

SUSTAINABLE INVESTOR 2021 FACTSHEET

www.fdc.lu

1 2021 IN NUMBERS

Sustainability at financial assets level

Carbon footprint

FDC's equities and corporate fixed income portfolio¹ showed a weighted average carbon intensity of

255 t CO₂
per M€ revenue



intensity **6% lower** than the benchmark² intensity in **decrease of 13%** compared to 2019



FDC's sovereign portfolio showed a weighted average carbon intensity of

505 t CO₂ per M€ GDP



intensity in **decrease of 12.7%** compared to 2019 intensity in line with the benchmark³



Investment universe





excluded for investment and more than

180 compagnies under observation



SUSTAINABLE INVESTOR 2021
FACTSHEET IN NUMBERS 2021

- Without neither green bonds nor sustainable impact equities.
- ² Weighted composite benchmark being 75% equity composite benchmark and 25% S&P Global Developed Aggregate Ex-Collateralised Index. Equity composite benchmark being 76% MSCI World Total Return Index, 14% MSCI Emerging Markets Total Return Index and 10% MSCI Small Cap World Total.
- 3 Weighted composite benchmark being 88% S&P Global Developed Sovereign Bond Index and 12% S&P Global Emerging Sovereign Inflation-Linked Bond Index.

Asset management and managers





















scores in excess of **respectively 9%** and **12%** compared to the benchmark⁵





dedicated to investments in equities of listed companies aiming to generate **a social or environmental impact** next to a financial return

GRESB Real Estate Standing Investments Benchmark as of September 2021.

Sustainability at direct investments level

Timber

during 2021, FDC owned almost

700 HA

of PEFC certified forest
absorbing annually

9,000 t CO,6
See P.15

Real estate



as second largest shareholder of the SNHBM, FDC contributed to

the launch of 293 affordable

housing units

300 affordable housing units

1,000 units are still in progress⁷

33,000 M² lettable space labelled "BREEAM Excellent"

... additional **56,000 M²** in progress of certification See P.14





all administrative buildings owned and managed directly by FDC supplied with

100% renewable energy



were made available to housing aid beneficiaries via a **lease agreement** with the Fonds du Logement

SUSTAINABLE INVESTOR FACTSHEET 2021

1. 2021 IN NUMBERS In order to determine the exact value of negative emissions (negative emissions permanently remove CO₂ already emitted into the atmosphere) of FDC's forest estate, further research (types of trees, distribution of the different types of trees, age of trees, etc.) would be required. However, considering the rule of thumb that one hectare of forest, all age groups combined, stores about 13 tons of CO₂ per year, FDC's forest estate should absorb about 9,000 tons of CO₂ on an annual basis. Please also refer to https://www.wald.de/wie-viel-kohlendioxid-co2-speichert-der-wald-bzw-ein-baum/.

⁷ Source: SNHBM Rapport Annuel 2021.

2 KEY INFORMATION AND CONSIDERATIONS

What is FDC's legal mission?

FDC's legal mission is to prudentially manage the reserve of the general pension scheme and to earn an effective return while diversifying risks. When defining FDC's investment strategy, particular attention is paid to the above mentioned criteria.

Since 2007, FDC invests a major part of the reserve in the financial markets through a SICAV. Asset management within the SICAV is entirely entrusted to external asset managers. The off-SICAV balance is managed internally by FDC and is composed of shares of the SNHBM, a direct real estate portfolio of about 120,000 m² lettable space, forest holdings of almost 700 hectares, a loan portfolio, cash as well as the balance between receivables and payables essentially representing contributions not yet available for investment.

At year end, 24.6 billion euros were invested in the SICAV and 1.5 billion euros were directly managed by FDC.

Why has FDC decided to formalise a sustainable investor policy?

FDC invests long-term and at a global level and therefore favours a healthy and sustainable economy. As an institutional asset manager, FDC is aware of its ecological, social and good governance responsibilities. When applying FDC's legal mission to sustainable investments, return on such investments must be in line with the market. In terms of risk management, sustainable criteria and aspects need to be taken into consideration if sustainability risks are relevant investment risks. Thus, FDC is conscious of the importance of taking into account sustainable criteria and aspects into the investment process. The latter are analysed in strategic discussions, the selection process of asset managers as well as their monitoring. Accordingly, FDC's responsible investor policy has been designed to comply with its legal requirements while at the same time ensuring that the expected risk-adjusted return remains in line with market returns.

