



**FONDS DE
COMPENSATION**

SUSTAINABLE INVESTOR
FACTSHEET **2024**

www.fdc.lu

1. 2024 IN NUMBERS

Sustainability at financial assets level

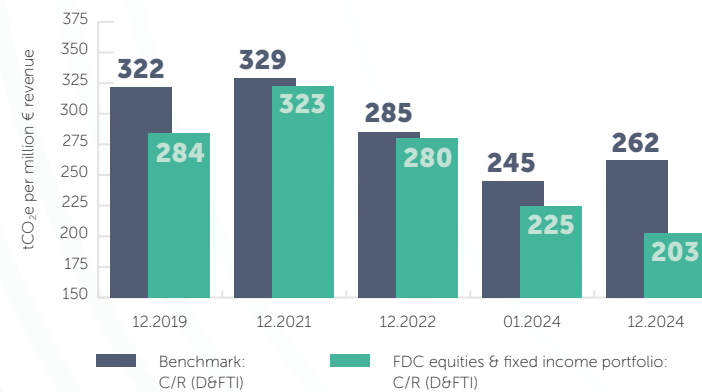
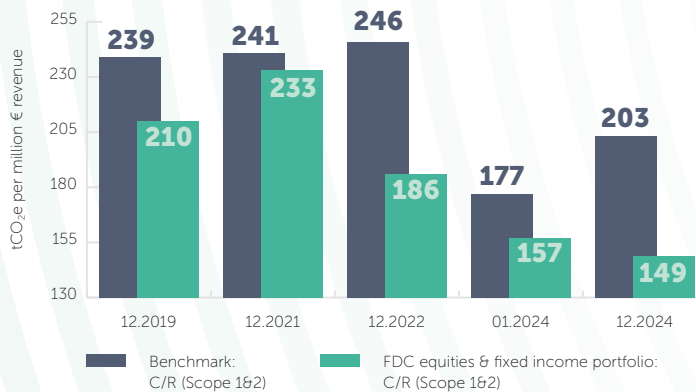
Carbon to Revenue footprint: equities and fixed income portfolio¹



Carbon footprint
in decrease of respectively
-5% and -10%
(Scope 1&2) (D&FTI)
compared to the previous carbon audit



Carbon footprint respectively
-27% and -23%
(Scope 1&2) (D&FTI)
lower than the benchmark²



¹ Metrics used: Carbon to Revenue (C/R) per million EUR revenue based on Scope 1&2 emissions as well as Direct and First Tier Indirect (D&FTI) emissions which englobe Scope 1 emissions, direct emissions from four additional sources, Scope 2 emissions as well as upstream Scope 3 emissions. Calculations are presented in tonnes of carbon equivalents (tCO₂e).

² Weighted composite benchmark being 76% equity composite benchmark and 24% bond composite benchmark. Equity composite benchmark being 78% MSCI World Total Return Index, 12% MSCI Emerging Markets Total Return Index and 10% MSCI Small Cap World Total Index. Bond composite benchmark being 67% iBoxx EUR Overall Corporate Index, 20% iBoxx Global Core Overall Index and 13% iBoxx ALBI (corporates only) Index.

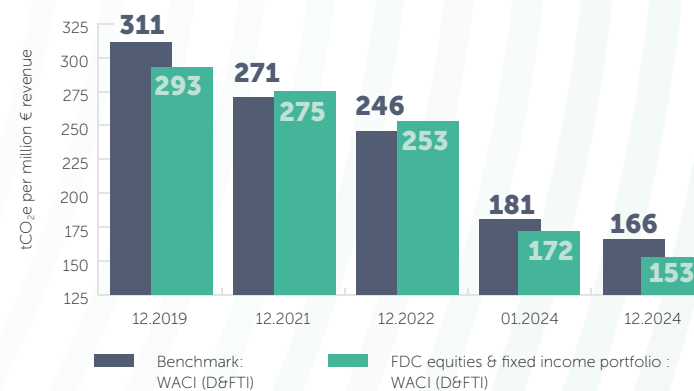
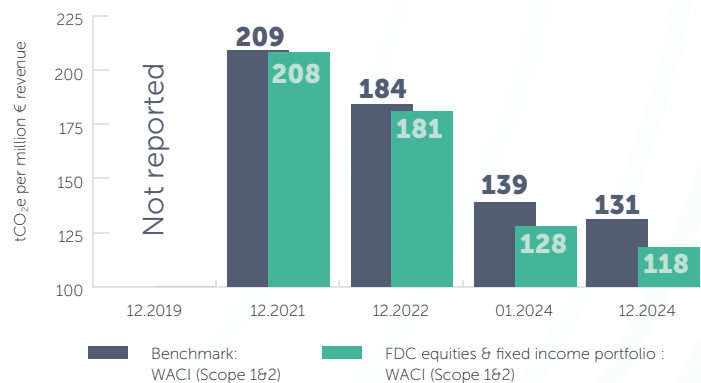
Carbon intensity (WACI): equities and fixed income portfolio³



Carbon intensity
in decrease of respectively
-8% and **-11%**
(Scope 1&2) (D&FTI)
compared to the previous carbon audit



Carbon intensity respectively
-10% and **-8%**
(Scope 1&2) (D&FTI)
lower than the benchmark⁴



