation risk management performance. The majority of its debt is issued in USD, so it is perhaps unsurprising that the EUR funds do not have significant exposure.[17] What is more surprising is that four USD funds have zero exposure, although the L&G fund holds two bonds, the 1.7% 31s and 5.125% 32s.

[17] For analysis of one of its rare EUR bond issuances please see "Cargill: EUR bond EU deforestation risk", AFII, 14 Apr 2023.

As shown in Table 7 in the Appendix, Cargill does not have an MSCI ESG Rating, which should render it ineligible for investment by any fund with a minimum rating threshold.

The L&G USD fund uses the non-public JESG rating system rather than the public MSCI ESG rating. However, we note that the Bloomberg ESG score and Sustainalytics ESG Risk score – both of which are shown in Table 7 in the Appendix – are present and above average for that population, which may imply its JESG score could be sufficient for inclusion.

Our earlier analysis suggests Cargill may have significant financial exposure to the (recently delayed) EU Deforestation Regulation, which presents risks for investors.[18,19]

2) General Mills

Global food company General Mills issued over $2.5bn bonds in 2024, which are held by all funds under analysis apart from the L&G EUR fund.

Earlier analysis has already revealed that these bonds are held by several Article 8 and 9 funds, primarily due to their reasonable ESG ratings. They score AAA from MSCI, and 6.38/10 from Bloomberg (compared to a peer average of 2.84).[20]

This is an example of how use of a broad ESG rating can sometimes miss concentrated ESG risks. This in turn suggests that investors concerned about deforestation may need to apply additional screens.

3) JBS

It is also worth noting that the only 5-ranked issuer on this list is JBS, a Brazilian multinational company that is the largest meat processor in the world. Most funds have zero exposure, but the iShares USD fund has 0.02% invested, and the Vanguard USD fund 0.33% across eleven securities, including the two JBS sustainability-linked bonds (ISINs US46590XAP15 & US46590XAU00).[21]

JBS only has USD debt outstanding, and has an MSCI ESG rating of CCC, which should exclude it from Invesco USD and L&G USD funds. It may be the index optimisation approach used for iShares USD and State Street USD which has reduced the weighting of JBS to such a low level, but kept it represented in the Vanguard USD fund.

4) Kellanova

Kellanova, a US-headquartered global food company, has an ESG rating of AAA from MSCI.

Notably, the Invesco funds, which use a weighting tilt derived from this rating, seem both to have excluded the issuer and assigned it zero weight.

All other funds have some exposure to this issuer, with the most held by iShares USD, which uses the PORT optimisation. This gives higher weights to higher ratings and those that create less risk differences to the parent index.

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[18] "Cargill's EUDR compliance: risks of a soy-prise", AFII, 14 Jun 2024.
[19] For commentary on the regulation delay please see "EU deforestation regulation U-turn", AFII, 21 Nov 2024.
[20] This is explored in more detail in "General Mills: lurking deforestation", AFII, 17 Dec 2024.
[21] These bonds are discussed in further detail in "The Forensic Carbon Accountant: JBS SLB", AFII, 21 Sep 2023.

We note that Kellanova is in the process of being acquired by Mars, another deforestation-exposed issuer but one with stronger performance. This transaction may therefore result in more responsible behaviour from the combined entity.[22]

Conclusions

All the funds investigated are invested in deforestation-exposed securities, with an average exposure of 5.8%. Notably, a majority of ESG funds have higher deforestation exposure than a non-ESG equivalent passive ETF. When considering the poorest performing issuers, exposure is lower although not necessarily when adjusted for outstanding debt.

ESG index construction rules do not explicitly consider deforestation exposure and often rely on ESG ratings both for inclusion and weighting decisions. Amongst the poorest performing issuers in our universe, some have high ratings because of the typically broad range of assessment criteria used. This can lead to substantial exposure in the funds.

Total exposure to high-risk names is quite varied, something which cannot be clearly explained by the index construction rules. Investors with issuer-specific deforestation concerns may need to check their ETF choices are aligned with their investment intentions, and it may be new index construction methods need to be developed.

[22] "Mars: Raising standards", AFII, 5 Mar 2025.