The exclusion of companies or entire activity sectors on the basis of choices not dictated by financial management criteria and recognised by the profession, but instead inspired by specific thematic considerations, cannot be taken into consideration by FDC under current legislation.

"As an institutional asset manager, FDC is aware of its ecological, social and good governance responsibilities."

"FDC's asset managers are specialised to assess and evaluate financial and extrafinancial risks deemed relevant. including climate risks. In this way, environmental, social and good corporate governance aspects and criteria are incorporated into the portfolio construction process."

What does "sustainable approach" mean?

In 2010, FDC decided to pay more attention to sustainable aspects and criteria taken into account and implemented by tendering asset managers in their investment strategies and decision-making processes. Since 2017, the integration of a sustainable approach by a tendering asset manager into an active investment strategy is mandatory. The type, scope and impact of such an approach on the investment strategy proposed are not predefined by FDC and can therefore take different forms. This approach allows an asset manager to tender with the strategy they deem most appropriate in relation to the tendered mandate and FDC's needs while remaining in compliance with the investment restrictions and guidelines imposed by FDC. The sustainable approach is evaluated according to a predefined evaluation criteria with significant weighting.

The sustainable approach pursued by an asset manager is an integral component of their investment strategy and process executed on behalf of FDC, particularly in terms of financial and risk analysis. Indeed, FDC's asset managers are specialised to assess and evaluate financial and extra-financial risks deemed relevant, including climate risks. In this way, environmental, social and good corporate governance aspects and criteria are incorporated into the portfolio construction process.

Often sustainable approaches include engagement policies and proprietary exclusion lists. Engagement is a variant of active ownership and aims to have a sustainable impact on companies. In practice, various topics are discussed with the management of the companies, such as climate change, corporate governance, requirements regarding sustainability reports, working conditions as well as compliance with

human rights. Proprietary exclusions are for instance based on low ESG ratings as well as normative or product-specific exclusions such as tobacco, gambling, nuclear power, shale drilling, fur and leather, thermal coal, oil sands or adult entertainment. The sustainable approaches of FDC's asset managers can be viewed on FDC's website.

Although the specifically implemented sustainable approaches may vary, FDC endeavours to implement overarching criteria such as the LuxFLAG label eligibility criteria as well as the article 8 or 9 classification criteria of the SFDR regulation.

What does LuxFLAG mean?

LuxFLAG is an independent and international non-profit association created in Luxembourg in July 2006 aiming to promote the raising of capital for sustainable investments by awarding a recognisable, independent and transparent label to eligible investment vehicles. LuxFLAG awards a label in the areas of microfinance, environment, ESG, climate finance, green bonds and sustainable insurance products in order to reassure that assets are invested following responsible criteria.

What does the SFDR regulation mean?

The Sustainable Finance Disclosure Regulation (SFDR) imposes mandatory ESG disclosure obligations for asset managers and other financial markets participants. According to the SFDR classification system, a fund will either be classified as an article 6, 8 or 9 fund depending on their characteristics and level of sustainability:

- Article 6: funds without a sustainability scope.
- Article 8: funds that promote environmental and/or social characteristics as well as good governance practices.
- Article 9: funds that have sustainable investment as their objective.

In essence, article 6 requires to disclose the integration of sustainability risks in a fund, regardless of whether the fund is promoted as ESG or not. Article 8 applies to funds promoting environmental and social objectives, having good governance practices and which take more into account than just sustainability risks as required by article 6. Compared to article 8 funds, article 9 funds should make a positive impact on society or the environment through sustainable investment and have a clear non-financial objective. It is foreseen that in 2023, FDC's active investment strategies with mandatory sustainable approach will all be article 8 or 9 compliant.

How does FDC exclude companies? What areas are covered? What does it mean if a company is under observation?

FDC proceeds to a normative exclusion of companies that do not comply with international standards as enshrined in the 10 principles of the United Nations Global Compact covering human rights, the environment, international labour standards and the fight against corruption. Their complementary standards are the United Nations Guiding Principles on Business and Human Rights as well as the OECD Guidelines for Multinational Enterprises and their underlying conventions and treaties⁸. Equally excluded are companies involved in activities related to controversial weapons, including anti-personnel mines, cluster bombs, nuclear weapons, depleted uranium weapons, white phosphorous weapons as well as chemical and biological weapons.

