FONDS DE COMPENSATION

SUSTAINABLE INVESTOR REPORT 2024

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°C: Degree Celsius • **BREEAM:** Building Research Establishment Environmental Assessment Methodology • **C/R:** Carbon to Revenue intensity per million revenue • **C/V :** Carbon to Value intensity per million invested • **CaPex:** Capital expenditures **CDP:** Carbon Disclosure Project • **CO2:** Carbon dioxide • **D&FTI:** Direct and First Tier Indirect emissions including scope 1, scope 2 and direct upstream scope 3 emissions • **EBITDA:** Earnings Before Interest, Taxes, Depreciation and Amortisation • **ESG:** Environment, Social and Governance • **ESMA:** European Securities and Markets Authority • **EU Taxonomy:** Regulation (EU) 2020/852 of the European Parliament and of the Council of 18 June 2020 on the establishment of a framework to facilitate sustainable investment • **FDC:** Fonds de compensation commun au régime général de pension, sole shareholder of Fonds de Compensation de la Sécurité Sociale, SICAV-FIS • **FDC Aggregate (EQ+FI):** Aggregate Equites and Fixed Income, refers to FDC's aggregated equites and corporate bonds portfolio • **FDC Aggregate EQ:** Equities, referring to FDC's aggregated equities portfolio • **FDC Aggregate FI:** Fixed Income, referring to FDC's aggregated corporate bonds portfolio • **GBP:** Green Bond Principles • **GDP:** Gross Domestic Product • **GEVA:** Greenhouse gas Emissions per unit of Value Added • **GHG:** Greenhouse Gases • **GRESB:** Global Real Estate Sustainability Benchmark • **GwH:** Gigawatt hours • **ICMA:** International Capital Market Association • **IEA:** International Energy Agency • **IIGCC:** Institutional Investors Group on Climate Change • **IPCC:** Intergovernmental Panel on Climate Change • **LuxFLAG:** Luxembourg Finance Labelling Agency • **MwH:** Megawatt hours • **NDCs:** Nationally Determined Contributions • **NZAM:** Net Zero Asset Managers initiative • **OECD:** Organisation for Economic Cooperation and Development • **PAI(s):** Principal Adverse Impact(s) • **Paris Agreement:** International treaty on climate change adopted by 196 Parties at the UN Climate Change Conference in Paris on 12 December 2015 (COP21) and entered into force on 4 November 2016 • **Paris Aligned:** Aligning with the Paris Agreement's goal to hold in this century "the increase in the global average temperature to well below 2°C above pre-industrial levels" and pursue efforts "to limit the temperature increase to 1.5°C above pre-industrial levels" • **PEFC:** Program for the Endorsement of Forest Certification • **PRIs:** Principles for Responsible Investment • **S&P:** Standard & Poor's • **SBT(s):** Science Based Target(s) • **SBTi:** Science Based Targets initiative • **SDA:** Sectoral Decarbonisation Approach • **SDG(s):** Sustainable Development Goal(s) • **SFDR:** Regulation (EU) 2019/2088 of the European Parliament and of the Council of 27 November 2019 on sustainability-related disclosures in the financial services sector, as amended • **SICAV:** Fonds de Compensation de la Sécurité Sociale, SICAV-FIS • **SNHBM:** Société Nationale des Habitations à Bon Marché • **TCFD :** Task Force on Climate-related Financial Disclosures • **tCO2e:** Carbon dioxide equivalent, expressed in tons • **UCC:** Unpriced Carbon Cost • **UN:** United Nations • **WACI:** Weighted Average Carbon Intensity per million revenue

1. Foreword

The Fonds de compensation (FDC), the public entity that ensures the management of the reserve of the general pension insurance scheme, is honoured to publish its second Sustainable Investor Report after an initial report in the year 2020.

Since 2010, FDC has continuously strengthened its commitment to investing the assets of the pension reserve in a responsible way, within the legal framework, which puts particular emphasis on risk diversification and a focus on a market-conform return on investment in order to contribute to the long-term viability of the general pension insurance scheme. FDC's Responsible Investor Report of 2020 reviewed these efforts in responsible and sustainable investment in all transparency, reported on the carbon footprint and analysed the alignment of its investments with the Paris Agreement target of limiting global warming to a maximum of 2°C compared to pre-industrial levels. The present Sustainable Investor Report looks in particular at the developments and the progress in continuing these earlier efforts within the last 4 years.

Through the continuous renewal of its investment mandates, FDC has been able to build on a constantly evolving expertise and professionalism of its asset managers managers in sustainable investing, resulting in an increasing number of LuxFLAG labels being granted to FDC's sub-funds, covering all actively managed listed assets today. Similarly, FDC chose to adhere voluntarily to the Sustainable Finance Disclosure Regulation (SFDR), and today, all its actively managed listed assets are classified as article 8 or 9 investments under SFDR. With respect to indexed investment mandates, FDC chose the innovative path of launching Paris-aligned sub-funds of equities (in 2022) and bonds (in 2024) while still referring to a conventional benchmark. This allows the respective investment

managers to build on their expertise and adapt their traditional indexed investment strategy in a coherent manner whilst adhering to the Paris Agreement.

Following the publication of its first Responsible Investor Report, FDC also decided to report on an annual basis on the carbon footprint of its investments in order to assess its sustainable credentials on a regular basis. FDC has thus published its annual Sustainable Investor Factsheets from 2022 onwards. The 2024 factsheet is integrated in the present Sustainable Investor Report, which shows that FDC has been able to consistently reduce its carbon footprint over the past 4 years. FDC has notably achieved a further reduction of 29% of the Weighted Average Carbon Intensity (WACI) based on scope 1&2 CO_2 emissions compared to the carbon footprint of its equities and corporate fixed income holdings on 31st December 2022.

Furthermore, FDC committed to renewing its study of the Paris-alignment of its investments on a tri-annual basis. This Sustainable Investor Report presents the results of this climate analysis, showing a marked improvement in both FDC's equity and corporate fixed income holdings. If the latter can be classified as being on a trajectory of global warming between 1.5 and 2°C, the aggregate holdings of FDC cannot yet be deemed to be Paris-aligned in the analysis entrusted to S&P Global. Considering that the over-budget of carbon emissions of FDC's holdings was reduced from 13% to 5% (in terms of tons of CO_2 emissions) whereas these holdings themselves have increased by 22% compared to the earlier alignment analysis, FDC was able to orientate capital significantly towards companies with strict Paris-aligned carbon budgets. The fact that this shift had almost enough weight should instill confidence that continued improvements over the coming years will also lead to the desired aggregate Paris Agreement alignment.

It must furthermore be stressed that, due to methodology constraints, neither FDC's green bond holdings, financing projects that reduce greenhouse gas emissions, nor its positive impact investments, generating positive impacts across various UN Sustainable Development Goals, nor its forestry holdings in the Grand Duchy, absorbing CO_2 emissions in a direct way, could be included as mitigating factors in the Paris-alignment study. However, FDC has to weigh a multitude of considerations in its sustainable investment efforts and cannot singularly pursue a positive outcome in the S&P Global climate analysis to the detriment of other sustainable criteria.

These decisions on the transparency of its sustainable investments were further cemented in FDC's investment directive for the period 2023-2027. This directive also reinforces FDC's commitment to respecting human rights and complying with international conventions, strengthening the criteria for its exclusion list. This list restricts the allowed universe of investments by excluding companies that do not comply with international standards or are involved in controversial weapons. The standards considered are those

enshrined in the ten principles of the UN Global Compact covering human rights, the environment, international labour standards and the fight against corruption, or in the UN Guiding Principles on Business and Human Rights, or in the OECD Guidelines for Multinational Enterprises on Responsible Business Conduct as well as their underlying conventions and treaties. Companies that are under observation for a prolonged period with no concrete prospects of improvement are also excluded from 2024 onwards. The exclusion list currently consists of some 140 listed companies.

In its new investment directive, FDC also decided to put a particular focus on engagement with respect to environmental criteria as asset owner by joining the Institutional Investors Group on Climate Change and the Climate Action 100+ initiative aiming to ensure that the world's largest corporate greenhouse gas emitters take appropriate action on climate change.

FDC decided furthermore to invest in a new investment class, infrastructure, with a focus on sustainable and clean energy assets. A corresponding investment mandate was awarded in May 2024, whilst the first investments are planned for the start of 2025.

With this Sustainable Investor Report, FDC draws up a transparent inventory of its latest and continuing efforts in sustainable investments and confirms its commitment as a responsible investor.

Alain REUTER
Chairman of the Board

2. Introduction

FDC was established by the amended law of 6 May 2004 concerning the administration of the assets of the general pension insurance scheme. It has the form of a public entity with a very specific mission: ensuring the management of the reserve through a diversified portfolio subject to strict risk and return criteria in order to contribute to the long-term viability of the general pension insurance scheme.

The Board of Directors, composed of twelve members based on the tripartite model[1], establishes the guidelines that define FDC's asset management principles and rules. A six-member investment committee, including three external experts appointed on the basis of their knowledge and experience in the financial sector, is assisting the Board of Directors in its financial asset investment decisions. In addition, the Board of Directors has set up a real estate committee responsible for preparing its decisions concerning real estate holdings.

FDC invests long-term and globally and therefore favours a healthy and sustainable economy. As an institutional asset owner, FDC is aware of its ecological, social and good governance responsibilities. As a consequence, such considerations are being taken into account in FDC's investment strategy as well as in its investment decisions.

FDC had already started to formalise a responsible investor policy as early as 2010. At the beginning of 2011, the Board of Directors decided to set up and implement an exclusion list, based on international conventions ratified by the Grand Duchy of Luxembourg and covering the fields of environment as well as institutional, social and joint responsibility. At the same time, FDC proactively started to pay more attention to sustainable criteria and aspects in its public tenders aiming to mandate external asset managers. In 2012, the first mandate with an investment approach exclusively based on ESG criteria was awarded.

At the end of 2019, the Board of Directors took the initiative to prepare a dedicated report setting out in detail the scope, the different aspects and the implementation of FDC's responsible investor policy, to be complemented with a climate analysis of its investment portfolios. Consequently, **FDC's first Sustainable Investor Report was published in 2020 and drew up a transparent inventory of FDC's responsible investor policy and publicly confirmed its commitment as a responsible investor**.

Today, FDC's responsible investor policy has further evolved and deepened and is based on several pillars, covering different themes and at varying levels of granularity. These pillars are outlined in detail in this second Sustainable Investor Report. Going forward, this report will be published on a three-yearly basis and constitutes, alongside an annual report first published in 2021 and mainly highlighting key carbon metrics in relation to FDC's investments, the extra-financial reporting FDC has committed to publishing on a regular basis in the context of its responsible investor policy.

1 Fundamental mechanism of Luxembourg's economic and social model bringing together the government, employers and trade unions.

3. Structure, legal mission and considerations

A major part of the reserve allocated to FDC is invested in the financial markets through its SICAV. This SICAV, created in 2007, invests in four asset classes: money market, bonds, equities and indirect real estate, while investments in a new asset class, infrastructure, are in the process of being set up. The 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 with about 160,000 m^2 of total surface, forest holdings of almost 700 hectares, a loan portfolio, cash and the balance between receivables and payables, essentially representing contributions not yet available for investment. At the end of 2023, FDC's reserve amounted to 26.25 billion euros, of which approximately 92% was invested through the SICAV across 25 sub-funds managed by 17 specific asset managers. Active and indexed management[2] is balanced. A detailed and more recent asset allocation of the SICAV can be found in Appendix 1.

FDC's legal mission is to prudentially manage the reserve of the general pension scheme and to earn an effective return while diversifying risks. In this way, Article 248 of the Social Security Code provides the following:

«The compensation reserve is invested in order to ensure the long-term viability of the general pension insurance scheme. In order to ensure the security of investments, account shall be taken of all the assets and liabilities, the financial situation, as well as the structure and foreseeable evolution of the pension scheme. Investments shall comply with the principles of appropriate risk diversification. To this end, the assets must be spread among different investment classes as well as among different economic and geographical sectors.»

When defining FDC's investment strategy, particular attention was paid to all the criteria indicated above. The security of FDC's investments is ensured thanks to the high quality of its investments spread globally and across all economic sectors and the choice of its structure and management model. On top of that, the objective of market-conform returns under acceptable risk conditions as legally set out is completely respected. It is within this well-defined framework that FDC is carrying out its mission of managing the reserve and taking into account sustainable investments.

2 Indexed management consists of faithfully replicating the performance of a benchmark by investing in almost all the securities included in the given benchmark. Active management aims to outperform the performance of a benchmark by investing in a basket of securities selected on the basis of various criteria. In active management, portfolios are therefore generally more concentrated and have different risk and return characteristics.

Applying Article 248 to sustainable investments, return on such investments must be in line with the market. In terms of risk management, sustainable criteria and aspects must be taken into consideration provided that sustainability risks are relevant investment risks.

FDC is therefore well aware of the importance of taking into account sustainable criteria and aspects in the investment process. The latter are analysed by FDC in strategic discussions, the selection process of asset managers as well as their monitoring. Structured processes based on best practices ensure that the legal mission is entirely fulfilled and that the responsibility towards the society and the environment is assumed. In this way, **FDC's responsible investor policy has been designed to comply with the legal requirements while at the same time ensuring that the expected risk-adjusted return remains in line with market returns**.

In this context, **FDC's Board of Directors is not itself empowered to accept, beyond the restrictions imposed by the legal provisions and international conventions in force, the exclusions of companies or entire sectors from the authorised investment universe 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 would have to be considered**.

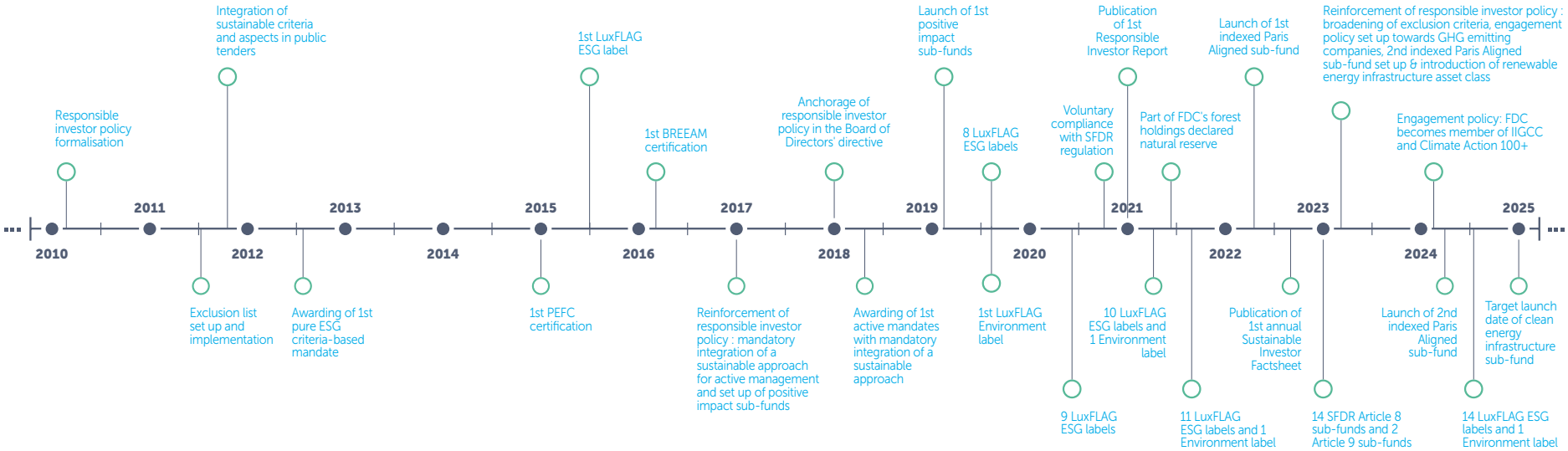
However, **a more restrictive legal framework could lead to a redefinition of FDC's investment strategy and jeopardise its current management model, that nevertheless has had a proven track record** since 2007 with an average annual return of almost 5% and capital gains of more than 11.5 billion euros at year-end 2023. Compared to the situation prior to 2007, and in terms of cumulative performance, FDC's investment strategy thus generated an outperformance of about 105% compared to simple short-term investments.[3]

3 Performance figures can be accessed via FDC's website and published annual reports: https://fdc.public.lu/en/publications.html.

4. FDC's responsible investor policy

4.1. Chronological implementation

The timeline below shows that FDC integrated sustainable criteria and aspects into its investment process already at an early stage and that **FDC is constantly evolving its responsible investor policy.**



4.2. Pillars

Since 2010, FDC has been continuously analysing how and in what form a responsible investor policy in line with the legal framework could be integrated into its investment strategy and decision-making processes. **Today, sustainable criteria and aspects are incorporated at different levels, for instance within the authorised investment universe, the selection process of asset managers and the strategic allocation, and take different forms, such as negative screening, positive impact investments, focus on engagement or the integration of sustainable approaches**. All these elements are part of a structure which respects the principle of cost-efficient and profitable investments. Moreover, since 2018, the pillars of FDC's responsible investor policy have been anchored in the Board of Directors' directive concerning the principles and rules of asset management[4], which is subject to the approval of the Minister of Social Security.

4.2.1. Allowed investment universe and exclusions

Since 2011, FDC has ensured that all investments through its SICAV comply with international conventions. More precisely, the integration of such a principle is put into practice through **a normative exclusion of companies that do not comply with international standards as enshrined in the ten principles of the UN Global Compact covering human rights, the environment, international labour standards and the fight against corruption, the UN Guiding Principles on Business and Human Rights, the OECD Guidelines for Multinational Enterprises on Responsible Business Conduct as well as their underlying conventions and treaties**.[5]

The ten principles of the UN Global Compact

HUMAN RIGHTS

Principle 1 Businesses should support and respect the protection of internationally proclaimed human rights;

Principle 2 Make sure that they are not complicit in human rights abuses.

LABOUR

Principle 3 Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining;

Principle 4 The elimination of all forms of forced and compulsory labour;

Principle 5 The effective abolition of child labour;

Principle 6 The elimination of discrimination in respect of employment and occupation.

ENVIRONMENT

Principle 7 Businesses should support a precautionary approach to environmental challenges;

Principle 8 Undertake initiatives to promote greater environmental responsibility;

Principle 9 Encourage the development and diffusion of environmentally friendly technologies.

ANTI-CORRUPTION

Principle 10 Businesses should work against corruption in all its forms, including extortion and bribery.

Source: https://unglobalcompact.org/what-is-gc/mission/principles

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 implementation of exclusions or restrictions that go beyond these international norms and conventions, such as thematic or sectoral exclusions, would require a change in the legal framework applicable to FDC.**

4 The Board of Directors' directive is published on FDC's website: https://fdc.public.lu/en/gouvernance.html.
5 As of June 2024, related international conventions and instruments englobed 52 UN instruments, 25 International Labour Organisation (ILO) instruments as well as 23 other instruments.

In addition to these companies either directly excluded or excluded through corporate ownership, some companies are under observation. These are companies for which investigations are not yet completed or for which engagement is still ongoing in order to put an end to the litigious facts. Depending on the progress of these investigations and discussions, these companies can be classified as either compliant or non-compliant. FDC supports in this way, with its financial weight, an engagement process led by its screening service provider with the aim to change the policy and governance mode of the companies in question. **FDC took the decision, in 2023, to also exclude companies deemed to have a status of being "under observation for an extended period" with "no concrete prospects of improvement"**.

Exclusions are periodically reviewed and updated on the basis of a systematic process in collaboration with the Dutch company Sustainalytics, a specialised, recognised and independent external service provider. Sustainalytics is a global leader in ESG and corporate governance research and ratings. It supports many investors integrating ESG and good governance policies into their investment processes. **As of February 2024, 137 listed companies have been excluded from FDC's authorised investment universe**. Listed companies with observation status amounted to some 170 companies.

FDC's exclusion list as of February 2024

Business Ethics

- 63 Moons Technologies Ltd.
- Gazprom Neft PJSC
- Gazprom PJSC
- Mosenergo OAO
- Mumias Sugar Co. Ltd.
- NIS AD
- Stark Corp. Public Co. Ltd.
- Territorial Generating Co. No 1 PJSC
- The Second Generation Co of the Wholesale Power Market PJSC
- Unitech Ltd.
- VK Co., Ltd.
- Wells Fargo & Co.
- Wirecard AG

Controversial Weapons

- Airbus SE
- Anhui GreatWall Military Industry Co., Ltd.
- Aryt Industries Ltd.
- Babcock International Group Plc
- BAE Systems Plc
- Bharat Dynamics Ltd.
- Brookfield Renewable Partners LP
- BWX Technologies, Inc.
- CACI International, Inc.
- China Shipbuilding Industry Co., Ltd.
- Daikin Industries Ltd.
- Ducommun, Inc.
- Fluor Corp.
- General Dynamics Corp.
- Honeywell International, Inc.
- Huntington Ingalls Industries, Inc.
- ICL Group Ltd.
- Jacobs Solutions, Inc.
- L3Harris Technologies, Inc.
- Larsen & Toubro Ltd.
- Leidos Holdings, Inc.
- Leonardo SpA
- LIG Nex1 Co., Ltd.
- Lockheed Martin Corp.
- Moog, Inc.
- Northrop Grumman Corp.
- Oceaneering International, Inc.
- Poongsan Corp.
- Pretis dd
- Rheinmetall AG
- Rolls-Royce Holdings Plc
- RTX Corp.
- Safran SA
- SNT Dynamics Co., Ltd.
- Textron, Inc.
- Thales SA
- The Boeing Co.
- Walchandnagar Industries Ltd.

Environment

- China Northern Rare Earth (Group) High-Tech Co., Ltd.
- Elsewedy Electric Co.
- Inner Mongolia Baotou Steel Union Co. Ltd.
- Metallurgical Corp. of China Ltd.
- MMC Norilsk Nickel PJSC
- Tokyo Electric Power Co. Holdings, Inc.
- Vale SA

Human Rights

- Alrosa PJSC
- Anhui GreatWall Military Industry Co., Ltd.
- Baidu, Inc.

- Bashneft PJSOC
- Bharat Dynamics Ltd.
- Central Telegraph PJSC
- China Literature Ltd.
- China Petroleum & Chemical Corp.
- China Spacesat Co., Ltd.
- CNPC Capital Co., Ltd.
- Energy Transfer LP
- Gazprom Neft PJSC
- Gazprom PJSC
- Gazprombank OJSC
- Hangzhou Hikvision Digital Technology Co., Ltd.
- HUYA, Inc.
- iQIYI, Inc.
- Irkut Corp.
- L&T Finance Holdings Ltd.
- L&T Technology Services Ltd.
- Larsen & Toubro Ltd.
- LIG Nex1 Co., Ltd.
- Lockheed Martin Corp.
- LTIMindtree Ltd.
- Mattel, Inc.
- Mosenergo OAO
- NIS AD
- Novorossiysk Commercial Sea Port PJSC
- Oil & Natural Gas Corp. Ltd.
- Orascom Investment Holding SAE
- PetroChina Co., Ltd.
- Poongsan Corp.
- Poongsan Holdings Corp.
- Rosneft Oil Co.
- Rostelecom PJSC
- RTX Corp.
- Saudi Arabian Oil Co.
- Saudi Aramco Base Oil Co.
- Saudi Basic Industries Corp.
- Sberbank Russia PJSC
- Sinopec Kantons Holdings Ltd.
- SNT Dynamics Co., Ltd.
- SNT Holdings Co., Ltd.
- S-Oil Corp.
- Steel Authority of India Ltd.
- Tata Consultancy Services Ltd.
- Tata Investment Corp. Ltd.
- Tatneft PJSC
- Tencent Holdings Ltd.
- Tencent Music Entertainment Group
- Territorial Generating Co. No 1 PJSC
- The Second Generation Co of the Wholesale Power Market PJSC
- Tokyo Electric Power Co. Holdings, Inc.
- Transneft PJSC
- Unitech Ltd.
- United Aircraft Corp. PJSC
- Vale SA
- VK Co., Ltd.
- VTB Bank PJSC
- Walchandnagar Industries Ltd.
- Weibo Corp.
- Yixin Group Ltd.

Involvement through corporate ownership

- 4iG Nyrt.
- Avio SpA
- Cameco Corp.
- China Aerospace International Holdings Ltd.
- China Isotope & Radiation Corp.
- China National Nuclear Power Co., Ltd.
- China Shipbuilding Industry Group Power Co., Ltd.
- CNNC International Ltd.
- Dassault Aviation SA
- Hensoldt AG
- Honeywell Automation India Ltd.
- Indian Hotels Co. Ltd.
- Norinco International Cooperation Ltd.
- NuScale Power Corp.
- Tata Chemicals Ltd.
- Tata Consumer Products Ltd.
- Tata Elxsi Ltd.
- Tata Motors Ltd.
- Tata Power Co., Ltd.
- Tata Steel Ltd.
- Trent Ltd.
- Voltas Ltd.

Labour rights

- Xinjiang Zhongtai Chemical Co., Ltd.

Prolonged observation status

- Bolloré SE
- Compagnie de l'Odet SE
- Compagnie du Cambodge SA
- GCM Resources Plc
- La Forestière Équatoriale SA
- McDonald's Corp.
- Siemens Energy AG
- Socfinaf SA
- Socfinasia SA
- Société de Caoutchoucs de Grand-Bereby
- Société Financière des Caoutchoucs SA
- The Okomu Oil Palm Co. Plc
- Wockhardt Ltd.

Below are two examples that illustrate the reasoning behind FDC's exclusion list and its practical application.

Tencent Holdings Limited

Tencent is a leading internet and technology company developing, among others, innovative communication and social products and services. Tencent owns various brands and subsidiaries, including the application WeChat.

WeChat serves as China's primary messaging application, social media platform and payment application. But WeChat, as well as the close collaboration between Tencent and the Chinese Government, have raised concerns in relation to user privacy and surveillance as well as censorship.

FDC considers Tencent to be in violation of Principle 2 of the UN Global Compact and Chapters IV and VIII of the OECD Guidelines for Multinational Enterprises. Consequently, this company is not eligible for investment under the "Human Rights" category and has been on FDC's exclusion list since the beginning of 2023.

Elsewedy Electric

Elsewedy Electric is involved in the construction of the Julius Nyerere hydropower project in Tanzania, which has been associated with severe environmental impacts, including irreversible damage to a UNESCO World Heritage Site.

Whilst Tanzanian politicians and officials had discussed given project over decades, it was only on 2017 that the Tanzanian Government advertised bids to construct mentioned dam. Environmental experts were opposed to the project because its gorge is located in the Selous Game Reserve, a World Heritage Site. Also, the project faced criticism from conservationists saying it threatens the endangered animal species in the area. However, the Tanzanian Government asserted the country's firm position to execute the project, highlighting that the dam will only occupy a small portion of the heritage site, but will benefit the power-starved country in a big way. Thus, construction started mid-2019 and is currently nearing completion.

FDC considers Elsewedy Electric being in violation of Principle 7 of the UN Global Compact and Chapter VI of the OECD Guidelines for Multinational Enterprises. Consequently this company is not eligible for investment under the "Environment" category and has been on FDC's exclusion list since November 2020.

4.2.2. Sustainability at asset manager level

It is important to FDC that its asset managers are committed to responsible investing as an organisation. It is therefore substantial that **FDC integrates sustainable aspects and criteria already as early as during the selection process of its asset managers**.

In 2010 FDC decided to pay more attention to sustainable aspects and criteria taken into account and implemented by the different tendering companies in their investment strategies and decision-making processes. Since 2017, **the integration of a sustainable approach into the investment strategy offered by a tendering company has been mandatory for FDC's actively managed mandates**. 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 (positive or negative screening, specific ESG approach (for example best-in-class), thematic investments, etc.). 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. Tendering companies must, among other things, provide detailed answers to the subsequent questions evaluated according to predefined evaluation criteria with significant weighting.

Asset manager selection questionnaire: questions in relation to the sustainable approach integrated by the tendering company (non-exhaustive list)

1. Please characterise your sustainable approach in general.
2. Do you have to adapt your strategy in order for it to include a sustainable approach/research? If yes, please explain the foreseen adaption of the strategy.
3. Please describe the differences in a model portfolio incorporating a sustainable approach/research and a model portfolio without the incorporation of a sustainable approach/research regarding the following portfolio characteristics:
    - Number of securities in the investment universe.
    - Number of securities in the portfolio.
    - Expected relative performance versus the benchmark in % per annum.
    - Expected tracking error versus the benchmark in % per annum.
4. Please provide the composition of a model portfolio with a sustainable approach/research and a model portfolio without a sustainable approach/research which complies with the foreseen investment guidelines and restrictions.
5. Since when does your company manage mandates incorporating a sustainable approach/research in given asset class?
6. In general, do you publish your sustainable research? If yes, please add an example of such published data/research.
7. Do you have a separate in-house sustainable approach/research department? If yes, please describe the setup and resources of the given department.
8. Please describe what kind of sustainable approach/research you conduct in-house and what kind of sustainable approach/research or data you receive from external providers.
9. For the foreseen mandate: do you explicitly incorporate the following aspects regarding sustainability in your investment approach?
    - Alignment with the UN SDGs.
    - Best-in-class approach.
    - Thematic investments.
    - Engagement.
    - Proxy voting.
    - Exclusion of controversial weapons.
    - Norm-based exclusions (e.g., UN Global Compact).
    - Thematic exclusions (e.g., tobacco, nuclear energy, etc.).

    For all aspects considered in your investment approach, please explain how you incorporate it in your investment approach.

10. Please also list all the exclusion criteria you apply in the strategy you are tendering with.
11. Are you able to measure the impact of your sustainable approach/research? If yes, please describe the used methodology/indicators.
    Have those been developed internally and/or can they be associated to internationally recognised standards? If no, please explain for which criteria and why the impact cannot be measured.
12. Please classify the strategy you tender with according to the SFDR regulation. Please justify your classification.
13. Please provide the following ESG metrics for your model portfolio as well as for the given benchmark:
    - Number of securities.
    - Market capitalisation in EUR billion.
    - Weighted Average Carbon Intensity in tCO_2e per million EUR revenue (as per definition of the TCFD, scope 1&2).
    - Weighted Average Carbon Intensity in tCO_2e per million EUR revenue (as per definition of the TCFD, scope 3).
    - Quantitative ESG score.

    Please state the relative performance versus given benchmark. Please indicate all the data sources used for calculating the Weighted Average Carbon Intensity and the quantitative ESG score of the portfolio.
14. Are you able to create a client specific sustainable portfolio reporting for the mandate? If yes, please add a sample of such a reporting.
15. Please mark which of the following elements you cover in your client specific sustainable portfolio reporting for the mandate:
    - Exclusion list applied to the portfolio.
    - Market value in % of benchmark excluded.
    - Performance impact of exclusions and active weights.
    - ESG profile/rating for portfolio and benchmark.
    - Weighted Average Carbon Intensity for portfolio and benchmark.
    - Alignment with the Paris Agreement for portfolio and benchmark.
    - SDG mapping for portfolio and benchmark.
    - Proxy voting report.
    - Engagement report.
16. Do you measure whether the strategy you are tendering with is aligned with the goals of the Paris Agreement? If yes, please briefly describe the used method and your data providers.
17. Is the strategy you are tendering with Paris Aligned?
18. Do you generally exercise the voting rights for the portfolio holdings of your company? If yes, please briefly describe your proxy voting process and the external service providers you work with.
19. Please briefly summarise your general policy and your ESG policy for the exercise of voting rights.
20. Please provide the below information on the model portfolio and the given benchmark:
    - Total number of securities.
    - Number of companies for which you exercise voting rights.
    - % of the model portfolio/benchmark (market value) for which you exercise voting rights.
    - Yearly number of annual general meetings at which you exercised your voting rights.
21. Does your company in general conduct active engagement?
22. Please describe your engagement approach for the mandate. Do you follow ESG criteria in your engagement program for the assets of the mandate? If yes, please provide a complete list of your ESG engagement criteria.
23. How are the companies with which the dialogue is conducted determined? Can a client choose which companies to engage with, if they wish?
24. Please confirm that you engage on environmental topics. If yes, please briefly describe your engagement process on environmental topics.
25. Please provide the following coverage statistics regarding your general engagement program with companies within your model portfolio and given benchmark:
    - Number of securities.
    - Number of companies within the model portfolio/benchmark for which you have an active engagement program.
    - % of the model portfolio/benchmark (market value) for which you have an active engagement program.

Source: PPCmetrics AG

Unless otherwise stated, data and information of this section 4.2.2. is as of 31 December 2023 and was directly collected by means of specific due diligence questionnaires from FDC's asset managers listed below.

Asset Class / Asset Manager		Management style	Assets (EUR)
EUR money market			
AXA Investment Managers	AXA Investment Managers	active	1,145,242,834
EUR denominated bonds			
Allianz Global Investors	Allianz Global Investors	active	920,982,752
Allianz Global Investors	Allianz Global Investors (green bonds)	active	198,611,458
Amundi	Amundi Asset Management	active	989,016,862
HSBC Asset Management	HSBC Global Asset Management	active	948,509,899
Credit Suisse	Credit Suisse Asset Management[6]	indexed	2,199,595,311
Global bonds			
AXA Investment Managers	AXA Investment Managers	active	988,167,279
Franklin Templeton	Franklin Templeton Investment Management	active	801,012,185
Neuberger Berman	Neuberger Berman Asset Management	active	790,937,919
BlackRock	BlackRock Investment Management	indexed	2,344,673,283
Emerging markets bonds			
Amundi	Amundi Asset Management	active	286,451,765
State Street Global Advisors	State Street Global Advisors	indexed	274,785,976

6 Effective 30 August 2024, Credit Suisse Asset Management has merged with UBS Asset Management and FDC's portfolio management agreement has been transferred to UBS Asset Management.

Global equities

HSBC Asset Management	HSBC Global Asset Management	active	775,919,492
IMPAX Asset Management	Impax Asset Management[7]	active	422,196,070
ROBECO The Investment Engineers	Robeco Institutional Asset Management	active	816,069,739
Union Investment	Union Investment Institutional	active	794,120,852
STATE STREET GLOBAL ADVISORS	State Street Global Advisors	indexed	2,842,530,037
STATE STREET GLOBAL ADVISORS	State Street Global Advisors (Paris Aligned)	indexed	549,108,551
UBS	UBS Asset Management	indexed	2,672,431,834

Global small cap equities

Allianz Global Investors	Allianz Global Investors	active	591,606,355
STATE STREET GLOBAL ADVISORS	State Street Global Advisors	indexed	578,938,685

Emerging markets equities

MFS	MFS Investment Management	active	616,391,099
PICTET Asset Management	Pictet Asset Management	indexed	771,165,041

Global real estate

CBRE GLOBAL INVESTORS	CBRE Global Investment Partners	active	485,823,154
LaSalle	LaSalle Investment Management	active	390,911,251
TOTAL			**24.195.199.683**

7 Per sub-delegation from BNP Paribas Asset Management.

4.2.2.1. Sustainable approaches: focus on sustainability risks, ESG and climate

The sustainable approach pursued by an active asset manager is an integral component of its investment strategy and process, 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 that context, **FDC's asset managers do all have an in-house ESG team** contributing to the incorporation of sustainable aspects and criteria into the portfolio construction process.

On the right-hand side is an example how sustainability and climate risks can be identified and assessed by an asset manager. Appendix 2 gives further information on how FDC's active asset managers can address sustainability and climate risks.

More information about sustainability risks can also be found within the SICAV's issue document accessible through following link: https://fdc.public.lu/en/strategie-investissement/allocation-strategique-fdc.html.

ROBECO
The Investment Engineers

Robeco considers that sustainability risks can be climate-related, or related to other environmental, social and governance practices and can be identified across asset classes, sectors and geographies, or on the basis of length and maturity. Robeco uses various proprietary and external tools to identify and evaluate sustainability factors and related risks. Robeco's Investment Due Diligence and Risk Management frameworks are the basis for the different investment teams and risk management functions to identify and evaluate potential sustainability risks for its investment portfolios.