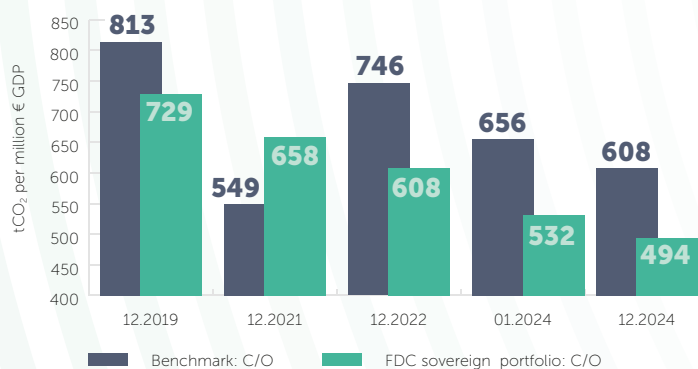
³ Metrics used: Weighted Average Carbon Intensity (WACI) per million EUR revenue based on Scope 1&2 emissions as well as Direct and First Tier Indirect (D&FTI) emissions which englobe Scope 1 emissions, direct emissions from four additional sources, Scope 2 emissions as well as upstream Scope 3 emissions. Calculations are presented in tonnes of carbon equivalents (tCO₂e).

⁴ Weighted composite benchmark being 76% equity composite benchmark and 24% bond composite benchmark. Equity composite benchmark being 78% MSCI World Total Return Index, 12% MSCI Emerging Markets Total Return Index and 10% MSCI Small Cap World Total Index. Bond composite benchmark being 67% iBoxx EUR Overall Corporate Index, 20% iBoxx Global Core Overall Index and 13% iBoxx ALBI (corporates only) Index.

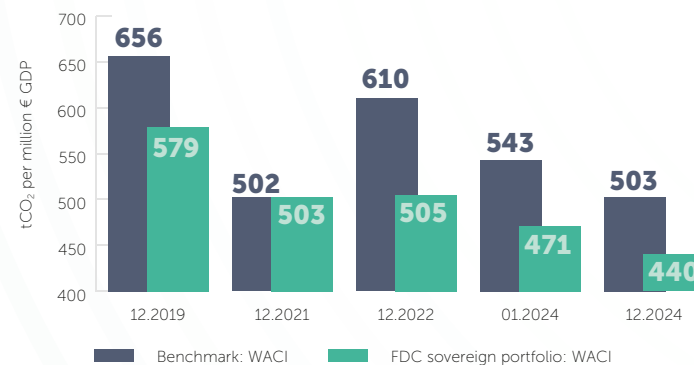
Carbon audit: sovereign portfolio⁵



Carbon footprint
in decrease of respectively
-7% and -6%
(Scope 1&2) (D&FTI)
compared to the previous carbon audit



Carbon intensity respectively
-19% and -13%
(Scope 1&2) (D&FTI)
lower than the benchmark⁶



⁵ Metrics used: Carbon to Output (C/O) for carbon footprint data and Weighted Average Carbon Intensity (WACI) per million EUR Gross Domestic Product (GDP) for carbon intensity data. Emissions include domestic emissions, direct and indirect imports emissions as well as direct exports emissions. Calculations are presented in tonnes of carbon equivalents (tCO₂e).

⁶ Weighted composite benchmark being 48% iBoxx EUR Overall Sovereign Index, 28% iBoxx Global Core Overall Sovereign Index, 18% iBoxx ALBI Sovereign Index and 6% iBoxx USD Emerging Markets Sovereign Index.

Responsible investment

All financial assets screened

to be compliant with international

standards covering human rights, environment, labour standards as well as fight against corruption and/or linked to controversial weapons...



... resulting in more than

120 companies

excluded for investment and nearly

140 companies under observation⁷



470 M€

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



All financial assets

managed by UNPRI signatories



1.2 BN€

dedicated to investments

managed passively in accordance with the Paris Agreement objective to limit global warming to well below 2°C, ideally 1.5°C



1.6 BN€

invested in green bonds having avoided **467,932 tonnes of CO₂ equivalents** in 2024⁹



15 sub-funds representing

12.4 BN€

labelled ESG or Environment by LuxFLAG



All actively managed listed

financial assets

managed according to sustainable approaches focusing on ESG integration, carbon criteria and targets as well as decarbonisation



17 sub-funds representing

13.6 BN€

categorised SFDR Article 8 or 9

930 M€

invested in real estate funds having achieved 2024 GRESB scores of



sustainability scores in excess of respectively 7% and 9% compared to the broader market⁸

⁷ As of February 2025. Listed companies only.

⁸ Source: 2024 GRESB Real Estate Benchmark (<https://www.gresb.com/nl-en/2024-real-estate-assessment-results/>). Given benchmark globally covered USD 7 trillion in gross asset value in 80 markets with an average score of 75.84 for standing investments.

⁹ Source: S&P Global Sustainable1. Green bonds as classified by S&P Global Sustainable1. Based on disclosed data using calculated data only in the absence of disclosures. For more information on avoided emissions, please refer to the Appendix.

Sustainability at direct investments level

Timber

FDC owns almost

700 HA
of PEFC certified forest
absorbing annually
7,500 tonnes of CO₂
and partially declared
natural reserve¹⁰



¹⁰ 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, the Luxembourgish Nature and Forest Agency assumes an average of 10.6 tonnes of CO₂ per year that a hectare of forest can store (https://environnement.public.lu/fr/publications/conserv_nature/2022/faltblatt-klimareduktion.html). FDC's forest estate should thus absorb nearly 7,500 tonnes of CO₂ on an annual basis.