The exclusion list is periodically reviewed and updated on the basis of a systematic process in collaboration with Sustainalytics, a specialised, recognised and independent external service provider.

In addition to the excluded companies, various companies are under observation. This status is in principle granted to companies for which investigations are not yet completed or for which engagement by FDC's service provider is still ongoing in order to put an end to the litigious facts. Depending on the progress of these investigations, these companies can be classified as either compliant or non-compliant. In this way, FDC supports an engagement process with the aim to change the policy and governance mode of the companies in question.



"At year end, FDC's asset managers were all signatories of the UNPRIs".

What are the UNPRIs?

The United Nations Principles for Responsible Investment (UNPRI) is an international organisation that works to promote the incorporation of environmental, social, and corporate governance factors (ESG) into investment practice and decision-making. The UNPRI put forward six core principles, to which signatory companies must agree to commit themselves. As expressed on the organisation's website, these six principles are as follows:

- Principle 1: We will incorporate ESG issues into investment analysis and decision-making processes.
- Principle 2: We will be active owners and incorporate ESG issues into our ownership policies and practices.
- Principle 3: We will seek appropriate disclosure on ESG issues by the entities in which we invest.
- Principle 4: We will promote acceptance and implementation of the Principles within the investment industry.
- Principle 5: We will work together to enhance our effectiveness in implementing the Principles.
- Principle 6: We will each report on our activities and progress towards implementing the Principles.

How does FDC assess sustainability within its real estate funds?

FDC reports on the Global Real Estate Sustainability Benchmark (GRESB) score. GRESB is an organisation that assesses and benchmarks the ESG performance of real assets and has become the leading ESG benchmark for real estate across the world. GRESB is aligned with other international reporting frameworks including the Task Force on Climate-related Financial Disclosures (TCFD) recommendations, the Paris Climate Agreement and the United Nations Sustainability Development Goals. In 2021, 1,520 property actors participated in the GRESB Real Estate Assessment generating a benchmark that covers 5.7 trillion dollars of assets under management. The data combines high-level overall scores with in-depth information across hundreds of ESG data points, including performance indicators such as greenhouse gas emissions as well as waste, energy and water consumption.

How does FDC calculate carbon footprints?

FDC mandated Trucost to carry out an analysis of its equity and fixed income portfolios. As a leader in carbon and environmental data and risk analysis, Trucost assesses risks relating to climate change, natural resource constraints and broader environmental, social, and governance factors. Specific carbon audits offer a systematic assessment of the carbon risks and opportunities within a portfolio at a given point in time.

Carbon footprint of FDC's aggregated equity and fixed income portfolios

At the end of 2021, FDC's aggregated equity and fixed income portfolio amounted to 14.744 billion euros of which almost 100% were covered by Trucost's analysis. Green bonds and sustainable impact equites have been excluded from the analysis.

The first step of beginning an audit is to decide on the scope of the analysis. While limiting a carbon audit to Scope 1 emissions would avoid the risk of double-counting and thus also an unjustified swelling of carbon balances, FDC decided notwithstanding to report on direct emissions which englobe Scope 1 emissions, direct emissions from four additional sources, Scope 2 emissions as well as direct upstream Scope 3 emissions. The aim is to give a more complete picture as emissions throughout the entire supply chain are considered. The Task Force on Climate-related Financial Disclosures (TCFD) recommends metrics based on Scope 1 and Scope 2 emissions only.

Portfolios with larger assets under management will typically also have larger absolute carbon footprints than smaller portfolios due to their size. In order to facilitate fair comparison, it is therefore important to normalise the totals. The three most common approaches to normalisation are:

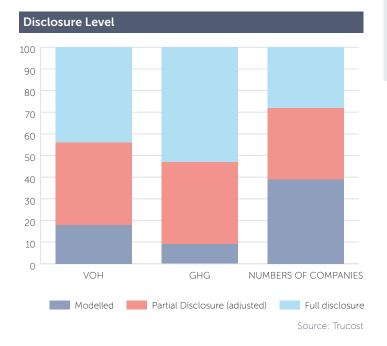
- Carbon to Revenue (C/R)
- Carbon to Value Invested (C/V)
- Weighted Average Carbon Intensity (WACI)

FDC reports following the WACI approach as the TCFD clearly recommends that asset owners should report on this metric.¹⁰

With regard to carbon data, Trucost allocates to FDC's portfolios a proportion of a company's total emissions by using a specific apportioning factor.