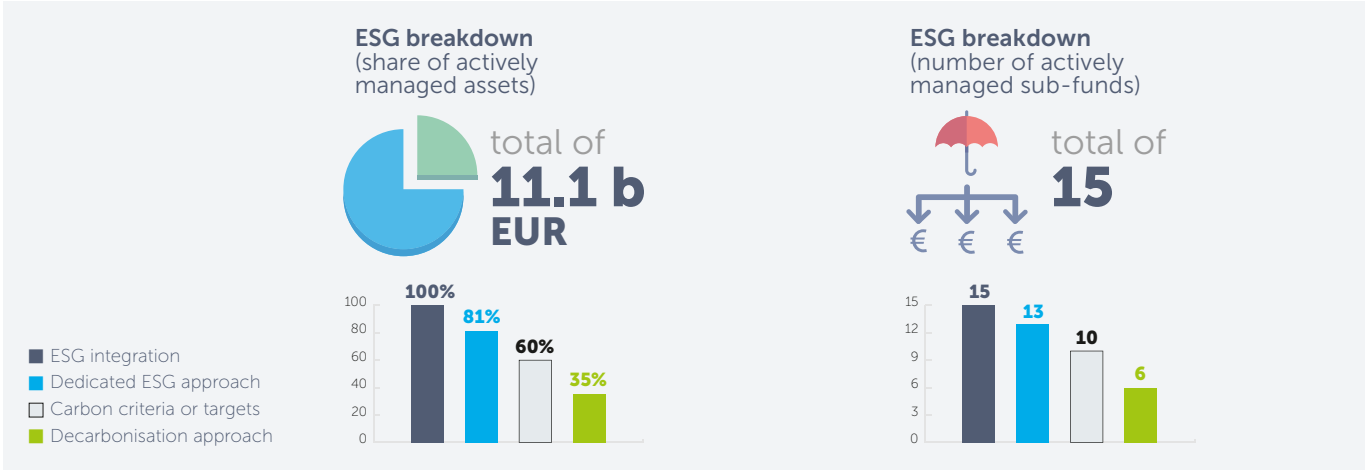
More information is available in Robeco's Sustainability Risk Policy at this link: https://www.robeco.com/files/docm/docu-robeco-sustainability-risk-policy.pdf.

For climate-related risks, the Risk Management function makes use of several climate risk scenarios to estimate the potential financial impact on strategies, both on an absolute and relative level. These scenarios entail internally developed scenarios as well as external scenarios provided by the Dutch Central Bank and MSCI. Using these scenarios, portfolio climate risk sensitivities and expected performance can be measured. The primary metric to assess climate risk is MSCI Climate Value-at-Risk (VaR). The climate VaR methodology incorporates climate transition risks and opportunities, and physical risk based on a 3-degree pathway. Standardised climate VaR reports are actively shared with portfolio managers. The internally developed scenarios are based on literature review and modelled into Robeco's risk platform. The scenarios focus on transition risk and follow both a bottom-up and top-down approach to assess the impact of climate risks on the portfolios versus their respective benchmark. The results of these scenario assessments are shared through a monthly sustainability risk report.

It should be noted that **in 100% of FDC's actively managed bond, equity and money market sub-funds ESG criteria are integrated in the financial analysis and portfolio construction process by the respective asset managers**. For example, if an asset manager considers certain ESG criteria and aspects not being sufficiently taken into account by a company, they will underweight or, if necessary, exclude the company in question. Such allocation choices, aiming to achieve outperformance through the consideration of ESG criteria, are compatible within active management, but hardly conceivable with regard to indexed management.

While ESG integration is non-binding, a dedicated ESG approach is defined as including ESG criteria in a binding manner. A best-in-class approach (investing in companies with the best ESG ratings within an industry) is such an example. Except one asset manager, all active asset managers are applying a dedicated ESG approach.[8] In other words, **more than 80% of FDC's actively managed assets are managed according to a dedicated ESG approach**.

Asset managers may also apply specific carbon criteria or targets, such as decarbonisation approaches. Decarbonisation approaches may include a stepwise reduction in carbon figures and may be consistent with the goals of the Paris Agreement. **60% of FDC's actively managed assets do address specific criteria or targets with respect to climate and 35% are subject to a decarbonisation approach**.



8 While the remaining asset manager does themself not classify their approach as a dedicated ESG approach, environmental and/or social characteristics are promoted and the two sub-funds managed by given asset manager are classified SFDR article 8 and labelled ESG by LuxFLAG.

Below are a few examples how this can put into practice by FDC's asset managers. Detailed description of the sustainable approaches put into practice by the respective asset managers can be found within FDC's sustainability-related disclosures accessible through following link: https://fdc.public.lu/en/investissement-responsable/approches-durables-gerants-fdc.html.

FRANKLIN TEMPLETON

An example for a sub-fund that is managed via a dedicated ESG approach and carbon criteria is the sub-fund managed by the asset manager Franklin Templeton. Investments in issuers that are lagging in the transition to a low carbon economy are avoided and corporate and sovereign issuers that are in the bottom 20% of the investment universe based on characteristics such as greenhouse gas emissions are excluded from the investment universe.

Amundi
ASSET MANAGEMENT

Amundi is applying a dedicated ESG approach with climate targets within the management of an EUR denominated bonds sub-fund. In this context, Amundi aims to achieve a higher ESG score, a better Carbon Policy - Sovereign Index score and a lower carbon footprint than that of the investment universe defined by the associated benchmark to given sub-fund. The use of an aggregated Carbon Policy - Sovereign Index enables Amundi to assess a country's potential for more stringent GHG reduction policies to be implemented and the degree to which they are likely to have material implications.

NEUBERGER BERMAN

IMPAX Asset Management

FDC's assets managers Neuberger Berman and Impax implemented a decarbonisation criteria. Whilst Neuberger Berman aims to reduce the carbon footprint annually by 7%, which leads to a reduction of 20% until 2025 and 50% until 2030 (compared to 2019), Impax targets to have 100% of its assets invested in companies that can be considered as either transition aligned or transition aligning.

Sustainability aspects are also considered in the investment process for real estate investments. Since real estate accounts for a significant portion of total global greenhouse gas emissions, investors and asset managers who invest directly in real estate have an important role in the transition to a low carbon economy. Sustainability aspects can be taken into account in the following ways by indirect real estate mandates, among others:

- ESG integration in the investment process;
- specific carbon criteria or targets can be applied to real estate;
- define a decarbonisation approach;
- obtain sustainability or energy certifications from real estate labels.

FDC's two real estate asset managers do take all of above mentioned aspects into consideration within the management of the portfolios entrusted to them.

LaSalle™

Asset manager LaSalle has aligned with the NZAM initiative globally and as a supporter of the TCFD is committed to support investing aligned with net zero emissions by 2050 or sooner.

LaSalle considers ESG in its investment process by means of a dedicated ESG section in its due diligence questionnaire when selecting investments. Currently, 100% of LaSalle's investments for the FDC have a net zero carbon commitment and 85% are aligned with SBTs.

30% of the underlying holdings have operational building certifications.

CBRE GLOBAL INVESTORS

Asset manager CBRE uses a proprietary Sustainability Assessment Framework during acquisition and ongoing monitoring of investments. All underlying holdings are expected to set a net zero carbon target in line with the NZAM initiative's commitment to achieve net zero emissions by 2050 or sooner.

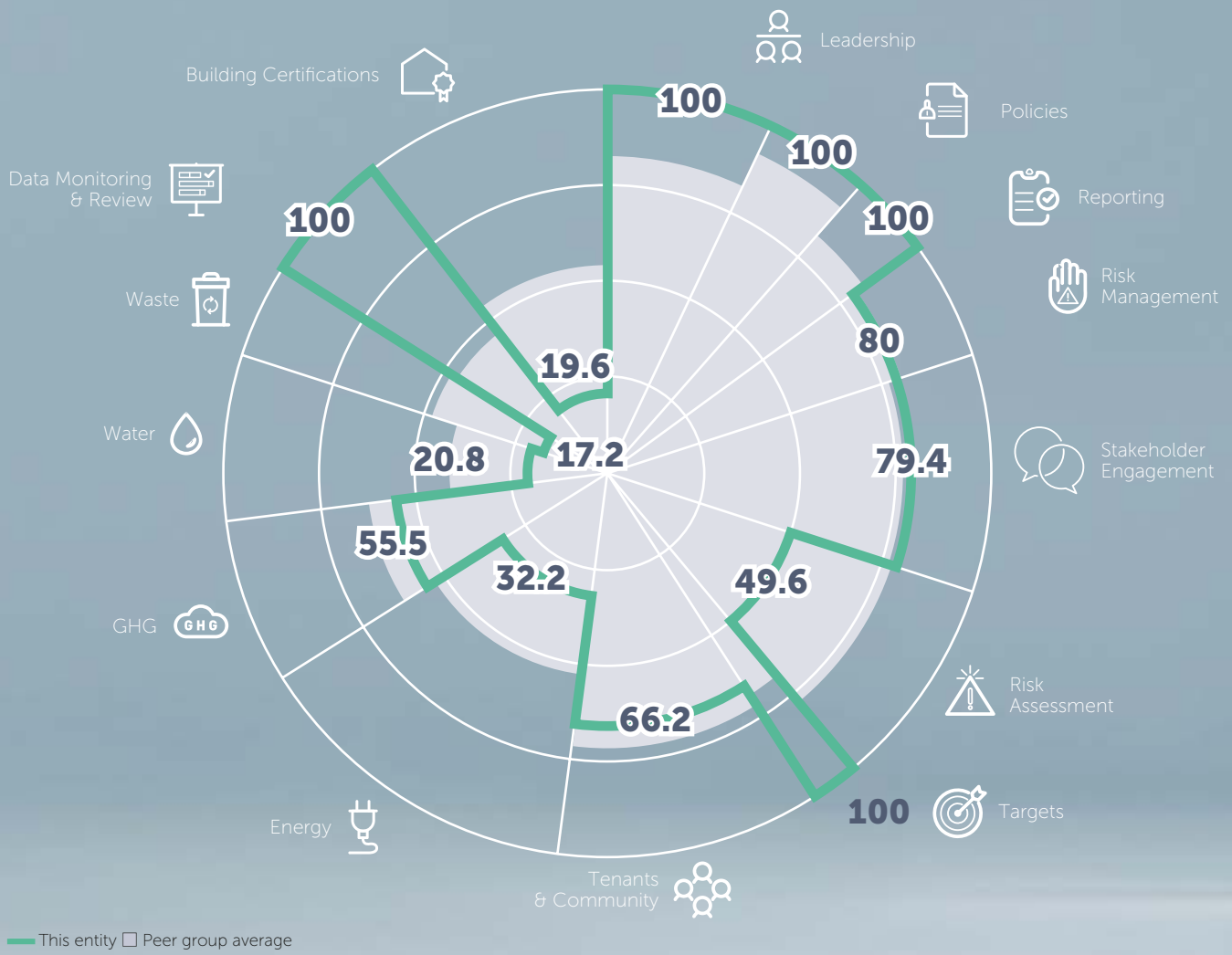
As of December 2022, the average target year for net zero across the underlying holdings of FDC's sub-fund managed by CBRE was 2040 for scope 1&2 and scope 3 emissions.

Almost 40% of the underlying holdings have operational building certifications.

One way for institutional investors to assess, measure and compare the environmental, social and governance performance of real estate assets worldwide is the GRESB survey. The latter identifies critical ESG and sustainability data and can thus be considered as the global sustainability benchmark for real assets. GRESB is aligned with other international reporting frameworks including the PRI, the TCFD recommendations, the Paris Agreement and the UN SDGs.

The GRESB score measures ESG performance by aggregating 14 sustainability aspects (e.g., energy use, greenhouse gas emissions, water consumption, waste) up to 100 points (the higher, the better).

GRESB scorecard sample



Source: https://gresb-prd-public.s3.amazonaws.com/2023/RE_Documents/Real_Estate_Assessment_How_to_read_your_benchmark_report.pdf

The portfolios managed by CBRE and LaSalle exposed a 2023 GRESB score of respectively 81 and 82 out of 100 points. The average score of the benchmark was 75.[9]

Detailed description of the sustainable approaches put into practice by FDC's real estate asset managers can be found within FDC's sustainability-related disclosures accessible through following link: https://fdc.public.lu/en/investissement-responsable/approches-durables-gerants-fdc.html.

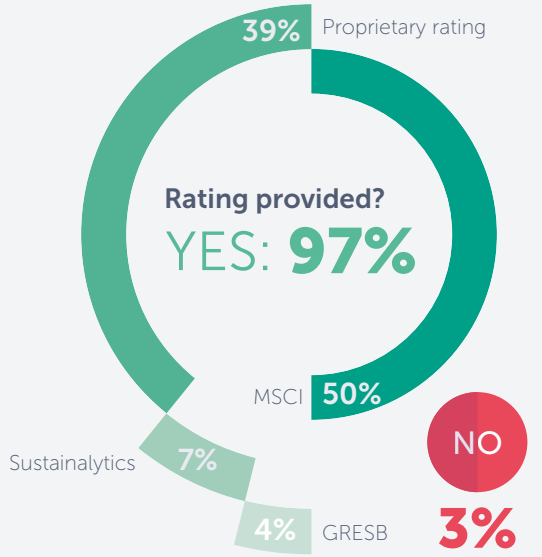
9 Standing Investment Benchmark. Source: https://www.gresb.com/nl-en/insights/gresb-esg-benchmarks-grow-to-cover-usd-8-8-trillion-and-shed-light-on-net_zero-momentum-across-real-estate-and-infrastructure-globally/.

4.2.2.2. Focus on ESG ratings

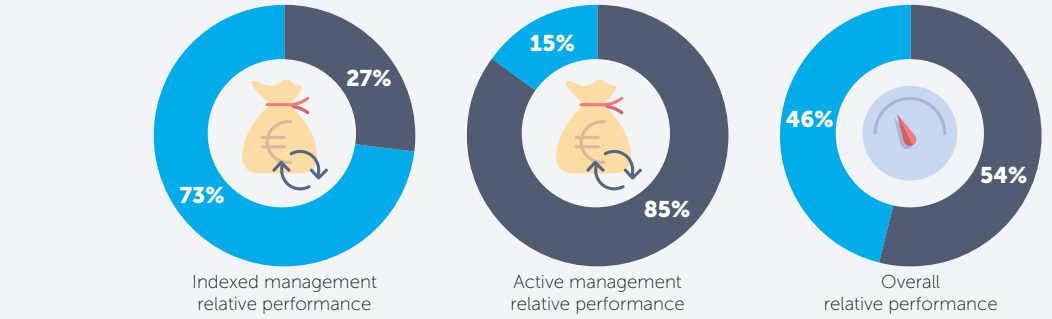
Depending on its methodology, an ESG rating or score measures either to what extent sustainability imposes a financial risk for a portfolio or the influence of a portfolio on the environment and society. For listed equity and bond portfolios, the MSCI ESG Score[10] is often reported. In some cases, asset managers also use other or their own rating or scores. Rating providers use different scales and methodologies. Typically, a higher score is a better score. The Sustainalytics score is an exception since it measures sustainability risk, thus considering a lower score is desirable. As already mentioned, the GRESB score is relevant for real estate investments.

Except two asset managers, FDC's asset managers do all report ESG scores for the sub-funds they manage. Overall, a rating is provided for 97% of FDC's total assets. All ESG scores are at least equal to the scores of the respective benchmarks. 85% of the actively managed assets do have a better ESG score than the benchmark.

Rating provider (share of total assets EUR)



Relative performance (share of total assets EUR)



10 For more information, please refer to https://www.msci.com/sustainable-investing/esg-ratings.

4.2.2.3. Focus on exclusion criteria directly applied by FDC's asset managers

Some sustainable approaches of FDC's asset managers include internal exclusion criteria put into practice. **Asset manager specific exclusion criteria are applied within 95% of FDC's actively managed assets, irrespective of FDC's exclusion list to be bindingly applied by all asset managers. In addition, exclusion criteria are also applied within two indexed sub-funds**.

Often applied criteria go beyond those applied within FDC's exclusion list. **Such exclusions are for instance based on severe ESG controversies, ecosystem protection & biodiversity, climate change and risk, as well as normative or product-specific exclusions such as tobacco, gambling & adult entertainment, fracking, oil & tar sands, animal testing for non-medical purposes, thermal coal, fossil fuels or palm oil**. The number of companies that are excluded by an asset manager from the allowed investment universe on top of FDC's exclusion list varies widely, from only a few to more than 750 companies. **On average and where applied, almost 260 securities are excluded on top of FDC's exclusion list**.

4.2.2.4. Focus on stewardship, initiatives and engagement

Asset managers can commit to sustainable development in different ways. Internationally, the PRI initiative launched by the UN has become an established practice among asset managers. Equally important on a global scale is the Climate Action 100+ initiative, which focuses on engaging with the world's largest corporate greenhouse gas emitters to take the necessary action on climate change. In addition, the international NZAM initiative is often in focus.

PRI Principles for Responsible Investment

The PRI initiative, established in partnership with the UN, is dedicated to the practical implementation of the six principles for responsible investment. By signing these principles, asset managers commit to incorporating and reporting on sustainability aspects in financial analysis and decision-making processes.

The initiative aims to understand the implications of environmental, social and governance issues on investment activities. In addition, the members are required to actively pursue stewardship and report on their activities.

As of 31 March 2024, the initiative counted over 5,300 signatories from various countries with combined investment capital of more than USD 120 trillion.

Sources: https://www.unpri.org/ and Principles for Responsible Investment, Annual Report 2024, page 17.

A proud participant of: Climate Action 100+ Global Investors Driving Business Transition

Climate Action 100+ is an investor-led initiative. It counts more than 600 investors that engage with companies to improve climate change governance, cut emissions and enhance climate-related financial disclosures, aiming to mitigate financial risk and maximise long-term asset value.

Founded in 2017, Climate Action 100+ quickly became one of the largest global investor engagement initiatives on climate change, with growing influence and impact. Initially planned as a five-year program, its mission was extended to 2030, with an updated strategy announced in 2023.

Source: https://www.climateaction100.org/about/

The NZAM initiative was launched in December 2020 and has over 325 signatories (asset managers) with combined assets under management of more than USD 57 trillion.

The purpose of the initiative is to commit the asset management industry to the goal of net zero emissions by 2050 or earlier.

Source: https://www.netzeroassetmanagers.org/

One result of FDC's efforts is that all its asset managers are PRI signatories. By signing the PRIs, a manager is committed to integrating sustainable aspects into its financial analysis and decision-making process as well as to reporting on them.

The six Principles for Responsible Investment

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.

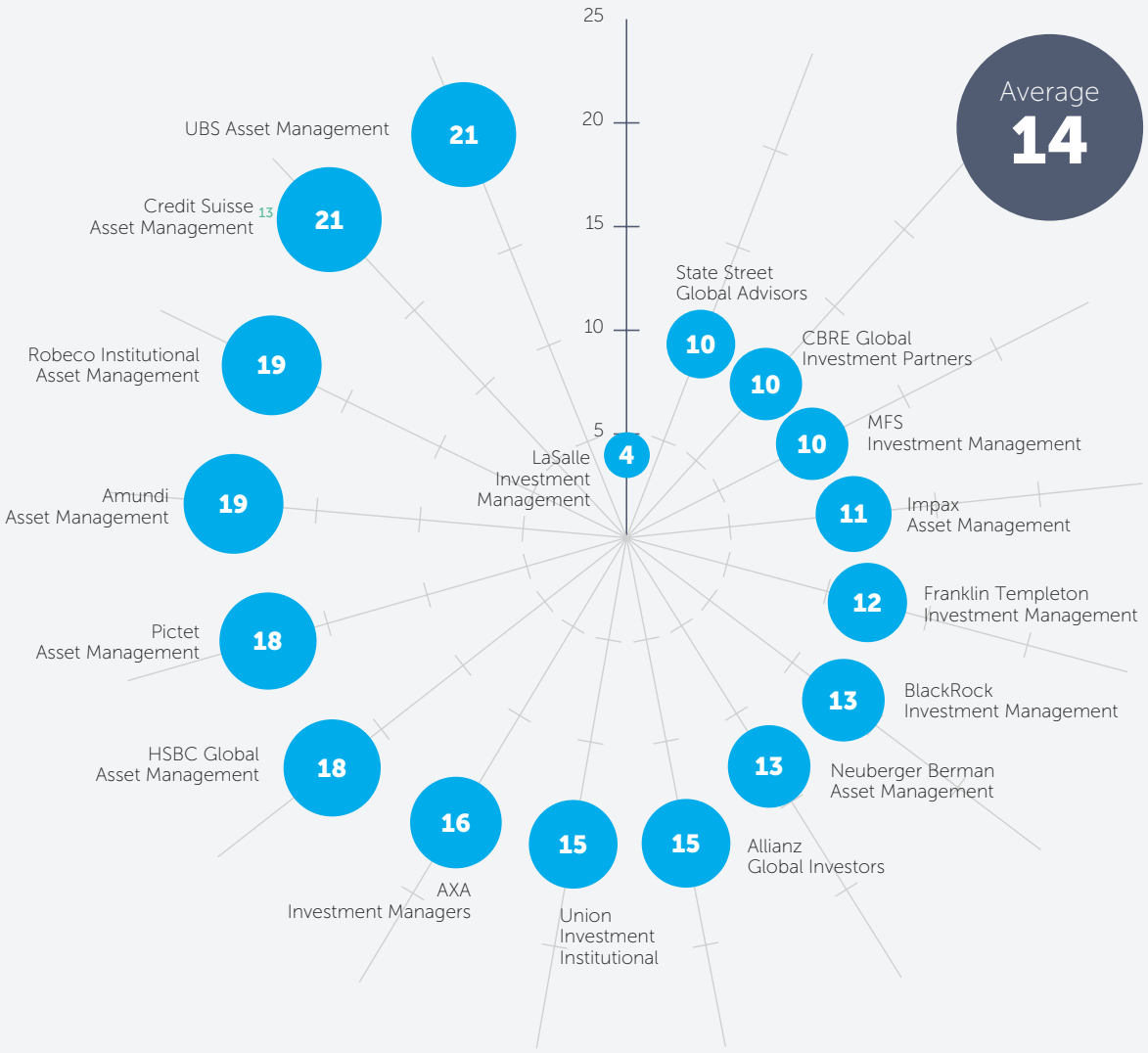
Principle 6
We will each report on our activities and progress towards implementing the Principles.

Source: https://www.unpri.org/about-us/what-are-the-principles-for-responsible-investment

Similarly, all asset managers are members of the NZAM initiative and thus support the climate compatibility of financial flows. Also, **FDC's asset managers are all investor participants within Climate Action 100+**.[11] They are thus engaging with the world's largest corporate greenhouse gas emitters to take necessary action on climate change. Equally, **FDC's asset managers adhere to the TCFD recommendations** with the aim to effectively disclose climate-related risks and opportunities through their existing reporting processes. To summarise, FDC's asset managers are members of various projects, initiatives and associations active in the field of sustainable development and responsible investment. **On average, an asset manager is member of 14 initiatives whilst individual memberships can range between 4 and 21**.[12]

11 The two asset managers in charge of FDC's real estate sub-funds are not included as Climate Action 100+ is not directly targeting real estate.
12 FDC's asset managers might have a higher number of memberships. For reasons of comparability and clarity, FDC has decided to show only a selection of memberships that FDC believes are particularly widespread among asset managers (being in total 32 different memberships).

Initiatives, networks and industry associations of FDC's asset managers (non-exhaustive list)



13 Effective 30 August 2024, Credit Suisse Asset Management has merged with UBS Asset Management and FDC's portfolio management agreement has been transferred to UBS Asset Management.

Initiatives, networks and industry associations of FDC's asset managers (non exhaustive list)

Name	Website	Number of memberships
Access to Medicine Foundation	https://accesstomedicinefoundation.org/	4
Carbon Disclosure Project	https://www.cdp.net/	14
Climate Action 100+	https://www.climateaction100.org/	15
Climate Bonds Initiative	https://www.climatebonds.net/	10
Corporate Support Group of the Red Cross	https://www.icrc.org/en/partnering-your-company#corporate-support-group	1
Equator Principles	https://equator-principles.com/	2
European Sustainable Investment Forum	https://www.eurosif.org/	8
FAIRR Initiative	https://www.fairr.org/	10
Forum Nachhaltige Geldanlagen	https://www.forum-ng.org/de/	3
Global Impact Investing Network	https://thegiin.org/	10
The Global ESG Benchmark for Real Assets	https://www.gresb.com/nl-en/	12
Global Reporting Initiative	https://www.globalreporting.org/	3
International Corporate Governance Network	https://www.icgn.org/	12
International Capital Market Association	https://www.icmagroup.org/	7
Klimastiftung Schweiz	https://www.klimastiftung.ch/de/	1

Name	Website	Number of memberships
Montréal Carbon Pledge	https://www.unpri.org/sustainability-issues/climate-change/montreal-carbon-pledge-is-now-closed	4
Net Zero Asset Managers Initiative	https://www.netzeroassetmanagers.org/	17
Verband für nachhaltiges Wirtschaften	https://www.oebu.ch/	1
Ocean Panel Advisory Network	https://oceanpanel.org/our-advisory-network/	1
Operating Principles for Impact Management	https://www.impactprinciples.org/	5
Principles for Responsible Investment	https://www.unpri.org/	17
Roundtable on Sustainable Palm Oil	https://rspo.org/	5
Sustainability Accounting Standards Board	https://sasb.ifrs.org/	9
Science Based Targets Initiative	https://sciencebasedtargets.org/	7
Sustainable Finance Geneva	https://sfgeneva.org/	4
Swiss Sustainable Finance	https://www.sustainablefinance.ch/	8
Task Force on Climate-related Financial Disclosures	https://www.fsb-tcfd.org/	17
The Wolfsberg Group	https://wolfsberg-group.org/	5
Task Force on Nature-related Financial Disclosures	https://tnfd.global/	10
UN Global Compact	https://unglobalcompact.org/	14
UN-convened Net zero Asset Owner Alliance	https://www.unepfi.org/net zero-alliance/join-the-alliance/	1
United Nations Environment Programme Finance Initiative	https://www.unepfi.org/	8

Another important factor in responsible and sustainable investing is engagement. Engagement describes the process of actively seeking dialogue with the management of companies to influence the latter. This can happen in various forms, such as conference calls, face-to-face meetings or letters addressed to the management of a company in question. In particular, 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.

Engagement can be conducted either directly by the asset manager, with the support of a specialised engagement provider or by joining an engagement initiative such as Climate Action 100+. Engagement is most common for corporate investment, but can also be conducted for real estate investments. Real estate managers may, for example, search the dialogue with tenants on ESG topics.

FDC's responsible investor policy puts particular focus on engagement and values asset managers that actively seek dialogue with companies and who have established a consistent and wide-ranging engagement policy. In that respect, **FDC's asset managers all pursue an engagement policy that is in general consistent with the sustainability goals they publicly support. In addition, most asset managers confirmed that the principles of dialogue are compatible with the net zero emissions target by 2050**.

The asset managers' overall engagements covered various ESG topics. In 2023, most engagements did address governance issues, followed by environmental and social issues.

Engagement share per topic[14]

	Environmental	Social	Governance
Allianz Global Investors	31%	18%	51%
Amundi	44%	24%	32%
AXA Investment Managers (money market)	45%	42%	13%
AXA Investment Managers (bonds)	29%	53%	18%
BlackRock	26%	24%	50%
CBRE Global Investors	73%	16%	11%
Franklin Templeton	53%	13%	34%
HSBC Asset Management (bonds)	16%	19%	65%
HSBC Asset Management (equities)	26%	31%	43%
Impax Asset Management	45%	27%	27%
LaSalle	34%	33%	33%
MFS	40%	30%	30%
Neuberger Berman	26%	28%	46%
Pictet Asset Management	37%	22%	41%
Robeco	28%	33%	39%
State Street Global Advisors (Paris Aligned equities)	14%	34%	52%
State Street Global Advisors (global equities)	19%	31%	50%
State Street Global Advisors (small cap equities)	7%	37%	56%
UBS	40%	22%	38%
Union Investment	43%	31%	26%
Average	Environmental **34%**	Social **28%**	Governance **38%**

14 Following the acquisition by UBS Asset Management, Credit Suisse Asset Management did not produce their own Active Ownership report. Instead, it was included in the report from UBS Asset Management.

The number of engagements conducted in 2023 varies widely among asset managers. Some asset managers had dialogues with only a few companies, while others had dialogues with more than 2,500 companies. **For almost 99% of FDC's assets[15], the asset managers indicated that they carry out engagement activities with investments part of the mandate(s) they manage on FDC's behalf**. Below are a few examples of engagement by different asset managers throughout 2023.

Amundi ASSET MANAGEMENT

Since 2021, Amundi Asset Management has been working with a German utility company on decarbonisation, focusing on a coal exit in line with Amundi Asset Management's coal policy and a targeted net zero campaign. The key player in the European energy sector has shifted its focus to renewables, particularly wind power, after Germany's nuclear phase-out in 2022, and now plans to end coal generation by 2028 to achieve climate neutrality by 2035.

HSBC Asset Management

Since 2020, HSBC Global Asset Management engages with a company in the healthcare sector, focusing on improving its human rights policy and reporting standards. This objective was successfully achieved within 18 months, with the company expanding its human rights reporting in its most recent Corporate Social Responsibility report, now covering its supply chain, distribution network and employee base. As a result, the company's ESG score improved by 10%.

ROBECO The Investment Engineers

In December 2020, Robeco Institutional Asset Management launched a three-year dialogue with a construction materials company, focusing on aligning its emissions path with the Paris Agreement and improving various aspects of its decarbonisation strategy. Over the three years, the company made significant progress, including reporting on climate-related risks, validating emissions reduction targets with the SBTi for a 30% reduction by 2030 as well as aligning climate lobbying practices with the Paris Agreement.

UBS

Since 2019, UBS Asset Management engages with a company's leadership, providing feedback on their climate change plan and raising issues such as community relations at a coal mine as well as health and safety improvements. In these engagements, the company outlined several actions to address the community relations at the coal mine.

Union Investment

Union Investment Institutional has been engaging with an energy company to divest its oil sands business and invest in renewable energies. As a result of this ongoing engagement, the company divested the oil sands business in 2023. In addition, the company increased its mid-term goal for renewable energies to 100 megawatt by 2030.

15 The remaining portion relates to an indexed emerging markets bond mandate investing in government bonds only. Currently, government bonds are out of scope of the engagement activities of the asset manager in charge of given sub-fund.

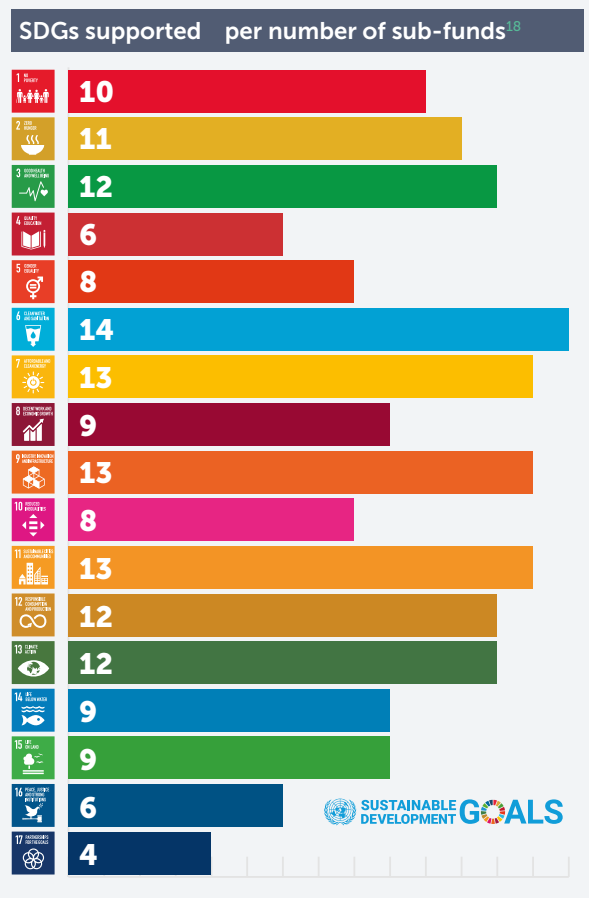
STATE STREET GLOBAL ADVISORS At the May 2023 annual meeting, State Street Global Advisors voted against all members of a company's safety committee due to inadequate oversight of safety practices. Prior to the annual meeting, State Street Global Advisors highlighted the need for vigilant stakeholder engagement and transparency in addressing safety risks. By October 2023, the company announced significant improvements, including environmental remediation in various locations, new board appointments, enhanced safety oversight and the integration of safety metrics into executive compensation plans.

PICTET Asset Management Pictet Asset Management has worked with an Indonesian bank to improve transparency and environmental lending policies in its agricultural and microcredit sectors. Ongoing engagement aims to influence the long-term strategy for managing biodiversity risks across its loan portfolio.

NEUBERGER BERMAN Neuberger Berman Asset Management worked with a company to improve its ESG reporting and sustainability initiatives, advocating for improved disclosure. Discussions with key management took place. The company significantly improved its ESG reporting and set new targets for water management, health and safety, community engagement, diversity and inclusion as well as circular economy initiatives.

4.2.2.5. Focus on SDG coverage

Closely linked to the UN Global Compact are the UN 17 SDGs. They represent a political objective to be achieved worldwide. They also cover a wide range of sustainable development aspects and combine economic, environmental, social and good corporate governance objectives. FDC is aware that these 17 goals cannot all be addressed in the same way and to the same extend but nevertheless considers all areas important. While there is still lack of standards for quantifying the contribution of portfolios to SDG alignment, FDC encourages its asset managers to report on the sustainable impact of their investments on such a basis.[16] The following graphs show that **each goal is supported in the management of FDC's SICAV**.[17]



16 As the SDGs are usually applied to companies, this is not applicable to FDC's two emerging markets bonds sub-funds investing in government bonds only.
17 As per asset manager applied mapping and exposure methodology and subject to available data and/or metrics. Some asset managers indicated that (part of) the mandate supports an SDG if the sub-fund includes securities that are strongly aligned or aligned with that SDG. AXA Investment Managers: SDG data is not available for each corporate issuer. The portfolio coverage is thus not complete. Allianz Global Investors: based on proprietary methodology based on business activities. Amundi Asset Management: based on MSCI Sustainable Impact Metrics, corporates only. Franklin Templeton Investment Management: corporates only. BlackRock Investment Management: based on MSCI SDG alignment methodology. Union Investment Institutional: exposure calculated using revenue share from products and services with positive impact/negative impact according to the SDGs. Information primarily derived from external ESG data providers. In addition, proprietary research is employed for improved coverage and consistency, specifically for companies not yet covered by external providers. Robeco Institutional Asset Management: companies are assessed with Robeco's Company SDG Framework. Impax Asset Management: Impax's classification of the investment universe enables it to link the percentage of revenues of each subsector to the most relevant SDGs. UBS Asset Management: share of revenues aligning with the UN SDGs. LaSalle: LaSalle endeavours to develop processes to measure water consumption for each direct investment and embodied carbon in materials with respect to new developments in each region and to promote sustainable practices through employee and tenant engagement. Energy, carbon, water and waste intensity are tracked on an annual basis. LaSalle will endeavour to measure and report annually the megawatt usage of energy sourced from renewables and improvements in "energy use intensity" measurement. LaSalle integrates climate risk assessments into each step of the investment lifecycle and investment decision making processes. In addition, LaSalle will implement climate change training and measure the percentage of employees receiving climate/carbon training. CBRE Global Investment Partners: GRESB is used for monitoring and measuring ESG topics relevant for real estate industry. GRESB has completed a mapping exercise to identify the material SDGs. SDG 1, 2, 4, 10, 14, 15 and 16 are not material for real estate sector.
18 Please note that (part of) a sub-fund supporting an SDG does not necessarily mean that this SDG is part of the investment approach. A SDG might be supported while exposure is not being meaningful at a given moment.