¹¹ Source: SNHBM Rapport Annuel 2024.

Real estate

As second largest shareholder of the SNHBM, **FDC contributed to the launch of**

301
affordable
housing units



the realisation of
250
affordable
housing units

Nearly
1,100
units are in
progress¹¹

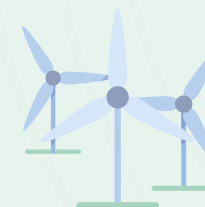
23
low cost units



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



33,000 M²
lettable space sustainably
labelled BREEAM Excellent



all administrative buildings
owned and managed directly
by FDC supplied with

100%
renewable energy



FDC's sustainable investor policy: recent developments and work in progress

Additional bond investments of

500 M€

managed passively **in accordance with the Paris Agreement** objective realised in January 2024



Implementation of an engagement policy

towards the largest corporate greenhouse gas emitters through a **membership of IIGCC¹²** and by **being signatory to Climate Action 100+** since 2024



Increase of

SFDR Article 8 classifications



Real estate projects in FDC's pipeline foreseeing **affordable housing units** representing some

93,000 m²

of gross floor area



Since February 2024,

exclusion of companies deemed

that have a **continued observation status** with **no concrete prospects for improvement**



Additional

52,000 m²

lettable space **to be labelled BREEAM Excellent**



Publication of

FDC's second Sustainable Investor Report

in January 2025



Sub-fund in relation to sustainable

infrastructure investments with focus on **clean energy** for a target volume of

500 M€ implemented

in April 2025

¹² Institutional Investors Group on Climate Change.

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, 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, 27.12 billion euros were invested in the SICAV and 2.26 billion euros were directly managed by FDC.

What is the general pension scheme and its reserve?

The basis of the Luxembourg pension system is the general pension insurance scheme covering the private sector. The general scheme is based on a pay-as-you-go system meaning that pension contributions paid by the working population are used to finance pension benefits paid to pensioners. Thus, **paid contributions within the pension scheme are above all used for paying out pension benefits and not intended to specifically finance certain investments.**

Only the surplus, after deduction of the liquidity needs of the pension scheme, is transferred to FDC, the latter investing given liquidities since 2007 into its SICAV while respecting the principle of broad diversification in terms of asset classes, sectors, regions as well as risk. It should be noted that over the last years and in the context of FDC's responsible investor policy, **new liquidities have predominantly been allocated to sustainable investments.**

FDC is conscious of the importance of taking into account sustainable criteria and aspects into the investment process.

Why has FDC decided to formalise a sustainable investor policy?

FDC invests long-term and globally 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 the principles of 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 provided that 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, in the selection process of asset managers as well as in 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.**

FDC is not empowered to accept, beyond the restrictions imposed by legal provisions, the exclusion of companies or entire sectors on the basis of choices not dictated by financial management criteria recognised by the profession, but instead inspired by specific thematic considerations, and to take a position on issues that are the subject of philosophical, religious, political, climatological or societal controversies. If such exclusions were to be taken into account, a modification of the current legal framework applicable to FDC will have to be considered.

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 offered investment strategies and decision-making processes. **Since 2017, the integration of a sustainable approach into an active investment strategy offered by a tendering asset manager 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 it deems 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 professionally set up and 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 of asset managers focus on ESG integration in a binding manner and include carbon criteria and targets, decarbonisation objectives, wide-ranging engagement policies as well as 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

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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, fracking, fossil fuels, palm oil, thermal coal, oil & tar sands or adult entertainment.

Although the 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 and green bonds in order to reassure that assets are invested following responsible criteria.

FDC's LuxFLAG labels can be accessed via following link: <https://fdc.public.lu/en/investissement-responsable/certifications-fdc.html>

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 or social characteristics.
- **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 if 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.

Although FDC's SICAV is not subject to given regulation, FDC has decided to voluntarily comply with the SFDR regulation in the interests of transparency.

FDC's sustainability disclosures can be accessed via following link: <https://fdc.public.lu/en/investissement-responsable/approches-durables-gerants-fdc.html>

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 ten principles of the United Nations Global Compact** covering human rights, the environment, international labour standards and the fight against corruption, its complementary standards being the United Nations Guiding Principles on Business and Human Rights as well as the OECD Guidelines for Multinational Enterprises as well as their underlying conventions and treaties.¹³ Also 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. Since 2024, companies deemed to have a status of being under observation for an extended period with no concrete prospects of improvement are also excluded by the FDC.

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 may be later 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.**

What are the UNPRIs?

The United Nations Principles for Responsible Investment (PRI) is an international organisation that works to **promote the incorporation of ESG into investment practice and decision-making**. The PRI 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.

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

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

¹³ As of 2024, related international conventions and instruments englobed 52 United Nations instruments, 25 International Labour Organisation (ILO) instruments as well as 23 other instruments.

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 TCFD recommendations, the Paris Climate Agreement and the United Nations Sustainability Development Goals. In 2024, 2,223 property actors participated in the GRESB Real Estate Assessment generating a benchmark that covers 7 trillion dollars of gross asset value. The data combines high-level overall scores with in-depth information across hundreds of ESG data points, including performance indicators such as GHG emissions as well as waste, energy and water consumption.

How does FDC calculate carbon footprints?