In order to provide an overview of the transparency of the data

at company level, the following graph shows **the disclosure level of Scope 1 emissions** only based on value of holdings (VOH), apportioned greenhouse gas emissions (GHG) and number of companies. Roughly 45% to 75% of the data still needs to be adjusted or modelled.



"Roughly 45% to 75% of the data still needs to be adjusted or modelled."

Please refer to the Appendix for more information on apportioning, normalisation, emission categories and disclosure rates.

Carbon footprint of FDC's aggregated sovereign portfolios

At the end of 2021, FDC's aggregated sovereign portfolio amounted to 7.276 billion euros of which almost 95% were covered by Trucost's analysis. Green bonds have been excluded from the analysis.

Trucost's analysis aims to consider the emissions of a country's entire economy. In order to provide a most accurate picture of the contributions to climate change, the impacts related to production and consumption behaviour have been taken into account for each country. The perimeters used therefore include domestic emissions, imported emissions as well as exported emissions. Again, three metrics can be used:

- Carbon to Output (C/O)
- Carbon to Value (C/V)
- Weighted Average Carbon Intensity (WACI)

The proportion of emissions apportioned to FDC's sovereign portfolio is based on the level of financing of a country's government. Similar to FDC's aggregated equity and fixed income portfolios, the sovereign carbon footprint is reported according to the WACI metric.

Please refer to the Appendix for more information on apportioning, metrics and emission categories.

Why does FDC exclude green bonds and sustainable impact equities from the carbon footprint audit?

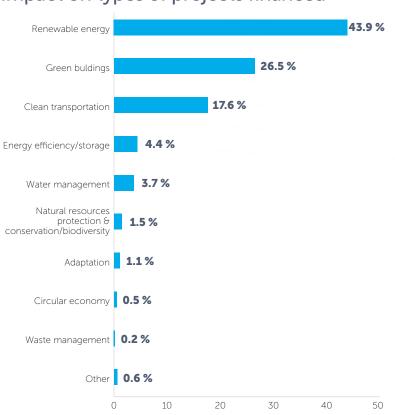
Although Trucost is applying recognised market standards, some constraints and limits remain within carbon audits. Next to concerns such as double counting, lack of data or poor data quality, another matter is that apportioned emissions and avoided and/or negative emissions are not aggregated.¹¹ For example, a green bond issuer might have a rather substantial carbon footprint while at the same time financing green projects that will considerably reduce the global carbon footprint. As a carbon audit is solely based on issuer carbon data, only the negative impact will be taken into consideration.

This also affects companies of FDC's sustainable impact equities portfolio. While offering products that contribute favourably to the reduction of the global carbon footprint, given products might necessitate a rather carbon intensive production.

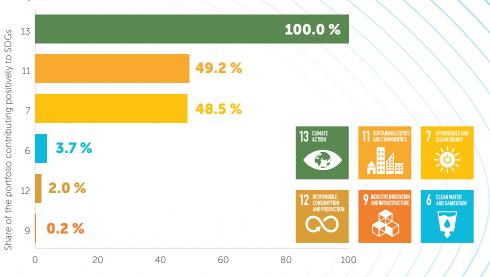
FDC considers that the objective of investments in green bonds and sustainable impact equities is to generate a positive impact and notably to report on these. In this context and due to their biasing effect, such investments are excluded from the carbon audit.

What was the impact of FDC's dedicated green bond portfolio in 2021?

Impact on types of projects financed¹²



Impact on SDGs¹³





¹² Source: AGI. Types of projects are based on data disclosed by the issuer (data as of 31/12/2021 for 60.5% of the total portfolio representing 230 M€)

¹³ Source: AGI. Data based on an internal grid of matching between type of projects and corresponding SDGs. One type of project can respond to several SDGs (data as of 31/12/2021 for 60.5% of the portfolio representing 230 M€).

¹⁴ Source: AGI. Data is calculated for green bonds included in the portfolio during the year 2021 with available reporting or impact expectations disclosed by the issuer (60.1% of the portfolio's holdings during the year). Bonds without any available reporting or impact expectation disclosure from the issuer are not included. Impact figures are approximates and do not necessarily reflect the exact impact of the portfolio.

