Allianz

Allianz Portfolio
Carbon Footprint
Methodology

1. Introduction

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[1] https://ghgprotocol.org/sites/default/files/standards_supporting/Chapter15.pdf

[2] https://www.esma.europa.eu/sites/default/files/library/jc_2021_03_joint_esas_final_report_on_rts_under_sfdr.pdf

[3] https://assets.bbhub.io/company/sites/60/2021/07/2021-Metrics_Targets_Guidance-1.pdf

[4] https://carbonaccountingfinancials.com/files/downloads/PCAF-Global-GHG-Standard.pdf

[5] NZAOA-Target-Setting-Protocol-Second-Edition.pdf (unepfi.org)

Allianz, as a founding member of the U.N.-convened Net-Zero Asset Owner Alliance (AOA), advocates for ambitious decarbonization strategies in the real economy, and financing by industry. Our commitment is to support real world decarbonisation while also reaching net zero greenhouse gas (GHG) emissions in our proprietary investment portfolio by 2050. In line with this, we are working towards our first intermediate target to reduce GHG emissions in our portfolio's listed equities and corporate bonds by 25 % by 2025 compared to 2019.

For measuring and steering the decarbonization of our portfolio, and for our sustainability reporting, we calculate the carbon footprint of the companies in our portfolio, in proportion to the amount of that company we hold. This is termed our 'owned emissions' and we calculate it on an annual basis. Our owned emissions represent part of Allianz's scope 3 emissions, as outlined in category 15 of the GHG protocol[1].

This document details our carbon footprint calculation approach in order to provide clarity on how we compute our owned emissions in a generally accepted and consistent manner. The metrics and methodology described in this document were defined in accordance with the guidance given by the Sustainable Finance Disclosure Regulation (SFDR) Final Report on draft Regulatory Technical Standards[2], the guidance of the Task Force on Climate-related Financial Disclosures[3] and The Global GHG Accounting & Reporting Standard for the Financial Industry[4]. Additionally, we calculate and report in line with second edition of the UN AOA Target Setting Protocol[5].

In alignment with these above referenced works, we calculate multiple carbon footprint KPIs. Our absolute portfolio carbon footprint is used to determine total owned GHG emissions and measure decarbonization over time. In order to compare companies, sectors, or portfolios to each other in terms of emissions, we use intensity metrics, i.e. metrics showing the emissions per a specific unit, such as emissions per EUR invested. The different KPIs are described in more detail in section 3.

Furthermore, we would like to emphasize the importance of carbon disclosure by investors as well as investee companies, to ensure transparency and the ability to reach climate targets. Standardized GHG accounting enables financial institutions to provide transparent climate disclosure, identify the emission hot spots within the portfolio and seize the right climate friendly opportunities. Consequently, we will continuously enhance our carbon footprint methodology and portfolio coverage based on available methodologies, data and standards set out.

2. Portfolio Scope

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Our portfolio carbon footprint covers our global equity and corporate bond portfolios. This includes the asset classes listed below. Derivatives and unit-linked products[6] are excluded from our carbon footprint calculation.

Global equity portfolio:

In Scope:
• Public equity (single stocks on IFRS consolidated balance sheet), not in scope yet: mutual funds)

Out of Scope:
• Mutual funds

Global corporate bond portfolio[7] :

In Scope:
• Corporates
• Agencies
• Private Placements

Out of Scope:
• Asset Backed Securities
• Mortgage Backed Securities
• Collateralized Mortgage Obligations
• Covered Bonds
• Mutual Funds

For sector comparisons and the sector average method (see section 3.3), investments in our portfolio are categorized by industry sector according to the Statistical Classification

of Economic Activities in the European Community (NACE). The NACE classification system partitions economic activities into unique industry sectors and further sub classifies them into four levels of specificity. For example, a company in the 'Manufacturing' (level 1) NACE sector may be further categorised into 'Manufacture of basic metals' (level 2) then 'Casting of metals' (level 3) and finally 'Casting of iron' (level 4). For more information on the different sectors and levels, please refer to Regulation (EC) No 1893/2006 of the European Parliament and of the Council[8].

[6] Unit-linked describes a type of investment, usually offered by a life insurance company, which is essentially a combination of insurance and an investment vehicle.
For more information see
BaFin - Life and pension insurance - What are the special features of unit-linked life insurance?.
EUR-Lex - 32006R1893 - EN - EUR-Lex (europa.eu)

[7] The bonds in our portfolio are categorized according to the Bloomberg Global Sector Classification Scheme (BCLASS) which groups bonds by industry, government affiliation or some other grouping of ultimate company risk. See Bloomberg-Barclays-Methodology1.pdf (bloomberglp.com)

[8] EUR-Lex - 32006R1893 - EN - EUR-Lex (europa.eu)

3. Calculation Methodology

We calculate the owned emissions of an investment in our portfolio by computing the fractional share of the respective company's total GHG emissions relative to the amount of the company that we 'own'. This is determined by the ratio of our exposure in the company (equity or bond) and the company's total enterprise value, multiplied with the company's total emissions. Our total portfolio carbon footprint is the sum of all those owned emissions in our portfolio, expressed as carbon dioxide equivalents (CO_2e).