SDGs supported per asset manager (% of portfolio supporting given SDG)[19]

Asset Manager		1 NO POVERTY	2 ZERO HUNGER	3 GOOD HEALTH AND WELL-BEING	4 QUALITY EDUCATION	5 GENDER EQUALITY	6 CLEAN WATER AND SANITATION	7 AFFORDABLE AND CLEAN ENERGY	8 DECENT WORK AND ECONOMIC GROWTH	9 INDUSTRY, INNOVATION AND INFRASTRUCTURE	10 REDUCED INEQUALITIES	11 SUSTAINABLE CITIES AND COMMUNITIES	12 RESPONSIBLE CONSUMPTION AND PRODUCTION	13 CLIMATE ACTION	14 LIFE BELOW WATER	15 LIFE ON LAND	16 PEACE, JUSTICE AND STRONG INSTITUTIONS	17 PARTNERSHIPS FOR THE GOALS
Allianz Global Investors (EUR bonds)	8	✓	✓	✓			✓	✓		✓		✓		✓				
Allianz Global Investors (Global small cap equities)	11	✓	✓	✓			✓	✓		✓		✓	✓	✓	✓	✓		
Allianz Global Investors (EUR green bonds)	16	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Amundi Asset Management	17	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
AXA Investment Managers (EUR money market)	16	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
AXA Investment Managers (Global bonds)	16	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
BlackRock	12	✓	✓	✓			✓	✓	✓	✓	✓	✓	✓	✓	✓			
CBRE Global Investors	10			✓		✓	✓	✓	✓	✓		✓	✓	✓				✓
Franklin Templeton	2		✓				✓											
Impax Asset Management	5						✓	✓		✓		✓	✓					
LaSalle	2												✓	✓				
Neuberger Berman	16	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Robeco The Investment Engineers	17	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
UBS	15	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Union Investment	6			✓			✓	✓		✓		✓				✓		

19 As the SDGs are usually applied to companies, this is not applicable to FDC's asset managers in charge of the two emerging markets bonds sub-funds investing in government bonds only. Please note that (part of) a sub-fund supporting an SDG does not necessarily mean that this SDG is part of the investment approach. A SDG might be supported while exposure is not being meaningful at a given moment.

4.2.3. Overarching criteria: LuxFLAG labels and SFDR compliance

Whilst the implemented sustainable approaches of FDC's asset managers may vary, FDC endeavours to implement overarching criteria. These criteria are currently the LuxFLAG label eligibility criteria as well as the SFDR regulation. It is worth mentioning that **although FDC's SICAV is out of scope of given regulation, FDC has decided to voluntarily comply with the SFDR regulation in the interest of transparency and to be able to report in a predefined and standardised format**.

LUXFLAG
Supporting Sustainable Finance

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

In order to obtain a LuxFLAG label, each applicant must meet predefined eligibility criteria assessed by an independent eligibility committee composed of industry academics, experts and analysts. For example, in order to obtain an ESG label, the applicant must describe its ESG investment strategy and demonstrate how it integrates these criteria throughout its investment process.

In addition, the applicant must screen its overall portfolio on the basis of ESG criteria and apply an exclusion list. As per the end of December 2023, **fifteen sub-funds representing 100% of FDC's actively managed listed assets and more than 11 billion euros are holding a LuxFLAG label**.

LuxFLAG labelled sub-funds

Asset manager	Sub-Fund	Label type	Value of holdings
ROBECO The Investment Engineers	FDC SICAV Global Equities – Active 1	ESG [20]	816.069.739
HSBC Asset Management	FDC SICAV Global Equities – Active 2	ESG	775.919.492
Union Investment	FDC SICAV Global Equities – Active 3	ESG	794.120.852
Allianz Global Investors	FDC SICAV Global Equities Small Cap – Active 1	ESG	591.606.355
MFS	FDC SICAV EMMA Equities – Active 1	ESG	616.391.099
Allianz Global Investors	FDC SICAV EUR Bonds – Active 1	ESG	920.982.752
HSBC Asset Management	FDC SICAV EUR Bonds – Active 2	ESG	948.509.899
Amundi Asset Management	FDC SICAV EUR Bonds – Active 3	ESG	989.016.862
Allianz Global Investors	FDC SICAV EUR Green Bonds – Active 1	ESG	198.611.458
Franklin Templeton	FDC SICAV Global Bonds – Active 1	ESG	801.012.185
AXA Investment Managers	FDC SICAV Global Bonds – Active 2	ESG	988.167.279
Neuberger Berman	FDC SICAV Global Bonds – Active 3	ESG	790.937.919
Amundi Asset Management	FDC SICAV EMMA Bonds – Active 1	ESG	286.451.765
AXA Investment Managers	FDC SICAV EUR Money Market – Active 1	ESG	1.145.242.834
IMPAX Asset Management	FDC SICAV Global Equities Sustainable Impact – Active 1	ENVIRONMENT [21]	422.196.070
			11.085.236.560

20 Label eligibility criteria can be viewed at https://luxflag.org/labels/esg/.
21 Label eligibility criteria can be viewed at https://luxflag.org/labels/environment/.

According to the SFDR classification system, a fund will either be classified as 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 objectives and may invest in sustainable investments, but do not have sustainable investing as core objective.
- **Article 9:** funds that make a positive impact on society or the environment through sustainable investments and have a clear sustainable investment objective.

SFDR introduced mandatory disclosures at different levels and depending on the SFDR classification. Entity-level information on how sustainability risks and adverse sustainability impacts are taken into account in the investment decision making process should be made available. Since the management of the SICAV's assets is exclusively delegated to external asset managers, their approaches to sustainabilty risks and adverse sustainability impacts are also put into practice throughout the management of the assets of FDC's SICAV.[22]

This report puts thus particular focus on product level disclosures. In essence, Article 6 funds must disclose the manner in which sustainability risks are integrated into their investment decisions as well as an assessment of the likely impacts of sustainability risks on the returns of the financial products. In addition to the information on sustainability risks, Article 8 and 9 funds must disclose on a variety of sustainability and ESG topics to be materialised within:

- specific website disclosures;
- pre-contractual disclosures as per pre-defined templates;[23]
- periodic disclosures as per pre-defined templates.[24]

22 FDC's asset managers' approaches to sustainable investing in accordance with the requirements of the SFDR regulation are made available on their public websites and are updated on a regular basis.
23 Templates as provided by the ESMA: https://www.esma.europa.eu/document/sfdr-templates.
24 Ibid.

The below table summarises the main information to be provided within website as well as pre-contractual disclosures.

Website disclosures		Pre-contractual disclosures	
Article 8	Article 9	Article 8	Article 9
The environmental and/or social characteristics promoted and the share of sustainable investments, if applicable.	The sustainable investment objective and its monitoring and how the investments cause no significant harm to the sustainable investment objective.	The environmental and/or social characteristics promoted and the share of sustainable investments, if applicable.	The sustainable investment objective and share of sustainable investments. Information on how the sustainable investments do not cause significant harm to any environmental or social sustainable investment objective.
The investment strategy pursued to promote the environmental and/or social characteristics.	The investment strategy pursued to meet the sustainable investment objective.	Information on the sustainability indicators that are used to measure the attainment of each of the environmental and/or social characteristics promoted.	Information on the sustainability indicators that are used to measure the attainment of the sustainable investment objective. Information if indicators for adverse impacts on sustainability factors have been taken into account. Information if the sustainable investments are aligned with the OECD Guidelines for Multinational Enterprises and the UN Guiding Principles on Business and Human Rights.
The proportion of investments aligned/not aligned with the promoted environmental and/or social characteristics.	The proportion of sustainable investments.	The proportion of investments aligned/not aligned with the promoted environmental and/or social characteristics.	The proportion of sustainable investments.
The methodologies used to assess and monitor the promoted environmental and/or social characteristics.	The methodologies used to assess and monitor the sustainable objective.	The investment strategy followed to promote the environmental and/or social characteristics as well as the binding elements to attain each of the environmental and/or social characteristics promoted.	The investment strategy followed to meet the sustainable investment objective as well as the binding elements to attain the sustainable investment objective.
The data sources and their processing.		Information on the policy to assess good governance practices of the investee companies.	
The constraints related to methodology and data.		Information if principal adverse impacts on sustainability factors are considered.	
The due diligence conducted for underlying assets.		Information if sustainable investments with an environmental objective are aligned with the EU Taxonomy and if investments in fossil gas and/or nuclear energy related activities that comply with the EU Taxonomy are made.	
The engagement policies.		Information on the minimum share of investments in transitional and enabling activities, the minimum share of sustainable investments with an environmental objective that are not aligned with the EU Taxonomy as well as the minimum share of socially sustainable investments.	
The reference benchmark, if applicable.		The reference benchmark, if applicable.	

Within the periodic disclosures, it should notably be reported on how the above mentioned characteristics and/or objectives have been met during a reference period.

As per the end of December 2023, **sixteen sub-funds representing 100% of FDC's actively managed listed assets and one indexed sub-fund were categorised as Article 8 or 9 product**.

Article 8 and Article 9 categorised sub-funds

Asset manager	Sub-Fund	SFDR classification	Value of holdings
ROBECO The Investment Engineers	FDC SICAV Global Equities – Active 1	Article 8	816.069.739
HSBC Asset Management	FDC SICAV Global Equities – Active 2	Article 8	775.919.492
Union Investment	FDC SICAV Global Equities – Active 3	Article 8	794.120.852
Allianz Global Investors	FDC SICAV Global Equities Small Cap – Active 1	Article 8	591.606.355
STATE STREET GLOBAL ADVISORS	FDC SICAV Global Equities Paris Aligned – Indexed	Article 8	549.108.551
MFS	FDC SICAV EMMA Equities – Active 1	Article 8	616.391.099
Allianz Global Investors	FDC SICAV EUR Bonds – Active 1	Article 8	920.982.752
HSBC Asset Management	FDC SICAV EUR Bonds – Active 2	Article 8	948.509.899
Amundi	FDC SICAV EUR Bonds – Active 3	Article 8	989.016.862
FRANKLIN TEMPLETON	FDC SICAV Global Bonds – Active 1	Article 8	801.012.185
AXA Investment Managers	FDC SICAV Global Bonds – Active 2	Article 8	988.167.279
NEUBERGER BERMAN	FDC SICAV Global Bonds – Active 3	Article 8	790.937.919
Amundi	FDC SICAV EMMA Bonds – Active 1	Article 8	286.451.765
AXA Investment Managers	FDC SICAV EUR Money Market – Active 1	Article 8	1.145.242.834
IMPAX Asset Management	FDC SICAV Global Equities Sustainable Impact – Active 1	Article 9	422.196.070
Allianz Global Investors	FDC SICAV EUR Green Bonds – Active 1	Article 9	198.611.458
			11.634.345.111

The SICAV's SFDR disclosures on the integration of sustainability risks are referenced within the SICAV's issue document published on FDC's website: https://fdc.public.lu/en/strategie-investissement/allocation-strategique-fdc.html.

An example of website, pre-contractual and periodic disclosures in relation to one sub-fund has been provided in Appendix 3. The complete SFDR related disclosures can be found within FDC's sustainability-related disclosures published on its website: https://fdc.public.lu/en/investissement-responsable/approches-durables-gerants-fdc.html

4.2.4. Dedicated investments with positive impact

By enabling companies to finance low-carbon projects, green bonds are a critical lever in financing the ecological transition. Good practices in terms of transparency as well as regular communication on the allocation of the funds are in fact essential to assess the environmental impact of such investments.

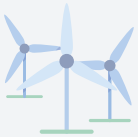
In early 2019 FDC launched a sub-fund investing exclusively in green bonds. In order to ensure the "greenness" of eligible bonds, these must be included in a benchmark whose inclusion criteria are based on ICMA's GBP. These are based on four main pillars:

- use of funds;
- project selection and evaluation process;
- project management;
- reporting.

Via this sub-fund, amounting to nearly 300 million euros at the end of June 2024, FDC is financing projects with a positive impact on the environment.

TYPE OF PROJECTS FINANCED AND IMPACT OF THE DEDICATED GREEN BOND INVESTMENTS FOR THE YEAR 2023

Projects financed [25]



34.6%
Renewable Energy

29.4%
Green Buildings

21.7%
Clean Transportation

4.1%
Water Management

3.5%
Energy Efficiency

2.8%
Climate Adaptation

1.8%
Sustainable Resources

1.5%
Pollution Control

0.6%
Circular Economy

25 Source: Allianz Global Investors, MainStreet Investment Partners, data for year 2023 as of 10/09/2024. Data for 100% of the bonds held (total of 210 bonds) during the year. 92.8% of the bonds have reported allocation data of funded projects while an additional component of 7.2% which has been estimated.

Share/Number of bonds contributing positively to the SDGs [26]

89.9%
187

84.4%
174

83.2%
161

75.0%
156

43.3%
80

34.4%
59

28.7%
39

28.1%
71

24.3%
31

12.5%
15

10.8%
11

7.8%
11

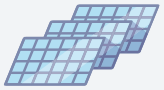
5.7%
5

5.6%
5

1.4%
2

0.7%
1

Impact of the funded projects during the year 2023



76
MW
Renewable energy capacity added

85,860
MW/h
Renewable energy produced

4,683
MW/h
Energy saved

1,567
Ha
Land restored / reforested / certified

81,151
Tons
CO_2 equivalent avoided

185,966,947
Litres
Water saved

3,491
Tons
Waste treated / prevented

1,333
Electric
Cars / Trains deployed

Looking at the previous graphs, FDC financed mainly renewable energy projects, green buildings as well as clean transportation through its green bond mandate during 2023. Moreover, the green bond portfolio, which averaged approximatively 190 million euros in 2023, contributed to 16 SDGs, and particularly to the 7th SDG (affordable and clean energy), the 13th SDG (climate action), the 11th SDG (sustainable cities and communities) as well as the 9th SDG (industry innovation and infrastructure). In terms of yearly environmental impact, the funded projects of the portfolio allowed for example to avoid at least 81,151 tons of CO_2 emissions, to generate 85,860 megawatt hours of renewable energy and to save nearly 186 million litres of water.

26 Source: Allianz Global Investors, MainStreet Partners. Data as of 10/09/2024 for year 2023. 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 (total of 210 bonds) during the year. 75.5% of the bonds have SDG contribution data of funded projects while an additional component of 24.5% which has been estimated.

Equally, FDC launched in 2019 a sub-fund that invests only in equities of listed companies that intend to generate a social or environmental impact, in addition to a financial return. Moreover, the investments of the given sub-fund have to cover at least 5 of the 17 SDG's and the asset manager in charge of this mandate has to measure and report on the impact of its portfolio on the environment. At the end of June 2024, almost 460 million euros were invested into that sub-fund.

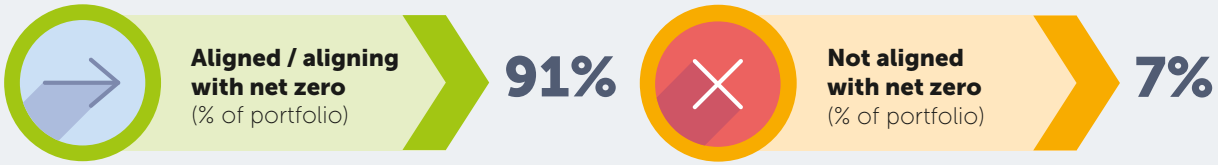
IMPACT OF THE DEDICATED SUSTAINABLE IMPACT EQUITY INVESTMENTS FOR THE YEAR 2023

Financed and avoided emissions[27]

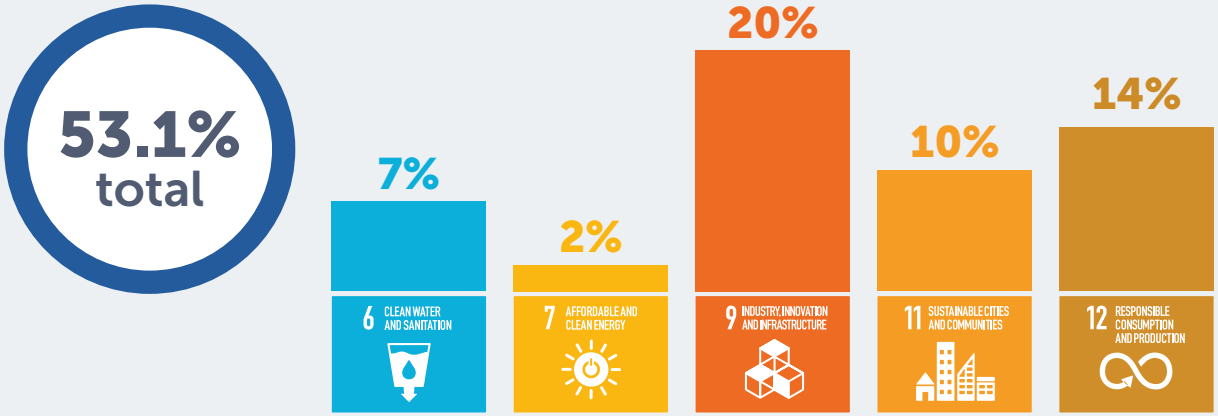
	Total portfolio (€ 422 mn)	**Equivalent to**
Avoided GHG emissions	**85,960** tCO_2e	**61,400** cars off the road
Water provided / saved / treated	**26,760** megalitres	**209,230** households' water consumption
Renewable energy generated	**11,250** MWh	**3,130** households' electricity consumption
Materials recovered / waste treated	**51,850** tonnes	**52,910** households' waste consumption

27 Source: Impax Asset Management. Based on most recently reported annual environmental data for holdings and assets under management as of 31 December 2023. Impax's impact methodology is based on equity value.

Net zero alignment[28]



SDG alignment[29]



During 2023, the investments had a positive impact on various SDGs, namely the 6th (clean water and sanitation), the 7th (affordable and clean energy), the 9th (industry, innovation and infrastructure), the 11th (sustainable cities and communities) and the 12th (responsible consumption and production). The nature of Impax's investment philosophy results in meaningful exposure to the SDGs as a consequence of the investment process, which is focused on investments enabling and benefiting from the transition to a more sustainable economy. Impax's investment process does not analyse alignment with SDGs as an investment objective or component of portfolio construction. Instead, Impax uses the SDG framework to understand which portfolio companies are involved in activities that contribute towards addressing these critical global challenges, as a mapping and reporting exercise. Alignment is evaluated with this framework by identifying the proportion of portfolio companies' activities, measured in revenue percentages that contribute to the achievement of the SDGs.

In that way, these investments avoided for example CO_2 emissions equivalent to 85,960 tons and produced renewable energy representing 11,250 megawatt hours.

As a signatory of the NZAM initiative, Impax supports the goal of net zero GHG emissions by 2050 or sooner, in line with global efforts to limit warming to 1.5°C. As part of that initiative, Impax has adopted a target that 100% of its assets covered by the NZAM commitment – being all actively managed listed equities and private markets investments – will be "transition aligned" or "transition aligning" by 2030. Impax's group level net zero targets cascade to, and are monitored at, the portfolio level. In this context, FDC's portfolio has a net zero alignment share of 91%.

In early 2021, in-depth discussions were held on the advisability and feasibility of implementing additional sustainable criteria at the level of FDC's portfolio management mandates. **In order not to limit the consideration of sustainable criteria to active management only, particular focus has been placed on indexed management**.

The idea of replacing the current traditional benchmarks to be replicated by a sustainable or climate index was quickly abandoned. Firstly, the growing number of such benchmarks makes it very difficult to choose the most appropriate one. Secondly, such benchmarks do often provide less diversification and can show higher return fluctuations. Lastly, choosing such an index and strictly adhering to the methodology used by the given index provider would at the end constitute an active management decision taken by the FDC. However, FDC considers active asset management decisions to be the responsibility of asset managers.

28 Figures may not add to 100% due to cash. Impax's net zero methodology is based on the Net Zero Investment Framework Paris Aligned Asset Owners, an outcome of the Paris Aligned Investment Initiative (PAII).
29 Figures above are based on Impax Asset Management internal data. Performance is not a consideration in the selection of the representative account. Total revenue exposure may not equal the aggregate of individual SDG amounts due to rounding.

Instead and as a first step, **it was decided to launch a tender regarding the awarding of a new indexed equity mandate to be managed against the traditional MSCI World benchmark while at the same time complying with the Paris Agreement**. It was thus up to the tendering companies to frame themselves, via an innovative approach within a competitive environment, a meaningful Paris Agreement aligned indexed strategy based on their own know-how, resources and research.

Following a successful tender, **this new mandate was finally launched in May 2022 with a size of 500 million euros** under the responsibility of State Street Global Advisors. At the end of June 2024, given sub-fund amounted to almost 630 million euros.

Complementary and as foreseen by FDC's revised investment strategy for the years 2023 to 2027, a second indexed Paris Aligned mandate as well as a mandate considering investments in unlisted infrastructure assets with a clear focus on clean energy were tendered respectively in 2023 and 2024, both with a target size of 500 million euros. While the first mandate, targeting investments in global bonds and launched in January 2024, was awarded to BlackRock Investment Management, the second one is foreseen to be launched in early 2025 and will be managed by Ardian France.

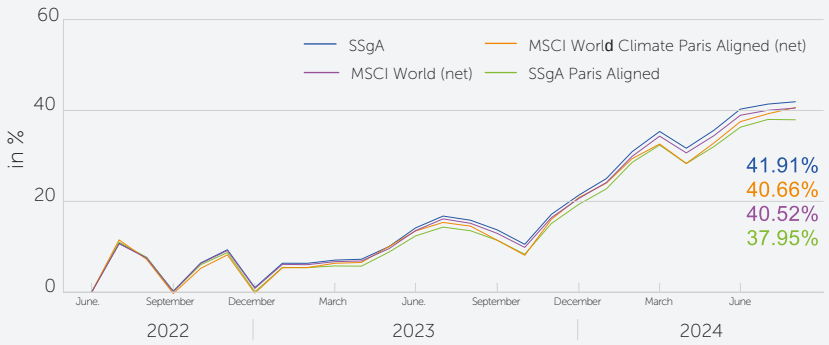
Case study: focus on performance and risk of FDC's indexed global equities Paris Aligned portfolio

State Street Global Advisors (SSgA) is managing a traditional indexed global equities sub-fund as well as the indexed global equities Paris Aligned sub-fund. Both should replicate the performance of the standard MSCI World benchmark. Considering that both sub-funds are managed by the same asset manager, identical resources and capabilities are used and FDC can thus assess in a transparent and unbiased way the impact on risk and performance of adapting the traditional strategy to fulfill the Paris Aligned criteria.

While the Paris Aligned sub-fund has been launched on 24 May 2022, below performance is measured from 1st July 2022 onwards, this to minimise the impact of initial portfolio construction and implementation costs, to the end of August 2024.

Yearly performances (%)	2022	2023	August 2024
SSgA Global Equities[30]	1.03	20.14	16.92
MSCI World (net)[31]	0.86	19.61	16.46
Difference	0.17	0.53	0.46
SSgA Global Equities	1.03	20.14	16.92
MSCI World Climate Paris Aligned (net)[32]	-0.19	21.08	16.39
Difference	1.22	-0.94	0.53
SSgA Global Equities Paris Aligned[33]	0.11	19.23	15.57
MSCI World (net)	0.86	19.61	16.46
Difference	-0.75	-0.38	-0.89
SSgA Global Equities Paris Aligned	0.11	19.23	15.57
MSCI World Climate Paris Aligned (net)	-0.19	21.08	16.39
Difference	0.30	-1.85	-0.82

30 Performance data of sub-fund is based on net asset value data as provided by the central administration.
31 Source: Bloomberg. Benchmark shown is the MSCI World Net Total Return USD Index (Bloomberg ticker NDDUWI) converted into euro.
32 Source: Bloomberg. Benchmark shown is the MSCI World Climate Paris Aligned Index (Bloomberg ticker MXWOCLPA) converted into euro.
33 Performance data of sub-fund is based on net asset value data as provided by the central administration.



Over given reference period, the Paris Aligned portfolio could not achieve the same performance levels as those of the traditional portfolio and, albeit on a smaller scale, also of the MSCI World. A similar conclusion can also be drawn when performance is compared to the MSCI World Climate Paris Aligned benchmark.

It should also be noted that the Paris Aligned portfolio was less diversified and showed higher risk. While the Paris Aligned portfolio did only invest in approximatively 500 companies, the traditional sub-fund did invest in some 1,400 companies. Similarly, the MSCI World index included 1,410 constituents while the MSCI World Climate Paris Aligned index was narrowed down to 594 constituents at the end of September 2024.[34]

Index characteristics

	MSCI World Climate Paris Aligned	MSCI World
Number of constituents	594	1,410
	Weight (%)	
Largest	5.11	4.85
Smallest	0.01	0.00
Average	0.17	0.07
Median	0.08	0.03

Risk can be assessed through tracking error. The tracking error is an indicator that measures the risk of a portfolio's performance diverging from that of its benchmark. The higher the tracking error, the more a portfolio's performance diverges from that of its benchmark. Over the reference period, the Paris Aligned sub-fund showed an annualised tracking error of 0.91% whereas the traditional portfolio displayed a tracking error of 0.23%.

Source: Bloomberg, MSCI and PPCMetrics AG

In order to fulfil its social commitment in Luxembourg, FDC is, behind the Luxembourg State, the second-most important shareholder of SNHBM. 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 over a period of 99 years. At FDC's initiative, SNHBM's shareholders carried out a capital increase in 2017. This was to ensure the continuity of SNHBM's activities and moreover, the expansion of its activities as a social property developer. It is in fact inconceivable to finance land acquisitions over such a long period of time with bank loans. FDC currently holds 22.6% of the shares of said company. In that way, the **FDC contributed in 2023 to the launch of 230 affordable housing units as well as the realisation of 160 affordable housing units. In addition, more than 950 units were still in progress.**[35]

Additionally, in 2020 FDC acquired the residential building Kräizerbierg in Grevenmacher. That building, with a gross floor area of 3,730 m² and comprising 23 flats, is leased by FDC to the Fonds du logement for a period of 20 years. **In the context of low-cost housing rental**, the Fonds du logement ensures **the said units are made available to beneficiaries referred to in the amended law of 25 February 1979 on housing aid.**[36] **Further real estate projects in FDC's pipeline do foresee the construction of additional affordable housing units representing some 93,000 m² of gross floor area**.

Finally, in the agricultural and forestry sector, FDC owns 691 hectares of forest. These woods are subject to the PEFC certification. In mid-2021, **part of FDC's forestry holdings has been declared natural reserve**.

34 Source: MSCI World Index (USD) and MSCI World Climate Paris Aligned Benchmark Select Index (USD) factsheets as of September 30, 2024.
35 SNHBM Rapport annuel 2023.
36 This includes the rental of low-cost social housing to low-income households, large families, the elderly and the physically handicapped as well as the creation of hostels for immigrant workers. It also covers the renting of social housing to legal persons not engaged in profit-making activities and whose corporate purpose includes the provision of housing to disadvantaged population groups.

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

In order to determine the exact value of negative emissions (negative emissions permanently remove CO_2 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 that a hectare of forest can store an average of 10.6 tonnes of CO_2 per year.[37] Thus **FDC's forest estate should absorb nearly 7,500 tons of CO_2 on an annual basis**.

4.2.5. Climate analyses and inherent risk monitoring

As already mentioned and on an individual basis, detailed analysis and assessment of climate metrics and risks are carried out by FDC's asset managers. The management of climate risks forms an integral part of their investment process.

While the FDC encourages its asset managers to report on climate metrics and risks, the use of external service providers or tools allows FDC to have a more consolidated and independent view of climate metrics and risks and appropriate means to monitor and assess them. In addition, an alignment to a global warming limited to 2°C can be analysed.

FDC's responsible investor policy thus foresees an annual carbon footprint analysis as well as, on a three-year basis, a Paris Agreement alignment analysis and to report on the outcome of these analyses.

4.2.6. Implementation of an engagement policy

As already mentioned, FDC's responsible investor policy puts particular emphasis on engagement, especially with regard to environmental issues and greenhouse gas emissions and values asset managers that actively seek dialogue with companies and who have established a consistent and wide-ranging engagement policy.

In addition and **from an asset owner perspective, FDC's engagement policy is since 2024 put into practice through a membership of the IIGCC and by being signatory to the Climate Action 100+ initiative** as a supporting asset owner.

4.2.7. Sustainability at direct real estate level

Direct real estate investments also have an impact on society and the environment. Since 2010, **new buildings and building renovations launched by FDC have been subject to high-level BREEAM certifications. Additionally, all have received a class B in energy performance**.

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.

As a result, FDC's major buildings[38] are all labelled BREEAM Excellent. For the current major project, namely the Cité de la sécurité sociale building, a BREEAM Excellent label is also targeted. In addition, **as one of the first property developers, FDC did place particular emphasis on the reuse and recycling of materials in its recent major deconstruction operations,** in particular by complying with the law of 9 June 2022 amending the law of 21 March 2012 on waste.

Lastly, **the electrical energy supply of all administrative buildings owned and managed directly by FDC is exclusively based on renewable energy**.

37 https://environnement.public.lu/fr/publications/conserv_nature/2022/faltblatt-klimareduktion.html.
38 Building IAK located at the Kirchberg district as well as building Carrefour located at the Ville Haute district.

5. Climate analysis

Climate change is an important subject that affects all of us at the same time and to the same extent. The Paris Agreement, ratified by the Grand Duchy of Luxembourg on 4 November 2016, made this topic even more relevant.

FDC pays particular attention to climate risks. These are mainly taken into account by its various asset managers when selecting and monitoring their investments as well as via their various memberships and engagement policies. The majority of FDC's asset managers confirmed to be considering climate issues throughout the management of the mandate(s) entrusted to them. Nevertheless, it is important to FDC to carry out a separate climate analysis in order to obtain a consolidated, independent and compiled assessment and evaluation of climate risks within its portfolios. The present climate analysis is divided into two parts:

- the carbon footprints of the individual portfolios, based on data directly provided by the respective asset managers by means of a specific due diligence questionnaire ;
- a climate analysis carried out by a well-known and independent external company duly mandated by FDC for this purpose, namely the London-based company S&P Global Sustainable1 (previously Trucost).

5.1. Individual carbon metrics[39]

To address climate risks in its investment process, FDC encourages its asset managers to periodically measure and report on carbon metrics related to the portfolio(s) they manage on behalf of FDC. **Regarding carbon metrics for equities and corporate bonds, all asset managers do report on carbon intensity. Except for one asset manager, the carbon footprint is also reported. Regarding government bonds, the carbon intensity is reported for 7 out of 11 sub-funds**.[40]

It should be noted that, despite the efforts to create a standard, there are still differences between the metrics reported by asset managers. Possible reasons for the differences are varying data sources and/or providers, non-identical coverage of securities and different calculation methods. The comparison of a sub-fund with its benchmark is generally more meaningful than the comparison between sub-funds, as sub-fund and benchmark values were collected from the same asset managers and are therefore calculated using the same methodology.

For equities and corporate bonds, FDC is currently able to assess, for all sub-funds, whether the carbon intensity is lower or higher than the value of the respective benchmark. With regard to carbon footprint, such a relative performance assessment is possible for 17 out of 20 sub-funds.[41] In this context and where reported, **only one actively managed sub-fund does not present a better carbon intensity and footprint than the respective benchmark. Regarding government bonds, performance versus the benchmark is reported for 6 out of 11 sub-funds. Similarly, only one actively managed sub-fund does show a higher intensity in comparison to its benchmark**.

39 Unless otherwise stated, data and information of this section is as of 31 December 2023.
40 Money market sub-fund is not included as no exposure to government bonds.
41 Benchmarks associated to the different portfolios: MSCI World Total Return Index, MSCI World IMI Total Return Index, MSCI Small Cap World Total Return Index, MSCI Emerging Markets Total Return Index, Bloomberg Barclays Euro Aggregate – Ex Securitized Total Return Index, Bloomberg Barclays MSCI Euro Green Bond Total Return Index, Bloomberg Barclays Global Aggregate – Ex Securitized Total Return Index and JP Morgan Government Bond Index – Emerging Markets Global Diversified Composite. Without money market as carbon metrics of the benchmark associated to the given asset class cannot be calculated.

Asset manager	Management style	Equities & corporate bonds: carbon intensity provided?	Better than benchmark?	Equities & corporate bonds: carbon footprint provided?	Better than benchmark?	Sovereign bonds: carbon intensity provided?	Better than benchmark?
EUR money market							
AXA Investment Managers	active	✓	N/A	✓	N/A	N/A	N/A
EUR denominated bonds							
Allianz Global Investors	active	✓	✓	✓	✓	✗	N/A
Allianz Global Investors (green bonds)	active	✓	✓	✓	✓	✗	N/A
Amundi Asset Management	active	✓	✓	✓	✓	✗	N/A
HSBC Global Asset Management	active	✓	✓	✓	✓	✓	✓
Credit Suisse Asset Management[42]	indexed	✓	✗	✓	✗	✓	✓
Global bonds							
AXA Investment Managers	active	✓	✓	✓	✓	✓	✓
Franklin Templeton Investment Management	active	✓	✓	✓	✓	✓	✓
Neuberger Berman Asset Management	active	✓	✓	✓	✓	✓	✗
BlackRock Investment Management	indexed	✓	✗	✓	✗	✓	✓
Emerging markets bonds							
Amundi Asset Management	active	N/A	N/A	N/A	N/A	✓	Not reported
State Street Global Advisors	indexed	N/A	N/A	N/A	N/A	✗	N/A

42 Effective 30 August 2024, Credit Suisse Asset Management has merged with UBS Asset Management and FDC's portfolio management agreement has been transferred to UBS Asset Management.

Asset manager	Management style	Equities & corporate bonds: carbon intensity provided?	Better than benchmark?	Equities & corporate bonds: carbon footprint provided?	Better than benchmark?	Sovereign bonds: carbon intensity provided?	Better than benchmark?
Global equities							
HSBC Global Asset Management	active	✓	✓	✓	✓	N/A	N/A
Impax Asset Management[43]	active	✓	✗	✓	Not reported	N/A	N/A
Robeco Institutional Asset Management	active	✓	✓	✓	✓	N/A	N/A
Union Investment Institutional	active	✓	✓	✓	Not reported	N/A	N/A
State Street Global Advisors	indexed	✓	✗	✓	✗	N/A	N/A
Stare Street Global Advisors (Paris aligned)	indexed	✓	✓	✓	✓	N/A	N/A
UBS Asset Management	indexed	✓	✗	✓	✗	N/A	N/A
Global small cap equities							
Allianz Global Investors	active	✓	✓	✓	✓	N/A	N/A
State Street Global Advisors	indexed	✓	✗	✓	✗	N/A	N/A
Emerging markets equities							
MFS Investment Management[44]	active	✓	✓	✗	N/A	N/A	N/A
Pictet Asset Management	indexed	✓	✗	✓	✗	N/A	N/A

43 Carbon footprint based on data as per year 2022.
44 Carbon intensity as per 31 March 2024.

5.2. Climate analysis by S&P Global Sustainable1

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. S&P Global Sustainable1's data, tools and services enable companies and financial institutions to:

- understand their exposure to ESG factors;
- be informed of their resilience; and
- identify solutions for a more sustainable global economy.

The effects of climate change pose considerable and far-reaching risks to the global economy. Those most directly affecting businesses include physical risks posed by increased climate variability and more frequent extreme weather events, which may result in property damage, challenges linked to business continuity, and the disruption to global supply chains. Businesses also face risks associated with the transition to a low-carbon economy, including policy changes designed to discourage carbon-intensive energy use or favour more resource-efficient industries and operations.

In June 2017, the TCFD published recommendations on the disclosure of "information needed by investors, lenders, and insurance underwriters to appropriately assess and price climate-related risks and opportunities."

The TCFD provides a voluntary disclosure framework organised around four themes, designed to facilitate better disclosure. These are governance, strategy, risk management, and metrics and targets. In order for organisations to disclose in line with TCFD recommendations, they must be able to quantify or qualify the risks and opportunities facing them, linked to climate-related issues. In this context, FDC mandated S&P Global Sustainable1 to **carry out an analysis of its equity and bond portfolios** (including corporate bonds, sovereign bonds and eligible money market instruments) based on valorisations as of 31 January 2024 **in accordance with the TCFD guidelines**.