FDC mandated S&P Global Sustainable1 (formerly Trucost) to carry out an analysis of its equity, fixed income and sovereign portfolios. As a leader in carbon and environmental data and risk analysis, S&P Global Sustainable1 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 portfolio

At year end, given portfolio amounted to 17,075 billion euros of which 99% were covered by S&P Global Sustainable1's 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 Scope 1 and Scope 2 emissions as well as Direct and First Tier Indirect (D&FTI) emissions which englobe Scope 1 emissions, direct emissions from four additional sources¹⁴, Scope 2 emissions as well as 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.¹⁵

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)

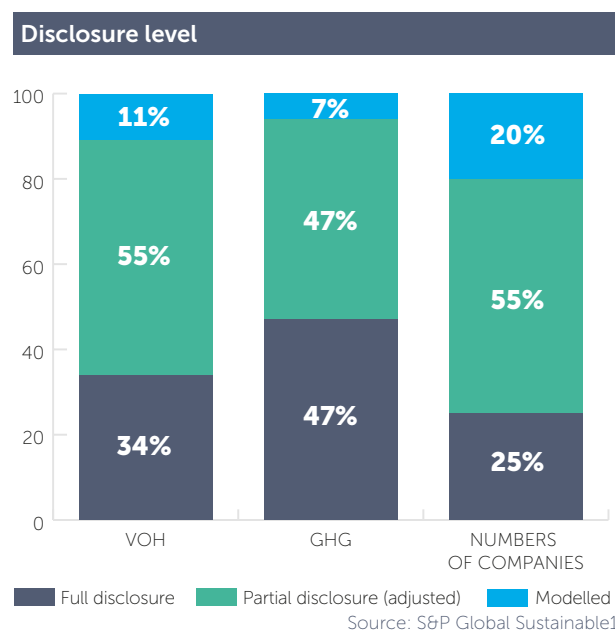
FDC reports following the C/R approach as well as the WACI approach whilst the TCFD recommends that asset owners should focus on the WACI metric.¹⁶

¹⁴ Emissions of carbon tetrachloride (CCl₄), 1,1,2-trichloroethane (C₂H₃Cl₃), bromotrifluoromethane (CBrF₃) as well as CO₂ emissions from biomass.

¹⁵ TCFD, Implementing the Recommendations of the Task Force on Climate-related Financial Disclosures, October 21, page 52.

With regard to carbon data, S&P Global Sustainable1 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 rate based on value of holdings (VOH), apportioned greenhouse gas emissions (GHG Scope 1 emissions only) and number of companies. Roughly 55% to 75% of the data still needs to be adjusted or modelled by S&P Global Sustainable1.



Please refer to the Appendix for more information on metrics calculation, normalisation, emission categories, data collection and disclosure rates.

Carbon footprint of FDC's aggregated sovereign portfolio

At year end, given portfolio amounted to 7.826 billion euros of which almost 90% were covered by S&P Global Sustainable1's analysis.

S&P Global Sustainable1'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 C/O and WACI metric.

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

Although S&P Global Sustainable1 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 avoided and negative emissions as well as other environmental benefits stemming from companies' operations are not incorporated.**¹⁷ For example, a green bond issuer might have a rather substantial carbon footprint while at the same time financing green projects

"Roughly 55% to 70% of the data still needs to be adjusted or modelled."

¹⁶ TCFD, Implementing the Recommendations of the Task Force on Climate-related Financial Disclosures, October 21, page 42.

¹⁷ Emissions can be avoided by financing environmentally friendly projects, such as the production of renewable electricity, heat or energy or buildings with zero net carbon emissions. Negative emissions permanently remove CO₂ already emitted into the atmosphere.

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.

Benchmarks used and relative performance assessment

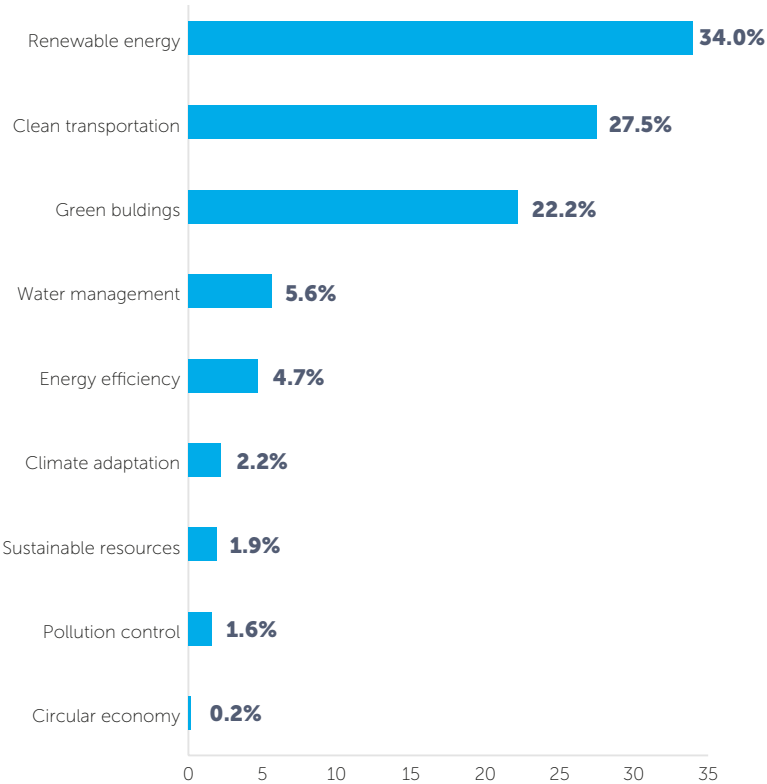
In an ideal scenario, S&P Global Sustainable1's carbon audit would also cover FDC's benchmarks being representatives of the global markets in which FDC can invest. However, due to licence constraints, S&P Global Sustainable1 **can cover FDC's equities benchmarks only**. During the data collection phase, FDC and S&P Global Sustainable1 thus agree on alternative benchmarks to be used for the fixed income and sovereign portfolios while trying to ensure maximum representativeness with regard to FDC's benchmarks.

