

Tracking the environmental footprints of corporate green bond issuers



How green are companies that issue green bonds? It's question that gets to the heart of the ESG debate. Yet assessing issuers based on their green bonds – which finance discrete asset pools – fails to address the vital issue of corporate-level environmental footprints. This will have to change as transition and sustainability-linked instruments emerge in greater volume.

Evaluating corporate debt issuers at company level, including their supply chains, in the context of transition planning and execution offers a cleaner context in which to gauge ESG narratives and achievements. But measuring companies' environmental impacts presents a series of challenges, considering uneven and non-standardised reporting.

These challenges will diminish over time as governments craft regulatory frameworks to meet net zero carbon targets (using science-based inputs), and as standardised ESG disclosure and reporting based on TCFD-like schemas become more pressing.

In the meantime, to gain some insight into the ESG credentials of corporate green bond issuers, we took the environmental ('E') scores of a sample of 28 issuers captured in Scope's statistical model. These are quantitative measures based on macroeconomic data – see Appendix II. The issuer cohort came from a universe of around 80 companies that sold roughly USD 52bn of labelled ESG debt in the second half of 2020 (to mid-November), according to deals tracked by Bond Radar, and company reports.

Roughly two-thirds (18) of the 28 issuers in the sample score relatively poorly, with 'E' scores below 5 (0 = worst; 10 = best). Twelve companies score below 3, while four score below 1 (see **Figure 1**, next page). Companies scoring close to zero means the environmental impact of generating each euro of revenue is very high.

Even so, having issuers in sectors with less-than-stellar environmental records tap the ESG market to fund active brown-to-green transition is a welcome development: over the life of a bond, the positive environmental impacts will likely be much higher than those of companies in 'clean' sectors.

Issuance across the whole ESG issuance universe during the review period came mainly in the form of green bonds but also emerged in social, sustainable, sustainability, transition and sustainability-linked (KPI-linked) format. Corporates in our sample sold roughly USD 29bn in labelled bonds, accounting for 57% of labelled ESG debt in the review period (see Appendix I).

Corporate ESG bond supply over the review period accounted for around 22% of total ESG-linked bond issuance; the sector continues to be dominated by supranational, sovereign and government agency supply. But the flow of transactions from global industrial and tech companies is noteworthy because it offers clear evidence that they are starting to address their ESG responsibilities.

From a diversification perspective, the deals offered a welcome relief from the more typical diet of labelled corporate offerings from real estate companies financing green buildings, utilities financing renewables, or pure-play renewable energy issuance.

Companies selling ESG bonds in the review period included a host of energy companies and utilities; automobile companies (Daimler, Volkswagen, and Volvo Cars); Etihad Airways, Amsterdam's Schiphol Airport, Brazil's Suzano Papel e Celulose; consumer and luxury goods companies (Adidas, Burberry, Chanel, and Mexico's Coca-Cola Femsa) as well as Google parent Alphabet Inc., Johnson Controls, Novartis, Orange, and Verizon.

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Figure 1: Corporate ESG issuer sample – reverse ranking by Scope E score

Issuer	Sector	Country	Scope E score
NRG Energy	Electric Utilities	US	0.36
LafargeHolcim	Construction Materials	France	0.54
Pattern Energy	Independent Power Producers	US	0.54
Suzano Papel e Celulose	Paper Products	Brazil	0.99
ERG	Independent Power Producers	Italy	1.08
ENN Energy Holdings	Natural Gas Utilities	Hong Kong	1.20
Energias de Portugal	Electric Utilities	Portugal	1.26
Piedmont Natural Gas	Natural Gas Utilities	US	1.40
Terna -- Rete Elettrica Nazionale	Electric Utilities	Italy	1.44
Enel	Electric Utilities	Italy	1.53
UPM-Kymmene	Paper Products	Finland	2.79
Concord New Energy	Natural Gas Utilities	China	2.90
Johnson Controls	Appliances, Tools & Housewares	US	3.15
Arkema	Commodity Chemicals	France	3.69
Coca-Cola Femsa	Non-Alcoholic Beverages	Mexico	3.69
MTR Corp	Passenger Transportation, Ground & Sea	Hong Kong	3.69
Mercury NZ	Electric Utilities	New Zealand	3.90
Adidas	Footwear	Germany	4.68
Volvo Car AB	Heavy Machinery & Vehicles	Sweden	5.04
Schneider Electric	Electrical Components & Equipment	France	5.22
Volkswagen	Auto & Truck Manufacturers	Germany	6.03
Getlink	Highways & Rail Tracks	UK	6.57
Daimler	Auto & Truck Manufacturers	Germany	6.75
Novartis	Pharmaceuticals	Switzerland	7.38
Alphabet Inc	Internet Services	US	8.28
Prologis	Commercial REITs	US	8.37
Verizon	Integrated Telecommunications Services	US	8.55
Orange	Integrated Telecommunications Services	France	8.82