56,820 tons of CO₂ avoided: what does it mean?¹⁵





7,157Home's energy use for one year



131,550Barrels of oil consumed



CO, emissions from

752Tanker trucks' worth of gasoline



6,944,735,163Smartphones charged



0.015Coal-fired power plants in one year

Greenhouse gas emissions avoided by



19,661
Tons of waste recycled instead of landfilled



2,153,536Incandescent lamps switched to LEDs

Greenhouse gas emissions from



12,243Gasoline powered passenger vehicles driven for one year

Carbon sequestered by



939,524Tree seedlings grown for 10 years

What was the impact of FDC's dedicated sustainable impact equity portfolio in 2021?

Environmental impact¹⁶

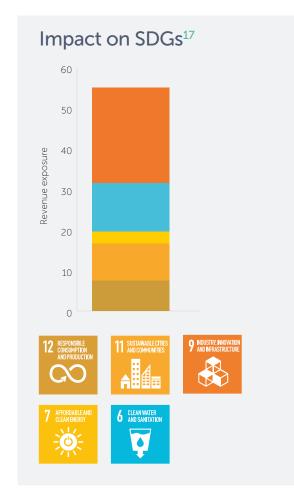
Net CO, impact (Emitted - avoided) (tCO₂) -5,700



3,960 cars off the road

The Net CO, impact number is derived from 88,100 CO, emitted minus 93,800 CO, avoided.

Water provided / saved / treated	8,000 megalitres	51,360 households' water consumption
Renewable energy generated	10,580 MWh	2,940 households' electricity consumption
Materials recovered / waste treated	28,700 tonnes	30,480 households' waste output



2021

¹⁶ Source: Impax Asset Management. Portfolio representing 450 M€ at year end.

¹⁷ Source: Impax Asset Management. Impax has mapped the portfolio to show how companies' activities align with the goals based on environmental market revenue exposure.

What are the SDGs?

Adopted by the General Assembly of the United Nations in 2015, the 17 Sustainable Development Goals (SDGs) are the layout to achieve a better and more sustainable world for all by 2030. These goals are a call for action to address a series of global challenges such as poverty, inequality, climate, environmental degradation and justice. The 17 SDGs are shown below.



































What does SNHBM mean?

The Société Nationale des Habitations à Bon Marché (SNHBM) is a social property developer specialised in constructing single-family homes and apartment buildings via the acquisition of construction land which is rented via a long-term lease. **The SNHBM aims to provide affordable housing of excellent quality**. SNHBM's selection criteria are for example based on income thresholds and state construction subsidy eligibility.

What does Fonds du Logement mean?

The autonomous public entity Fonds du Logement objective is to contribute to housing development through the construction of housing accessible to all households according to their needs and means.

What does the BREEAM label mean?

The BREEAM label is the most widely used method for assessing and improving the environmental performance of buildings. Indeed, it evaluates the performance of buildings on management system, energy, health, well-being, pollution, transport, land use, biodiversity, materials and water. Points are awarded on each of these aspects according to the performance achieved. A weighting system allows these scores to be aggregated and an overall score awarded in the form of a label.

What does the PEFC label mean?

The PEFC label is a forest certification guaranteeing sustainable forest management that is environmentally friendly, socially beneficial and economically viable.

How often will the sustainable investor factsheet be published? Why does the factsheet not include a full Paris Agreement alignment analysis?

Following a first detailed climate and Paris alignment analysis published in 2019, the FDC decided to proceed with such an analysis every three years and for the next time in 2024 based on data as of 31 December 2023. A sustainable investor factsheet will be published on an annual basis going forward.

2021

APPENDIX¹⁸

APPORTIONING

Apportioning, as an approach, began with the principle of ownership. That is, if an investor owns 1% of a company, then they also "own" 1% of the company's emissions. This concept has since been extended to cover all sources of financing, whether equity, bonds or loans in order to calculate an investor or lender's share of "financed emissions".

Trucost selects apportioning denominators in line with the recommendations of the Partnership for Carbon Accounting Financials (PCAF). For listed companies Enterprise Value including Cash (EVIC) is in general used. The company level emissions are then multiplied by the apportioning factor to arrive at emissions quantities specific to each holding. The portfolio level emissions are the sum of all of these quantities.