5.2.1. Carbon footprint

5.2.1.1. Carbon footprint of the equity and corporate bond portfolios

The analysis included some 6,150 companies and covered 15.14 billion euros. S&P Global Sustainable1's analysis takes into account **direct emissions and first tier indirect emissions** (D&FTI emissions), greenhouse gas emissions being quantified by S&P Global Sustainable1 as tCO_2e.[45]

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.[46]

First tier indirect emissions include:

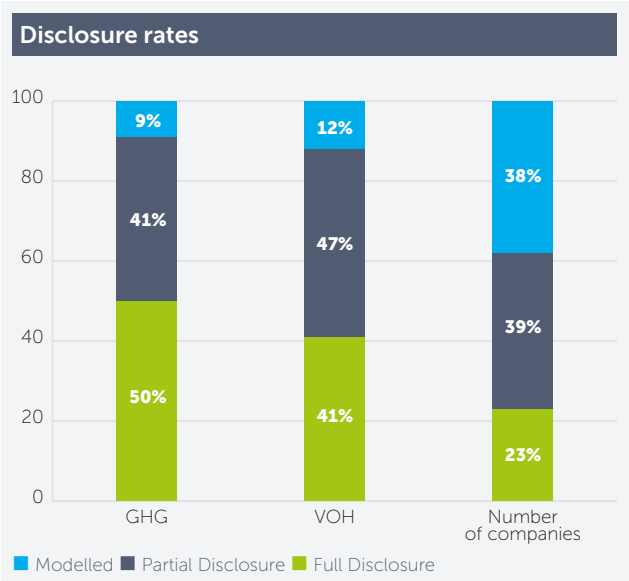
- scope 2 emissions, i.e., emissions generated by purchased electricity, heat or steam or other sources of energy; and
- direct upstream scope 3 emissions, being other indirect emissions generated by the supply chain.

45 Calculations of greenhouse gas emissions are presented in units of millions of metric tons of carbon equivalents, 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".
46 Emissions of carbon tetrachloride (CCl4), 1,1,2-trichloroethane (C2H3Cl3), bromotrifluoromethane (CBrF3) as well as CO_2 emissions from biomass.

In order to provide an overview of the transparency of the data, the following graph shows disclosure rates for scope 1 emissions only expressed as:

- % of the total value of holdings (VOH);
- % of the total apportioned greenhouse gas emissions;
- % of the total number of companies.

Whilst roughly 50% to 80% of the data still needs to be adjusted or modelled[47], modelled data can be considered as rather low given their smaller share in terms of value of holdings and apportioned greenhouse gas emissions.



Source: FDC and S&P Global Sustainable1

Please refer to Appendix 4 for more information on S&P Global Sustainable1's data collection approach.

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:

- 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:

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

- 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:

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

- 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:

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

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

47 Modelled data refers to when S&P Global Sustainable1 has calculated estimates using its proprietary model due to the unavailability or unreliability of up-to-date disclosures. Full disclosure refers to when exact figures have been extracted from annual reports, financial account disclosures, CDP disclosures, environmental reports or from personal communication with a company. Partial disclosure refers to when S&P Global Sustainable1 has needed to derive, adjust or scale any of the data acquired from the sources described above.

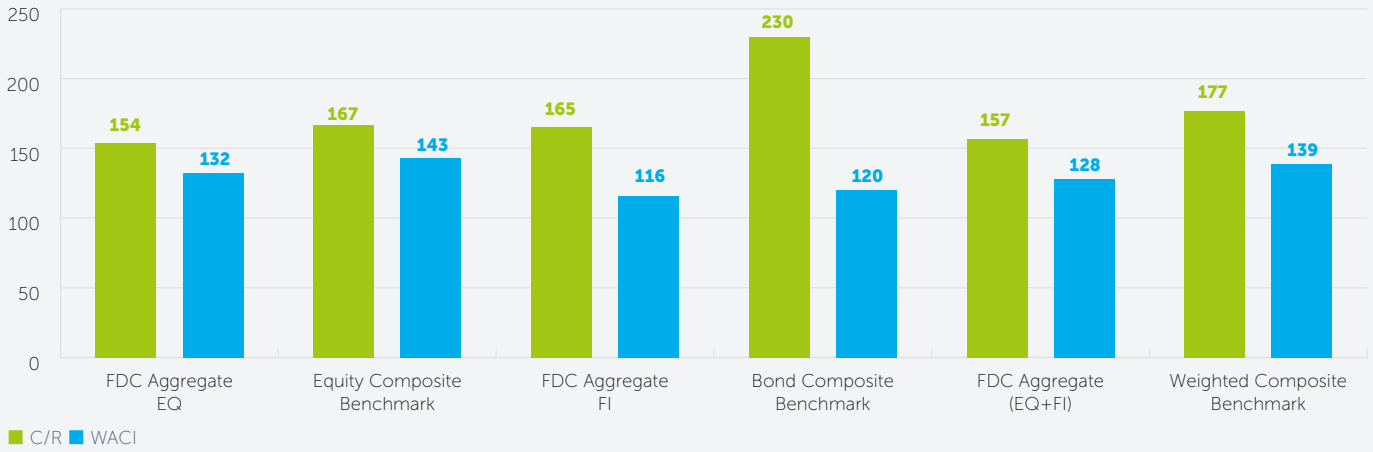
While the first two approaches serve as indicators of an investor's contribution to climate change or ecosystem degradation, the weighted average carbon intensity method provides an indication of an investor's exposure to carbon-intensive companies.

For the two first metrics, 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.

The analysis further compares the carbon footprints of FDC's portfolios to different benchmarks[48] being representatives of the global markets in which FDC can invest.

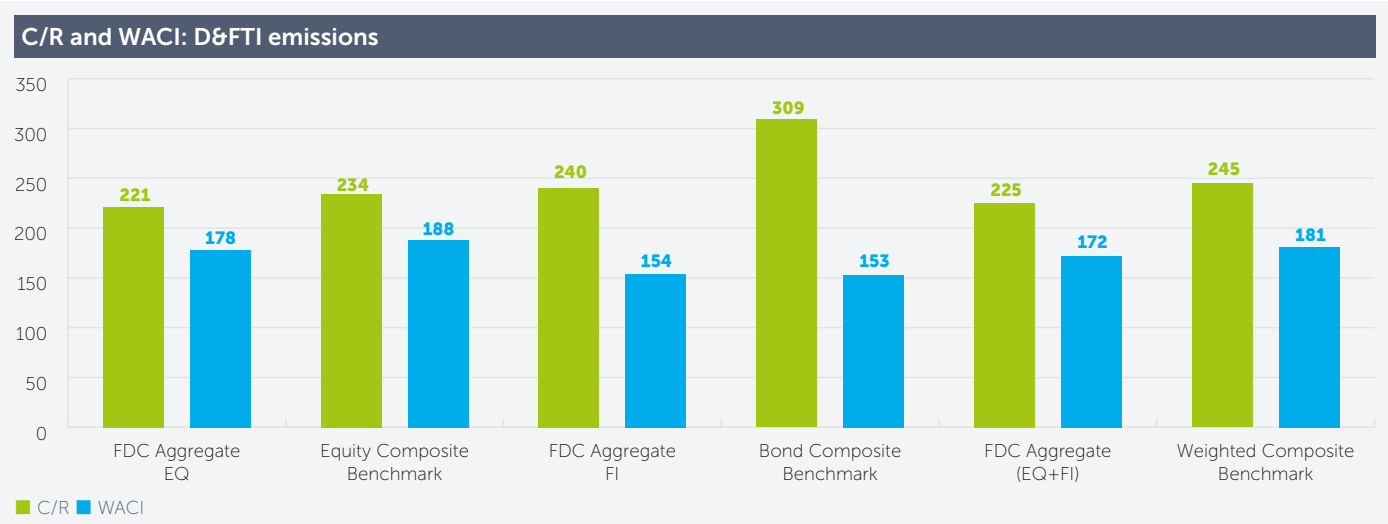
FDC decided to report the Carbon to Revenue as well as the Weighted Average Carbon Intensity metrics, whilst the TCFD recommends that asset owners should focus on the WACI metric.[49] **The following two graphs illustrate that FDC's portfolios have a positive performance compared to the benchmarks, regardless of the approach considered**.

C/R and WACI: scope 1&2 emissions



Source: S&P Global Sustainable1

48 Equity composite benchmark: 78.5% MSCI World Total Return Index, 11.6% MSCI Emerging Markets Total Return Index and 9.9% MSCI Small Cap World Total Return Index. Bond composite benchmark: 63.5% iBoxx EUR Overall (corporates only), 21.9% iBoxx Global Core Overall (corporates only) and 14.6% iBoxx ALBI (corporates only). Weighted composite benchmark: 76.2% equity composite benchmark and 23.8% composite bond benchmark.
49 TCFD, Implementing the Recommendations of the Task Force on Climate-related Financial Disclosures, October 21, page 52.



Source: S&P Global Sustainable1

Taking into consideration scope 1&2 emissions only, the first chart shows that FDC's aggregated portfolio produces 157 tCO_2e for each million euros of revenue generated. The corresponding value of the benchmark is 177 tCO_2e. **This means that for each million euros of revenue generated, FDC's consolidated portfolio produces 11% less tCO_2e than the benchmark**. Furthermore, FDC's consolidated portfolio has a weighted average carbon intensity of 128 tCO_2e. In other words, **the companies within FDC's portfolio emit on average 128 tCO_2e per million euros of revenue generated. Compared to** the weighted average carbon intensity of **the benchmark** of 139 tCO_2e, **FDC's consolidated portfolio shows a positive relative performance of 8%.**

In relation to direct and first tier indirect emissions, the second chart shows that FDC's aggregated portfolio produces 225 tCO_2e for each million euros of revenue generated. The corresponding value of the benchmark is 245 tCO_2e, **meaning again a positive relative performance of 8%**. Furthermore, FDC's aggregated portfolio has a weighted average carbon intensity of 172 tCO_2e. **Compared to** the weighted average carbon intensity of **the benchmark** of 181 tCO_2e, **FDC's aggregated portfolio shows a positive relative performance of 5%**.

Hence, **FDC's aggregated portfolios contribute less to climate change and is less exposed to carbon-intensive companies**. The same conclusions can be drawn at the level of the individual portfolios except for the fixed income portfolio with a WACI based on D&FTI emissions just above the WACI of the corresponding benchmark.

The principal reasons for the carbon intensity of a portfolio to differ from the benchmark are sector allocation decisions and company selection decisions. Sector allocation decisions can cause the carbon intensity of a portfolio to diverge from its benchmark when it is over- or

underweight. markedly high or markedly low carbon sectors. For example, if a portfolio is overweighting a high carbon sector, then it is more likely to have a higher overall intensity than the benchmark. However, if the companies selected within a high carbon sector are the most carbon efficient, then it is still possible that the portfolio may have a lower overall intensity.

The chart below shows the relative contribution of sector[50] allocation and company selection effects towards the total effect of FDC's aggregated portfolio versus its benchmark, based on the C/R metric and D&FTI emissions.

C/R (D&FTI emissions): sectoral allocation and performance

	C/R Intensity		Attribution Effect		Total
	Portfolio	Benchmark	Sector	Investee	
Communication Services	41	42	0.32%	0.01%	0.33%
Consumer Discretionary	73	77	-0.83%	0.20%	-0.63%
Consumer Staples	184	199	-0.20%	0.54%	0.34%
Energy	405	420	0.60%	0.65%	1.25%
Financials	14	22	1.35%	0.40%	1.75%
Health Care	27	31	0.61%	0.17%	0.78%
Industrials	164	157	-0.15%	-0.46%	-0.61%
Information Technology	68	74	0.41%	0.27%	0.69%
Materials	999	915	0.16%	-2.61%	-2.45%
Real Estate	92	87	-0.05%	-0.02%	-0.08%
Utilities	832	1,284	-2.25%	9.23%	6.98%
	225	**245**	**-0.03%**	**8.38%**	**8.35%**

Source: S&P Global Sustainable1

Carbon intensity by sector of the aggregated portfolio is lower than those of the benchmark for 8 of the 11 sectors considered. With regard to the carbon intensity attribution analysis, it should be noted that the total effect of sectoral under/overweight decisions and stock selection is largely positive. For example, the weighting of the utilities sector negatively impacts the carbon intensity in the consolidated portfolio by -2.25%. However, the selection of less carbon-intensive stocks within given sector improves the performance of the portfolio by 9.23%. This leads to a positive total effect of 6.98%. **Especially in terms of stock selection, it can be concluded that FDC's asset managers are aiming to substitute high-carbon companies for low-carbon companies**.

50 Sectors as per Global Industry Classification Standard (GICS) classification.

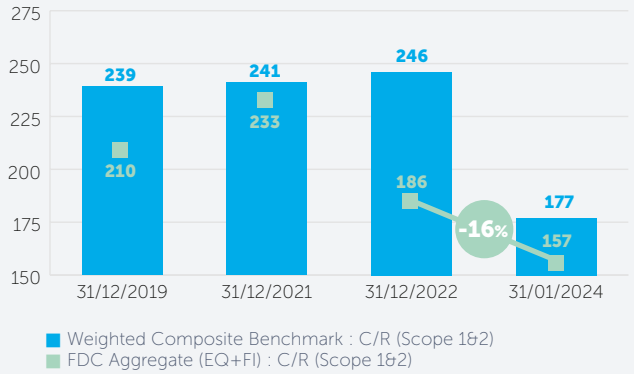
How are benchmarks chosen within FDC's carbon audits?

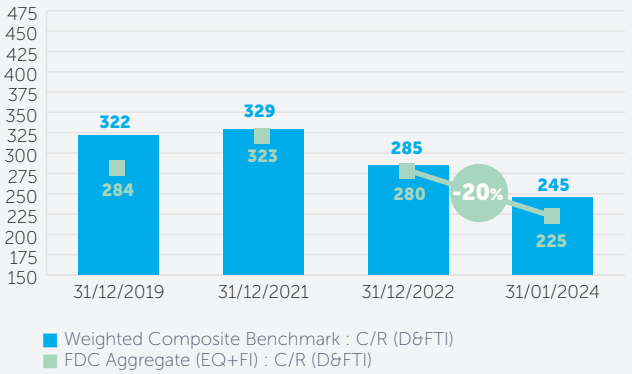
FDC does not select its benchmarks randomly or at will. FDC's benchmarks are clearly defined within its investment strategy and published in the SICAV's issue document. Given FDC's legal mission to invest among different investment classes as well as among different economic and geographical sectors, they represent global markets in which the FDC can invest.

FDC aims to report on sustainability criteria against the same benchmarks. Unfortunately, due to license 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 fixed income and sovereign portfolios while trying to ensure maximum representativeness with regard to FDC's benchmarks. It is within the sole objective of representativeness maximisation that fixed income and sovereign benchmarks within FDC's carbon audits have been adjusted over time. It should be noted that, although benchmark representativeness has been increased, differences still exist. This has to be kept in mind when assessing relative carbon performance.

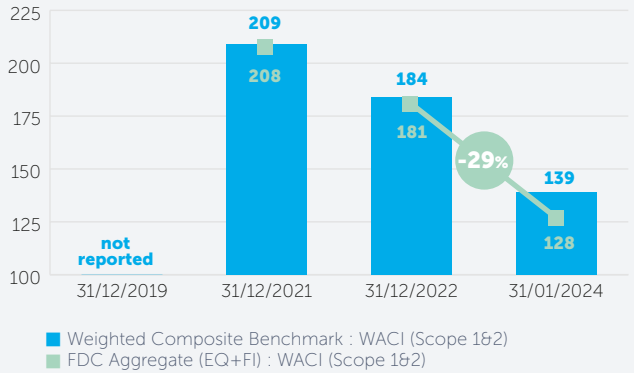
FDC's ongoing efforts taken within its responsible investor policy did have a positive impact on carbon metrics. The below graphs show the evolution of the C/R and WACI metrics since FDC's first carbon audit based on data as of 31 December 2019.

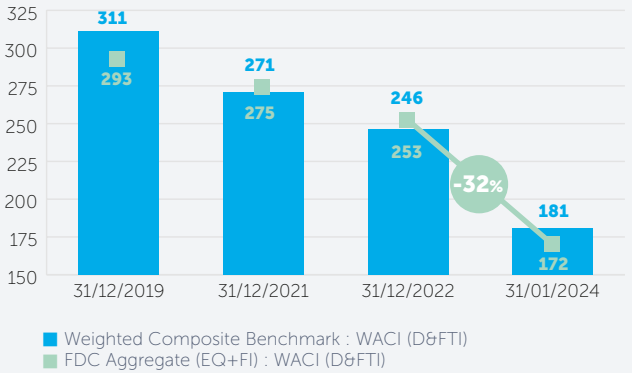
C/R evolution





WACI evolution





Source: S&P Global Sustainable1

In comparison to the latest audit based on data as of 31 December 2022, FDC was again able to significantly decrease the carbon footprint of its aggregated portfolio while ensuring a positive relative performance versus the benchmark. Depending on the metric and scopes considered, this decrease varies between -16% and -32%. In addition, the carbon metrics did reach their lowest levels since FDC's first carbon audit as of 2019.

5.2.1.2. Carbon footprint of FDC's sovereign portfolio

The analysed sovereign portfolio amounted to 7.32 billion euros and covered nearly 3,370 debt instruments.[51]

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

$$\frac{\text{Sovereign Bond Investment}}{\text{Gross General Debt}} \times \text{Country Emissions } (tCO_2e)$$

S&P Global Sustainable1's analysis aims to consider the emissions of a country's entire economy. This approach takes into account the impact that a government can have on current regulations as well as on the functioning of the 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. Also, a country does not only contribute to the greenhouse gases emitted on its territory, but also to the greenhouse gases emitted during the production of goods and services imported. The perimeters used by S&P Global Sustainable1 therefore include:

- 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 that they originated in a different country from which the goods and services are imported;
- direct exports, being the emissions embodied in goods and services produced in a country and exported to a foreign economy.

This approach is consistent with the approach of direct greenhouse gases and greenhouse gases from direct suppliers which was applied in the analysis of equities and corporate bonds carbon footprints.

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 three methodologies:

- the Carbon to Output metric describes the relationship between the average amount of tCO_2e generated per million euros of 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:

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

n = number of bonds in the portfolio
i = specific bond "i" in the portfolio
tCO_2e' = total portfolio apportioned-emissions
GDP' = total portfolio-apportioned GDP
tCO_2e' i,c = apportioned emissions of sovereign bond "i" mapped to country "c"
GDP' i,c = apportioned GDP of sovereign bond "i" mapped to country "c"

51 Debt securities issued by governments, provinces, municipalities, central banks or (national) agencies are mapped by S&P Global Sustainable1 to the country of origin. Securities issued by international/supranational organisations are excluded from S&P Global Sustainable1's analysis. Andorra and Bermuda were not covered by S&P Global Sustainable1.

n = number of bonds in the portfolio
i = specific bond "i" in the portfolio
tCO_2e' = total portfolio-apportioned emissions
Inv (€ mn) = the total value invested in the sovereign bond portfolio in millions of €
tCO_2e' i = apportioned territorial emissions of sovereign bond "i" mapped to country "c".
Inv (€ mn) i = the value invested in sovereign bond "i" in millions of €

Wi = the value of holding portfolio weight of sovereign bond "i"
GDP c = the gross domestic Product of country "c"
Country Emissions (tCO_2e) c = the sovereign greenhouse gas emissions of country "c"

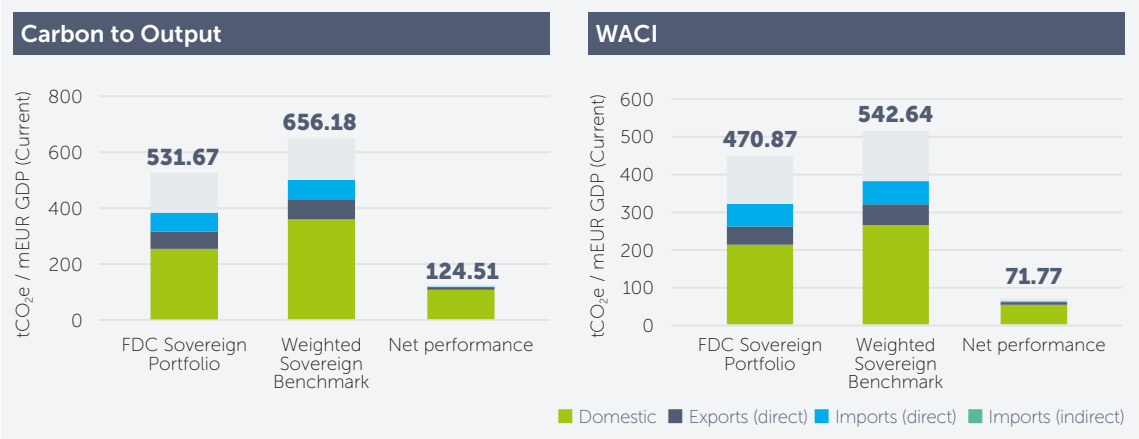
- the Carbon to Value method describes the relationship between the average amount of tCO_2e generated per million euros of investments made in the portfolio. This metric is calculated by dividing the sum of all portfolio-apportioned emissions by the sum of millions of euros invested:

$$\frac{tCO_2e'}{Inv\ (€mn)} = \frac{\sum_i^n tCO_2e'_i}{\sum_i^n Inv\ (€mn)_i}$$

- the 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 each country's bonds. 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:

$$\sum_i^n W_i \times \left[\frac{\text{Country Emissions } (tCO_2e)_c}{GDP_c} \right]$$

Similar to the analysis at the level of equities and corporate bonds, the next charts highlight the carbon intensities of FDC's sovereign portfolio according to the Carbon to Output and WACI metric per million euros of GDP generated.

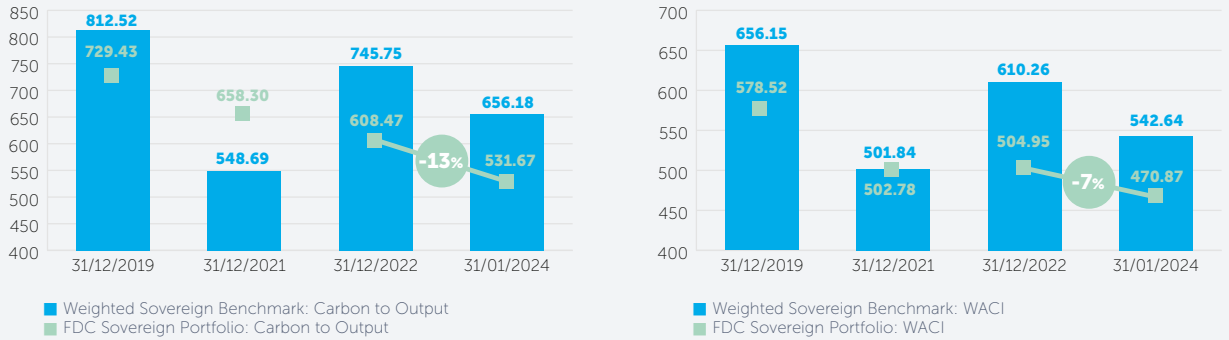


Source: S&P Global Sustainable1

For both approaches, FDC's sovereign portfolio shows a positive relative performance with respect to the benchmark.[52] This means that FDC's portfolio shows on average a lower dependence on the production and consumption of carbon-intensive goods and services and a lower exposure to carbon-intensive countries.

52 Sovereign composite benchmark: 6.7% iBoxx USD Emerging Markets Sovereigns, 43.8% iBoxx EUR Overall (sovereigns only), 29.7% iBoxx Global Core Overall (sovereigns only) and 19.8% iBoxx ALBI (sovereigns only).

Carbon to Output and WACI evolution



Source: S&P Global Sustainable1

FDC's continuous efforts taken within its responsible investor policy did also positively impact the metrics of its sovereign portfolio. **In comparison to the latest audit based on data as of 31 December 2022, FDC was able to reduce the carbon footprints of its sovereign portfolio while ensuring a positive relative performance versus the benchmark. The decrease varies between -7% and -13% while the carbon metrics did also reach all-time lows**.

5.2.1.3. Exposure to stranded assets

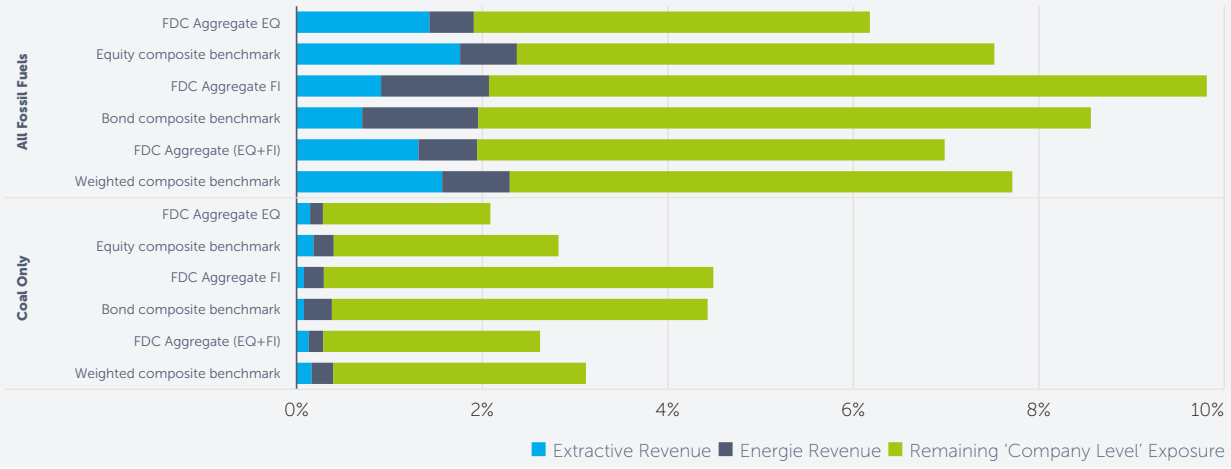
Future emissions from fossil fuel reserves far outweigh the allowable carbon budget that will limit global warming to 2°C above pre-industrial levels. Industry experts refer to assets that may suffer from unanticipated or premature write-downs, devaluations or conversion to liabilities as "stranded assets". Significant and sudden changes in legislation, environmental constraints or technological innovations may for example be at the origin of such depreciations. S&P Global Sustainable1 assesses exposure to such assets by highlighting holdings with business activities in extractive industries[53] or fossil fuel energy generation[54] industries as well as holdings in companies that have disclosed proven and probable fossil fuel reserves. This helps to identify potentially stranded assets that could become apparent as economies move towards a 2°C alignment.

Exposure to business activities in extractive or fossil fuel energy generation industries is assessed by S&P Global Sustainable1 on the basis of:

- the combined weight of companies in the portfolio deriving any revenues from fossil fuel related activities (expressed as % of holdings value); and
- the weighted average revenue exposure, calculated by summing the product of each holding's weight in the portfolio with the company level revenue dependency on the sector in question (expressed as % of revenue).

53 Extraction-related activities include crude petroleum and natural gas extraction, tar sands extraction, natural gas liquid extraction, bituminous coal underground mining, bituminous coal and lignite surface mining, drilling oil and gas wells as well as support activities for oil and gas operations.
54 Energy-related activities include coal, petroleum and natural gas power generation.

Exposure to fossil fuel activities



Source: S&P Global Sustainable1

It can be concluded that the weight of the companies in FDC's aggregated portfolio deriving any revenue from fossil fuel related activities is limited to some 7%. In 2019, given exposure amounted still to 9%. Also, the weighted average exposure to the revenues themselves has remained very limited, notably less than 2%. In addition, FDC's aggregated portfolio continued to show a lower exposure to fossil fuel activities as well as coal compared to the benchmark.

S&P Global Sustainable1 can analyse two additional metrics that provide additional insights relevant to stranded asset risk being carbon emissions embedded within company owned fossil fuel reserves which can be considered "unburnable" if 2°C targets are to be achieved and capital expenditure (CaPex) set aside for future fossil fuel related activities such as further exploration and extraction. Both metrics are based on disclosures published by invested companies.

The next charts show the total tonnes of apportioned "future" CO_2 from reserves, broken down by reserve type as well as the total apportioned CapEx on fossil fuel related activities, again broken out by reserve type.

Source: S&P Global Sustainable1

Again, **FDC aggregated portfolio has a positive performance in comparison to the benchmark, meaning a lower share and intensity of future carbon emissions embedded in the companies fossil fuel reserves as well as a lower share and intensity of capital expenditures set aside for future fossil fuel related activities**.

5.2.2. Analysis of FDC's green bonds

Green bonds are specifically used to raise money for projects with environmental benefits such as renewable energy, energy efficiency, water conservation and climate change adaptation. Policy developments and increased client awareness means that investors are under increasing pressure to better manage and report on their positive environmental and societal impacts. While the investment community has demonstrated appetite for instruments which meet positive environmental criteria, there are limited solutions in the market to help them systematically assess and quantify the positive impacts of green bonds.

S&P Global Sustainable1's measurement of the positive environmental impacts of green bonds will help address the growing market concern regarding the number of self-proclaimed "green financial assets" which are either not audited at all or assessed inconsistently in the market. S&P Global Sustainable1 has developed a green bond dataset that is designed to estimate the potential positive impacts and avoided carbon emissions from green bond investments. S&P Global Sustainable1 believes that the quantification of absolute and avoided carbon emissions offers issuers and investors the opportunity to develop a green bond market that is robust, credible and transparent.

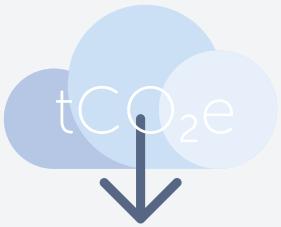
FDC launched a dedicated sub-fund for investments in green bonds in line with the GBP developed by ICMA.[55] As more and more green bonds are being included in major benchmarks, FDC has additional exposure to green bonds through its conventional bond sub-funds.

To show the potential carbon savings achieved by the green bond portfolio on an annualised basis, avoided emissions are calculated by S&P Global Sustainable1 comparing the lifecycle emissions of each project — including the construction, operation and disposal of the assets financed — to a business as usual scenario. Please refer to Appendix 5 for more information on S&P Global Sustainable1's avoided emissions methodology.

The valuation of green bonds[56] included in FDC's bond portfolios at the end of 2024 amounted to 1.24 billion euros spread over more than 900 bonds. It is worth mentioning that **compared to 2019, FDC's green bonds exposure has more than tripled** from 382 million to said 1.24 billion euros.

S&P Global Sustainable1 was able to cover 468 of these bonds, representing 65% of FDC's total green bond portfolio. The next chart shows the potential carbon savings achieved while prioritising disclosed data first and using calculated values only in the absence of disclosures.

Apportioned annualised avoided emissions



Avoided Emissions (tCO_2e)

-431,443

Source: S&P Global Sustainable1

The green bonds held by FDC mainly financed renewable electricity and heat production, transport, as well as buildings projects[57] and **enabled FDC to avoid on an annual basis 533 tCO_2e per million euros invested respectively more than 430,000 tCO_2e on an absolute basis.** Unfortunately**, such positive impacts cannot be included as mitigating factors into the subsequent 2°C alignment study**.

Where sufficient information relating to a bond's use of proceeds is available, S&P Global Sustainable1 may also be able to produce a number of metrics that quantify the physical impacts of different projects. These include green energy produced, area covered for green buildings, passenger kilometres travelled on green transport, and energy saved through green products. In the table below these impacts have been apportioned to FDC's green bond portfolio.

Physical impacts

Green Energy
Energy produced :
4,376 GWh

Green Buildings
Area :
64,844 m²

Green Transport
Passenger distance travelled :
215,939,364 km

Energy Savings
Energy saved :
379,526 MWh

Source: S&P Global Sustainable1

Adequate governance is a key requirement for increasing trust in the green bond market. In this context, each issuer's alignment to the GBP is assessed by S&P Global Sustainable1 via four pillars – use of proceeds, process, management and reporting — with the overall score being an average of these. **FDC's green bond portfolio achieved an overall governance score of 88 out of 100**. For more information on S&P Global Sustainable1's governance score, please refer to Appendix 6.

55 The State of Luxembourg based itself on the same principles for the launch of its reference framework for sustainable bonds. This framework meets the highest market standards and fully complies with the new recommendations of the European taxonomy on green financing.
56 As mapped and classified by S&P Global Sustainable1.
57 Project type categories according to the Climate Bonds Initiative (CBI) taxonomy.

5.2.3. 2°C alignment

This section presents an analysis of the transition trajectories and energy mixes of FDC's portfolios and their alignment with a 2°C scenario.

5.2.3.1. 2°C alignment: transition trajectory

FDC's aggregated equity and corporate bond portfolio as well as the benchmark were evaluated by S&P Global Sustainable1 both on the basis of their alignment with the objective of limiting global warming to a maximum of 2°C compared to pre-industrial levels and on the basis of different alternative climate scenarios.

This approach can be described as an assessment of a company's transition trajectory, i.e., an analysis of the adequacy between each company's emission reductions and the reductions required to achieve a given scenario. The analysis takes into account historical carbon data as well as forward-looking indicators (over a medium-term time horizon) based on scope 1 and 2 emissions. This avoids the uncertainties of using only forward-looking data, and is of a sufficient time horizon to make the effect of any year-on-year volatility less significant.

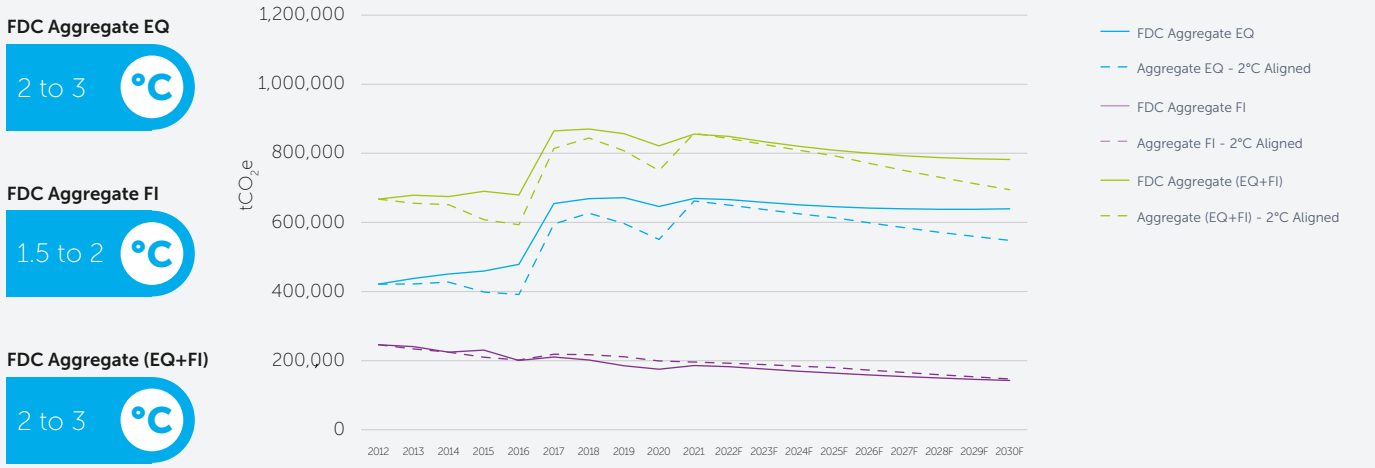
Historical data on greenhouse gas emissions and company activities have been compiled from a base year of 2012. Forward-looking data sources are used to track likely future transition pathways from the most recent year of disclosed data through to 2030. The prospective data used in the analysis depends on the availability of the sources indicated below (listed in order of use):

- emission reduction targets reported by companies;
- asset-level data providing signals of potential changes in production for high-emitting sources;
- historical emission trends for a group of companies with homogeneous business activities;
- average historical emission trends within a sub-industry;
- no change in emissions intensity assumptions.

S&P Global Sustainable1's approach is adapted from two methodologies highlighted by the SBTi, these being the SDA and the GEVA approaches. The SDA is applied to companies with high-emitting, homogeneous business activities, while GEVA is applied to those with lower emitting, heterogeneous business activities.

More information on the methodology and scenarios considered by S&P Global Sustainable1 can be found in Appendix 7.