Scale runs from 0 (lowest) to 10 (highest)
Source: Scope

Including supply chains is vital

The ESG scores incorporate the factors over which companies have direct control plus, importantly, their supply chains. Full supply-chain analysis demands the inputs of immediate suppliers, suppliers' suppliers, and extends all the way back to extraction of raw materials. Incorporating supply-chain data must be a core component of any holistic ESG analysis, as companies could very well be supporting poor environmental corporate ecosystems even if their direct impacts are reasonable.

The problem for investors concerned about supply chains is that reporting requirements and accounting standards do not yet require detailed disclosure; and companies rarely have information beyond their first supply line; if that.

In-sector and cross-sector comparisons

Beyond individual company scores, looking at where green bond issuers rank on environmental factors in their sector peer group offers useful insights. Hong Kong's MTR, for example, ranks close to the bottom of the 81 companies classified under 'passenger transportation, ground and sea'; as does Brazil's Suzano among the 83 companies in the 'paper products' sector peer group. In fact, UPM-Kymmene, NRG Energy, Coca-Cola Femsa, Prologis, Alphabet and Johnson Controls all rank in the bottom third of their peer groups. See **Figure 2** on next page. This kind of analysis can offer useful pointers to the securities selection process.

On an intra-sector basis, Mercury NZ (which says it generates electricity from 100% renewable sources) ranks in the leading segment of the 320 companies in the electric utilities sector, even with an E score of 3.90 – the utilities sector is still in early stages of environmental transition. On a sector comparison, Italy's Enel and Terna and Energias de Portugal score less well but are still in the leading tier in the sector. NRG Energy, meanwhile, has a much lower, albeit still a median, sector ranking.

Figure 2: Ranking of issuers by relative position in sector peer group

Issue rank in sector peer group	Peer group	Peer group count
Top 10%		
Mercury NZ	Electric Utilities	320
Orange	Integrated Telecommunications Services	177
Concord New Energy	Natural Gas Utilities	101
Daimler	Auto & Truck Manufacturers	123
Novartis	Pharmaceuticals	734
Enel	Electric Utilities	320
Terna - Rete Elettrica Nazionale	Electric Utilities	320
Energias de Portugal	Electric Utilities	320
Top 25%		
ERG	Independent Power Producers	99
Volkswagen	Auto & Truck Manufacturers	123
Arkema	Commodity Chemicals	454
Piedmont Natural Gas	Natural Gas Utilities	101
Pattern Energy	Independent Power Producers	99
Top 50%		
Verizon	Integrated Telecommunications Services	177
Getlink	Highways & Rail Tracks	55
Volvo Car AB	Heavy Machinery & Vehicles	145
LafargeHolcim	Construction Materials	251
ENN Energy Holdings	Natural Gas Utilities	101
Adidas	Footwear	36
Schneider Electric	Electrical Components & Equipment	541
UPM-Kymmene	Paper Products	83
NRG Energy	Electric Utilities	320
Coca-Cola Femsa	Non-Alcoholic Beverages	63
Prologis	Commercial REITs	342
Bottom 50%		
Alphabet Inc	Internet Services	235
Johnson Controls	Appliances, Tools & Housewares	113
Bottom 20%		
Suzano Papel e Celulose	Paper Products	83
MTR Corp	Passenger Transportation, Ground & Sea	81

Source: Scope

Beyond rankings, it is important to understand corporate narratives around transition and how companies perform against transition targets. The fact that Enel pioneered the sustainability-linked bond market and has issued multiple times in this format with evolving ESG covenants attests to the fact that stories can change quickly if companies are committed to addressing their environmental footprints even if E scores are low.