In this context, used fixed income and sovereign benchmarks might differ between FDC's carbon audits, which should be kept in mind when assessing year-on-year benchmark carbon performance as well as relative carbon performance.

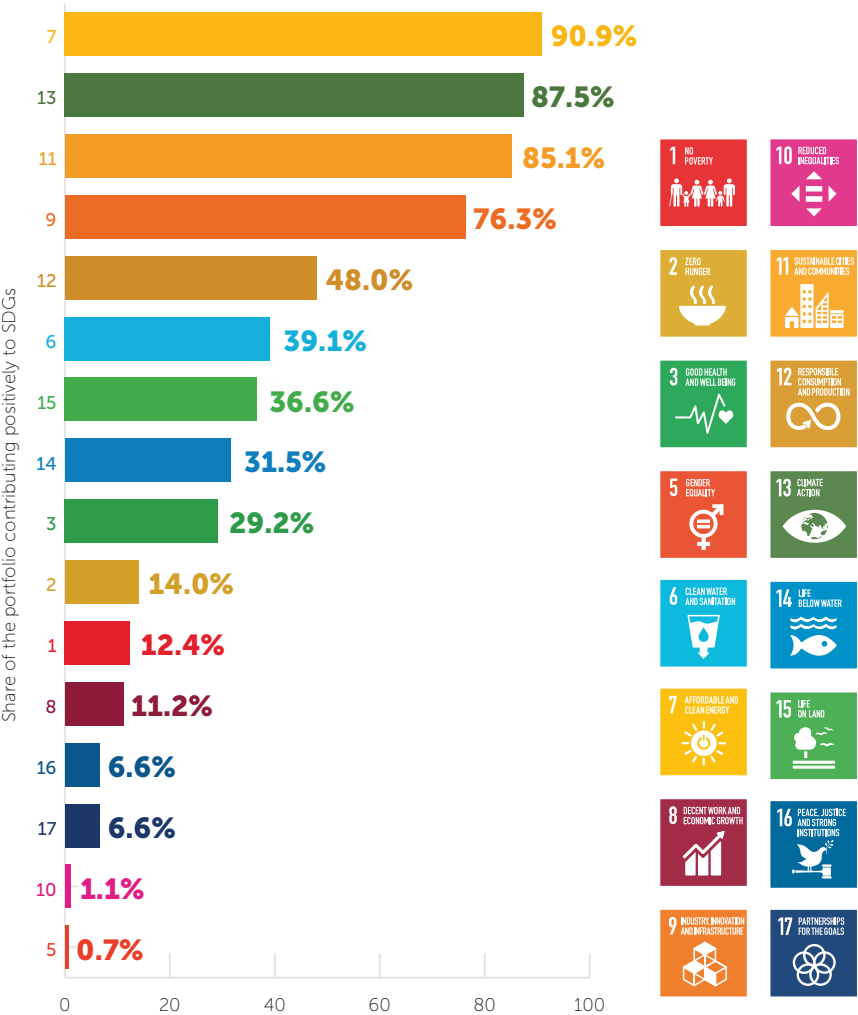
Furthermore and **although benchmark representativeness has been increased over time, differences still exist biasing the relative carbon performance assessment for the fixed income and sovereign portfolios**.

What was the impact of FDC’s dedicated green bond portfolio in 2024?

Types of projects financed¹⁸



Impact on SDGs¹⁹

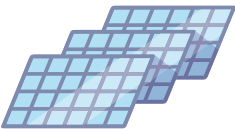


Source: Allianz Global Investors, MainStreet Partners

¹⁸ Data for the year 2024 as of 27/07/2025. Data for 100% of the bonds held during the year. 95.5% of the bonds have reported allocation data of funded projects while an additional component of 4.5% has been estimated. Covergae: 100% of the portfolio representing 207 bonds.

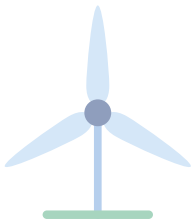
¹⁹ Data for the year 2024 as of 27/07/2025. MainStreet Partners defines the contribution of each bond to the SDGs. Contribution to each of the 17 SDGs is determined by reference to the bond’s use of proceeds and how it promotes various targets associated with each SDG. By aggregating the data it is possible to determine how many green bonds in the portfolio are positively contributing to each SDG. Data for 100% of the bonds held during the year. 78.3% of the bonds have SDG contribution data of funded projects while an additional component of 21.7% has been estimated.