Absolute portfolio carbon footprint:

$$\sum_{i=1}^{n} \frac{\text{€}investment_i}{company's\ enterprise\ value\ including\ cash_i} * company's\ emissions_i$$

For computing our portfolio carbon footprint, the following input is required (described in more detail in the next sections):

- $\text{€ } investment_i$ refers to the exposure in EUR for the $company_i$ [9] in our investment portfolio, where 'exposure' is defined as market value for equities and nominal value for all fixed income securities.
- $company's\ emissions_i$ refers to the sum of scope 1 and scope 2 GHG emissions of the $company_i$ according to the GHG Protocol[10].

- The $company's\ enterprise\ value\ including\ cash_i$ (EVIC) is calculated as the sum, at year-end, of the market capitalisation of ordinary shares, the market capitalisation of preferred shares, and the book value of total debt and non-controlling interests, without the deduction of cash or cash equivalents.

Our portfolio carbon footprint is calculated in the beginning of each year for the year previous. While our exposure and a company's EVIC data is generally available for the previous year, GHG emissions data is usually only available for the year before the previous year. Therefore, there is a one-year time-lag between financial data and emission data within the calculation. As an example, our portfolio carbon footprint in 2021 was calculated in early 2022 and based on financial data from year-end 2021, but GHG emissions data was from 2020. This is in line with the approach described in the second edition of the UN AOA Target Setting Protocol, Option 2 (page 41)[11].

3.1. Investment

Definition

$\text{€ } investment_i$ is the exposure for the $company_i$ in our investment portfolio, here referring to our global equity and corporate bond portfolio. For equity investments and zero-coupon bonds, this corresponds to the market value at year-end, for corporate bonds this is the nominal value of the bond at year-end.

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[9] The index "i" refers to any given individual company in our portfolio.

[10] https://ghgprotocol.org

[11] NZAOA-Target-Setting-Protocol-Second-Edition.pdf (unepfi.org)

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[12] https://ec.europa.eu/info/sites/info/files/business_economy_euro/banking_and_finance/documents/192020-sustainable-finance-teg-benchmarks-handbook_en_0.pdf

[13] https://www.esma.europa.eu/sites/default/files/library/jc_2021_50_-_final_report_on_taxonomy-related_product_disclosure_rts.pdf

[14] https://ghgprotocol.org

3.2. EVIC

Definition

The *company's enterprise value including cash$_i$* refers to the sum of the market capitalization of ordinary shares at year-end, the market capitalization of preferred shares at year-end, and the book values of total debt and minorities' interests, without the deduction of cash or cash equivalents.

Cash and cash equivalents are not deducted in order to avoid the possibility of negative enterprise values. Furthermore, it ensures that 100% of all company's emissions are attributed to either equity or debt holders, as the sum of equity and debt represents 100% of the company's EVIC[12]. In line with the EU SFDR Final Report on Draft Regulatory Technical Standards and the Principal Adverse Impact screening set forth here in, EVIC is used as the standard denominator when determining owned emissions[13].

Source

For Allianz's carbon footprint, the different EVIC components (Company Market Cap, Preferred Stock, Non-Redeemable (Net), Total Debt, Minority Interest) are sourced from the Refinitiv Eikon database. If these components are not available from Refinitiv, EVIC data from MSCI is used instead. If the necessary data is still not available, we use the company's market cap from MSCI instead of EVIC.

3.3. Emissions

Definition

company's emissions$_i$ refers to the sum of scope 1 and scope 2 emissions of a company. As defined in the GHG Protocol[14], scope 1 GHG emissions include all direct emissions and scope 2 GHG emissions include all indirect emissions from consumption of purchased electricity, heat or steam. Scope 3 emissions are currently not included because of data comparability, coverage, transparency, and reliability issues. However, scope 3 is planned to be included once sufficient and reliable data is available.

Source

Carbon footprint KPIs for an investment can be displayed by different aggregation levels. This can entail aggregation by direct issuer level, parent issuer level or ultimate issuer level. Based on the Bloomberg company hierarchy, we define the different issuer levels as follows:

Direct issuer: Issuer of investment
Parent issuer: Company that owns the direct issuer
Ultimate issuer: Highest/final company that owns the other companies

Because emissions of an investment are often only reported at the ultimate issuer level, and might be unavailable for the respective reporting year, the following method is applied for sourcing and choosing the final GHG emission figures that we use. Only the latest three emission reporting years are considered to ensure that up-to-date carbon emission data is used.

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[15] An exception from the steps a. to c. are sovereign bonds: if the ultimate issuer is a sovereign bond, the direct issuer is always chosen as identified company.

[16] https://carbonaccountingfinancials.com/files/downloads/PCAF-Global-GHG-Standard.pdf

[17] Global emission intensity is the average emission intensity of all identified companies in our portfolio.