E scores allow for direct comparisons between best-in-class sector plays and sector laggards. Sector rankings can also be used to target specific companies to gauge their preparedness to issue labelled debt if they have not yet done so, or to screen companies out of selection based on absolute E scores or relative peer-group rank.

On a cross-sector view, specialty materials manufacturer Arkema, Coca-Cola Femsa and MTR Corp all have E scores of 3.69. But while Arkema scores above its sector average, Femsa scores close to its sector average, while MTR scores well below.

Figure 3: Reverse ranking – distance to sector average

0	Sector	Scope issuer E score	Average sector E score	Distance to sector average E score
MTR Corp	Passenger Transportation, Ground & Sea	3.69	6.64	-2.95
Suzano Papel e Celulose	Paper Products	0.99	2.18	-1.19
Johnson Controls	Appliances, Tools & Housewares	3.15	3.80	-0.65
LafargeHolcim	Construction Materials	0.54	0.81	-0.27
Pattern Energy	Independent Power Producers	0.54	0.73	-0.19
NRG Energy	Electric Utilities	0.36	0.51	-0.15
Adidas	Footwear	4.68	4.53	0.16
ENN Energy Holdings	Natural Gas Utilities	1.20	1.04	0.16
Alphabet Inc	Internet Services	8.28	7.96	0.32
ERG	Independent Power Producers	1.08	0.73	0.35
Piedmont Natural Gas	Natural Gas Utilities	1.40	1.04	0.36
Coca-Cola Femsa	Non-Alcoholic Beverages	3.69	3.22	0.47
Prologis	Commercial REITs	8.37	7.87	0.50
Verizon	Integrated Telecommunications Services	8.55	8.00	0.55
UPM-Kymmene	Paper Products	2.79	2.18	0.61
Energias de Portugal	Electric Utilities	1.26	0.51	0.75
Orange	Integrated Telecommunications Services	8.82	8.00	0.82
Schneider Electric	Electrical Components & Equipment	5.22	4.30	0.92
Terna - Rete Elettrica Nazionale	Electric Utilities	1.44	0.51	0.93
Volvo Car AB	Heavy Machinery & Vehicles	5.04	4.04	1.00
Enel	Electric Utilities	1.53	0.51	1.02
Arkema	Commodity Chemicals	3.69	2.55	1.14
Getlink	Highways & Rail Tracks	6.57	5.07	1.50
Volkswagen	Auto & Truck Manufacturers	6.03	4.46	1.57
Novartis	Pharmaceuticals	7.38	5.57	1.81
Concord New Energy	Natural Gas Utilities	2.90	1.04	1.86
Daimler	Auto & Truck Manufacturers	6.75	4.46	2.29
Mercury NZ	Electric Utilities	3.90	0.51	3.39

Red text = issuer score < sector average; green text = issuer score one mark and above > sector average.

Source: Scope



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Appendix I: Corporate ESG sample – bond issuance details