Current trajectories vs. aligned trajectories : FDC portfolios

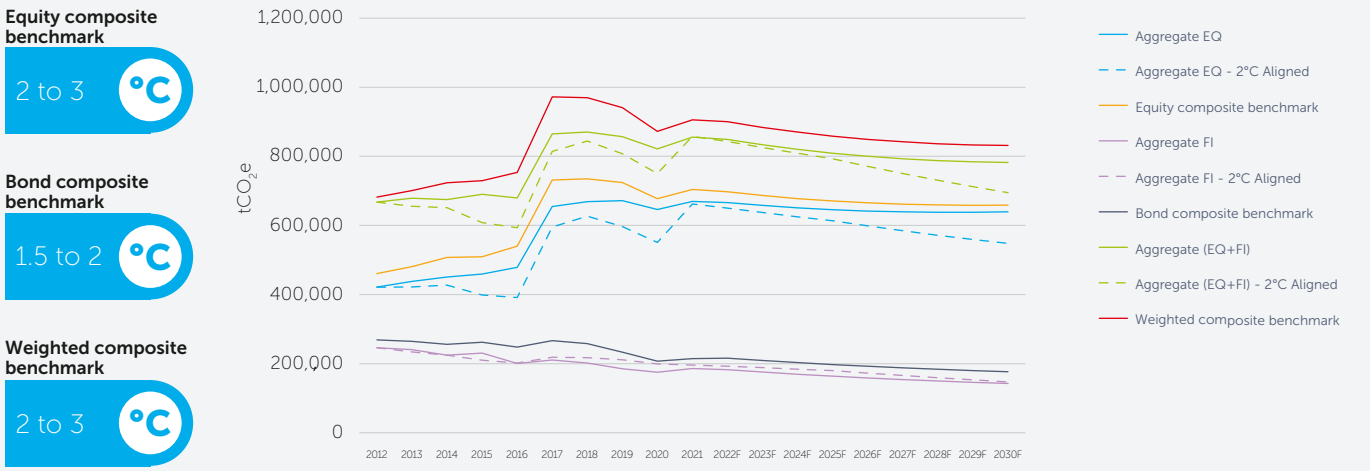


Source: S&P Global Sustainable1

Considering the previous graph and **in comparison to the first transition pathway analysis based on data as of 31 December 2019, the warming level of FDC's equities portfolio has moved from an "above 3°C" to a "2 to 3°C" level whereas FDC's fixed income portfolio has switched from a "2 to 3°C" to a "1.5 to 2°C" level. On an aggregated level, these improvements have not yet had sufficient impact to also allow for a move to a lower bandwidth and thus the aggregated portfolio remained within the "2 to 3°C" level**.

However, improvement within the aggregated portfolio can be made apparent when considering the over-budget in terms of tCO_2e to comply with a 2°C pathway. **While the over-budget (as a percent of the total portfolio level budget) amounted to more than 13% at the end of 2019, it has now been reduced to 5%**, the latter representing on an absolute basis less than 800,000 tCO_2e. **This is all the more remarkable as the assets submitted for the alignment study have grown by more than 20%. In other words, FDC was able to significantly orientate and re-allocate, over the last 4 years, capital towards companies with carbon budgets in compliance with a 2°C or even a lower pathway**.

Current trajectories vs. aligned trajectories: benchmark comparison



Source : S&P Global Sustainable1

Compared to the benchmarks, it can be noted that FDC's portfolios do have a lower level in terms of absolute tCO_2e emissions. Global warming levels are equal.

While proceeding to alignment assessments, several potential limitations should be kept in mind. **Firstly, it should be noted that within S&P Global Sustainable1's transition trajectory alignment study, avoided and negative emissions as well as or other environmental benefits stemming from companies' operations are not incorporated**. For example, FDC's avoided emissions from its investments in positive impact equities and green bonds or negative emissions from its forest estate are not included. On the contrary, green bonds may have a penalising effect. This could happen when the issuers of such bonds taken into account in the alignment study have rather unfavourable carbon balances. This also affects the companies themselves. For example, they may have a significant carbon footprint and at the same time offer products that contribute favourably to the reduction of the global carbon footprint. With an analytical boundary of scope 1 and 2 emissions only, such factors are not taken into consideration. Taking such elements into account would reduce FDC's overall carbon footprint.

In addition, the results are sensitive to the chosen baseline year, particularly for companies where there is significant volatility in emissions or other contributing factors like production levels or gross profits year on year. Significant corporate events can also influence the results.

There are advantages to including a longer time horizon in the scenario analysis – notably greater perceived visibility and transparency – but also disadvantages – notably greater uncertainty, potential errors and false sense of certainty involved in extending scenario and emissions

forecast horizons. The selected time horizon may also impact the results, especially in a context where many companies have rather recently announced to reduce their carbon balance sheets, often in a staggered, progressive manner or with a medium or even long-term objective. The effects of changes in companies' behaviour and business model due to climate considerations are still expected to gain momentum in the coming years and are not reflected neither in historical nor in current data. In this context and at the level of forward-looking data, an extended time horizon could bring more visibility and transparency, however, keeping in mind that any extension may increase the probability of errors in the estimates.

Also, **there is some inevitable double counting across companies based on the scopes of emissions included**, most notably between power generators and power users. On balance, scope 2 emissions were included for greater consistency with carbon footprint results, and because for a number of industries scope 1 emissions alone are insubstantial to their overall footprint. Scope 3 data is omitted from the assessment boundary because of the lower proportion of issuers disclosing such data, less consistency in scope 3 disclosures between companies or between years for disclosing companies, and higher likely ranges of potential modelling error for scope 3 estimates than for scope 1 and 2 estimates.

Volatility in underlying data as well as "non-disclosers" might impact the results. The GEVA approach is sensitive to changes in its denominator value — gross profits — which is more volatile at company and sector level than GDP, the sum of value added across the global economy that it proxies. Elements like changes in exchange rates, commodity and product prices, and company specific factors contribute to year-on-year volatility. The relatively short historical time horizon accentuates this issue, relative to a longer period that might show a clearer trend. Incorporating earlier years was not seen as viable as lack of disclosed data began to sharply reduce the company coverage universe if an earlier baseline year was chosen. S&P Global Sustainable1 provides Paris Alignment data coverage for all companies that meet certain data availability criteria. While disclosed data is the preferred source for GHG emissions data inputs, to enhance the GEVA coverage, it also covers companies with modelled instead of disclosed data, and companies with emissions data gaps for some reporting years. These gaps are bridged through assuming a constant year-on-year carbon intensity based on data availability from previous or subsequent years. S&P Global Sustainable1 incorporates a minimum of four years data history in addition to the most recent year of emissions data available, whatever its source (disclosed, modelled, assumed constant intensity). This enables a medium term trend to be discernible from whatever the best data is available for a given company, as well as placing a limit on the use of modelling assumptions in cases where they are significant. This allows S&P Global Sustainable1 to analyse the majority of its universe with a minimum baseline four years earlier than the current most recent year available, while including greater data history and a longer trend through an earlier baseline for a subset of companies where that longer trend adds to the robustness of the trend without adding unnecessary modelling assumptions.

Finally, **it should be noted that the power generation, airlines and cement industries when covered under the SDA are assessed based on scope 1 emissions only**, which is the scope of the scenario data they are assessed against, and which by convention is the scope these companies disclose their emissions intensities and represents the bulk of these industries' emissions. The steel and aluminium industries, as well as all companies assessed using the GEVA approach use scope 1 and 2 emissions.

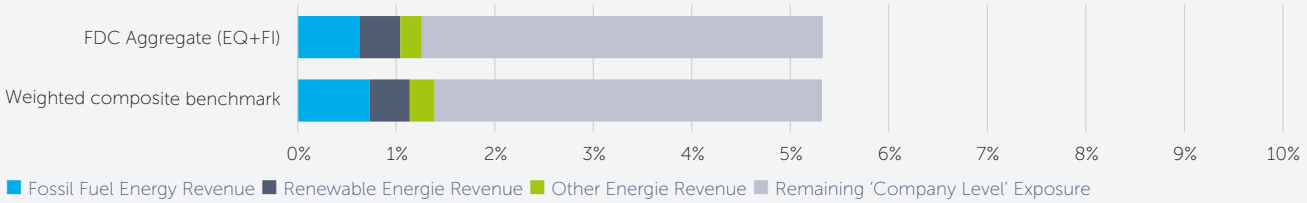
5.2.3.2. 2°C alignment: energy mix

The power generation sector will play a crucial role in any strategy which aims to achieve the 2°C alignment targets. In terms of energy mix, S&P Global Sustainable1 highlights the aggravating factors (fossil fuels) versus the mitigating factors (renewable energies) based on sources of revenue. Electricity production can be divided into three groups:

- production of fossil fuel-based energy including coal, petroleum and natural gas;
- other energy production, including nuclear and landfill gas energy as well as any other unclassified electricity production;
- renewable energy production, which includes solar, wind, wave and tidal, geothermal, hydroelectric and biomass energy.

The chart below shows total exposure to companies with any energy revenues (total bar size), while the light blue, dark blue and green segments represent the weighted average revenue exposure to fossil fuels, renewables, and other energy revenues respectively. **Overall, the exposure to companies with any energy revenues is limited to some 5%. Compared to the benchmark, it can be noted that FDC's aggregated equity and corporate bond portfolio is less exposed to companies with fossil fuel energy revenues**.

Exposure to energy revenues



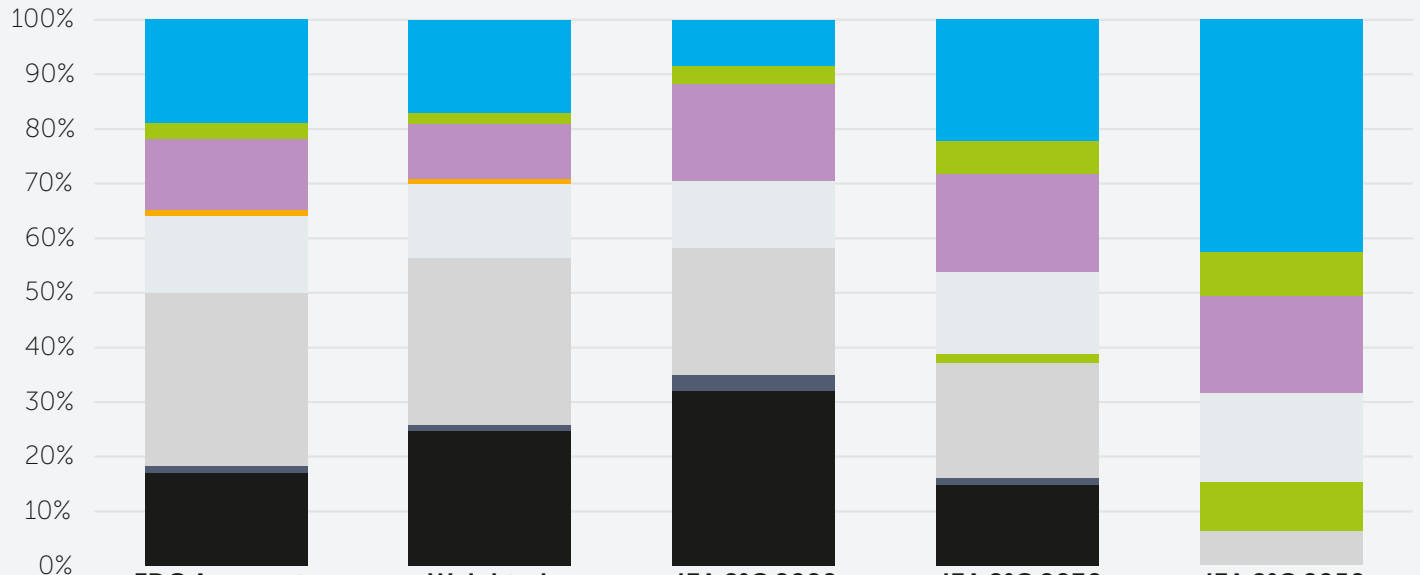
Source: S&P Global Sustainable1

Understanding a portfolio's energy mix enables it to be compared not only with benchmarks that reflect the current economy, but also with forward-looking benchmarks informing investors what efforts will be required to finance the energy transition and consequently, the economy of tomorrow. Therefore, analysing the energy mix of each issuer in the portfolio has a priority to ensure that the portfolio is aligned with the objectives of limiting global warming. From this perspective, the climate trajectories defined by the IEA, which is working with governments and the industry to shape a secure and sustainable energy future for all, are a very meaningful basis for comparison since they detail the energy mix of the main countries and regions in a climate scenario limiting global warming to 2°C.

The analysis compares the share, by energy type, of the total GWh apportioned to FDC's aggregated equity and corporate bond portfolio as well as its sovereign portfolio with energy mixes that are consistent with different 2°C global warming scenarios based on data from the IEA.[58]

58 Based on data from the International Energy Agency (2021) Net Zero by 2050: Net Zero by 2050 Scenario - Data product – IEA, as modified by S&P Global Sustainable1. Sovereign data based on apportioned output method.

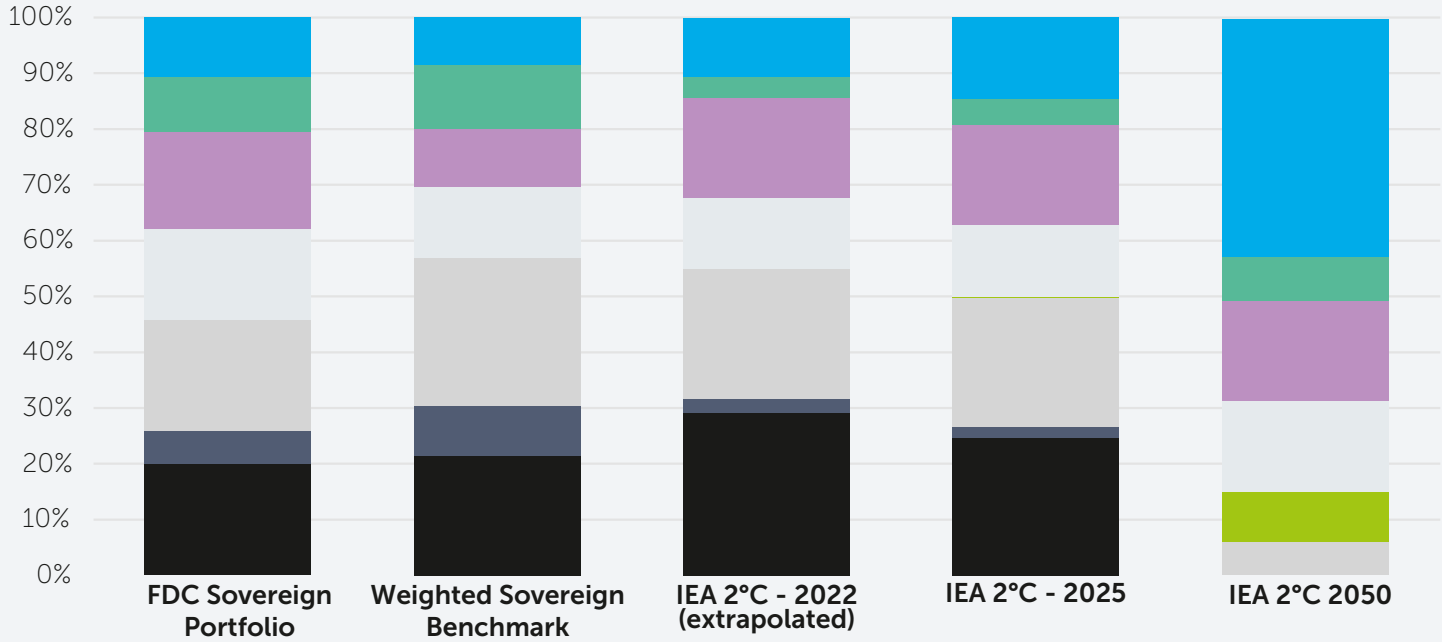
Energy mix alignment: aggregated equity and fixed income portfolio



	FDC Aggregate (EQ+FI)	Weighted composite benchmark	IEA 2°C 2020	IEA 2°C 2030	IEA 2°C 2050
Other Renewables	18.88%	16.90%	8%	22%	43%
Biomass	2.84%	2.11%	3%	6%	8%
Hydroelectric	13.10%	10.19%	18%	18%	18%
Other sources	1.07%	0.88%	0%	0%	0%
Nuclear	14.13%	13.57%	12%	15%	16%
Fossil energy with CCS	0.00%	0.00%	0%	2%	9%
Natural Gas	31.63%	30.47%	23%	21%	6%
Petroleum	1.35%	1.17%	3%	1%	0%
Coal	16.99%	24.70%	32%	15%	0%

CCS: carbon capture and storage • Source: S&P Global Sustainable1

Energy mix alignment: sovereign portfolio



	FDC Sovereign Portfolio	Weighted Sovereign Benchmark	IEA 2°C - 2022 (extrapolated)	IEA 2°C - 2025	IEA 2°C 2050
Other sources	0%	0%	0%	0%	0%
Other Renewables	11%	8%	11%	15%	43%
Biomass	10%	12%	4%	5%	8%
Hydroelectric	17%	10%	18%	18%	18%
Nuclear	16%	13%	13%	13%	16%
Fossil energy with CCS	0%	0%	0%	0%	9%
Natural Gas	20%	27%	23%	23%	6%
Petroleum	6%	9%	3%	2%	0%
Coal	20%	22%	29%	25%	0%

CCS: carbon capture and storage • Source: S&P Global Sustainable1

Generally speaking, the IEA scenarios show a substitution of fossil fuels (coal, petroleum and natural gas) in favour of renewable energies. This transition also involves a slight increase in nuclear energy.

Referring to FDC's aggregated equity and fixed income portfolio, the share of the most carbon intensive sectors (coal and petroleum) remains well below the one of the benchmark. **18% of FDC's aggregated portfolio energy mix is derived from petroleum and coal-fired power generation, compared to 26% for the benchmark. This proportion allows FDC to be nearly in line with the IEA 2030 scenario which foresees a threshold of 16%. The 2019 audit showed very similar results. Renewables (biomass and hydroelectric included) represent almost 35% of the energy mix of FDC's aggregated portfolio while the IEA 2030 scenario foresees a share of 46%. In 2019, renewables accounted only for 21% within FDC's energy mix. While exposure to natural gas did not change significantly, this increase does mainly stem from a decrease of FDC's exposure to nuclear energy, moving from 32% to 14%**.

At the level of the sovereign portfolio, similar conclusions can be drawn. **26% of FDC's sovereign portfolio energy mix is derived from petroleum and coal-fired power generation while the benchmark exposes a value of 31%. In 2019. FDC's share amounted to 27%. On that basis, FDC's portfolio is more than in line with the IEA's 2025 scenario. Fossil fuels, including natural gas, account for 46% of the energy mix of FDC's sovereign portfolio. The IEA 2025 scenario still foresees a share of 50%. Renewables represent 38% of the energy mix of FDC's sovereign portfolio, share in line with the IEA 2025 scenario. In 2019, renewables accounted only for 29% within FDC's energy mix. While exposure to nuclear remained quasi unchanged, this increase does mainly stem from a decrease of FDC's exposure to natural gas, moving from 28% to 20%**.

5.2.4. Transition and physical risks

In an asset management context, climate risks are often defined as physical and transition risks arising from climate change. To help investors navigate transition risks, S&P Global Sustainable1 has compiled a dataset of possible future carbon prices that can be used to stress test each investee's current ability to absorb future costs.

To better understand physical risks, S&P Global Sustainable1 has developed a physical risk assessment framework covering eight key hazard types: wildfire, extreme cold, extreme heat, water stress, coastal flood, riverine flood, tropical cyclone and drought.

5.2.4.1. Carbon price risk

Carbon pricing mechanisms are an essential policy tool to reduce GHG emissions and direct capital towards cleaner energy and lower-carbon solutions. There are currently 52 carbon pricing schemes either in operation or scheduled for implementation at a regional, national, or sub-national level, covering about 20% of global GHG emissions. More schemes are likely to appear in order to achieve the Nationally Determined Contributions (NDCs) made by countries that ratified the Paris Agreement.

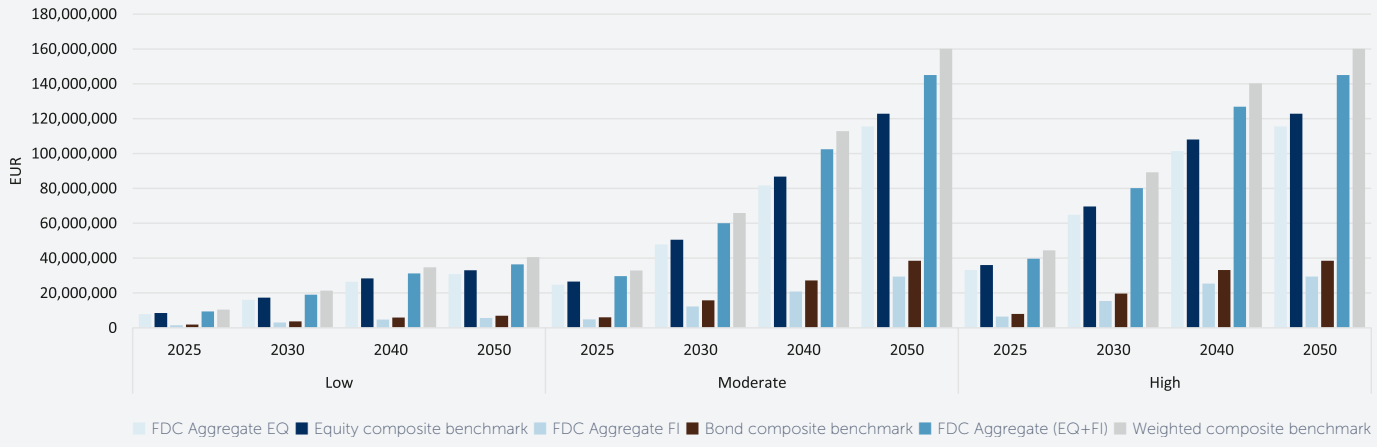
S&P Global Sustainable1 has compiled a dataset of possible future carbon prices that can be used to stress test each investee's current ability to absorb future costs. Integral to this analysis is the quantification of an Unpriced Carbon Cost (UCC) the difference between what a company pays for emitting carbon today and what it may pay in the future. The UCC will vary depending on both the sector a company operates in and the regions in which they emit. It also depends on the scenario and reference year chosen.

S&P Global Sustainable1 considers three scenarios, i.e., a low, intermediate and high carbon price scenario, for different reference years (2025, 2030, 2040 and 2050). High and moderate scenarios both arrive, by 2050, at a price deemed to be sufficient to keep global warming to within 2°C above pre-industrial levels (in the latter action is delayed in the short-term). The low scenario is not 2°C aligned, but assumes the implementation of the NDCs.

For more information on the UCC methodology and scenarios please refer to Appendix 8.

The next chart shows the total UCC apportioned to FDC's portfolios and benchmarks under all scenarios and reference years i.e., the total additional costs arising (in)directly at the aggregated portfolio level.

Total apportioned unpriced carbon costs



When the UCC is deducted from a company's profits, it can be seen that even same-sector companies with similar emissions profiles can be faced with very different financial impacts. Portfolio companies with a higher profit margin will have a better chance of absorbing future cost increases.

"Earnings at Risk" metrics provide a useful indicator of potential vulnerability. The below section shows an indicator depending on earnings before interest, taxes, depreciation and amortisation of companies, called "EBITDA at risk". The EBITDA at risk is the share of a portfolio's earnings exposed to a carbon price increase and highlights areas of risk across the portfolios that can be fed into financial analysis. The indicator results from the ratio of a company's future carbon costs to its benefits, weighted at portfolio level.

$$\text{EBITDA at risk} = \sum_{i}^{n} \left[\frac{\text{Future carbon costs}_i}{\text{EBITDA}_i} \times \text{weight}_i \right]$$

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

With any forward-looking analysis, a number of assumptions must be used to calculate possible future outcomes. By holding company earnings and absolute emissions constant, S&P Global Sustainable1 limits the number of variables. Rather than assessing a company's future ability to pay potential carbons costs, S&P Global Sustainable1 assesses the ability of a company to pay future costs now. S&P Global Sustainable1 has calculated current earnings using a three year trailing average in order to smooth out volatility in financial performance. Below results are based on the scenario of a high carbon price increase in 2030.[59]

59 Companies that do not have sufficient financial data or that report negative earnings are excluded from the analysis.

Transition risks within FDC's portfolios: high carbon price increase in 2030

FDC Aggregate EQ

EBITDA at Risk **7.72%**

Apportioned UCC

64,846,270€

Equity composite benchmark

EBITDA at Risk **7.94%**

Apportioned UCC

69,679,686€

FDC Aggregate FI

EBITDA at Risk **5.56%**

Apportioned UCC

15,333,047€

Bond composite benchmark

EBITDA at Risk **12.99%**

Apportioned UCC

19,701,260€

FDC Aggregate (EQ+FI)

EBITDA at Risk **7.26%**

Apportioned UCC

80,179,317€

Weighted composite benchmark

EBITDA at Risk **8.76%**

Apportioned UCC

89,203,759€

Source: S&P Global Sustainable1

The allocated future carbon costs highlight the future carbon costs incurred by companies in the portfolio and reflect the increase of the risk premium by 2030. **When considering the table on the left, it should be noted that FDC's portfolios show all a lower level of allocated future carbon costs and EBITDA at risk than the respective benchmarks**. For example, for the aggregated portfolio, these costs are estimated at some 80 million euros, representing only some 0.5% of FDC's total aggregated equities and fixed income portfolio submitted to S&P Global Sustainable1 for analysis. The benchmark shows a value of nearly 90 million euros. Moreover, the share of earnings before interest, taxes and amortisation at risk in a scenario of a high carbon price in 2030 is estimated at 7.26% compared to 8.76% at benchmark level.

Finally, **compared to FDC's first Sustainable Investor Report based on data as of end of 2019, the apportioned carbon costs have decreased by nearly 18%. Also, the EBIDTA at risk has decreased, this from 8.79% to 7.26%. Additionally, the positive relative performance versus the benchmark has been increased for both metrics**.

5.2.4.2. Physical risks

Physical risks resulting from climate change can be acute (driven by an event such as a flood or storm) or chronic (arising from longer term shifts in climate patterns) and may have financial implications for organisations such as damage to assets, interruption of operations and disruption to supply chains. To better understand these risks, S&P Global Sustainable1 has developed a physical risk assessment framework covering eight key hazard types: wildfire, extreme cold, extreme heat, water stress, coastal flood, riverine flood, tropical cyclone and drought.

The latest version of the dataset links over 3.1 million built assets to over 20,000 companies, and provides eight decades of forecasts (from 2020s to 2090s) under four different climate scenarios based on IPCC Representative Concentration Pathways and Shared Socioeconomic Pathways and informed by the TCFD technical guidelines:

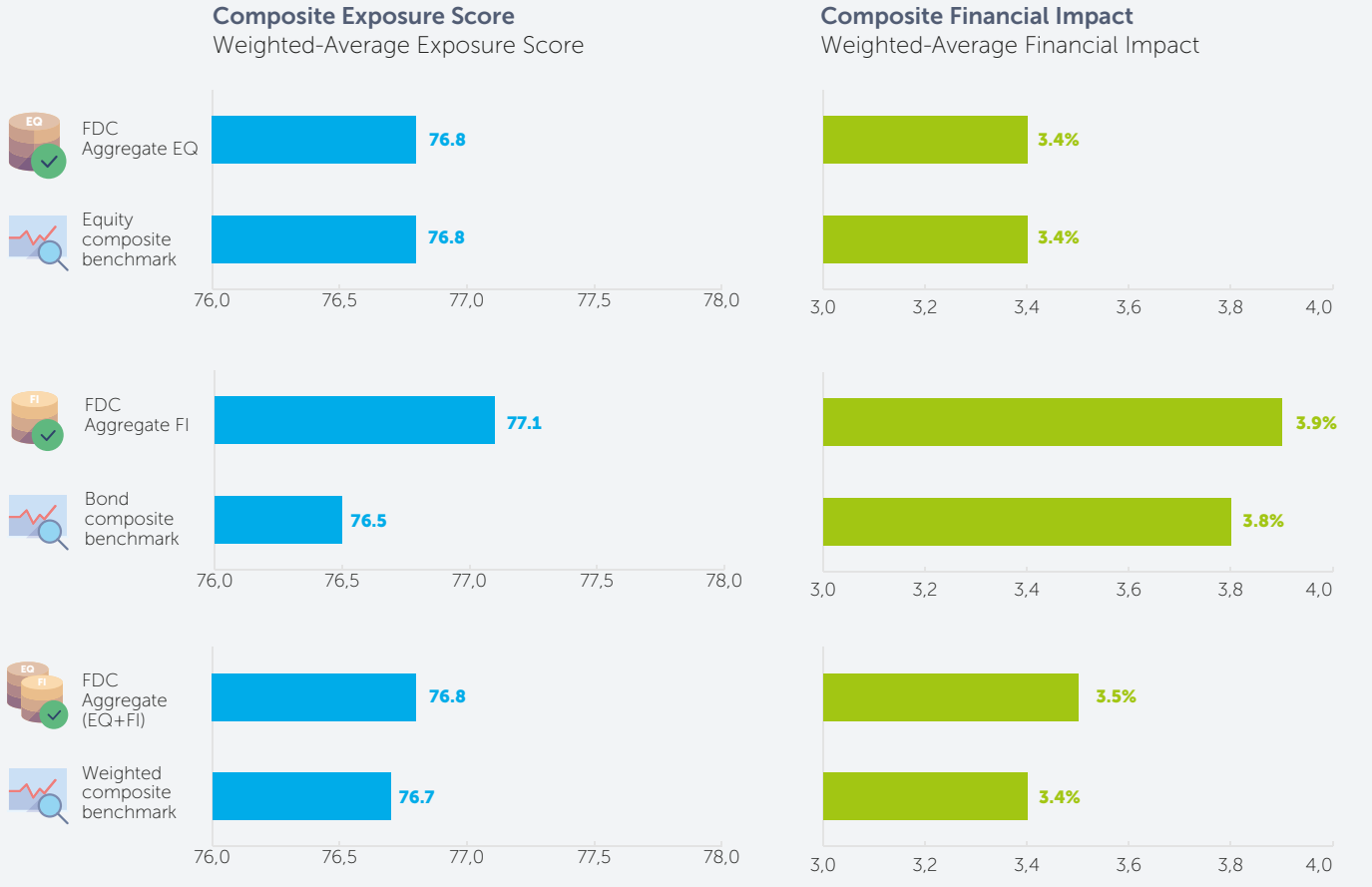
- High Climate Change Scenario: low mitigation scenario in which total greenhouse gas emissions triple by 2075 and global average temperatures rise by 3.3 - 5.7°C by 2100.
- Medium-High Climate Change Scenario: limited mitigation scenario in which total green-house gas emissions double by 2100 and global average temperatures rise by 2.8 - 4.6°C by 2100.
- Medium Climate Change Scenario: strong mitigation scenario in which total greenhouse gas emissions stabilise at current levels until 2050 and then decline to 2100. This scenario is expected to result in global average temperatures rising by 2.1 - 3.5°C by 2100.
- Low Climate Change Scenario: aggressive mitigation scenario in which total greenhouse gas emission reduce to net zero by 2050, resulting in global average temperatures rising by 1.3 - 2.4°C by 2100, consistent with the goals of the Paris Agreement.

The two key outputs of the dataset are exposure scores and financial impact. The former is a point-in-time assessment of exposure to climate hazards relative to global conditions, independent of the characteristics of the asset at a given location. It is provided on a 1 to 100 scale, with 100 indicating the highest possible risk and 1 indicating the lowest. Composite exposure scores are also provided as a logarithmic function of exposure to all 8 hazards. The latter reflects the financial consequences arising from the change in climate hazard exposure versus a baseline, specific to the asset present at a given location. Financial impacts are presented as the possible climate-linked losses (e.g., from CapEx business interruption, etc.) as a percentage of asset value. Financial impact quantification pathways are not currently available for extreme cold but are offered for all other climate hazards. Both metrics are calculated as investment-weighted averages of constituent scores respectively impacts at the portfolio or benchmark level.

For more information on the physical risk assessment framework's methodology, please refer to the Appendix 9.

The following graph illustrates FDC's composite exposure score as well as the composite financial impact, based on a medium-high warming in 2050 scenario.

Exposure Score and Financial Impact of FDC's portfolios: medium-high warming in 2050



Source: S&P Global Sustainable1

S&P Global Sustainable1's analysis shows that **FDC's aggregated portfolio is nearly aligned with the benchmark in terms of exposure scores and financial impact. Possible climate-linked losses within FDC's aggregated portfolio would be limited to a share of 3.5%.**[60]

60 S&P Global Sustainable1 launched a suite of Climate Change Physical Risk Analytics solutions to the market in 2019, offering an asset based approach to the assessment of physical risk at the company and portfolio level. In 2022, launched an enhanced physical risk framework, leveraging the expertise and intellectual property of The Climate Service (TCS), which was acquired by S&P Global in January 2022. In this context, FDC was not able to proceed to a meaningful and consistent comparison between its first physical risk analysis based on data as of 31 December 2019 and the present analysis.

6. Conclusions

FDC is required by law to build a broadly diversified portfolio with appropriate risk and return characteristics to contribute to the long-term viability of the general pension insurance scheme. Therefore, the objective is to generate a return in line with the market while investing in several asset classes managed according to different management styles in order to spread the assets over a large number of regions, countries, sectors and currencies. Within this framework, FDC considers sustainable aspects and criteria in its investment policy.

The pillars of FDC's responsible investor policy can be summarised as follows:

- since 2011, an exclusion list has ensured that FDC's investments through its SICAV comply with international standards as enshrined in the ten principles of the UN Global Compact covering human rights, the environment, international labour standards and anti-corruption. Equally excluded are companies involved in controversial weapons-related activities as well as companies deemed to have an "extended under observation" with "no concrete prospects of improvement" status. In addition to the restrictions imposed by the legal provisions and international conventions in force, FDC considers that thematic or sectoral exclusions require a change in the legal framework;
- the assets invested through the SICAV are managed by professional and approved asset managers duly designated by FDC. These asset managers are appointed in a transparent manner through public tenders. Since 2011, detailed questions have been incorporated in the asset manager selection questionnaire referring to sustainable aspects and criteria taken into consideration by the tendering companies, in particular with regard to their investment process and asset allocation. This aspect got strengthened over time so that from 2017 onwards, each tendering company participating in a tender for actively managed mandates has been obliged to integrate a sustainable approach into the investment strategy proposed to FDC. As a result, FDC's asset managers have all engagement policies in place, participate in various initiatives and are members of different organisations that promote, among others, sustainability and/or the transition to a low-carbon economy, are all signatories to the UN PRIs and strive to align with the 17 SDGs of the UN. The sustainable approaches of the asset managers are monitored and audited. Fifteen ESG and Environment labels have been awarded by the labelling agency LuxFLAG. In addition, sixteen sub-funds are categorised as Article 8 or 9 product. These labels and SFDR classifications account for 100% of FDC's actively managed listed assets;
- alongside the obligation for actively managed mandates to integrate a sustainable approach into the investment strategy, FDC proceeds also to dedicated positive-impact investments in various forms via specifically created sub-funds. Sub-funds were created within the SICAV to invest exclusively in green bonds as well as in equities of companies

intending to generate, in addition to financial returns, an environmental or social impact. In this way, FDC contributes, for example, to the treatment and saving of water, the generation of renewable energy, the reduction of greenhouse gas emissions and the recycling and management of waste. In addition, two Paris Aligned indexed mandates were launched respectively in 2022 and 2024 for a total size of one billion euros. In 2025, it is planned to launch a clean energy focused infrastructure sub-fund with a target size of 500 million euros. Through its stakes in the SNHBM and specific real estate acquisitions, FDC supports low-cost housing. As an owner of almost 700 hectares of PEFC-certified forest, FDC contributes, among other things, to absorbing CO_2 emissions of about 7,500 tons per year;

- with regard to FDC's direct real estate, high standards in terms of energy performance and sustainability are targeted and ensured in particular through high level BREEAM labels;
- while FDC's responsible investor policy puts particular focus on engagement and values asset managers that actively seek dialogue with companies and who have established a consistent and wide-ranging engagement policy, FDC's engagement policy is put into practice through membership of IIGCC and by being signatory to the Climate Action 100+ initiative as a supporting asset owner;
- finally and on an individual basis, detailed analysis and assessment of climate risks are carried out by FDC's asset managers. The management of these risks forms an integral part of their investment process. At the same time, the use of external service providers such as S&P Global Sustainable1 allows FDC to have a more consolidated and independent view of climate risks and to monitor and assess them. In addition, an alignment to a global warming limited to 2°C can be analysed.