Appendix: Higher risk issuers in soy or beef

Table 7. List of issuers from the Deforestation Debt Universe with poor scores in soy or beef, with ESG ratings and Forest IQ metrics. Source: AFII, Bloomberg, Forest IQ, accessed 17 Mar 2025.

Bloomberg Name	Credit Ticker	MSC ESG Rating	Bloomberg ESG Score (0-10)	Sustainalytics ESG Risk Score (0-100)	Soy	Beef
Aeon Co Ltd	JUSCO	AA	2.8	23.1	4 - Weak	
Ajinomoto Co Inc	AJINOM	AAA	5.1	24.7	4 - Weak	
BRF SA	BRFSBZ	BBB	4.0	33.3	5 - Weak	
Campbell Soup Co	CPB	AA	5.8	26.3	4 - Weak	4 - Weak
Cargill Inc	CARGIL	N.S.	2.6	27.9	4 - Weak	
Clorox Co/The	CLX	AAA	5.8	22.8	4 - Weak	
COFCO Corp	COFCO	N.S.				4 - Weak
Conagra Brands Inc	CAG	AA	4.6	26.9	4 - Weak	4 - Weak
Coty Inc	COTY	N.S.	4.6	23.9	4 - Weak	
General Mills Inc	GIS	AAA	6.4	26.0	4 - Weak	
Heilongjiang Agriculture Co Lt	HLJAGR	N.S.	1.8	45.2	5 - Laggard	
Hormel Foods Corp	HRL	AA	5.1	26.1	4 - Weak	4 - Weak
International Flavors & Fragra	IFF	AA	4.9	23.2	4 - Weak	
J M Smucker Co/The	SJM	AA	4.5	27.2	4 - Weak	4 - Weak
JBS S/A	JBSSBZ	CCC	3.9	43.3	5 - Weak	5 - Weak
Johnson & Johnson	JNJ	A	6.8	19.9	4 - Weak	
Kellanova	K	AAA	4.4	30.4	4 - Weak	4 - Weak
Louis Dreyfus Co BV	LOUDRE	N.S.	3.2	30.5	5 - Weak	
Marfrig Global Foods SA	MRFGBZ	N.S.	4.3		5 - Weak	4 - Weak
Marubeni Corp	MARUB	AAA	3.9	44.0	4 - Weak	
Minerva SA/Brazil	BEEFBZ	N.S.	3.9			4 - Weak
Mitsubishi Corp	MITCO	A	3.3	39.4	4 - Weak	
Mitsui & Co Ltd	MITSCO	A	4.7	31.8	4 - Weak	
Mondelez International Inc	MDLZ	A	6.6	22.0	4 - Weak	
Olam Group Ltd	OLGPSP	N.S.	4.3		4 - Weak	
Restaurant Brands International	QSRCN	BBB	4.2	21.6	5 - Weak	4 - Weak
Seven & i Holdings Co Ltd	SEVENI	A	2.8	21.7	4 - Weak	
Sysco Corp	SYY	A	4.0	15.3	4 - Weak	4 - Weak
Tesco PLC	TSCOLN	AA	6.6	17.8	4 - Weak	
Tyson Foods Inc	TSN	BBB	3.0	36.8	4 - Weak	4 - Weak
WM Morrison Supermarkets Ltd	MRWLN	N.S.	2.6		4 - Weak	

Appendix: Business screening exclusion details

Table 8. Business screening exclusion details of underlying index. Source: Index providers, AFII.

Business Screening exclusions													
Fund	Weapons	Firearms	Adult Entertainment	Alcohol	Tobacco	Gambling	Genetic Engineering	Nuclear Power	Fossil Fuels	Thermal coal	Oil Sands	Shale extraction	Arctic drilling
Invesco EUR	X	X	X	X	X	X	X	X	X	X	X		
L&G EUR (active)	X	X	X	X	X	X	X	X	X	X	X	X	
iShares EUR	X	X	X	X	X	X	X	X	X	X	X		
State Street EUR	X	X			X					X	X		X
Vanguard EUR	X	X	X	X	X	X		X	X	X			
Invesco USD	X	X	X	X	X	X	X	X	X	X	X		
L&G USD	X	X			X					X	X		
iShares USD	X	X			X					X	X		
State Street USD	X	X			X					X			
Vanguard USD	X	X	X	X		X		X	X	X			

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