Environmental impact ²⁰



57
MW

Renewable
energy capacity
added



122,253
MW/h

Renewable
energy produced



13,204
MW/h

Energy
saved



2,521
Ha

Land restored /
reforested / certified



67,994
Tons

CO₂ equivalent
avoided



111,495,311
Litres

Water saved



4,623
Tons

Waste
treated / prevented







925
Electric

Cars / Trains deployed

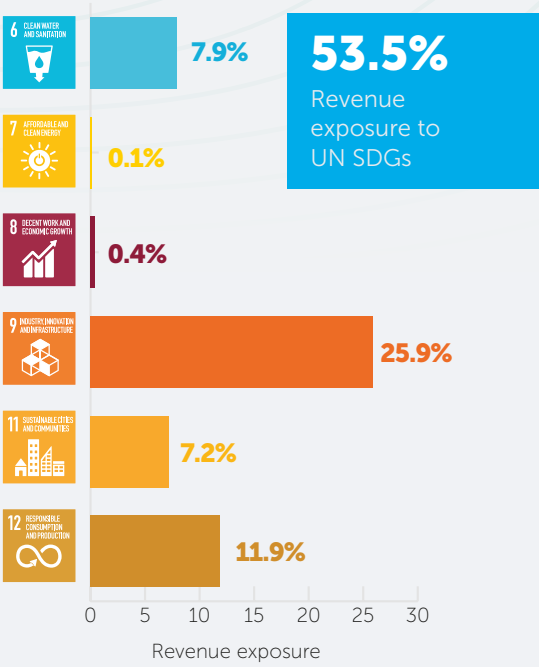
²⁰ Data for 92.8% of the bonds held during the year. 85.2% of the bonds have reported data related to the social and environmental impact of funded projects while an additional component of 7.5% has been estimated. Impact results are calculated based on the amount invested in each green bond in relation to the nominal amount issued together with the holding period of the investment.

What was the impact of FDC’s dedicated sustainable impact equity portfolio in 2024?

Environmental impact²¹

Avoided GHG emissions	93,810 tCO ₂ e		avoided GHG emissions were equivalent to: 64,880 cars off the road
Water provided / saved / treated	31,320 megalitres		257,040 households’ water consumption
Renewable energy generated	9,190 MWh		2,550 households’ electricity consumption
Materials recovered / waste treated	48,490 tonnes		53,580 households’ waste consumption

Impact on SDGs²²



²¹ Source: Impax Asset Management. Based on most recently reported annual environmental data for holdings in the portfolio as of 31 December 2024 totalling EUR 471 million. Impax’s impact methodology is based on equity value. Avoided GHG emissions arising from the portfolio companies’ products and services. Cars of the road figures based on average tCO₂ of a car in a year (derived from total number of all vehicles licensed in UK as of Q2 2024 ([Vehicle licensing statistics data tables](#)); total public road miles driven by all vehicles from October 2023 to September 2024 ([Provisional road traffic estimates](#)); average carbon tailpipe emissions of new cars ([UK Automotive Sustainability Report](#)) calculated as 537 billion km*(108.9/1,000,000 CO₂t/km)/(40.45 million cars) = 537,038,092,800*0.0001089/40,448,900 = 1.45 tCO₂/car as the average CO₂ emissions of a car in a year). Water consumption data based on average annual UK household water usage of 121,851.60 litres ([UK average daily water usage per person 2024](#)). Electricity consumption data based on average annual UK household electricity usage of 3.60 MWh ([Annual domestic energy bills](#)). Household waste data based on : Office for National Statistics, 2022: Household and resident characteristics, England and Wales: Census 2021. Average annual UK household waste of 905kg. Department for Environment, Food & Rural Affairs, 2023: Local authority collected waste management annual results 2021/22. Office for National Statistics, 2022: Household and resident characteristics, England and Wales: Census 2021.

²² Source: Impax Asset Management. Data as at 31 December 2024. Figures above are based on Impax internal data. Impax’s investment process does not identify alignment with SDGs as a specific objective. Instead, the nature of Impax’s investment philosophy results in some meaningful revenue exposure within the Environmental Markets strategies and Sustainability Lens strategies, based on investee companies’ eligible activities.

What does IIGCC mean?

The Institutional Investors Group on Climate Change (IIGCC) is the leading European membership body enabling the European investment community in driving significant and real progress by 2030 towards a net zero and resilient future. In this context, IIGCC works closely with investors to provide guidance, frameworks, tools and support and helps to respond to challenges and integrate management of climate-related risks and opportunities into their investment processes.

IIGCC work is delivered across three programme areas: policy, investor strategies and corporate and covers a range of important topics, including for example net zero as well as climate adaptation and resilience. IIGCC works in strategic partnership with investors supporting, enabling and showcasing their role in the realisation of the transition to net zero in support of the goals of the Paris Agreement.

In addition, IIGCC has developed a number of flagship tools and frameworks to support investors on their climate journeys and played a key role in launching a number of investor initiatives with global reach and relevance such as the Paris Aligned Asset Owners initiative, the Net Zero Asset Managers initiative, the Net Zero Engagement initiative or the Climate Action 100+ initiative.

What does Climate Action 100+ mean?

Climate Action 100+ is delivered by five investor networks (Asian Investment Group on Climate Change (AIGCC), Ceres, Investor Group on Climate Change, IIGCC and Principles for Responsible Investment (PRI)) working with the initiative's investor signatories. As of today, Climate Action 100+ is made up of more than 700 global investors active in various markets.

As an investor-led initiative, Climate Action 100+ aims to ensure the world's largest corporate greenhouse gas emitters take necessary action on climate change. Climate Action 100+ engagement currently focuses on 170 companies that are critical to the net-zero emissions transition and have a major role to play in the transition to a net-zero emissions economy.