Thus, FDC is well aware of the importance of taking into consideration sustainable aspects and criteria and climate analyses and making an assessment of the related risks. The results presented in this report confirm that these risks are well managed. The analysis by S&P Global Sustainable1 did neither identify significant exposure to stranded assets nor to transition or physical risks.

With regard to carbon footprints, S&P Global Sustainable1's analysis shows that FDC portfolios perform positively compared to benchmarks. In addition, FDC was able to significantly reduce given footprints during the last 4 years. Similarly, the transition pathways of FDC's equities portfolio and fixed income portfolio have respectively moved from an "above 3°C" trajectory to a "2 to 3°C" trajectory and from a "2 to 3°C" trajectory to a "1.5 to 2°C" trajectory. On an aggregated level, these individual portfolio improvements did not yet have enough weight to result in an under-budget in terms of absolute tCO_2e to comply with a 2°C pathway. However, the over-budget has been reduced from more than 13% at the end of 2019 to now 5%. This is all the more remarkable as the assets covered by the alignment study have grown by more than 20%. Hence, FDC was able to significantly orientate and reallocate over the last years within its responsible investor policy capital towards companies with carbon budgets in compliance with a 2°C or even a lower pathway. Keeping in mind that S&P Global Sustainable1's alignment study does for example not take into account avoided or negative carbon emissions resulting from FDC's green bond or positive impact investments argues in favour of an even more favourable transition pathway being thus very close to a 2°C alignment.

Finally, the results have also shown that the energy mixes of FDC's portfolios continue getting closer to the future energy mixes needed to meet the 2°C objective. According to S&P Global Sustainable1, the carbon-intensive sectors coal and oil within the energy mix of FDC's consolidated

equity and corporate bond portfolio remain nearly aligned with the energy mix projected for 2030. In addition, FDC was able to increase its exposure to renewables through a significant decrease of its exposure to nuclear energy. The largest deviation remains within natural gas where an overexposure of approximatively 10% currently persists compared to the 2°C aligned energy mix for 2030.

At the level of the sovereign portfolio, similar conclusions can be drawn. In terms of petroleum and coal-fired power generation, FDC's sovereign portfolio is more than in line with the IEA's 2025 scenario. Renewables represent 38% of the energy mix of FDC's sovereign portfolio, share in line with the IEA 2025 scenario. In 2019, renewables accounted only for 29% within FDC's energy mix. While exposure to nuclear remained unchanged, this increase does mainly stem from a decrease of FDC's exposure to natural gas. FDC's foreseen investments with a target size of 500 million euros in infrastructure assets with a clear focus on clean and renewable energies will surely have a further positive impact on FDC's overall energy mix.

Overall, FDC sees its sustainable investment policy with its gradual and, in its judgement, sensible, feasible and step-by-step reinforcements and changes as absolutely confirmed. Current report clearly shows that further significant improvements have been achieved at various levels and that sound governance, monitoring and risk management is in place, which, among other things, has made it possible to create various positive impacts and to further mitigate non-financial risks, reduce carbon footprints as well as move towards a below 2°C alignment of all portfolios.

7. Appendices

APPENDIX 1: ASSET ALLOCATION WITHIN FDC'S SICAV AS OF 30 SEPTEMBER 2024 (UNAUDITED & SUBJECT TO CHANGE)

Sub-fund / Asset class	Total (€)	Total (%)	Management style
TOTAL SICAV	26.430.681.109	100.00%	
FDC SICAV EUR Money Market – Active 1	971.270.541		Active
TOTAL MONEY MARKET	971.270.541	3.67%	
FDC SICAV EMMA Bonds – Active 1	296.192.677		Active
FDC SICAV EMMA Bonds – Indexed	284.739.280		Indexed
TOTAL EMERGING MARKETS BONDS	580.931.957	2.20%	
FDC SICAV Global Bonds – Active 1	823.788.241		Active
FDC SICAV Global Bonds – Active 2	1.018.704.827		Active
FDC SICAV Global Bonds – Active 3	809.184.230		Active
FDC SICAV Global Bonds – Indexed	2.413.709.586		Indexed
FDC SICAV Global Bonds Paris Aligned – Indexed	519.332.988		Indexed
TOTAL GLOBAL BONDS	5.584.719.872	21.13%	
FDC SICAV EUR Bonds – Active 1	1.046.263.663		Active
FDC SICAV EUR Bonds – Active 2	1.074.478.014		Active
FDC SICAV EUR Bonds – Active 3	1.122.775.698		Active
FDC SICAV EUR Bonds – Indexed	2.560.349.786		Indexed
FDC SICAV EUR Green Bonds – Active 1	306.930.877		Active
TOTAL EUR BONDS	6.110.798.038	23.12%	
TOTAL BONDS	12.276.449.467	46.45%	
FDC SICAV Global Equities Small Cap – Active 1	654.408.072		Active
FDC SICAV Global Equities Small Cap – Indexed	635.597.988		Indexed
TOTAL GLOBAL SMALL CAP EQUITIES	1.290.006.060	4.88%	
FDC SICAV EMMA Equities – Active 1	717.797.743		Active
FDC SICAV EMMA Equities – Indexed	885.499.934		Indexed
TOTAL EMERGING MARKETS EQUITIES	1.603.297.677	6.07%	
FDC SICAV Global Equities – Active 1	976.457.083		Active
FDC SICAV Global Equities – Active 2	904.546.816		Active
FDC SICAV Global Equities – Active 3	957.667.058		Active
FDC SICAV Global Equities – Indexed	2.931.646.247		Indexed
FDC SICAV Global Equities – Indexed 2	2.517.413.768		Indexed
FDC SICAV Global Equities Paris Aligned – Indexed	642.169.212		Indexed
FDC SICAV Global Equities Sustainable Impact – Active 1	477.043.058		Active
TOTAL GLOBAL EQUITIES	9.406.943.242	35.59%	
TOTAL EQUITIES	12.300.246.979	46.54%	
FDC SICAV Global Real Estate – Active 1	390.553.091		Active
FDC SICAV Global Real Estate – Active 2	492.160.631		Active
TOTAL REAL ESTATE	882.713.722	3.34%	
FDC SICAV Global Infrastructure – Active 1	to be launched [61]		Active
TOTAL INFRASTRUCTURE	0	0.00%	

61 Target month: January 2025. Target size of 500 million euros.

APPENDIX 2: HOW ACTIVE ASSET MANAGERS CAN ADDRESS SUSTAINABILITY AND CLIMATE-RELATED RISKS

Allianz Global Investors

Allianz Global Investors has implemented a framework to identify and assess negative impacts on sustainability factors, which is based on the 16 mandatory PAI indicators as defined by the SFDR regulation. PAI indicators related to transition risks (PAIs 1 to 6) are considered either as part of the application of exclusion criteria or through significance thresholds on a sectorial or absolute basis. Allianz Global Investors has implemented pre-trade warnings for investments in securities which are not meeting these significant thresholds.

In addition, Allianz Global Investors' sustainability experts provide its investment professionals with regular portfolio screening of PAIs along selected key performance indicators such as carbon emissions or exposure to sectors that are affecting climate change more than other sectors. Beyond this systematic assessment, Allianz Global Investor's panels have access to granular GHG absolute emissions data (scope 1, 2 and 3) as well as intensity metrics. Data are sourced from MSCI ESG. In addition, they can assess forward-looking metrics, including SBTi data as well as the alignment status of individual issuers based on Allianz Global Investors' Net Zero Alignment Share methodology. This methodology leverages the Net Zero Investment Framework 1.0 (NZIF) from IIGCC's Paris Aligned Investment Initiative, which provides a forward-looking assessment at issuer level.

Amundi Asset Management

Sovereign entities

Amundi Asset Management has developed a proprietary methodology to rate sovereign entities on the main ESG issues to which an investor is exposed through its investments in sovereign debt. It aims at assessing ESG issues that are at the forefront of governments' current and past policies; these could in turn materialise into a country's ability to reimburse its debt in the mid to long-term, representing a risk for the investor. It also aims at assessing how countries are handling the major sustainability issues that contribute to the stability of global society. It is based on data points developed by an external ESG data provider, Verisk Maplecroft. This provider has been selected because of the stability and consistency of its indicator, its precision and its flexibility.

The methodology relies on roughly 50 indexes (or factors) that are developed by Verisk Maplecroft, each of these indexes represent an ESG issue. The external data provider constructs these indexes based on several data points from different sources. It includes external databases (such as the World Bank, the United Nations, etc.), proprietary databases as well as expert scorecards. The provider factors these data points into an index. Each index measures the performance of the sovereign entities on one ESG issue (e.g., Carbon Policy, Water Stress, Decent Wages, Corruption, etc.). Countries are scored on a scale from 0 (lowest score) to 10 (highest score) relatively (i.e., a country performance is measured against other countries). Only very specific indexes are scored based on an absolute scale (indexes for which it is possible to define an optimal level). Verisk Maplecroft measures some indexes at the subnational level and then aggregate the performance of each region at the national level.

The indexes are grouped into 8 categories in order to ensure a better readability of the score, each category falling into one of the pillars E, S or G. The selected indexes are then aggregated using a personalised weighting scheme into each pillar of the ESG score. This weighting scheme has been co-constructed with the provider in order to reflect both the provider's expertise on the relative significance of each index and Amundi's view on the material aspect of each issue. The final score resulting from this aggregation is, similarly to the indexes, a score between 0 and 10, which measures the overall performance of the country with respect to the selected issues.

Amundi's Carbon Policy Sovereign Index: The index's output is a numerical score from 0-10, with 10 being the best. Amundi relies on its external provider's data (Verisk Maplecroft) which groups a number of indicators into an aggregated index called the Carbon Policy — Sovereign Index. This index allows Amundi to assess a country's potential for more stringent greenhouse gas emissions reduction policies to be implemented and the degree to which they are likely to have material implications for business. The index deems countries to be higher risk when they demonstrate little or no actions to deploy greenhouse gas emissions reduction policies, capturing the reputational risk with operating in these locations.

The index is composed of three pillars – Emissions Gap, Capacity and intent to implement carbon policies, and Economic transition, with each pillar having associated sub-indicators to assess a sovereign's current positioning on an issue. As a first step, Amundi utilises this index to qualify where a sovereign issuer situates themselves in regards to their climate policy measures. The index scores for each sovereign are up-dated on a quarterly basis.[62]

ESG Engagement with Sovereigns: Engagement is a continuous and purpose driven process aimed at influencing the activities or behaviour of investee companies. The aim of engagement activities can fall into two categories: to engage an issuer to improve the way it integrates the environmental and social dimension, to engage an issuer to improve its impact on environmental, social, and human rights-related or other sustainability matters that are material to society and the global economy.

Controversies monitoring: Amundi has developed a controversy tracking system that relies on three external data providers to systematically track controversies and their level of severity. This quantitative approach is then enriched with an in-depth assessment of each severe controversy, led by ESG analysts and the periodic review of its evolution.

Corporates

Amundi bases its ESG analysis of corporates on a best-in-class approach. Each issuer is assigned a quantitative score assessed around the average of the issuer's sector. Amundi's assessment relies on a combination of extrafinancial data from third parties and qualitative analysis of associated sector and sustainability themes. The quantitative score is translated into a letter rating, using a seven point scale from A to G, whereby A is for the best practices, and G for the worst ones. As part of the application of Amundi's Minimum Standards and Exclusion Policy, G-rated companies are excluded from the investment universe.

Amundi's analysis framework has been designed to assess corporate behaviour in three dimensions: Environment, Social, and Governance (ESG). Amundi assesses companies' exposure to ESG risks and opportunities, including sustainability risks and impact on sustainability factors, and how corporates manage these challenges in their respective sectors. As far as issuers of listed securities are concerned, Amundi assigns a unique score at issuer level, which is attributed to all instrument types across the capital structure.

62 It should be noted that this index does not in any way assess whether the climate change mitigation policies in place in various jurisdictions are sufficient to limit global warming below 2°C. Nor does it attempt to assess whether countries are doing their "fair share".

Environmental dimension

There are risks and opportunities linked to environmental issues. Amundi's analysis on this dimension examines how issuers address this topic, and assesses companies' ability to control their direct and indirect environmental impact, by limiting their energy consumption, reducing their greenhouse emissions, developing solutions to fight resource depletion and protecting biodiversity.

Social dimension

In this dimension, Amundi measures how issuers manage their human capital and stakeholders, drawing on fundamental principles with a universal reach. This dimension covers multiple themes including the social aspect linked to issuers' human capital, those linked to human rights, and the responsibilities towards stakeholders.

Governance dimension

In this dimension, Amundi assesses issuers' ability to establish an effective corporate governance framework that ultimately supports the issuers' value over the long-term. Amundi's ESG analysis framework is comprised of 38 criteria, of which 17 are cross-sector criteria and 21 sector-specific criteria. These criteria are designed to assess how sustainability issues might affect the issuer as well as the quality of the management of these issues. Impact on sustainability factors as well as quality of the mitigation actions are also considered. These criteria are available in the fund managers' front office portfolio management system.

To be effective, ESG analysis must be focused on the most material criteria depending on the business and sector activity. The weighting of ESG criteria is therefore a critical element of Amundi's ESG analytical framework. For each sector, ESG analysts weigh the criteria deemed the most important. Amundi's ESG analysts will typically increase their level of scrutiny and expectations whenever the risk faced by a company on any given ESG criteria is deemed high and material.

ESG ratings are calculated by using the ESG criteria and weights assigned by the analysts and combining the ESG scores obtained from Amundi's external data providers. At each stage of the calculation process, the scores are normalised into Z-scores. Z-scores are a way to compare results to a "normal" population (deviation of the issuer's score compared to the average score of the sector, by number of standard deviations). Each issuer is assigned with a score scaled around the average of their sector. At the end of the process, each company is assigned an ESG score (approximately between -3 and +3) and the equivalent on a scale from A to G, whereby A is the best, and G the worst.

There is only one ESG rating assigned to each issuer, regardless of the chosen reference universe. The ESG rating is thus "sector neutral", that is to say that no sector is privileged or, on the opposite, disadvantaged. ESG ratings are updated on a monthly basis, based on the raw data provided by Amundi's external data providers. Developments on issuers' ESG practices are followed continuously.

When it comes to climate-related risk, Amundi has set up indicators and targets to identify, qualify and effectively manage climate-related risks and opportunities. By using a wide range of indicators, Amundi is able to set short, medium and long-term targets. To do this, Amundi relies on a wide range of data providers such as S&P Global, MSCI, Sustainalytics or Vigeo-Eiris to ensure that its measurements and assessments are as accurate as possible.

AXA Investment Managers

AXA IM is a long-term, responsible investor with the aim of delivering sustainable returns for clients. AXA IM aims to achieve this goal via in-depth research, data analysis and the construction of portfolios which look to optimise both financial and non-financial factors. AXA IM's investment process reflects its core belief that a focus on sustainability can help deliver robust economic and financial performance over the long term. AXA IM's sustainability strategy is mainly focused on :

- **Net Zero Ambition:** As an organisation, AXA IM has committed to become net zero by 2050 at the very latest. To achieve this, AXA IM is working on a programme to measure and reduce its footprint across all key emissions, with an initial milestone of 26% reduction by 2025 compared to 2019. This comes with underlying operational objectives such as scope 3 measurement and raising awareness initiatives with its employees. With this in mind and to ensure that its entire business is on track to meet its net zero target with an effective contribution from across the company the deferred part of the 2023 variable pay that will start to be paid in 2024 will include ESG metrics aligned with the AXA IM net zero targets.
- **Biodiversity:** AXA IM has launched in 2022 a fund focused on biodiversity preservation by investing in companies acting positively for the climate by reducing and/or limiting the negative impact of human activities on biodiversity as well as a dedicated-biodiversity focused exchange-traded fund (ETF). AXA IM is investigating other investment opportunities on biodiversity topics, considering a significant interest from its clients. Finally, the development of biodiversity-specific metrics and tools is crucial to allow progress on biodiversity impact measurements. AXA IM supports the work of Icerberg Data Lab and iCare & Consult in the development of an innovative biodiversity-specific data used to create a Corporate Biodiversity Footprint (CBF) to measure exposure to the risks of biodiversity loss.
- **Sustainable Finance policy:** absorbing new sustainable finance framework is a key challenge for the asset management industry which paved the way for an enhanced, shared under-standing of the key challenges to be addressed to make the framework more usable. AXA IM is committed to playing its part in making this sustainable finance framework usable and to enable it to reach its long-term objectives and participates to the new European Commission Platform on Sustainable Finance, as well as part of several industry initiatives on sustainable finance policies, including with a position of co-chair within the IIGCC Policy Advisory Group.
- **Revised governance:** as part of AXA IM's continued efforts to further embed ESG within the business and ensure consistency in its approach across investment, operations and human resources, the governance structure changed in 2022 with the creation of a sub-committee of the management board, the Sustainability Strategic Committee. AXA IM's vision and ambitions for sustainability across responsible investing and corporate responsibility are shaped and agreed within the AXA IM Sustainability Strategic Committee, attended by all of the Management Board members as well as AXA IM's Executive Chairman.
- **Transparency and disclosures:** in February 2023, AXA IM launched the AXA IM For Progress Monitor, accessible from the home page of its website, which brings together a selection of existing metrics in a simple and transparent way, to better communicate and showcase its journey to net zero. The For Progress Monitor index comprises metrics from both investment perspective and operational perspective (AXA IM as an organization). Its progress towards these interim targets will be reported annually.

AXA IM's Climate Strategy is aligned with the frameworks proposed by the TCFD, the IIGCC and the Paris Aligned Investment Initiative (PAII) coordinated by the IIGCC, and is evidenced by its active involvement in international initiatives such as Climate Action 100+ or the Climate Bonds Initiative.

AXA IM is deeply committed to tackling the impact of climate-related risks and as a large investor it has a role to play in limiting global warming. AXA IM believes it is its duty to provide the relevant expertise to help clients better understand climate change and how it may impact their portfolios and support them in adapting their investment decisions accordingly.

In addition to being part of the IIGCC working group on the Net Zero Investment Framework (NZIF), AXA IM also continues to work closely with its parent company in the Net Zero Asset Owner Alliance (NZAOA) with the aim of defining how investment strategies will support the shift of the economy to a pathway consistent with the objectives of the Paris Agreement.

In December 2020, AXA IM joined the NZAM (Net Zero Asset Managers initiative) as founding members, committing to reaching net zero emissions by 2050 or sooner across all assets under management. In this perspective AXA IM set an initial target committing to manage 15% of its assets under management in line with net zero by 2050. This means that all these assets are managed in a manner aligned with the IPCC 1.5°C pathways report. In April 2022, AXA IM announced an increase to 65% of total assets at end of 2021. This increase was possible thanks to the extensive work to review how AXA IM could integrate net zero methodologies into the management of corporate, sovereign and direct real estate assets.

To help AXA IM work out how companies are progressing on this journey, AXA IM developed the Climate Colour Framework which enables it to track their progress using quantitative as well as qualitative research, leveraging the Net Zero Investment Framework from the Paris Aligned Investment Initiative. This Climate colour framework aims to determine the net zero profile of assets which helps to inform investment decisions. If companies considered as "climate laggards" with no clear transition pathway or clear credible targets, AXA IM will divest by 2040 at the latest.

AXA IM has relied on its collaboration with a consortium of external experts such as S&P Global, MSCI and Beyond Ratings and continued to investigate innovative forward-looking metrics to measure exposure of its investments to transition and physical risks and the global warming potential of its investments. Combined with a shareholder engagement strategy through which AXA IM actively interacts with companies most at risk, its climate exposure assessment capacity is aimed at helping portfolio managers to further integrate climate risks and opportunities into their activities.

AXA IM excludes firms which fail to meet certain climate change criteria, focusing in particular on coal, as well as unconventional oil & gas. Its investment portfolios exclude coal-based electric power generating utilities and coal mining companies that are not credibly demonstrating a commitment to energy transition. AXA IM also excludes certain companies in the unconventional oil & gas sector with a focus on tar sands, arctic and shale. In early 2023, AXA IM tightened some of its exclusion criteria regarding coal and oil sands and committed to updated exclusion criteria later in 2023. AXA IM is committed to exit all coal investments in OECD countries by the end of this decade, and throughout the rest of the world by 2040.

AXA IM has set corporate asset targets to reduce carbon intensity by 25% by 2025 and 50% by 2030. AXA IM has committed to having its full corporate asset portfolio as either net zero emissions or aligned with becoming net zero emissions by 2050.

Alongside the work to reduce the carbon footprint of its existing portfolios, AXA IM continues to add "green" products and investments, increasing its asset under management by 50% in just 3 years and channelling capital to where it can have the greatest impact. This is part of its effort to go beyond what is expected and act as custodians for future generations. AXA IM goal is to have 6% of its assets under management dedicated to climate solutions by 2025.

In order to provide a summary of its climate strategy and commitments as an investor, employer and business, AXA IM published its Climate Action Report: https://www.axa-im.com/sites/corporate/files/2022-10/axa-im-climate-action-report-final.pdf.

AXA IM uses the third pillar of MSCI Climate Value at Risk (CVaR), called extreme weather, to assess physical climate risk at the issuer level. Also, the framework for climate risk analysis at the issuer level takes into account internal and external information from different providers (SBTi, Transition Pathway Initiative (PTI), Carbon Disclosure Project (CDP), S&P Global, MSCI). In addition to the financial characteristics of each stock, these measures are taken into account before and after the investment on an ongoing basis. Each company is assigned a "climate colour", ranging from dark blue (companies already compatible with a net zero global economy, based the International Energy Agency) to red ("climate laggards", for companies that have not demonstrated any effort to transition to a low carbon economy).

CBRE Global Investment Partners

CBRE Global Investment Partners utilises its Sustainability Scorecard to measure performance on issues such as energy and GHG emissions as well as GRESB results. CBRE Global Investment Partners also routinely screens the portfolio for exposure to physical climate risk using Moody's climate on demand.

Franklin Templeton Investment Management

Franklin Templeton Investment Management's portfolio managers use proprietary data tools and qualitative research to ensure alignment with the Do No Significant Harm (the "DNSH") principles across the portfolio. All issuers are monitored using the Principle Adverse Impact Risk App (the "PAI Risk App"). The PAI Risk App uses data from third-party providers to identify issuers involved in harmful economic activities and/or controversies and exclude such issuers from the investment universe.

A second proprietary tool, the Energy and Environmental Transition Index (the "EETI"), ranks the remaining sovereign issuers in the universe according to their GHG emissions and intensity. Sovereign issuers falling within the bottom 20% of their peer groups based on EETI are excluded from the investment universe.

Another tool, the ESG Credit App, ranks corporate issuers by their GHG emissions and intensity using various data points such as scope 1 and 2 GHG emissions, emitters' historic trajectories. Corporate issuers falling within the bottom 20% of the investment universe (i.e., climate laggards) based on the ESG Credit App are also excluded from the investment universe.

Additionally, sovereign issuers are subjected to tests based on their political liberties and/or corruption.

When deploying funds to sustainable investments, Franklin Templeton Investment Management's portfolio managers apply additional qualitative assessment (based on internal research or on external third-party opinion) of the issuer's and of the projects' DNSH eligibility.

HSBC Global Asset Management

Climate change is a core ESG consideration for HSBC and, as such, HSBC integrates climate-risk management in its overall approach. HSBC's multiple data sources and metrics enables it to evaluate companies/portfolios based on their current climate relevant credentials as well as develop a forward-looking view as to how HSBC considers climate impacts on future business/valuations.

At the issuer level, investment teams use third party data to assess issuers' climate credentials and transition risk and/or opportunities. HSBC is building its existing set of proprietary capabilities to enable it to analyse companies in which HSBC invests to assess the risks and opportunities climate presents to their business models; developing sector specific templates for key sectors critical to the transition; and assessing the quality and credibility of a company's transition planning.

At portfolio level, HSBC portfolio managers' decision tools embed ESG and carbon data. This allows the managers to make high-level assessments of their climate-related risk exposure, on an absolute and relative basis, at any time, as part of their ongoing portfolio management activities.

HSBC's RI team, with the support of the Sustainabillity Investment Lab, also conducts macro and sectoral research on climate issues. The analysis of these issues, particularly the risks inherent in the transition, and their impact on financial markets, is a rapidly evolving field of research. HSBC continues to be a pioneer in this area through its research, including its reports on transition scenarios towards a low-carbon economy, its collaboration with external experts and sectoral initiatives. HSBC shares the findings of its work with all its investment teams so that they can make better informed decisions. Finally, HSBC also leverages MSCI's climate value at risk model which is also published in its TCFD reports.

Impax Asset Management

The materiality of sustainability risks is assessed through Impax's proprietary integrated ESG analysis. Impax considers five main pillars within this analysis: Climate change, Governance, Material environmental and social risks, Human capital management and Equality, Diversity & Inclusion. In assessing a portfolio's transition alignment and the rigour of underlying investee companies' climate management processes, Impax's team considers individual companies' disclosures, quality of relevant risk management processes, and net zero alignment. In addition, Impax may use a number of analyses and scenario modelling tools in a comprehensive analysis of transition risk and physical climate risk.

LaSalle Investment Management

LaSalle collects net zero and climate risk data from its underlying investments on a quarterly basis, the results of which are included in its quarterly report. As of December 31, 2023 21% of its investments by market value calculate Climate Value-At-Risk (CVAR) with a portfolio level CVAR of 0.03%.

LaSalle is working with MSCI to get further capability to allow it to calculate a portfolio level CVAR utilising the locational codes LaSalle collects on an annual basis.

MFS Investment Management

MFS conducts a substantial amount of climate research, which is shared in sector team discussions, regional investment meetings, thematic presentations and one-on-one interactions. This research covers a wide range of industries across energy, utility, industrial sectors along with others.

Neuberger Berman Asset Management

Sustainability risks

In keeping with its belief that ESG integration must be based on the principle of materially impacting performance or risk and be appropriate for the specific investment process, Neuberger's teams do not simply rely on a third-party ESG research provider for ESG analysis. Instead, portfolio managers and research analysts have access to a wide range of ESG data sources and research providers, including proprietary tools such as the Industry Materiality Matrix, as well as the advanced analytics capabilities of Neuberger's Data Science team and the insights Neuberger gleans from engaging directly with investee company management teams. The Neuberger Berman Industry Materiality Matrix spans more than 75 different industries, under 11 sectors and across 33 ESG factors.

The matrix allows Neuberger to develop forward-looking views by industry, guiding ESG investment analysis and engagement in a consistent and comparable way, and accommodating real-time insights from sector experts. The matrix is available to all investment teams to use as a starting point for further ESG analysis, and can be applied to asset classes, including private markets. The result of this work is an industry-relative rating for each company under coverage on separate ESG characteristics that are available for all investment professionals at Neuberger throughout the research environment. The underlying data is updated weekly and the rating methodology is reviewed at least annually with the sector analysts. These resources are integrated by its central equity and credit research analysts into proprietary ratings for sovereigns and corporates that have been developed specifically for each asset class, namely the NB ESG Quotient.

These custom ratings cover over 4,000 equities and 2,700 credit issuers while incorporating the analysts' extensive industry experience to make decisions on qualitative categories that may be hard to measure. Given limited disclosure of ESG data in some markets and for some types of issuers, many ratings include significant qualitative judgment from analysts themselves. Those ratings are used by portfolio managers as part of their approach to ESG integration, for example, by adjusting internal credit ratings up or down based on the NB ESG Quotient.

Climate risks

As active managers, Neuberger strongly believes that ESG analysis should incorporate analyst judgement. While backward-looking indicators such as carbon footprint and carbon intensity are important to track, they only provide a partial picture of each company and sector's unique net zero journey. In assessing climate risk and progress towards achieving climate goals Neuberger uses a combination of traditional, backward looking measures including carbon intensity and absolute emissions to measure annual declines in attributable portfolio emissions, whilst also relying on more forward-looking tools, such as a Climate Value-at-Risk (CVaR) framework and its proprietary Net zero Alignment Indicator. Neuberger can track a variety of indicators, including but not limited to:

- Carbon Intensity
- Absolute Apportioned Emissions or Carbon Footprint
- Percentage of portfolio companies with approved SBTi targets

- Percentage of portfolio invested in climate solutions (including those aligned to the EU Tax-onomy)
- Climate Value-at-Risk
- Net zero Alignment

Carbon footprint third party data amongst other environmental characteristics are integrated within its proprietary ESG score — the NB ESG Quotient. The NB ESG Quotient is a key component of the internal credit ratings and can help to identify ESG risks, which would cause deterioration in an issuer's credit profile. Internal credit ratings are notched up or down based on the NB ESG Quotient. By integrating the investment team's proprietary ESG analysis (the NB ESG Quotient) into their internal credit ratings, there is a direct link between their analysis of material ESG characteristics and portfolio construction activities across their strategy. The investment team only looks at the internal credit ratings for fixed income portfolios as this allows them to consider a company holistically. The internal credit rating incorporates and is influenced by the NB ESG Quotient.

CVaR is also used within a portfolio to systematically measure the exposure to transition and physical climate risks. CVaR is a scenario analysis tool evaluating economic risks under various degree scenarios (i.e., the amount of warming targeted) and potential regulatory environments in varying countries. CVaR provides a framework for identifying climate-risk over the long-term to assist in understanding how issuers can shift their operations and risk practices over time to achieve net zero alignment. The scenario analysis can serve as a starting point for further bottom-up analysis and identifying potential climate-related risks to address through company engagement. The investment managers will utilise internal and third party research (including but not limited to CVaR and carbon footprint) to assess all holdings in the portfolio for net zero alignment.

The Net zero Alignment Indicator seeks to capture a company's current status and progress over time towards net zero targets. The Net zero Alignment Indicator was created in partnership with clients with decarbonisation targets and incorporates specific sub-indicators that were informed by the high-level expectations of the IIGCC. The indicator utilises multiple quantitative data points from both traditional ESG data providers and specialised climate data sets, as well as real-time insights from both Neuberger's credit and equity research analysts. The indicator is utilised across its listed public equities and fixed income universe.

Robeco Institutional Asset Management

Robeco considers that sustainability risks can be climate-related, or related to other environmental, social and governance practices and can be identified across asset classes, sectors and geographies, or on the basis of length and maturity. Robeco uses various proprietary and external tools to identify and evaluate sustainability factors and related risks. Robeco's Investment Due Diligence and Risk Management frameworks are the basis for the different investment teams and risk management functions to identify and evaluate potential sustainability risks for its investment portfolios. More information are available in Robeco's Sustainability Risk Policy at this link: https://www.robeco.com/files/docm/docu-robeco-sustainability-risk-policy.pdf.

For climate-related risks, the Risk Management function makes use of several climate risk scenarios to estimate the potential financial impact on strategies, both on an absolute and relative level. These scenarios entail internally developed scenarios as well as external scenarios provided by the Dutch Central Bank and MSCI. Using these scenarios, portfolio climate risk sensitivities and expected performance can be measured. The primary metric to assess climate risk is MSCI Climate Value-at Risk (VaR). The climate VaR methodology incorporates climate transition risks and opportunities, and physical risk based on a 3-degree pathway. Standardized Climate VaR reports are actively shared with portfolio managers. The internally developed scenarios are based on literature review and modelled into Robeco's risk platform. The scenarios focus on transition risk and follow both a bottom-up and top-down approach to assess the impact of climate risks on the portfolios versus their respective benchmark. The results of these scenario assessment are shared through a monthly sustainability risk report.

Union Investment Institutional

Union identifies and assesses sustainability and climate-related risks as part of its prudent fundamental analysis in its investment process. For Union sustainability and climate-related risks to a company are factors that are part of its quality criteria Union assesses and checks for all companies that are covered by its analysts. With its proprietary ESG engine SIRIS, Union is also able to identify controversial business areas and practices and can construct client specific exclusion filters. Companies that are flagged for controversial business practices through data that Union receives from data providers such as RepRisk, MSCI and ISS are evaluated though its ESG analysts that are part of its dedicated ESG team. Controversies are categorised and revised on a regular basis by the ESG team.

APPENDIX 3: SAMPLE OF SFDR PRODUCT DISCLOSURES

FONDS DE COMPENSATION

Investment Managers

February 2024

Article 8 SFDR – Website Disclosure
FDC SICAV Global Bonds – Active 2
LEI: 549300ELGSB8R78E4T58

Overview

Fonds de Compensation de la Sécurité Sociale, SICAV-FIS has appointed AXA Investment Managers Paris S.A. ("AXA") as the portfolio manager of its sub-fund FDC SICAV Global Bonds – Active 2 (the "Sub-Fund"). The management of the Sub-Fund has been classified under Article 8 of SFDR[1].

It should be noted that, in implementing its investment strategy and as an overarching binding restriction, AXA is required to exclude companies from the Sub-Fund referenced on Fonds de Compensation de la Sécurité Sociale, SICAV-FIS' proprietary exclusion list. The latter screens out companies based on their involvement in controversial practices against international norms. The core normative framework consists of the Principles of the UN Global Compact, the OECD Guidelines for Multinational Enterprises and the UN Guiding Principles for Business and Human Rights. Equally screened out are companies linked to following controversial weapons: anti-personnel mines, cluster munitions, chemical weapons, biological weapons, depleted uranium, white phosphorus and nuclear weapons. Fonds de Compensation de la Sécurité Sociale, SICAV-FIS' exclusion list can be viewed at https://fdc.public.lu/en/investissement-responsable/liste-exclusion-fdc.html.

No sustainable investment objective

This financial product promotes an environmental or social characteristic but does not have as its objective a sustainable investment.

Environmental or social characteristic of the financial product

The environmental and social characteristics promoted by this financial product consist of investing in issuers considering the ESG score further described below.

The Sub-Fund promotes environmental and/or social characteristics by investing in securities that have implemented good practices in terms of managing their environmental, governance and social ("ESG") practices. The Sub-Fund also promotes other specific environmental and social characteristics, mainly:

- Preservation of climate with exclusion policies on coal and oil sand activities.
- Protection of ecosystem and prevention of deforestation.
- Better health with exclusion on tobacco.
- Labour rights, society and human rights, business ethics, anti-corruption with exclusion on companies in violation of international norms and standards such as the United Nations Global Compact Principles, International Labour Organization's (ILO) Conventions or the OECD guidelines for Multinational Enterprises.

AXA also applies specific policy to ensure good governance practices of investee companies.

Investment Strategy

The Financial Product bindingly applies at all times the following elements described below.

AXA bindingly applies at all times a first exclusion filter, encompassing areas such as Controversial Weapons, Climate risks, Soft Commodities and Ecosystem Protection & Deforestation. The Sub-Fund also applies AXA's Environmental, Social and Governance standards policy ("ESG Standards") integrating the ESG Standards in the investment process by applying specific sectorial exclusions such as tobacco and white

[1] Regulation (EU) 2019/2088 on sustainability-related disclosures in the financial sector ("**SFDR**").

phosphorus weapons and by excluding investments in securities issued by companies in violation of international norms and standards such as the United Nations Global Compact Principles or the OECD guidelines for Multinational Enterprises; as well as investments in companies which are involved in severe ESG-related incidents and investments in issuers with a Low ESG quality (which is below 1.43 (on a scale of 0 to 10) – such number being subject to regular review and adaptation). Instruments issued by countries where serious specific categories of violations of Human Rights are observed are also banned.

The Sub-Fund doesn't invest in companies which cause, contribute or are linked to violations of international norms and standards in a material manner. Those standards focus on Human Rights, Society, Labour and Environment. AXA relies on an external provider's screening framework and excludes any companies that have been assessed as "non-compliant" to UN's Global Compact Principles, International Labour Organization's (ILO) Conventions, OECD Guidelines for Multinational Enterprises and the UN Guiding Principles on Business and Human Rights (UNGPs).