Issuer	Country	Sector	Issue type	Date of issue	Currency	Amount (m)	USD equiv.	Coupon	Maturity
Adidas	Germany	Footwear	Sustainability	29-Sep-20	EUR	500	570	0.000%	5-Oct-28
Alphabet Inc	US	Internet Services	Sustainability	3-Aug-20	USD	1,000	1,000	0.450%	15-Aug-25
					USD	2,250	2,250	1.100%	15-Aug-30
					USD	2,500	2,500	2.050%	15-Aug-50
Arkema	France	Commodity Chemicals	Green	7-Oct-20	EUR	300	352	0.125%	14-Oct-26
Coca-Cola Femsa	Mexico	Non-Alcoholic Beverages	Green	26-Aug-20	USD	705	705	1.850%	1-Sep-32
Concord New Energy	China	Natural Gas Utilities	Green	17-Sep-20	USD	90	90	10.750%	24-Sep-24
Daimler	Germany	Auto & Truck Manufacturers	Green	3-Sep-20	EUR	1,000	1,180	0.750%	10-Sep-30
Enel	Italy	Electric Utilities	Sustainability-linked	13-Oct-20	STG	500	643	1.000%	20-Oct-27
Energias de Portugal	Portugal	Electric Utilities	Green	17-Sep-20	USD	850	850	1.710%	24-Jan-28
ENN Energy Holdings	Hong Kong	Natural Gas Utilities	Green	10-Sep-20	USD	750	750	2.625%	17-Sep-30
ERG	Italy	Independent Power Producers	Green	4-Sep-20	EUR	500	585	0.500%	11-Sep-27
Getlink	UK	Highways & Rail Tracks	Green	22-Oct-20	EUR	700	826	3.500%	30-Oct-25
Johnson Controls	US	Appliances, Tools & Housewares	Green	8-Sep-20	USD	625	625	1.750%	15-Sep-30
LafargeHolcim	France	Construction Materials	Sustainability-linked	17-Nov-20	EUR	850	1,008	0.500%	23-Apr-31
Mercury NZ	New Zealand	Electric Utilities	Green	4-Sep-20	NZD	200	134	1.560%	14-Sep-27
MTR Corp	Hong Kong	Passenger Transportation, Ground & Sea	Green	12-Aug-20	USD	1,200	1,200	1.625%	19-Aug-30
Novartis	Switzerland	Pharmaceuticals	Sustainability	16-Sep-20	EUR	1,850	2,172	0.000%	23-Sep-28
NRG Energy	US	Electric Utilities	Sustainability-linked	17-Nov-20	USD	500	500	2.000%	2-Dec-25
Orange	France	Integrated Telecommunications Services	Sustainability	9-Sep-20	EUR	500	585	0.125%	16-Sep-29
Pattern Energy	US	Independent Power Producers	Green	14-Jul-20	USD	700	700	4.500%	15-Aug-28
Piedmont Natural Gas	US	Natural Gas Utilities	Green	5-Aug-20	USD	300	300	3.150%	15-Aug-30
Prologis	US	Commercial REITs	Green	6-Aug-20	USD	750	750	1.250%	15-Oct-30
Schneider Electric	France	Electrical Components & Equipment	Sustainability-linked convertible	17-Nov-20	EUR	660	782	0.000%	15-Jun-26
Suzano Papel e Celulose	Brazil	Paper Products	Sustainability-linked	10-Sep-20	USD	750	750	3.950%	15-Jan-31
Terna -- Rete Elettrica Nazionale	Italy	Electric Utilities	Green	17-Jul-20	EUR	500	568	0.750%	24-Jul-32
UPM-Kymmene	Finland	Paper Products	Green	12-Nov-20	EUR	750	877	0.125%	28-Nov-51
Verizon	US	Integrated Telecommunications Services	Green	16-Sep-20	USD	1,000	1,000	1.500%	18-Sep-30
Volkswagen	Germany	Auto & Truck Manufacturers	Green	16-Sep-20	EUR	1,250	1,467	0.875%	22-Sep-28
					EUR	750	880	1.250%	23-Sep-32
Volvo Car AB	Sweden	Heavy Machinery & Vehicles	Green	30-Sep-20	EUR	500	585	2.500%	7-Oct-27

Source: Bond Radar, company reports



Appendix II: Background to the scores

Scope's ESG scores are statistical approximations of the environmental and social damage caused by a company's activities. The scores assess a company's business model based on its income statement and balance sheet, and its global supply chain (using a multi-regional input-output model). The model outputs provide specific impacts of a company's activities on E, S and G measured as external costs per euro of revenue. Multiplying this figure by the company's revenues yields the total ESG impact.

Scope determines the scores by applying global peer-group analysis. The statistical model follows outputs in one industrial sector in one country as it is transformed into inputs into another industrial sector and country. It captures all global country-sector combinations and inter-dependencies as well as a company's dual role as a customer of outputs and supplier of inputs.

The model covers roughly 450 sectors in 47 countries or regions, providing some 20,000 country-sector combinations and giving rise to the 'average company'. The bucket with the lowest specific impacts scores 100, while the highest scores 1. The ESG scores are calculated by mapping the specific impacts (E, S, G and E+S+G) within the 100 buckets. A company receives four scores: for E, S, G and ESG combined.



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