In order to create long-term shareholder value, Climate Action 100+ has established a common high-level agenda for company engagement to achieve clear commitments with regard to three goals:

- cut emissions;
- improve governance; and
- strengthen both climate-related financial disclosures and transition plans.

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's 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 certification mean?

The BREEAM label is the most widely used method for assessing and improving the environmental performance of buildings. 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.

FDC's BREEAM certifications can be accessed via following link: <https://fdc.public.lu/en/investissement-responsable/certifications-fdc.html>

What does the PEFC certification mean?

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

FDC's PEFC certification can be accessed via following link: <https://fdc.public.lu/en/investissement-responsable/certifications-fdc.html>

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

FDC's Sustainable Investor Factsheet is published on an annual basis. Paris Agreement alignment analyses are included in FDC's Sustainable Investor Report published on a triennial basis.

3. APPENDIX²³

DATA COLLECTION

A four step process is used as part of S&P Global Sustainable1's data gathering exercise.

Analyse financial and sector data

A company's financials are analysed, collecting consolidated revenues for all companies and specifying their reporting scopes and operational boundaries.

Map activities to S&P Global Sustainable1's Environmentally Extended Input-Output (EE-IO) model

S&P Global Sustainable1's EE-IO model uses more than 450 business activities (broadly aligned to the North American Industry Classification System (NAICS), with some additional sectors included to distinguish key activities with materially different physical impacts) to model a company's environmental impacts by assigning portions of each company's revenues to one or more of these activities. The EE-IO model then estimates the pollutant emissions and resource use associated with each business activity,

both directly (for a company's own operations) and across the supply chain, using the revenue sector breakdown.

Incorporate disclosures and public registry data

S&P Global Sustainable1 searches all publically disclosed data sources of companies to find usable environmental data that will be used to overwrite S&P Global Sustainable1's modelled estimates. S&P Global Sustainable1 ensures the scope and time horizon of any environmental data found matches that of its financials.

Company engagement and data verification

S&P Global Sustainable1 analysts quality check the entire research process internally, then share the results with each company directly via a secure online portal. Companies are given one month to respond to S&P Global Sustainable1 to verify its data or directly engage to provide either refined, additional or non-public information. If appropriate and applicable data is provided, S&P Global Sustainable1 will integrate this into its analysis before publishing the data.

²³ Source: S&P Global Sustainable1.

DISCLOSURE LEVELS

All data collected as part of the process described above will be 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 S&P Global Sustainable1’s EE-IO model.

APPORTIONING

S&P Global Sustainable1 allocates a proportion of emissions to FDC’s portfolios, i.e., the apportioned emissions. 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.

S&P Global Sustainable1 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 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.

S&P Global Sustainable1 measures the greenhouse gas emissions exposure of sovereign assets on the basis of total greenhouse gas emissions per country, reflecting the specific role of the public sector as both a key service provider to the economy and a legislator influencing carbon emissions. Therefore, the analysis is based on national emissions rather than exclusively on emissions directly related to public activities.

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 (GDP). Once this ratio is calculated, it can be multiplied by a country’s emissions to derive the apportioned emissions:

$$\frac{\text{Sovereign Bond Investment}}{\text{Gross General Debt}} = \text{Country Emissions (tCO}_2\text{e)}$$

CARBON FOOTPRINT METRICS

Carbon metrics for equities and corporate bonds portfolios:

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 between portfolios, benchmarks and across years, it is therefore important to normalise the totals, either by revenues or by value invested. The three most common approaches to normalisation are highlighted below.

Carbon to Revenue

The Carbon to Revenue (C/R) intensity per million euros of revenue generated is obtained by dividing the apportioned emissions of the companies in the portfolio by their respective apportioned revenues:

$$\text{Carbon intensity} = \frac{\sum_i^n \text{apportioned emissions company}_i}{\sum_i^n \text{apportioned total value company}_i}$$

Carbon to Value

The Carbon to Value (C/V) intensity per million euros invested is calculated by dividing the apportioned emissions of the companies in the portfolio by their total respective value:

$$\text{Carbon intensity} = \frac{\sum_i^n \text{apportioned emissions company}_i}{\sum_i^n \text{apportioned total value company}_i}$$

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

Weighted Average Carbon Intensity

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:

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

The first two approaches serve as indicators of an investor's contribution to climate change or ecosystem degradation. The WACI method provides an indication of an investor's exposure to carbon-intensive companies.

Carbon metrics for sovereign portfolios

S&P Global Sustainable1's analysis aims at calculating the specific portion of sovereign emissions a holding is responsible for, i.e., the apportioned emissions, and includes carbon intensity measures calculated according to below three methodologies.

Carbon to Output

The Carbon to Output (C/O) metric describes the relationship between the average amount of tonnes of carbon dioxide equivalent generated per million euros gross domestic product (GDP) generated. This metric is calculated by dividing the sum of all portfolio-apportioned emissions by the sum of all portfolio-apportioned GDP:

$$\frac{tCO_2e'}{GDP'} = \frac{\sum_i^n tCO_2e'_{i,c}}{\sum_i^n GDP'_{i,c}}$$

Carbon to Value

The Carbon to Value method describes the relationship between the average amount of tCO_2e generated per million euros of investments made in the portfolio. This metric is calculated by dividing the sum of all portfolio-apportioned emissions by the sum of millions of euros invested:

$$\frac{tCO_2e'}{Inv (\text{€mn})} = \frac{\sum_i^n tCO_2e'_{i,c}}{\sum_i^n Inv (\text{€mn})_i}$$