In addition, ensuring good governance practices is also addressed by the engagement policies. AXA implemented a comprehensive active ownership strategy where AXA acts as stewards of investments made on the clients' behalf. AXA views engagement as a means for investors to influence, shape and shift investee company policies and practices to mitigate risks and secure long-term value. Governance practices of companies are engaged at first level by the portfolio managers and dedicated ESG analysts when meeting companies' management team. It is through the long-term investor status and in-depth knowledge of the investment targets that AXA feels legitimate to engage in a constructive but demanding dialogue with them.

Proportion of investments

#1 Aligned with E/S characteristics includes the investments of the financial product used to attain the environmental or social characteristics promoted by the financial product.
#2 Other includes the remaining investments of the financial product which are neither aligned with the environmental or social characteristics, nor are qualified as sustainable investments.

The Sub-Fund aims to plan its assets' allocation as presented in the graph above. This planned asset allocation might deviate on a temporary basis.

The planned minimum proportion of the investments of the Sub-Fund used to meet the environmental or social characteristics promoted by the Sub-Fund is 80% of the Sub-Fund's net asset value.

The remaining "Other" investments will represent a maximum of 20% of The Sub-Fund's. The "other" assets may consist in:

- cash and cash equivalent investments being bank deposit, eligible money market instruments and money market funds used for managing the liquidity of the Sub-Fund, and
- other instruments eligible to the Sub-Fund and that do not meet the Environmental and/or Social criteria described in this disclosure. Such assets may be debt instruments, derivatives investments and investment collective schemes that do not promote environmental or social characteristics and that are used to attain the financial objective of the Sub-Fund and/or for diversification and/or hedging purposes.

Environmental or social safeguards are applied and assessed on all “other” assets except on (i) non single name derivatives, (ii) on UCITS and/or UCIs managed by other management company and (iii) on cash and cash equivalent investments described above.

Monitoring of environmental or social characteristics

The environmental and social characteristics promoted by the Sub-Fund are reflected in monitoring tool and monitored by AXA’s Risk and Control team at all times through the ban-lists established by AXA’s RI Research team on each exclusion policy described above. Ban-lists are built based on criteria defined in AXA’s policies that are presented under the following link: https://www.axa-im.com/our-policies-and-reports.

The exclusion list is updated on an annual basis unless a specific event requires an intermediate revision or a delay in the publication of data from AXA sources which may postpone the update. Any updates are approved by dedicated governance body.

The sustainability indicator is reported to investment team in a specific report.

Methodologies for environmental or social characteristics

The attainment of the environmental and social characteristics promoted by the Sub-Fund and described above is measured with the following sustainability indicator: the weighted average ESG Score of the Sub-Fund.

The ESG score is based on ESG scoring from external data provider as primary inputs assessing data points across Environment, Social and Governance (ESG) dimensions. AXA’s analysts can complement with a fundamental and documented ESG analysis in case of lack of coverage or disagreement on the ESG rating provided that it is approved by AXA’s dedicated internal governance body.

Data sources and processing

The AXA sectorial and ESG Standards’ ban-lists are prepared using information from external data providers. Data providers used to define those exclusion lists are detailed at the following link: https://www.axa-im.com/our-policies-and-reports.

Ban lists are prepared and updated by AXA’s Responsible Investment Research team and approved by a dedicated governance body.

The ESG Scores rely on an external data provider (MSCI) coupled with an overlay of AXA’s own fundamental and documented ESG analysis. The proportion of data that are estimated is considered as being in the high range. Those ESG analysis are reviewed and approved in a dedicated governance body, the ESG Assessment and Review Committee.

The ESG Score sustainability indicator is relying on an external data provider MSCI. These data are updated at least on a bi-annual basis. The proportion of data that are estimated is considered as being in the high range.

AXA may change third party data providers at any time and at its own discretion and this may lead to changes to the data used for the same instruments or investments in the future.

AXA has been working with ESG data providers for several years and performs a due diligence on the methodology and outputs when selecting them. To make the best possible choices, the strengths and weaknesses of each data provider were reviewed and compared to determine factors such as coverage, data quality, alignment with sustainability-related regulations, calculation methodologies and level of transparency on these methodologies, update frequency and cost. When selected, AXA also performs regular checks on such external data providers. Regarding ESG scores and Sustainable Investment methodology in particular, each refresh of data is subject to a review as per our internal governance with an involvement from the risk department, quantitative experts and investment teams.

Data is received generally from automated data feeds. Values are cascaded to relevant associated issuers or securities and are then processed to aggregate instrument level data at portfolio level. Appropriate controls

on aggregation are performed by quant analysts. Data is stored in AXA’s data management system and is made available to various teams (mainly quant analysts, investment teams, risk and control). Investment teams have access to ESG data of which related to sustainability indicators and sustainable assets through AXA’s Front Office tools.

More information on data providers, measures and any relevant governance bodies taken to ensure data quality and governance on data is available in AXA’s Climate report at the following link: https://www.axa-im.com/sites/corporate/files/insight/pdf/axa-im-Art-173-TCFD-report%202021.pdf.

Limitations to methodologies and data

Methodologies may evolve in the future to take into account any improvements for example in data availability and reliability, or any developments of, but not limited to, regulations or other external frameworks or initiatives.

AXA relies largely on third-party data providers on ESG related data. Ultimately, data coming from either the issuers’ reporting or external providers might not be equally calculated due to different measurement methodologies or an embedded risk of error. AXA may also change third party data providers at any time and at its own discretion and this may lead to changes and hence limitations to the data used for the same instruments or investments.

However, AXA conducts some due diligences on data or methodologies that could prevent any limitations in the attainment of environmental or social characteristics promoted by the Sub-Fund.

Due diligence

AXA’s sectorial exclusion policies encompass areas such as Controversial Weapons, Climate risks, Soft Commodities and Ecosystem Protection & Deforestation. AXA’s Environmental, Social and Governance standards policy (“ESG Standards”) integrates specific sectorial exclusions such as tobacco and white phosphorus weapons, includes violation of international norms and standards such as the United Nations Global Compact Principles or the OECD guidelines for Multinational Enterprises and excludes investment companies which are involved in severe ESG-related incidents and investments in issuers with a Low ESG quality. Instruments issued by countries where serious specific categories of violations of Human Rights are observed are also banned. More details on those policies are available at https://www.axa-im.com/our-policies-and-reports.

AXA’s exclusion policies and ESG standards are reviewed annually by our Compliance and RI Coordination teams and updated accordingly. Based on these policies and standards, our responsible Investment Research team draws up ban lists which are then implemented into our systems to be monitored.

The Sub-Fund's other extra-financial commitments are also implemented through our monitoring tool which take into account other regulations and extra-financial guidelines (such as, but not limited to, Label guidelines). The parameters used for the monitoring are reviewed by AXA’s compliance team before being implemented into our monitoring tools.

These due diligence processes’ implementation and monitoring are controlled internally by AXA’s compliance team to ensure compliance with applicable regulatory norms.

Engagement policies

AXA implemented a comprehensive active ownership strategy where AXA acts as stewards of investments made on the clients' behalf. AXA views engagement as a means for investors to influence, shape and shift investee company policies and practices to mitigate risks and secure long-term value. Governance practices of companies are engaged at first level by the portfolio managers and dedicated ESG analysts when meeting companies’ management team. It is through the long-term investor status and in-depth knowledge of the investment targets that AXA feels legitimate to engage in a constructive but demanding dialogue with them.

An engagement action can be initiated with corporate issuers subject to severe controversies with progress of engagement activities is monitored by RI dedicated governance committee.

More details on AXA’s Stewardship policies are available at https://www.axa-im.com/document/4678/view.

AXA's last stewardship report is available at https://www.axa-im.com/who-we-are/stewardship-and-engagement.

Designated reference benchmark

A reference benchmark has not been designated for the purpose of attaining the environmental or social characteristics promoted by the Sub-Fund.

February 2024

Fonds de Compensation de la Sécurité Sociale, SICAV-FIS (the "Fund")

Pre-contractual disclosure for the financial products referred to in Article 8, paragraphs 1, 2 and 2a, of Regulation (EU) 2019/2088 and Article 6, first paragraph, of Regulation (EU) 2020/852

Product name: FDC SICAV GLOBAL BONDS – ACTIVE 2 (the "Sub-Fund")
LEI: 549300ELGSB8R78E4T58
Fund manager (by delegation): AXA Investment Managers S.A. (the "Fund Manager")

Sustainable investment means an investment in an economic activity that contributes to an environmental or social objective, provided that the investment does not significantly harm any environmental or social objective and that the investee companies follow good governance practices.

The **EU Taxonomy** is a classification system laid down in Regulation (EU) 2020/852, establishing a list of **environmentally sustainable economic activities**. That Regulation does not include a list of socially sustainable economic activities. Sustainable investments with an environmental objective might be aligned with the Taxonomy or not.

Environmental and/or social characteristics

Does this financial product have a sustainable investment objective?

☐ **Yes** ☒ **No**

☐ It will make a minimum of **sustainable investments with an environmental objective:** __%

- ☐ in economic activities that qualify as environmentally sustainable under the EU Taxonomy
- ☐ in economic activities that do not qualify as environmentally sustainable under the EU Taxonomy

☐ It will make a minimum of **sustainable investments with a social objective:** __%

☐ It **promotes Environmental/Social (E/S) characteristics** and while it does not have as its objective a sustainable investment, it will have a minimum proportion of __% of sustainable investments

- ☐ with an environmental objective in economic activities that qualify as environmentally sustainable under the EU Taxonomy
- ☐ with an environmental objective in economic activities that do not qualify as environmentally sustainable under the EU Taxonomy
- ☐ with a social objective

☒ It promotes E/S characteristics, but **will not make any sustainable investments**

What environmental and/or social characteristics are promoted by this financial product?

The environmental and social characteristics promoted by the Sub-Fund consist of investing in issuers considering the ESG score further described below.

The Sub-Fund promotes environmental and/or social characteristics by investing in securities that have implemented good practices in terms of managing their environmental, governance and social ("ESG") practices.

The Sub-Fund also promotes other specific environmental and social characteristics, mainly:

- Preservation of climate with exclusion policies on coal and oil sand activities
- Protection of ecosystem and prevention of deforestation
- Better health with exclusion on tobacco

In this context, it should be noted that, in implementing its investment strategy and as an overarching binding restriction, the Fund Manager is required to exclude companies from the Sub-Fund's portfolio referenced on the Fund's proprietary exclusion list. The latter screens out companies based on their involvement in controversial practices against international norms. The core normative framework consists of the Principles of the UN Global Compact, the OECD Guidelines for Multinational Enterprises and the UN Guiding Principles for Business and Human Rights. Equally screened out are companies linked to following controversial weapons: anti-personnel mines, cluster munitions, chemical weapons, biological weapons, depleted uranium, white phosphorus and nuclear weapons. The Fund's exclusion list can be viewed at https://fdc.public.lu/en/investissement-responsable/liste-exclusion-fdc.html.

A reference benchmark has not been designated for the purpose of attaining the environmental or socialcharacteristics promoted by the Sub-Fund.

What sustainability indicators are used to measure the attainment of each of the environmental or social characteristics promoted by this financial product?

Sustainability indicators measure how the environmental or social characteristics promoted by the financial product are attained.

The attainment of the environmental and social characteristics promoted by the Sub-Fund and described above is measured with the following sustainability indicator: the weighted average ESG Score of the Sub-Fund.

The ESG score is based on ESG scoring from external data provider as primary inputs assessing data points across Environment, Social and Governance (ESG) dimensions. The Fund Manager's analysts can complement with a fundamental and documented ESG analysis in case of lack of coverage or disagreement on the ESG rating provided that it is approved by the Fund Manager's dedicated internal governance body.

What are the objectives of the sustainable investments that the financial product partially intends to make and how does the sustainable investment contribute to such objectives?

The Sub-Fund does not commit to holding sustainable investments.

How do the sustainable investments that the financial product partially intends to make, not cause significant harm to any environmental or social sustainable investment objective?

Not applicable.

Principal adverse impacts are the most significant negative impacts of investment decisions on sustainability factors relating to environmental, social and employee matters, respect for human rights, anti-corruption and anti-bribery matters.

How have the indicators for adverse impacts on sustainability factors been taken into account?

Not applicable.

How are the sustainable investments aligned with the OECD Guidelines for Multinational Enterprises and the UN Guiding Principles on Business and Human Rights?

Not applicable.

The EU Taxonomy sets out a "do not significant harm" principle by which Taxonomy-aligned investments should not significantly harm EU Taxonomy objectives and is accompanied by specific EU criteria.

The "do no significant harm" principle applies only to those investments underlying the financial product that take into account the EU criteria for environmentally sustainable economic activities. The investments underlying the remaining portion of this financial product do not take into account the EU criteria for environmentally sustainable economic activities.

Any other sustainable investments must also not significantly harm any environmental or social objectives.

Does this financial product consider principal adverse impacts on sustainability factors?

Yes. Principal adverse impacts are considered with both i. qualitative and ii. quantitative approaches:

i. Qualitative approach to consider principal adverse impact is based on exclusion and, where relevant, stewardship policies.

Exclusion policies as part of the Fund Manager's ESG standards cover the most material sustainability factors' risks and are applied bindingly on a continuous basis. Where relevant, stewardship policies are an additional risk mitigation on principal adverse impacts through direct dialogue with companies on sustainability and governance issues. Through its engagement activities, the Sub-Fund will use its influence as an investor to encourage companies to mitigate environmental and social risks relevant to their sectors.

On top, the Fund's proprietry exclusion list excludes bonds issued by companies having a severe violation/breach of principles and guidelines such as the Principles of the UN Global Compact, the OECD Guidelines for Multinational Enterprises, and the United Nations Guiding Principles for Business and Human Rights on the grounds of problematic practices around human rights, labour rights, environment, and corruption issues, as well as bonds issued by companies involved in controversial weapons (anti-personnel mines, cluster munitions, chemical weapons, biological weapons, depleted uranium, white phosphorus, and nuclear weapons).

Through those exclusions and stewardship policies the Sub-Fund takes into consideration potential negative impact on those specific PAI indicators:

	Relevant Fund Manager	PAI indicators
Climate and other environment related indicators	Climate Risk policy	PAI 1: Green House Gas (GHG) emissions (scope 1,2 and 3)
	Ecosystem protection & Deforestation policy	
	Climate Risk policy	PAI 2: Carbon Footprint
	Ecosystem protection & Deforestation policy	
	Climate Risk policy	PAI 3: GHG intensity of investee companies
	Ecosystem protection & Deforestation policy	
	Climate Risk policy	PAI 4: Exposure to companies active in the fossil fuel sector
	Climate Risk policy (engagement only)	PAI 5: Share of non-renewable energy consumption and production
	Ecosystem protection & Deforestation policy	PAI 7: activities negatively affecting biodiversity sensitive area
Social and employee respect for human rights, anti-corruption and anti-bribery matters	Engagement policy with systematic criteria linked with board gender diversity	PAI 13: Board Gender diversity
	ESG standard policy / violation of international norms and standards	PAI 10: Violation of UN global compact principles & OECD guidelines for Multinational Enterprises
	Controversial weapons policy	PAI 14: Exposure to controversial weapons

ii. Principal adverse impacts are also considered quantitatively through the PAI indicators' measurement. The objective is to provide transparency to investors on significant negative impact on other sustainability factors. The Fund Manager measures all the mandatory PAI indicators, plus additional optional environmental indicator and additional optional social indicator.

The investment strategy guides investment decisions based on factors such as investment objectives and risk tolerance.

What investment strategy does this financial product follow?

The Sub-Fund's Fund Manager selects investments by applying an extra-financial approach based on the exclusion filters as described in the Fund Manager's Sectorial Exclusion and ESG Standards Policies.

The Sub-Fund's general investment approach is described in the Fund's Issue Document.

- ***What are the binding elements of the investment strategy used to select the investments to attain each of the environmental or social characteristics promoted by this financial product?***

  The Financial Product bindingly applies at all times the following elements described below.

  The Fund Manager bindingly applies at all times a first exclusion filter, encompassing areas such as controversial weapons, climate risks, soft commodities and ecosystem protection and deforestation. The Sub-Fund also apply the Fund Manager's Environmental, Social and Governance standards policy ("ESG Standards") integrating the ESG Standards in the investment process by applying specific sectorial exclusions such as tobacco and white phosphorus weapons and by excluding investments in securities issued by companies in violation of international norms and standards such as the United Nations Global Compact Principles or the OECD guidelines for Multinational Enterprises ; as well as investments in companies which are involved in severe ESG-related incidents and investments in issuers with a low ESG quality (which is currently below 1.43 (on a scale of 0 to 10, such number being subject to regular review and adaptation). Instruments issued by countries where serious specific categories of violations of human rights are observed are also banned.

  On top, the Fund's proprietry exclusion list excludes bonds issued by companies having a severe violation/breach of principles and guidelines such as the Principles of the UN Global Compact, the OECD Guidelines for Multinational Enterprises, and the United Nations Guiding Principles for Business and Human Rights on the grounds of problematic practices around human rights, labour rights, environment, and corruption issues, as well as bonds issued by companies involved in controversial weapons (anti-personnel mines, cluster munitions, chemical weapons, biological weapons, depleted uranium, white phosphorus, and nuclear weapons).

- ***What is the committed minimum rate to reduce the scope of the investments considered prior to the application of that investment strategy?***

  The Sub-Fund does not commit to reduce the scope of the investments by a minimum rate prior to the application of the investment strategy.

Good governance practices include sound management structures, employee relations, remuneration of staff and tax compliance.

- ***What is the policy to assess good governance practices of the investee companies?***

  The Sub-Fund doesn't invest in companies which cause, contribute or are linked to violations of international norms and standards in a material manner. Those standards focus on human rights, society, labor and environment. The Fund Manager relies on an external provider's screening framework and excludes any companies that have been assessed as "non compliant" to UN's Global Compact Principles, International Labor Organization's (ILO) conventions, OECD Guidelines

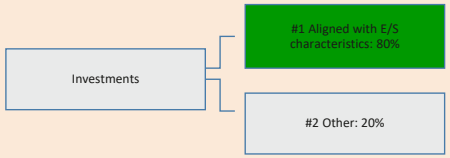
for Multinational Enterprises and the UN Guiding Principles on Business and Human Rights (UNGPs).

In addition, ensuring good governance practices is also addressed by the Fund Manager's engagement policies. The Fund Manager implemented a comprehensive active ownership strategy where the Fund Manager acts as stewards of investments made on the clients' behalf. The Fund Manager views engagement as a means for investors to influence, shape and shift investee company policies and practices to mitigate risks and secure long-term value. Governance practices of companies are engaged at first level by the portfolio managers and dedicated ESG analysts when meeting companies' management team. It is through the long-term investor status and in-depth knowledge of the investment targets that Fund Manager feels legitimate to engage in a constructive but demanding dialogue with them.

Asset allocation describes the share of investments in specific assets.

What is the asset allocation planned for this financial product?

The Sub-Fund aims to plan its assets' allocation as presented in the graph below. This planned asset allocation might deviate on a temporary basis. The planned minimum proportion of the investments of the Sub-Fund used to meet the environmental or social characteristics promoted by the Sub-Fund is 80%. The remaining "Other" investments will represent a maximum of 20%.



#1 Aligned with E/S characteristics includes the investments of the financial product used to attain the environmental or social characteristics promoted by the financial product.

#2 Other includes the remaining investments of the financial product which are neither aligned with the environmental or social characteristics, nor are qualified as sustainable investments.

***How does the use of derivatives attain the environmental or social characteristics promoted by the financial product*?**

The Fund Manager does not use derivatives to attain the environmental or social characteristics of the Sub-Fund.

Taxonomy-aligned activities are expressed as a share of:
- **turnover** reflecting the share of revenue from green activities of investee companies
- **capital expenditure** (CapEx) showing the green investments made by investee companies, e.g. for a transition to a green economy.
- **operational expenditure** (OpEx) reflecting green operational activities of investee companies.

To comply with the EU Taxonomy, the criteria for **fossil gas** include limitations on emissions and switching to renewable power or low-carbon fuels by the end of 2035. For **nuclear energy**, the criteria include comprehensive safety and waste management rules.

Enabling activities directly enable other activities to make a substantial contribution to an environmental objective.

Transitional activities are activities for which low-carbon alternatives are not yet available and among others have greenhouse gas emission levels corresponding to the best performance.

are sustainable investments with an environmental objective that **do not take into account the criteria** for environmentally sustainable economic activities under the EU Taxonomy.

To what minimum extent are sustainable investments with an environmental objective aligned with the EU Taxonomy? Does the financial product invest in fossil gas and/or nuclear energy related activities that comply with the EU Taxonomy[1]?

The Sub-Fund does not aim or commit to invest in sustainable investments with an environmental objective aligned with the EU Taxonomy.

The Sub-Fund does not aim or commit to invest in invest in fossil gas and/or nuclear energy related activities that comply with the EU Taxonomy.

What is the minimum share of investments in transitional and enabling activities?

The Sub-Fund does not commit to a minimum share in transitional and enabling activities.

What is the minimum share of sustainable investments with an environmental objective that are not aligned with the EU Taxonomy?

The Fund Manager does not commit to a minimum share of environmentally sustainable investments that are not aligned with the EU Taxonomy.

What is the minimum share of socially sustainable investments?

The Sub-Fund does not commit to a minimum share of socially sustainable investments.

What investments are included under "#2 Other", what is their purpose and are there any minimum environmental or social safeguards?

Under "#2 Other" the Sub-Fund may hold cash, cash equivalents and financial derivative instruments for the purposes of efficient portfolio management and/or risk hedging.

Environmental or social safeguards are applied and assessed on all "other" assets except on (i) non single name derivatives, (ii) on UCITS and/or UCIs managed by other management company and (iii) on cash and cash equivalent investments.

[1] Fossil gas and/or nuclear related activities will only comply with the EU Taxonomy where they contribute to limiting climate change ("climate change mitigation") and do not significantly harm any EU Taxonomy objective. Fossil gas criteria include limitations on emissions and switching to renewable power or low-carbon fuels by the end of 2035. Nuclear energy criteria include comprehensive safety and waste management rules. The full criteria are laid down in Commission Delegated Regulation (EU) 2022/1214.

Reference benchmarks are indexes to measure whether the financial product attains the environmental or social characteristics that they promote.

Is a specific index designated as a reference benchmark to determine whether this financial product is aligned with the environmental and/or social characteristics that it promotes?

No reference benchmark has been designated for the purpose of attaining the characteristics promoted by the Sub-Fund.

- ***How is the reference benchmark continuously aligned with each of the environmental or social characteristics promoted by the financial product?***

  Not applicable.

- ***How is the alignment of the investment strategy with the methodology of the index ensured on a continuous basis?***

  Not applicable.

- ***How does the designated index differ from a relevant broad market index?***

  Not applicable.

- ***Where can the methodology used for the calculation of the designated index be found?***

  Not applicable.

Where can I find more product-specific information online?

More product-specific information can be found on websites:

- https://www.fdc.lu
- https://fdc.public.lu/en/investissement-responsable/approches-durables-gerants-fdc.html

March 2024

Fonds de Compensation de la Sécurité Sociale, SICAV-FIS (the "Fund")

Periodic disclosure for the financial products referred to in Article 8, paragraphs 1, 2 and 2a, of Regulation (EU) 2019/2088 and Article 6, first paragraph, of Regulation (EU) 2020/852

Product name: FDC SICAV GLOBAL BONDS - ACTIVE 2 (the "Sub-Fund")
LEI: 549300ELGSB8R78E4T58
Fund Manager (by delegation): AXA Investment Managers S.A. (the "Fund Manager")

Environmental and/or social characteristics

Did this financial product have a sustainable investment objective?

☐ **Yes**	☒ **No**
☐ It made **sustainable investments with an environmental objective:** ___%	☒ It **promoted Environmental/Social (E/S) characteristics** and while it did not have as its objective a sustainable investment, it had a proportion of 26.38% of sustainable investments
☐ in economic activities that qualify as environmentally sustainable under the EU Taxonomy	☐ with an environmental objective in economic activities that qualify as environmentally sustainable under the EU Taxonomy
☐ in economic activities that do not qualify as environmentally sustainable under the EU Taxonomy	☒ with an environmental objective in economic activities that do not qualify as environmentally sustainable under the EU Taxonomy
	☒ with a social objective
☐ It made **sustainable investments with a social objective:** ___%	☐ It promoted E/S characteristics, but **did not make any sustainable investments**

Sustainable investment means an investment in an economic activity that contributes to an environmental or social objective, provided that the investment does not significantly harm any environmental or social objective and that the investee companies follow good governance practices.

The **EU Taxonomy** is a classification system laid down in Regulation (EU) 2020/852, establishing a list of **environmentally sustainable economic activities**. That Regulation does not include a list of socially sustainable economic activities. Sustainable investments with an environmental objective might be aligned with the Taxonomy or not.

Sustainability indicators measure how the environmental or social characteristics promoted by the financial product are attained.

To what extent were the environmental and/or social characteristics promoted by this financial product met?

The Sub-Fund has met the environmental and social characteristics promoted for the reference period by investing in companies considering their ESG Score.

The Sub-Fund has also promoted other specific environmental and social characteristics, mainly:

- Preservation of climate with exclusion policies on coal and oil sand activities.
- Protection of ecosystem and prevention of deforestation.
- Better health with exclusion on tobacco.
- Labor rights, society and human rights, business ethics, anti-corruption with exclusion on companies in violation of international norms and standards such as the United Nations Global Compact Principles, International Labor Organization's (ILO) Conventions or the OECD guidelines for Multinational Enterprises. The Fund Managers'sectorial exclusions and ESG standards have been applied bindingly at all times during the reference period.
- The Sub-Fund did comply over the reference period with the Fund's proprietary exclusion list (as described in the pre-contractual disclosures).

The Sub-Fund has not designated an ESG Benchmark to promote environmental or social characteristics.

How did the sustainability indicators perform?

During the reference period, the attainment of the environmental and social characteristics promoted by the Sub-Fund has been measured with the sustainability indicators mentioned above:

Sustainability KPI Name	Value	Coverage
ESG Score	6.59/10	99.94%

N.B.: While Sustainability KPIs (including sustainable investments) are reported based on an average of the data available at each end of quarter, for technical reasons benchmarks are reported based on end of year data only. Therefore, the comparison should not be taken as such at face value and should not be interpreted as a breach of the binding elements disclosed into the Sub-Fund's, documentation as figures disclosed for the benchmark are not based on the same accounting approach than for those disclosed for the Sub-Fund.

…and compared to previous periods?

Sustainability KPI Name	Value	Coverage
ESG Score	6.49/10	99.98%

What were the objectives of the sustainable investments that the financial product partially made and how did the sustainable investment contribute to such objectives?

During the reference period, the Sub-Fund has partially invested in instruments qualifying as sustainable investments with various social and environmental objectives (without any limitation) by assessing the positive contribution of investee companies through at least one of the following dimensions:

1. UN Sustainable Development Goals alignment (SDG) of investee companies as reference framework, considering companies which contribute positively to at least one SDG either through the products and services they offer or the way they carry their activities ("Operations"). To be considered as a sustainable asset, a company must satisfy the following criteria:

   a. the SDG scoring related to the products and services offered by the issuer is equal or above 2, corresponding to at least 20% of their revenues being derived from a sustainable activity, or
   b. using a best in universe approach consisting of giving priority to the issuers best rated from a no financial viewpoint irrespective of their sector of activity, the SDG scoring of the issuer's Operations is on the better top 2.5%, except in consideration to the SDG 5 (gender equality), SDG 8 (decent work), SDG 10 (reduced inequalities), SDG 12 (responsible production and consumption) and SDG 16 (peace & justic for which the SDG scoring of the issuer's Operations is on the better top 5%. For SDG 5, 8, 10 and 16 the selectivity criteria on issuer's Operations is less restrictive as such SDGs are better addressed considering the way the issuer carries their activities than the products and services offered by the investee company. It is also less restrictive for SDG 12 which can be addressed through the products and services or the way the investee company carries their activities.

   The quantitative SDG results are sourced from external data providers and can be overridden by a duly supported qualitative analysis performed by the Fund Manager.

2. Integration of issuers engaged in a solid transition pathway consistently with the European Commission's ambition to help fund the transition to a 1.5°C world based on the framework developed by the Science Based Targets Initiative, considering companies which have validated science-based targets.

3. Investments in Green, Social or Sustainability Bonds (GSSB) as well as Sustainability Linked Bonds:

   a. GSSB are instruments which aim to contribute to various sustainable objectives by nature. As such, investments in bonds issued by corporates and sovereigns that have been identified as GSSBs in Bloomberg database are considered as sustainable investments under the Fund Manager's SFDR framework.
   b. With regards to Sustainability Linked Bonds, an internal framework was developed to assess the robustness of those bonds that are used to finance general sustainable purpose. As these instruments are newer leading to heterogeneous practices from issuers, only Sustainability Linked Bonds that get a positive or neutral opinion from the Fund Manager's internal analysis process are considered as sustainable investments. This analysis framework draws on the International Capital Market Association (ICMA) guidelines with a stringent proprietary approach based on the following defined criteria: (i)issuer's

sustainability strategy and key performance indicators relevance and materiality, (ii) sustainability performance target's ambition, (iii) bond characteristics and (iv) sustainability performance target's monitoring and reporting.

The Sub-Fund did not take into consideration the criteria of the EU Taxonomy environmental objectives.

How did the sustainable investments that the financial product partially made not cause significant harm to any environmental or social sustainable investment objective?

During the reference period, the Do No Significant Harm Principle for the sustainable investments the Sub-Fund made had been achieved by not investing in company meeting any of the criteria below:

- The issuer caused significant harm along any of the SDGs when one of its SDG scores is below –5 based on a quantitative database from an external provider on a scale ranging from +10 corresponding to 'significantly contributing' to -10 corresponding to 'significantly obstructing', unless the quantitative score has been qualitatively overridden.
- The issuer failed within in the Fund Manager's sectorial and ESG standards ban lists, which consider among other factors the OECD Guidelines for Multinational Enterprises and the UN Guiding Principles on Business and Human Rights.
- The issuer had a CCC (or 1.43) or lower ESG rating according to Fund Manager's ESG scoring methodology (as defined in SFDR pre-contractual disclosure).

Principal adverse impacts are the most significant negative impacts of investment decisions on sustainability factors relating to environmental, social and employee matters, respect for human rights, anti-corruption and anti-bribery matters.

How were the indicators for adverse impacts on sustainability factors taken into account?

The Sub-Fund has taken into consideration Principal Adverse Impacts ("PAIs") indicators to ensure that the sustainable investments did not harm significantly any other sustainability objectives under SFDR. Principal adverse impacts have been mitigated through the Fund Manager's sectorial exclusion policies and the Fund Manager's ESG standards (as described in the SFDR pre-contractual disclosure), as well as through the filters based on UN Sustainable Development Goals scoring.

Where relevant, stewardship policies have been an additional risk mitigation on principal adverse impacts through direct dialogue with companies on sustainability and governance issues. Through the engagement activities, the Sub-Fund has used its influence as an investor to encourage companies to mitigate environmental and social risks relevant to their sectors as described below.

The Fund Manager also relies on the SDG pillar of its sustainable investment framework to monitor and take into account adverse impacts on those

sustainability factors by excluding investee companies which have a SDG score under – 5 on any SDG (on a scale from + 10 corresponding to 'significant contributing impact' to – 10 corresponding to 'significant obstructing impact'), unless the quantitative score has been qualitatively overridden following a duly documented analysis by the Fund Manager's Core ESG & Impact Research team. This approach enables us to ensure investee companies with the worst adverse impacts on any SDG are not considered as sustainable investments.

Environment:

Relevant policies	PAI indicator	Units	Measurement
Climate Risk policy Ecosystem Protection & Deforestation policy	PAI 1: Green House Gas (GHG) emissions (scope 1, 2, & 3 starting 01/2023)	Metric tonnes	Scope 1: 10172.947 Scope 2: 3178.004 Scope 3: 133141.281 Scope 1+2: 13350.951 Scope 1+2+3: 147666.109
	PAI 2: Carbon Footprint	Metric tonnes of carbon dioxide equivalents per million euro or dollar invested (tCO2e/M€ or tCO2e/M$)	Scope 1+2: 44.029 Scope 1+2+3: 153.423
	PAI 3: GHG intensity of investee companies	Metric tonnes per million EUR revenue	Scope 1+2+3: 1480.136
Climate Risk policy	PAI 4: Exposure to Companies active in the fossil fuel sector	% of investments	4.03
Climate Risk policy (engagement only)	PAI 5 : Share of nonrenewable energy consumption and production	% of total energy sources	Energy Consumption: 66.03 Energy Production: 67.64
Climate risk policy (considering an expected correlation between GHG emissions and energy consumption)[1]	PAI 6: Energy consumption intensity per high impact climate sector	GWh per million EUR of revenue of investee companies, per high impact climate sector	Sector NACE B: 1.992 Sector NACE C: 0.386 Sector NACE D: 6.66 Sector NACE E: 0.757 Sector NACE F: 0.169 Sector NACE G: 0.279 Sector NACE H: 1.198 Sector NACE L: 0.382
Ecosystem Protection & Deforestation policy	PAI 7: Activities negatively affecting biodiversity sensitive areas	% of investments	1.46
SDG no significantly negative score	PAI 8: Emissions to water	Tonnes per million EUR invested, expressed as a weighted average	N/A
SDG no significantly negative score	PAI 9: Hazardous waste and radioactive waste ratio	Tonnes per million EUR invested, expressed as a weighted average	1.581

[1] The approach used to mitigate the PAI indicators through this exclusion policy will evolve as the improvement in data availability and quality enables us to use the PAI more effectively. Not all high impact climate sectors are targeted by the exclusion policy for the time being.

Social and Governance:

Relevant policies	PAI indicator	Units	Measurement
ESG standards policy: violation of international norms and standards	PAI 10: Violations of UN Global Compact principles & OECD Guidelines for multinational enterprises	% of investments	N/A
ESG standards policy: violation of international norms and standards (considering an expected correlation between companies non-compliant with international norms and standards and the lack of implementation by companies of processes and compliance mechanisms to monitor compliance with those standards)[2]	PAI 11: Lack of processes and compliance mechanisms to monitor compliance with UN Global Compact principles & OECD Guidelines for multinational enterprises	% of investments	13.45%
SDG no significantly negative score	PAI 12: Unadjusted gender pay gap	Average unadjusted gender pay gap of investee companies	16%
Voting/Engagement policy	PAI 13: Board gender diversity	Expressed as a percentage of all board members	34.69
Controversial weapons policy	PAI 14: Exposure to controversial weapons	% of investments	N/A

The Sub-Fund is also taking into account the environmental optional indicator PAI 6 'Water usage and recycling' and the social optional indicator PAI 15 'Lack of anti-corruption and anti-bribery policies'.

PAI calculation methodologies have been defined as consistently as possible with current regulatory guidelines. Furthermore, reporting on PAIs can be limited or may reflect reporting periods prior to the reference period mainly due to challenges with regards to both data availability and reliability. PAI definitions and calculation methodologies may still evolve in the future depending on any additional regulatory guidelines, or due to data evolution with, for instance, data provider's change in methodology, or change in data sets used in order to align different reporting frameworks whenever possible.

Were sustainable investments aligned with the OECD Guidelines for Multinational Enterprises and the UN Guiding Principles on Business and Human Rights?

During the reference period, the Fund Manager excluded any companies that have been assessed as "non compliant" to UN's Global Compact Principles, International Labor Organization's (ILO) Conventions, OECD Guidelines for

[2] The approach used to mitigate the PAI indicators through this exclusion policy will evolve as the improvement in data availability and quality enables us to use the PAI more effectively.

Multinational Enterprises and the UN Guiding Principles on Business and Human Rights (UNGPs).