The proportion of emissions apportioned to FDC's sovereign portfolio is based on the level of financing of a country's government. That can be calculated using the value invested in each bond and the corresponding country's gross general debt. Once this ratio is calculated, it can be multiplied by a country's emissions to derive the apportioned emissions:

Sovereign Bond Investment x Country Emissions (tCO₂) Gross General Debt

CARBON FOOTPRINT METRICS

Carbon metrics for equities and corporate bonds portfolios

The Weighted Average Carbon Intensity (WACI) per million euros of revenues generated is calculated by summing the product of each company's weight in the portfolio with the company level carbon revenue intensity:

Carbon intensity =
$$\sum_{i}^{n} \left[\frac{\text{emissions company}_{i}}{\text{revenues company}_{i}} \times \text{weight}_{i} \right]$$

- **n** = number of companies in the portfolio
- i = specific company "i" in the portfolio

The WACI method provides an indication of an investor's exposure to carbon-intensive companies.

Carbon metrics for sovereign portfolios

The Weighted Average Carbon Intensity (WACI) method describes the portfolio exposure to specific countries' carbon intensities on portfolio weight basis. Portfolio weight is determined by value invested, which means

18 Source: Trucost.

the portfolio's overall carbon intensity is determined by individual country-level carbon intensities depending on how much is invested in the bonds of each country. This metric is calculated by performing a weighted-average of the portfolio weight of each bond and the territorial carbon intensity of the bond's mapped country:

$$\sum_{i}^{n} W_{i} \times \left[\frac{\text{Country Emissions (tCO}_{2})_{c}}{\text{Real GDP (constant } \in \text{mn)}_{c}} \right]$$

- **n** = number of bonds in the portfolio
- i = specific bond "i" in the portfolio
- **c** = specific issuer country "c" of bond "i"
- w = portfolio weight (%) of sovereign bond "i"

EMISSION SCOPES

Scopes for equities and corporate bonds portfolios

The right scope of emissions to include in footprint calculations is dependent on the breadth of view that the analyst wishes to take. Restricting the scope to direct operational emissions only (Scope 1) removes the risk of double counting carbon, but also limits the level of insight provided as much of what can be considered exposure to 'carbon risks' may exist in the supply chain of investees. Trucost

recommends widening the scope of analysis to uncover more of these potential risks. The full list of scopes available is shown below:

- Direct (Scope 1) = CO₂ emissions based on the Kyoto Protocol greenhouse gases generated by direct company operations.
- Direct (Other) = Additional direct emissions, including those from CCl4, C2H3Cl3, CBrF3, and CO₂ from Biomass.
- Purchased Electricity (Scope 2) = CO₂ emissions generated by purchased electricity, heat or steam.
- Non-Electricity First Tier Supply Chain (Scope 3) =
 CO₂e emissions generated by companies providing
 goods and services in the first tier of the supply chain.
- Other Supply Chain (Scope 3) = CO₂ emissions generated by companies providing goods and services in the second to final tier of the supply chain.
- Downstream (Scope 3) = CO₂ emissions generated by the distribution, processing and use of the goods and services provided by a company.

Scopes for sovereign portfolios

The full list of scopes is shown below:

- Domestic emissions = emissions embodied in all goods and services produced and consumed within a given territory.
- Direct imports = emissions embodied in goods and services directly imported by a country.
- Indirect imports = emissions embodied in goods and services indirectly imported by a country, meaning they originated in another country than the one from where the goods and services are imported.
- Direct exports = emissions embodied in goods and services produced in a country and exported to a foreign economy.

DISCLOSURE LEVELS

All data collected as part of the process described above is assigned a "disclosure flag", indicating the source of each specific data point. These flags will fall into one of three possible "disclosure categories" as described below.

- Full disclosure = data disclosed by a company is used in an unedited form as it matches the reporting scope and accuracy required by the research process.
- Partial disclosure = data disclosed by a company is used but has been adjusted to match the reporting scope required by the research process (e.g. where a company discloses its emissions deriving from 85% of its operational sites, this data is used to model 100% of its emissions). Values may also be derived from a previous year's disclosed data using changes in business activities and consolidated revenues.
- Modelled = absence of usable disclosures. In that case, data has been modelled using Trucost's internal model.