Weighted Average Carbon Intensity

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 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 carbon intensity of the bond's mapped country:

$$\sum_i^n W_i = \left(\frac{\text{Country Emissions } (tCO_2e)_c}{\text{Real GDP}_c} \right)$$

n = number of bonds in the portfolio
 i = specific bond "i" in the portfolio
 tCO_2e' = total portfolio apportioned-emissions
 $tCO_2e'_{i,c}$ = apportioned emissions of sovereign bond "i" mapped to country "c"
 GDP' = total portfolio-apportioned GDP
 $GDP' c$ = the gross domestic product of country "c"
 $GDP'_{i,c}$ = apportioned GDP of sovereign bond "i" mapped to country "c"
 $Inv (\text{€ mn})$ = the total value invested in the sovereign bond portfolio in millions of €
 $Inv (\text{€ mn})_i$ = the value invested in sovereign bond "i" in millions of €
 Wi = the value of holding portfolio weight of sovereign bond "i"
Country Emissions (tCO_2e) c = the sovereign greenhouse gas emissions of country "c"

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 is wished 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. S&P Global Sustainable¹ recommends widening the scope of analysis to uncover more of these potential risks and thus takes into account direct emissions and first tier indirect emissions (D&FTI emissions). Calculations of greenhouse gas emissions are presented in units of millions of metric tonnes of carbon equivalents (tCO₂e), which weights each gas by its Global Warming Potential. The Global Warming Potentials used in S&P Global Sustainable¹'s analysis are taken from the publically available 2006 IPCC "Guidelines for National Greenhouse Gas Inventories".

Direct emissions comprise:

- Scope 1 emissions, namely emissions generated by direct company operations according to the Kyoto Protocol's definition of greenhouse gas emissions; and
- direct emissions from four additional sources not covered by the Kyoto Protocol, being emissions of carbon tetrachloride (CCl₄), 1,1,2-trichloroethane (C₂H₃Cl₃), bromotrifluoromethane (CBrF₃) as well as CO₂ emissions from biomass.

First tier indirect emissions include:

- Scope 2 emissions, i.e., emissions generated by purchased electricity, heat or steam or other sources of energy; and
- direct upstream Scope 3 emissions, being other indirect emissions generated by the supply chain.

Scopes for sovereign portfolios

Are included:

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

AVOIDED EMISSIONS

Avoided emissions calculations

S&P Global Sustainable1 calculates the life cycle impacts of each project versus a location-specific Business-As-Usual (BAU) scenario. Life cycle impacts include the emissions from the construction, operation, and decommissioning of the project(s).

Steps in the calculation process



The BAU scenario impacts include the emissions that occur during the normal operations of the technology or project that the new investment is expected to replace. For instance, for an investment in onshore wind power in Spain, the BAU scenario would be purchased electricity from the Spanish national grid which would include carbon emissions from operations. The investment scenario would include the lifetime emissions from the wind power construction or manufacture, operation, and disposal. The net benefit is the difference between the emissions from the project financed and the avoided BAU emissions.

S&P Global Sustainable1 considers both project refinancing and the investment contributing to the project by the bond to estimate the green bond financed avoided emissions. For refinancing, the annual avoided emissions that are allocated would represent the full life cycle of the project. However, the lifetime avoided emissions are allocated only for the duration of the bond. The impacts are then apportioned according to the stake in the project (as a percentage of the total project value, i.e., equity and debt). For example, if the issuer owns 50% of the total project

value then the issuer will be held accountable for 50% of the net impact generated by the project.

In the final step of the calculation process, the avoided emissions are aggregated at the green bond level. S&P Global Sustainable1 estimates impacts based on issuer disclosure of the use of proceeds and of relevant project-related data, as well as Life-Cycle Analysis (LCA) data. Data comes from a variety of sources that can either be technology specific, country specific or regional average values.

Assumptions and limitations

A number of key assumptions are taken when calculating the environmental performance of a project. These are summarised below:

- The emissions are estimated only for projects relating to Green Energy, Green Buildings, Energy Efficiency and Green Transport covering over 130 technologies using full life cycle assessment.
- After the end of the asset life, the asset is deemed to be decommissioned and the benefits from this asset end. For instance, if a solar photovoltaic plant is decommissioned in 2040, the company would then revert to purchasing the equivalent amount of electricity from the national grid.
- The energy produced by the asset directly replaces energy produced by another source, such as the national grid. Therefore, no additional electricity is produced.
- However, the planned evolution of the national grid is taken into account including increases in capacity and changes in the generation mix.
- The efficiency of the asset being deployed, and the asset being replaced do not change over time (with the exception of the national grid).

- The regional granularity for the assessment only goes up to the country-level from global/regional levels but not further into sub-regions within the country.
- Due to data availability, the planned evolution of the national grid in each country is forecasted up until 2050. Beyond that year, the grid mix is deemed constant.

Given the assumptions that have been taken, there are also some limitations in calculating the environmental performance of a project. These are summarized below:

- For emissions from the national grid, each country has a unique factor up until 2050 that accounts for the anticipated changes in grid mix – normally a shift towards the deployment of more renewable technologies. As there is no forecast data beyond this point, the grid mix beyond 2050 is assumed to remain the same.
- Estimated avoided emissions may not be directly replicated in the real world. This can be due to increasing or decreasing efficiencies of project performance, or changing external factors, such as the amount of sunlight a solar farm receives for instance.



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