In addition, the Fund Manager did not invest in companies on the Fund's proprietary exclusion list screening out companies based on their involvement in controversial practices against international norms. The core normative framework consisted of the Principles of the UN Global Compact, the OECD Guidelines for Multinational Enterprises and the UN Guiding Principles for Business and Human Rights. Securities issued by companies with severe violations of these frameworks were restricted from the investment universe. Equally excluded were companies linked to controversial weapons being antipersonnel mines, cluster munitions, chemical weapons, biological weapons, depleted uranium, white phosphorus, and nuclear weapons.

The EU Taxonomy sets out a "do not significant harm" principle by which Taxonomy-aligned investments should not significantly harm EU Taxonomy objectives and is accompanied by specific Union criteria.

The "do no significant harm" principle applies only to those investments underlying the financial product that take into account the EU criteria for environmentally sustainable economic activities. The investments underlying the remaining portion of this financial product do not take into account the EU criteria for environmentally sustainable economic activities.

Any other sustainable investments must also not significantly harm any environmental or social objectives.

How did this financial product consider principal adverse impacts on sustainability factors?

The Sub-Fund took into consideration the following Principal Adverse Impact indicators applying the following exclusion policies and stewardship policies:

Relevant policies	PAI indicator	Units	Measurement
Climate Risk policy Ecosystem Protection & Deforestation policy	PAI 1: Green House Gas (GHG) emissions (scope 1, 2, & 3 starting 01/2023)	Metric tonnes	Scope 1: 10172.947 Scope 2: 3178.004 Scope 3: 133141.281 Scope 1+2: 13350.951 Scope 1+2+3: 147666.109
	PAI 2: Carbon Footprint	Metric tonnes of carbon dioxide equivalents per million euro or dollar invested (tCO2e/M€ or tCO2e/M$)	Scope 1+2: 44.029 Scope 1+2+3: 153.423
	PAI 3: GHG intensity of investee companies	Metric tonnes per million EUR revenue	Scope 1+2+3: 1480.136

Climate Risk policy	PAI 4: Exposure to Companies active in the fossil fuel sector	% of investments	4.03
Climate Risk policy (engagement only)	PAI 5 : Share of nonrenewable energy consumption and production	% of total energy sources	Energy Consumption: 66.03 Energy Production: 67.64
Ecosystem Protection & Deforestation policy	PAI 7: Activities negatively affecting biodiversity sensitive areas	% of investments	1.46
ESG standards policy: violation of international norms and standards	PAI 10: Violations of UN Global Compact principles & OECD Guidelines for multinational enterprises	% of investments	N/A
Voting/Engagement policy	PAI 13: Board gender diversity	Expressed as a percentage of all board members.	34,69
Controversial weapons policy	PAI 14: Exposure to controversial weapons	% of investments	N/A

PAI calculation methodologies have been defined as consistently as possible with current regulatory guidelines. Furthermore, reporting on PAIs can be limited or may reflect reporting periods prior to the reference period mainly due to challenges with regards to both data availability and reliability. PAI definitions and calculation methodologies may still evolve in the future depending on any additional regulatory guidelines, or due to data evolution with, for instance, data provider's change in methodology, or change in data sets used in order to align different reporting frameworks whenever possible.

N.B.: PAIs are reported based on an average of the impacts at each end of quarter where data is available.

What were the top investments of this financial product?

The list includes the investments constituting **the greatest proportion of investments** of the financial product during the reference period which is: 1st January 2023 to 31 December 2023

Largest investments	Sector	% of Assets	Country
T 3.5% - 15/02/2033	Public administration and defence; compulsory social security	6.41%	US
T 1.625% - 31/10/2026	Public administration and defence; compulsory social security	4.64%	US
JGB 0.1% - 20/12/2031	Public administration and defence; compulsory social security	4.6%	JP
DBR 0 - 15/08/2031	Public administration and defence; compulsory social security	4.16%	DE
T 1.5% - 15/02/2030	Public administration and defence; compulsory social security	4.16%	US
JGB 1% - 20/12/2035	Public administration and defence; compulsory social security	2.44%	JP
OBL 0 - 11/04/2025	Public administration and defence; compulsory social security	2.39%	DE

T 2.375% - 31/03/2029	Public administration and defence; compulsory social security	2.1%	US
UKT 3.5% - 22/10/2025	Public administration and defence; compulsory social security	1.77%	GB
T 1.875% - 15/02/2032	Public administration and defence; compulsory social security	1.64%	US
T 2.25% - 15/08/2049	Public administration and defence; compulsory social security	1.38%	US
T 4.5% - 15/08/2039	Public administration and defence; compulsory social security	1.29%	US
UKT 4.75% - 07/12/2030	Public administration and defence; compulsory social security	1.06%	GB
JGB 0.1% - 20/03/2026	Public administration and defence; compulsory social security	0.96%	JP
T 3.5% - 31/01/2028	Public administration and defence; compulsory social security	0.94%	US

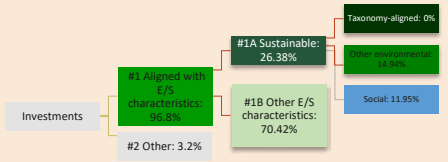
The portfolio proportions of investments presented above are an average over the reference period.

What was the proportion of sustainability-related investments?

The proportion of sustainable investments was 26.38%.

Asset allocation describes the share of investments in specific assets.

What was the asset allocation?



#1 Aligned with E/S characteristics includes the investments of the financial product used to attain the environmental or social characteristics promoted by the financial product.

#2Other includes the remaining investments of the financial product which are neither aligned with the environmental or social characteristics, nor are qualified as sustainable investments.

The category **#1 Aligned with E/S characteristics** covers:
- The sub-category **#1A Sustainable** covers environmentally and socially sustainable investments.
- The sub-category **#1B Other E/S characteristics** covers investments aligned with the environmental or social characteristics that do not qualify as sustainable investments.

The actual asset allocation has been reported based on the assets weighted average at the end of the reference period. Depending on the potential usage of derivatives within this product's investment strategy, the expected exposure detailed below could be subject to variability as the portfolio's NAV may be impacted by the Mark to Market of derivatives. Differences may occur due to rounding issues.

In which economic sectors were the investments made?

Top sector	% of Assets
Public administration and defence; compulsory social security	61.87%
Financial service activities, except insurance and pension funding	11.04%
Other	3.15%
Electricity, gas, steam and air conditioning supply	2.83%
Insurance, reinsurance and pension funding, except compulsory social security	2.17%
Telecommunications	1.93%
Activities auxiliary to financial services and insurance activities	1.72%
Real estate activities	1.69%
Land transport and transport via pipelines	1.48%
Warehousing and support activities for transportation	1.18%
Manufacture of basic pharmaceutical products and pharmaceutical preparations	1.07%
Manufacture of beverages	0.93%
Manufacture of motor vehicles, trailers and semi-trailers	0.9%
Manufacture of computer, electronic and optical products	0.73%
Activities of extraterritorial organisations and bodies	0.68%
Wholesale trade, except of motor vehicles and motorcycles	0.65%
Manufacture of coke and refined petroleum products	0.59%
Manufacture of machinery and equipment n.e.c.	0.55%
Manufacture of chemicals and chemical products	0.46%
Scientific research and development	0.46%
Retail trade, except of motor vehicles and motorcycles	0.44%
Publishing activities	0.42%
Extraction of crude petroleum and natural gas	0.4%
Manufacture of food products	0.33%
Waste collection, treatment and disposal activities; materials recovery	0.31%
Information service activities	0.27%
Rental and leasing activities	0.25%
Manufacture of paper and paper products	0.25%
Motion picture, video & television programme production, sound recording & music publishing activities	0.18%
Human health activities	0.17%
Advertising and market research	0.17%
Accommodation	0.12%
Other manufacturing	0.12%
Computer programming, consultancy and related activities	0.11%
Manufacture of electrical equipment	0.11%
Manufacture of other transport equipment	0.09%
Food and beverage service activities	0.05%
Civil engineering	0.04%
Activities of head offices; management consultancy activities	0.03%
Manufacture of other non-metallic mineral products	0.03%
Manufacture of wearing apparel	0.02%
Legal and accounting activities	0.01%

The portfolio proportions of investments presented above are an average over the reference period.

To what extent were the sustainable investments with an environmental objective aligned with the EU Taxonomy?

The Sub-Fund did not make sustainable investments with an environmental objective aligned with the EU Taxonomy.

Taxonomy-aligned activities are expressed as a share of:
- **turnover** reflecting the share of revenue from green activities of investee companies.
- **capital expenditure** (CapEx) showing the green investments made by investee companies, e.g. for a transition to a green economy.
- **operational expenditure** (OpEx) reflecting green operational activities of investee companies.

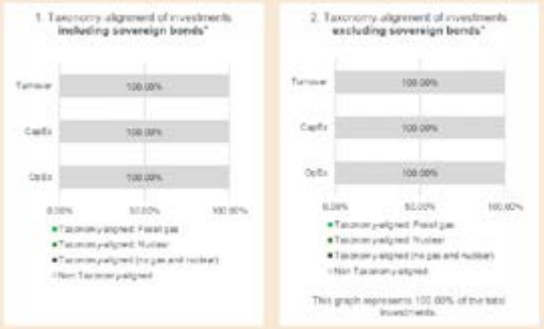
Did the financial product invest in fossil gas and/or nuclear energy related activities complying with the EU Taxonomy[3]?

Yes:

In fossil gas In nuclear energy

x No

The graphs below show in green the percentage of investments that were aligned with the EU Taxonomy. As there is no appropriate methodology to determine the taxonomy-alignment of sovereign bonds*, the first graph shows the Taxonomy alignment in relation to all the investments of the financial product including sovereign bonds, while the second graph shows the Taxonomy alignment only in relation to the investments of the financial product other than sovereign bonds.



* *For the purpose of these graphs, 'sovereign bonds' consist of all sovereign exposures.*

[3] Fossil gas and/or nuclear related activities will only comply with the EU Taxonomy where they contribute to limiting climate change ("climate change mitigation") and do not significantly harm any EU Taxonomy objective - see explanatory note in the left hand margin. The full criteria for fossil gas and nuclear energy economic activities that comply with the EU Taxonomy are laid down in Commission Delegated Regulation (EU) 2022/1214.

To comply with the EU Taxonomy, the criteria for **fossil gas** include limitations on emissions and switching to fully renewable power or low-carbon fuels by the end of 2035. For **nuclear energy**, the criteria include comprehensive safety and waste management rules.

Enabling activities directly enable other activities to make a substantial contribution to an environmental objective.

Transitional activities are activities for which low-carbon alternatives are not yet available and among others have greenhouse gas emission levels corresponding to the best performance.

 are sustainable investments with an environmental objective that **do not take into account the criteria** for environmentally sustainable economic activities under Regulation (EU) 2020/852.

- ***What was the share of investments made in transitional and enabling activities?***

  The Sub-Fund did not commit to invest in transitional and enabling activities.

- ***How did the percentage of investments that were aligned with the EU Taxonomy compare with previous reference periods?***

  N/A. The Sub-Fund did not commit to a minimum share of environmentally sustainable investments that are aligned with the EU Taxonomy.

What was the share of sustainable investments with an environmental objective not aligned with the EU Taxonomy?

The share of the sustainable investments with an environmental objective not aligned with the EU Taxonomy has been 14.94% for the Sub-Fund during the reference period. Investee companies with an environmental sustainable objective under SFDR are contributing to support UN SDGs or transition to decarbonization based on defined criteria as described above. Those criteria applying to issuers are different from technical screening criteria defined in EU Taxonomy applying to economic activities.

What was the share of socially sustainable investments?

The proportion of socially sustainable Investments during the reference period was 11.95%.

What investments were included under "other", what was their purpose and were there any minimum environmental or social safeguards?

The remaining "Other" investments represented 3.2% of the Sub-Fund's Net Asset Value. The "Other" assets may have consisted in cash and cash equivalent investments and other instruments eligible to the Sub-Fund and that do not meet the environmental and/or social criteria described in this disclosure.

Such assets may be debt instruments, derivatives investments and investment collective schemes that do not promote environmental or social characteristics and that are used to attain the financial objective of the Sub-Fund and/or for diversification and/or hedging purposes.

Environmental or social safeguards were applied and assessed on all "other" assets except on (i) non single name derivatives, (ii) on UCITS and/or UCIs managed by other management company and (iii) on cash and cash equivalent investments described above.

What actions have been taken to meet the environmental and/or social characteristics during the reference period?

In 2023, the Sub-Funds Fund Manager reinforced exclusion policies applied with new exclusions related to unconventional oil and gas, mainly (i) oil sands leading to the exclusion of companies for which oil sands represents more than 5% of global oil sands production, (ii) shale/fracking excluding players that produce less than 100k barrels of oil equivalent per day with more than 30% of their total production derived from fracking, and (iii) arctic with divestment from companies deriving more than 10% of their production from Artic Monitoring and Assessment Programme (AMAP) region or representing more than 5% of the total global Arctic production. More details on those enrichments are available under the following link: https://www.axa-im.com/our-policies-and-reports

In addition, the Fund Manager did not invest in companies included on the Fund's proprietary exclusion list.

How did this financial product perform compared to the reference benchmark?

N/A.

Reference benchmarks are indexes to measure whether the financial product attains the environmental or social characteristics that they promote.

APPENDIX 4: DATA COLLECTION

S&P Global Sustainable1's unique approach to environmental data collection and modelling enables near complete coverage of most investment universes, despite often low levels of reporting among investees. A four step process is used as part of S&P Global Sustainable1's data gathering exercise.

1. 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.

2. 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.

3. 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.

4. 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.

APPENDIX 5: 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.

The avoided emissions have been calculated for over 130 technologies as shown below.

Category	Green Energy	Green Transport	Green Buildings	Energy Efficiency
Single technologies available	43	32	18	38
Type	• Onshore & Offshore Wire • Solar Photovoltaic • Hydro Power • Anaerobic Digestion	• Electric Cars • Trucks • National Rail • Urban Rail • Buses • Trams	• Warehouses • Offices • Residential Housing • Factories • Retail Outlets	• LED lightning • Electronics • Insulation • Industrial

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

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.

Limitations

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

APPENDIX 6: GREEN BONDS GOVERNANCE SCORE

Each alignment with the Green Bonds Principles (GBPs) is assessed via a governance score or pillar, which covers four categories through nine qualitative questions:

1. Use of Proceeds
2. Process for Evaluation
3. Management of Proceeds
4. Reporting

The overall governance score is a simple average of the score obtained in each category. The governance assessment criteria are detailed below.

Use of Proceeds

- What is the percentage of the use of proceeds for which there is disclosure at a project-by-project level and country level?
- What is the percentage of the use of proceeds for which there is disclosure at the aggregate level?
- What percentage of projects are eligible to be green according to the Green Bond Principles?

Process for Project Evaluation and Selection

- Does the issuer have a defined project framework to evaluate projects based on the environmental objectives of the transaction?
- Does the issuer disclose the selection criteria used within this framework?

Management of Proceeds

- Does the issuer provide evidence that the proceeds are or will be ring-fenced solely for the financing of eligible project types identified in the financing documentation?
- Does the issuer have or plan to have, an independent third-party verification or audit of the allocation of proceeds to the eligible project types identified in the financing documentation?

Reporting

- Does the issuer quantify and disclose (or commit to quantifying and disclosing) the actual or expected environmental impacts of its eligible projects publicly?
- Does the issuer's reporting cover the relevant impact indicators for projects being financed by the transaction?

APPENDIX 7: 2°C ALIGNMENT

S&P Global Sustainable1's Paris Alignment assessment adopts two key methodologies first published in academic journals to establish what would be reasonable contributions for individual corporations to reduce emissions in line with scientific needs, and set targets reflecting them. These are:

- The Sectoral Decarbonization Approach (SDA)
- The Greenhouse gas Emissions per unit of Value Added (GEVA) approach

These approaches are consistent with key recommendations by regulators, collaborative investor bodies and non-governmental organisations such as:

- European Union Paris Aligned Benchmarks requirements
- Task-force on Climate-related Financial Disclosures (TCFD) portfolio alignment recommendations
- The Institutional Investors Group on Climate Change (IIGCC) net zero investment framework
- Science Based Targets Initiative (SBTi) target setting requirements for some high emitting sectors.

S&P Global Sustainable1 adapts these two methodologies to be scalable from individual company target-setting to assessments of portfolios that may include hundreds or thousands of companies to be assessed.

The SDA is applied to companies with high-emitting, homogeneous business activities. Its core principle is that companies in each industry must converge toward emissions intensities consistent with a 2°C scenario by 2050 from their unique starting points. It uses industry-specific 2°C scenario pathways, with companies measured using industry-specific emissions intensities and physical production levels (e.g., tCO_2e per GWh or per tonne of steel). Industry-specific transition pathways may be faster (e.g., power generation for consistency), or slower (e.g., cement) depending on an industry's available technologies, specific mitigation potential and costs of mitigation. Within a given industry, companies with a low base year emissions intensity and low production growth can reduce emissions at a gradual rate. Companies with a high emissions intensity or high production growth must make faster reductions.

The scenarios used in SDA assessments are International Energy Agency (IEA) scenarios from its Net Zero and Energy Technology Perspectives (ETP) 2017 publications.[63] These provide SDA assessment parameters consistent with 1.5°, 2°, and 2.7°C of warming.

The GEVA method is applied to companies with lower emitting or heterogeneous business activities. It recognises that many companies have diverse business activities, most of which do not have distinct transition pathways defined in climate scenarios. For these companies, GEVA entails applying a contraction of carbon intensity principle under which a company should make emissions reductions consistent with rates required for the overall economy, from each company's unique base year emissions intensity. It uses a non-industry specific, economy-wide 2°C scenario, and emissions intensities with a financial, not physical or production denominator. Each company's transition pathway is measured as its GHG emissions per unit of inflation-adjusted gross profit, representing its contribution to total global emissions and emissions intensity. This is compared with a global economy-wide emissions intensity pathway required for achieving below 2°C of warming.

The scenarios used in GEVA assessments are Shared Socioeconomic Pathway (SSP)[64] scenarios used prominently in the sixth assessment report (AR6) of the IPCC.[65] These provide GEVA assessment parameters consistent with 2°, 3°, 4°, and 5°C of warming. A 1.5°C scenario parameter is also consistent with the requirements of the EU's Paris Aligned Benchmark regulations.

63 https://www.iea.org/reports/energy-technology-perspectives-2017.
64 Shared Socioeconomic Pathways (SSPs) were developed over the last years as a joint community effort (by an international team of climate scientists, economists and energy systems modellers) to provide a toolkit for the climate change research community to carry out integrated, multi-disciplinary analysis. They describe plausible major global developments that together would lead in the future to different challenges for mitigation and adaptation to climate change.
65 https://www.ipcc.ch/assessment-report/ar6/.

APPENDIX 8: CARBON COSTS

S&P Global Sustainable1 has assembled a database of publicly available information on current carbon prices across over 44 jurisdictions as of January 2022. The Unpriced Cost of Carbon (UCC) is the estimated additional financial cost per tonne of greenhouse gas emissions in a future year. It is the difference between current carbon prices and possible future carbon prices for a given sector, geography and year.

Rising carbon prices entail direct financial implications for businesses where regulations impose a higher price on greenhouse gas emissions from the direct operations of the business. Companies also face indirect financial risks associated with the pass-through of rising carbon prices applied to the emissions of suppliers who inturn seek to recover the additional regulatory costs in part or in full through increased prices. Pass-through factors are used to estimate the proportion of the increased carbon prices on scope 2 emissions that are passed through from suppliers to companies.

The Carbon Price Risk Premium varies by geography due to government policy differences, and by sector due to the differential treatment of sectors in many climate change policies. The sectors are based on OECD's research and include:

1. Agriculture and Fisheries
2. Electricity
3. Industry
4. Air Transportation
5. Offroad Transport
6. Residential and Commercial Real Estate
7. Road Transport

Each of S&P Global Sustainable1's 464 business activities have been mapped to one of these seven categories.

Scenarios

3 scenarios are taken into account, i.e., with a low, medium and high carbon price increase.

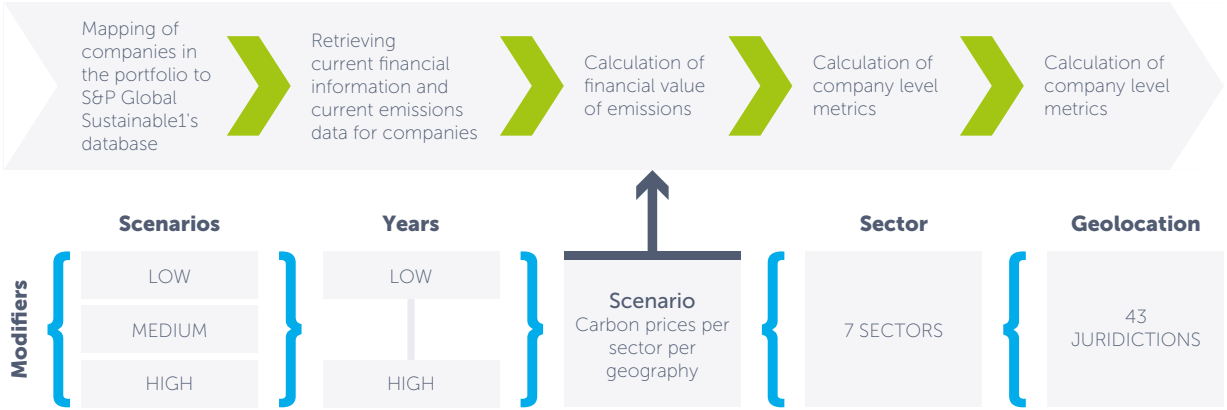
The high carbon price scenario represents the implementation of policies that are considered sufficient to reduce greenhouse gas emissions in line with the goal of limiting climate change to 2°C by 2100 (the Paris Agreement). This scenario is based on research by OECD and IEA.

The moderate carbon price scenario assumes that policies will be implemented to reduce green-house gas emissions and limit climate change to 2 degrees Celsius in the long term, but with action delayed in the short term. This scenario draws on research by OECD and IEA along with assessments of the sufficiency of country Nationally Determined Contributions by Climate Action Tracker by Ecofys, Climate Analytics and New Climate Team. Countries with Nationally Determined Contributions that are not aligned to the 2°C goal in the short term are assumed to increase their climate mitigation efforts in the medium and long term.

The low carbon price scenario represents the full implementation of country Nationally Determined Contributions under the Paris Agreement, based on research by OECD and IEA.

Which carbon price risk premium is applicable for individual companies will depend on the choice of scenario, companies' sector of operations as well as their geographical exposure. The analysis covers S&P Global Sustainable1's standard 464 sectors used for classification of companies that were mapped to the sectors based on OECD's classification for carbon pricing. The geographical exposure to different carbon price risk premiums is derived based on companies' geographical emissions as reported through the CDP. In case companies do not report to the CDP, S&P Global Sustainable1 uses the geographical breakdown of companies' revenues as a proxy for emissions' distribution. Together, the sector exposure and country level emissions profiles allow for a very granular level bottom up calculation of carbon price risk exposure.

Schema for the application of UCC to a portfolio



APPENDIX 9: PHYSICAL RISKS

The release of the TCFD recommendations highlighted the importance of climate change as a driver of material financial risks for companies and investors that should be assessed, disclosed and managed. The risks types are split into two major categories, the first being transitional risks (including policy and legal risk, technology risk, market risk and reputational risk), and the second being physical risks. Physical risks resulting from climate change can be acute (driven by an event such as a flood or storm) or chronic (arising from longer term shifts in climate patterns) and may have financial implications for organisations such as damage to assets, interruption of operations and disruption to supply chains.

S&P Global Sustainable1 launched a suite of Climate Change Physical Risk Analytics solutions to the market in 2019, offering an asset based approach to the assessment of physical risk at the company and portfolio level. In 2022, S&P Global Sustainable1 launched an enhanced physical risk framework, leveraging the expertise and intellectual property of The Climate Service (TCS), which was acquired by S&P Global in January 2022. Key features of the updated dataset include:

- Robust and science-based climate change physical hazard characterisation methodology, leveraging the latest available climate change models (CMIP6) and proprietary methodologies.
- Coverage of eight key climate change physical hazards at consistent resolution, globally: coastal flood, fluvial flood, extreme heat, extreme cold, tropical cyclone, wildfire, water stress, and drought.
- Coverage of four climate change scenarios based on the IPCC Shared Socioeconomic Pathway (SSP) and Representative Concentration Pathway (RCP) scenarios, and offering annualised decadal averages for all hazards from the 2020s to the 2090s.
- Physical risk exposure scores representing point in time exposure to climate hazards, and physical risk financial impact metrics describing the financial consequences arising from changing climate hazard exposure for over 250 unique asset types.
- Built upon a proprietary database of over 3.1 million asset locations linked to corporate entities and ultimate parent entities based on S&P Market Intelligence, S&P Commodity Insights, and Sustainable1-assembled datasets and with flexibility to rapidly analyse client provided asset datasets.
- Physical risk analytics for over 20,000 companies representing over 98% of global market capitalisation, ensuring high levels of coverage for equity and fixed income portfolios across all markets.

Exposure scores and financial impact metrics explained:

	Physical Risk Exposure Scores	Physical Risk Financial Impacts
What does this metric represent?	Point in time exposure to climate hazards relative to global conditions, independent of the characteristics of the asset present at a given location	Financial consequences arising from the change in climate hazard exposure vs. a baseline, specific to the asset present at a given location
Advantages	Efficient and high throughput for rapid screening of large asset portfolios	Deep dive analysis to quantify the financial impact of changing climate hazard exposure based on the best available data and S&P Global's view on the most material impacts for each asset type
	Offers an expansive view of climate hazards present at a given location, not limited to those hazards that are assumed to be material	Granular analysis based on over 250 different asset type profiles and associated financial impact pathways
	Readily applicable where only limited information (location only) is available on assets to be analysed	Ready integration into downstream financial analysis such as valuation models, credit risk models and the creation of climate risk adjusted financial accounts
	Valuable as proxy for risk in a given location (or nearby locations) when asset data is not available	Valuable to inform climate resilience strategies that need to respond to specific risk and mechanisms
Use cases	Risk screening exercises and portfolio analytics to understand: • Aggregate physical risk exposure at the asset, company or portfolio level, and in comparison with relevant benchmarks • Which climate hazards represent the greatest exposure • The assets or companies in a portfolio which contribute most to portfolio level exposure	Deep dive physical risk analysis focusing on the financial materiality of climate hazard exposures to specific asset types
	Inform initial TCFD disclosures and risk screening initiatives	Inform detailed TCFD disclosures and reporting
	Focus attention on the most exposed assets, companies or portfolio holdings to direct further investigation to the areas with greatest potential impact	Integration of climate physical risk into financial modelling, including the development of adjusted financial accounts, credit risk modelling and equity
		Climate resilience strategy
Outputs produced?	Exposure Score: 1-100 score representing the exposure to each hazard relative to global conditions	Financial Impact: Financial losses (e.g., CapEx, OpEx, Business Interruption) reflected as a percentage of asset value due to exposure to climate-related physical hazards

Hazard types explained

Hazards	Analysis Metric	Indicator Defintion	Spatial Resolution	Data Sources
Coastal Flood	Frequency of 100-yr flood	Projected frequency of the historical baseline 100-year coastal flood depth	30x30m (USA) 90x90 (RoW)	GTRS hydrodynamic surge model Kopp et al SLR data MERIT/US3DEP USGS global coastlines
Fluvial(River) Flood	Frequency of 100-yr flood	Projected frequency of the historical baseline 100-yr flood depth	~25x25km	Hydro Atlas NEX-GDDP downscaled CMIP6
Extreme Heat	Projected Tx90p (Exposure Scores) Tx50pAbsChg (Financial Impact)	Annual percentage of days with maximum temperature warmer than the 90th percentile local baseline daily maximum temperature	~25x25km	NEX-GDDP downscaled CMIP6
Extreme Cold	Projected Tx10p	Annual percentage of days with minimum temperature colder than the 10th percentile local baseline daily minimum temperature	~25x25km	NEX-GDDP downscaled CMIP6
Tropical Cyclone	Frequency of Categorie3+ storms	Projected annual frequency of category 3 and higher tropical cyclones	~25x25km	HURDAT JTWC TC archives CMIP5/6 SST
Wildfire	Wildfire conditions days	Projected number of days with Z-index less than or equal to the historical 10th percentile	~25x25km	NEX-GDDP downscaled CMIP6
Water Stress	Water Stress Index	Projected future ratio of water withdrawals to total renewable water supply in a given area	River Basin	WRI Aqueduct
Drought	Palmer Drought * Severity Index	Projected number of days with the self-calibrating Palmer Drought Severity Index (scPDSI) less than or equal to the historical 10th percentile	~25x25km	NEX-GDDP downscaled CMIP6

Analytical approach

The Sustainable1 Physical Risk Scores and Financial Impact methodology is based on five key analytical steps:

1. Climate Hazard Modelling
2. Physical Risk Exposure Quantification
3. Asset and Company Level Physical Risk Exposure Score Calculation
4. Financial Impact Function Modelling
5. Asset and Company Level Physical Rick Financial Impact Calculation

1. Climate Hazard Modelling

Sustainable1 has assembled models and datasets representing projected absolute exposure to eight discrete climate change hazards globally across four climate change scenarios and eight time periods to produce global climate change physical hazard maps. Each indicator, scenario and time period is represented as a geospatial dataset with hazard values assigned to location at a resolution deemed suitable to each hazard. This enables the modelling of exposure to each climate hazard at a given time period and the change in hazard exposure over time and relative to a historical baseline.

2. Physical Risk Exposure Quantification

Exposure to climate change physical hazards is quantified by overlaying asset locations of interest on the climate hazard maps described at step 1. For the purposes of this analysis, "Assets" represent any structure or real asset owned or leased by a company covered by S&P Global Sustainable1's database of over 20,000 companies. The Sustainable1 Climate Change Physical Risk dataset is generated based on an extensive database of physical asset locations, linked to corporate owners (or lessees), developed and maintained by S&P Global.

3. Asset and Company Level Physical Hazard Exposure Scores

The Sustainable1 physical risk exposure score model assigns risk scores from 1 (lowest risk) to 100 (highest risk) to each asset in the database based on location within the climate change hazard maps described in step 1. The exposure score is intended to represent the relative level of exposure to each hazard at each location relative to global conditions across all scenarios and time periods. Asset level physical risk exposure scores are aggregated to company level scores as a weighted average of all assets mapped to the company of interest, based on assumed asset values for each asset type. Assumed asset values were derived from a literature review and are intended to be indicative of the relative value of each asset type. Companies evaluated using asset level data are categorised as Data Quality A.

For some companies in the Sustainable1 CorePlus universe, insufficient asset level data is available to calculate physical risk exposure scores. In these cases, physical risk exposure is estimated based on a combination of physical risk exposure at the company headquarters location (20% weight), and a revenue weighted average of the country average physical risk exposure in those countries where the company generates revenues (80% weight). Country physical risk profiles are calculated as a GDP weighted average within the country boundaries, drawing on the climate hazard data described at step 1, and downscaled spatial GDP data. Companies evaluated for physical risk exposure using this method are designated Data Quality B.

The composite exposure score is intended to provide a combined measure of company exposure to all eight climate change physical hazards. It is calculated by taking an equal weighted additive combination of the company physical risk score on each hazard for a given scenario and year, and then rescaled to a 1-100 range using a

logarithmic scoring curve. The scoring curve is designed to ensure that assets or companies with high exposure to one hazard, but low exposure to all others, will be assigned a moderate to high composite physical risk exposure score. Alternative approaches, such as a simple average of hazard exposure scores within a given scenario and time period, risk understating the exposure of an asset or company to climate change physical risk.

4. Financial Impact Function Modelling

The Sustainable1 physical risk model quantifies the expected financial consequences of changes in physical risk exposure at both the asset and company level. This model is based on a library of "Impact Functions" developed by S&P Global which describe the relationship between the degree of change in climate hazard exposure and the financial impact on a given asset type across time and climate change scenarios. Impact functions have been developed for over 250 unique asset types, each focusing on a set of pathways by which climate change hazards may impact on the value, revenues, operations or other value drivers for that asset type. The impact function database has been developed over several years through extensive literature research and analytical development.

At the asset level, Financial Impact is quantified as the projected financial costs associated with changing climate hazard exposure, expressed as a percentage of the asset value.

The Financial Impact metric is calculated at the asset level for each hazard and can be summed to produce a combined Financial Impact metric, and aggregated to the company level as a weighted average based on the assumed asset value. Financial Impact is expressed as a relative metric because accurate data or estimates of the actual value of each asset is currently not available. The following example describes the process applied to developing impact functions for a single hazard and asset type combination.

Step 1. Identify Material Impacts

S&P Global has developed over 1,280 impact functions linked to over 250 asset types for application in the physical risk dataset and related tools (e.g., the Climanomics platform). The following example shows the extreme heat impact function for the office building asset type from the owner/occupier perspective. The temperature hazard metric used in this impact function is projected Tx50pAbsChg, measuring the absolute change in the annual 50th-percentile local daily maximum temperature (degree Celsius), relative to the historical value (1950-1999). To analyse the impact of increasing maximum temperature on owned/occupied office properties, a review of available research literature was conducted to identify a range of impact pathways, or avenues by which the operations and value of an office building may be impacted by increasing temperature. The following impact pathways were identified as material to the office building asset type:

- **Cooling Costs:** Excess operating expenses associated with increased use of cooling equipment/systems to maintain optimal temperatures for employees and plant/equipment in the context of rising temperatures.
- **Heating, Ventilation, and Air Conditioning (HVAC) Degradation:** annualised costs of reduced operating life and early replacement of HVAC systems due to increased operation in response to rising temperatures.
- **Employee Productivity:** Costs associated with reduced employee productivity and associated expenses caused by increasing ambient temperatures (including employees working indoors).

Step 2. Model Impact Pathway

For each impact pathway a series of relevant research studies and data sources are assembled to quantify the impact of a unit change in hazard on relevant financial performance metrics, as described below:

- **Cooling Costs:** Excess energy consumption associated with higher temperatures were estimated based on trends identified in a series of papers focusing on changes in energy demand and power generation, and estimated economic damages arising from climate change in the USA. Based on this data, cooling energy demand is projected to increase by 5% per one-degree Celsius increase in average maximum temperature.
- **HVAC Degradation:** Excess costs associated with reduced operating lifespan for HVAC systems per unit change in temperature were estimated from a series of studies including Fenaughty and Parker (2018). Based on this data, HVAC lifespan is projected to decrease by 6.76% per one-degree Celsius increase in average maximum temperature.
- **Employee Productivity:** Reductions in employee productivity were estimated based on a global study of the effects of heat on working populations. Based on this data, workforce productivity is projected to decrease by 1.14% per one-degree Celsius increase in average maximum temperature.

Step 3. Quantify Financial Impact

To quantify the total financial impact on asset value, the impact pathways described in the prior section are weighted based on a set of financial ratios reflecting the proportion of the total value of a given asset type that is represented by the value driver impacted by temperature change for each pathway. The asset value metric for the owned/occupied office building asset type is the replacement value, and the financial ratios applied to each impact function described below (these assumptions are based on literature review and analysis by S&P Global):

- **Cooling Costs:** 1.19% of asset value.
- **HVAC Degradation:** 13.29% of asset value.
- **Employee Productivity:** 7.84% of asset value.

The financial impact (%) for each impact pathway is multiplied by the corresponding financial ratio and summed to quantify the aggregated financial impact (%) on the asset.

5. Asset and Company Level Physical Risk Financial Impact Calculation

The Sustainable1 physical risk financial impact model quantifies the percentage of asset value at risk for each asset based on:

a. The change in climate change physical hazard under a given scenario and time period relative to a historical baseline.
b. The asset type classification, and associated impact functions, for the asset located at a given location.

Asset level Financial Impact is aggregated to company level as a weighted average of all assets mapped to the company of interest, based on assumed asset values for each asset type. Assumed asset values were derived from a literature review and are intended to be indicative of the relative value of each asset type.

Asset and company level Financial Impact is calculated for each climate hazard under each scenario and time period and are summed to a combined Financial Impact metric covering all hazards.

Financial impact metrics are not calculated for companies with no linked asset level data (other than the company headquarters) in the 2022 physical risk dataset.

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