Method for determining GHG emissions used for carbon footprint calculations of $company_i$:

a. Current year:
1. Look at **Ultimate issuer** of the investment and if GHG emissions are available from MSCI, choose MSCI data, if not, choose Refinitiv data.
2. Look at **Parent issuer** of the investment and if GHG emissions are available from MSCI, choose MSCI data, if not, choose Refinitiv data.
3. Look at **Direct issuer** of the investment and if GHG emissions are available from MSCI, choose MSCI data, if not, choose Refinitiv data.
4. Compare Ultimate, Parent and Direct issuer's emissions and **choose the issuer with the highest emissions** as 'identified company' and its emissions as final GHG emissions for calculating owned emissions for the investment.

b. If none of the above are available, then use the previous year's data with the same logic outlined above.

c. If previous year's data is not available, then use the data from the **year before the previous year** with the same logic outlined above.

d. If none of the above are available, then use the **sector average method**.

The steps described in a. to c. lead to the determination of an 'identified company' for each investment. This is the issuer level from which the emission data is used for the respective investment[15]. The identified company is then also used for retrieving the corresponding fundamental data (such as

enterprise value, market capitalization or debt for EVIC). This approach ensures that emissions and EVIC information always refers to the same investee company.

Sector Average Method

Where no emission data is available for the current and two previous years from neither MSCI or Refinitiv, a sector average method (step d.) is applied. This is done in accordance with The Global GHG Accounting & Reporting Standard for the Financial Industry[16]. The sector average is calculated in the following way:

A. **Assign the NACE sector** to the identified company. If the NACE sector is not available for the identified company, use the sector for the Ultimate issuer, if not available use the sector for the Parent issuer, if not available use the sector for the Direct issuer. If there is no NACE sector available at all, assign it manually based on our own best determination.

B. Determine the sector average universe which consists of all identified companies with reported emission values.

C. Determine the NACE sector level to use for calculating average carbon intensity. Starting with NACE sector level 3, if the number of identified companies in this level is greater than or equal to 8, calculate the sector intensity for this level. Otherwise, consider the next NACE sector level 2 and so on. If the highest NACE level has less than 8 companies, use global emission intensity[17].

D. Calculate the sector average carbon intensity for each identified NACE sector. This is the sum of emissions divided by the sum of enterprise value including cash for the respective NACE sector. For this purpose, only consider those identified companies with an original NACE sector.

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E. Compute the estimation of company's final emissions based on sector average carbon intensity (in cases where no emission data is available) by multiplying the sector average carbon intensity by the company's EVIC.

F. Compute our owned emissions (in cases where no emission data is available) by multiplying the sector average carbon intensity by our exposure for the company in our investment portfolio, defined as nominal value for bonds and market value for equities and zero coupon bonds.

Green Bonds

Green Bonds are a special case in the process of our portfolio's carbon footprint calculation. These are bonds where the money raised by the company is used exclusively to finance projects that have a positive environmental impact, such as funding further development of renewable energy or green buildings. To incentivize the investment in such bonds, we apply a percentage factor (currently 10%) to the calculation of owned emissions for green bonds. This is in general a conservative approach and will be applied until financed emissions of green bonds are available from our data providers. Green bonds are identified via a respective flag from our data provider.

3.4. Validity Check

Before calculating our total portfolio carbon footprint, emission and EVIC data is checked for accuracy. For this purpose, we examine year over year development of emissions and EVIC data retrieved from MSCI and Refinitiv for the companies in our top 100 owned emissions in our portfolio. Outliers are then manually verified against the company's published annual reports and corrected if necessary.

3.5. Weighted Metrics

When we benchmark or compare companies, sectors, or portfolios to each other in terms of GHG emissions, normalization is required. This means translating the absolute owned emissions to an emission intensity metric (emissions per a specific unit). We compute the following intensity metrics for our portfolio.'

Relative portfolio carbon footprint (i.e. portfolio carbon footprint per EUR invested):

$$\frac{\sum_{i=1}^{n} \frac{\text{€} investment_i}{company's\ enterprise\ value_i} * company's\ emissions_i}{total\ portfolio\ value}$$

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Weighted average carbon intensity (i.e. portfolio weighted average carbon intensity per EUR sales):

$$\sum\nolimits_{i=1}^{n} portfolio\ weight_i * \frac{company's\ emissions_i}{company's\ sales_i}$$

For this purpose, the following additional input is required:

- $total\ portfolio$ value refers to the aggregated value of all investments in the portfolio. For the global equity portfolio this is the aggregated market value and for the corporate bond portfolio the aggregated nominal value.
- $company's\ sales_i$ refers to a company's sales data as given by Refinitiv for the relevant company.
- $portfolio\ weight_i$ refers to the weight of the corresponding company i in the investment portfolio, calculated as:

$$portfolio\ weight_i = \frac{€investment_i}{total\ portfolio\ value}$$