

NON-FINANCIAL REPORTING AT ALLIANZ GROUP

Explanatory Notes for Reporting Year 2023

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01 Allianz Portfolio Carbon Footprint

01.1.1 Methodology for Commercial Underwriting Portfolio

Introduction

Allianz advocates for ambitious decarbonization strategies in the real economy. Our commitment is to support real world decarbonization while also reaching net-zero GHG emissions in our underwriting portfolio by 2050. In line with this, we are working towards our first intermediate target to reduce the GHG emission intensity in the commercial subportfolio of large corporates managed by Allianz Global Corporate & Specialty (AGCS) by 45 % by 2030 compared to 2022.¹ For measuring and steering the decarbonization of our portfolio, and for our sustainability reporting, we calculate the Insurance-Associated Emissions of the companies in our portfolio on an annual basis. Our insurance-associated emissions represent part of Allianz's scope 3 emissions as outlined by the Partnership for Carbon Accounting Financials (PCAF).²

These explanatory notes detail our emission baseline calculation approach in order to provide clarity on how we compute the insurance-associated 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 Insurance Associated-Emissions Standard of the Partnership for Carbon Accounting Financials (PCAF). In alignment with the standard, our absolute emissions baseline is calculated to measure the total insurance-associated emissions in our portfolio. In addition, we calculate intensity metrics, i.e., metrics showing the emissions per a specific unit, such as emissions per EUR of insurance premium in order to measure portfolio decarbonization over time.

Portfolio scope

Our portfolio baseline covers the corporate portfolio managed by Allianz Global Corporate & Specialty, for which GHG data is available from our data providers (for further details see section Customer emissions). This includes policies from lines of business listed below. PCAF requirements prescribe to exclude from the baseline perimeter specific lines of business across different segments.

1 Allianz announces first net-zero transition plan with 2030 intermediate targets.

In scope lines of business:

- Commercial insurance:
 - Property,
 - Liability/ Casualty,
 - Commercial Motor,
 - Aviation,
 - Marine,
 - Agriculture,
 - Engineering lines (except those out of scope),
 - Other/special lines (e.g., financial lines), and
 - Trade credit.

Out of scope lines of business:

- Commercial insurance,
 - Structured trade credit (credit risk for bank loans, mortgages, or other financial instruments),
 - Surety, and
 - Engineering lines:
- Construction all-risks,
- Erection all-risks only,

- Corporate life and pensions,
- Insurance contracts purchased by public entities,
- Treaty reinsurance, and
- Insurance contracts with NGOs and Governments.

Calculation methodology

We calculate the insurance-associated emissions of a policy in our portfolio by computing the fractional share of the customer's (policyholder) total CO_2e emissions relative to the share of insurance premiums paid over the customer's revenues. This is determined by the ratio of the customer's insurance premium paid and the revenues of that customer (attribution factor), multiplied by the customer's total (Scope 1 and 2) emissions. Our total emissions baseline is the sum of the insurance-associated emissions of all policies in scope of the baseline portfolio, expressed in tonnes of carbon dioxide equivalents (CO₂e).

² The global GHG Accounting & Reporting Standard Part C – Insurance-Associated Emissions (carbonaccountingfinancials.com).

For computing our absolute portfolio emissions baseline, the following input is required (described in more detail in the next sections):

- € insurance premium; refers to the premiums paid by the customer; in our underwriting portfolio, and it is defined as gross written premium (GWP) netted of external acquisition costs (i.e., brokerage costs, external commissions).
- Customer's emissions, refers to the sum of scope 1 and scope 2 CO₂e emissions of the customer, according to the GHG Protocol.
- Customer's revenues, are calculated as the sum, at year-end, of income generated by the sale of goods and services.

 $\sum_{i=1}^{n}$

The emission baseline is calculated at the beginning of each year for the previous year. While insurance premiums and customer revenue data are generally available for the previous year, CO₂e 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 2022 baseline was calculated in early 2023 based on financial data from yearend 2022, but CO₂e emissions data from 2021. This is in line with the approach described in the PCAF standard.

Additionally, and as our reduction target is defined on an intensity basis, we compute the following intensity metric for our portfolio.

€ insurance premiums, customer's revenues. * Customer's emissions,



Insurance premiums Definition

€ insurance premiums, is the amount of premiums paid by the policyholder after deducting external costs (gross acquisition, broker, and commission costs), in line with PCAF.

Customer emissions Definition

Customer emissions, refers to the sum of scope 1 and scope 2 emissions of a customer. As defined in the GHG Protocol, scope 1 GHG emissions include all direct emissions from sources that are owned or controlled by a customer 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

Scope 1 and 2 emissions of a customer are retrieved from MSCI and Refinitiv databases.

Emissions of a customer can be reported at either subsidiary or parent company level and might be unavailable for the respective reporting year. Therefore, the following method is applied for sourcing and choosing the final CO₂e emission figures for baselining. Only the latest four emission reporting years are considered to ensure that up-to-date emission data is used.

Method for determining CO₂e emissions used for baselining calculations of customer;:

- a) Current year:
 - Look at customer name and if emissions are available from MSCI, choose MSCI data, if not, choose Refinitiv data.
 - Look at customer's holding company name and if CO₂e emissions are available from MSCI, choose MSCI data, if not, choose Refinitiv data.
- b) Choose customer emissions as "matched emissions" if available.
 Otherwise, choose holding company and its emissions.
- c) If none of the above are available, then use the previous years' data (back to 2019) with the same logic outlined above.

The steps described in a. to c. lead to the determination of a "customer with reported emissions." If a customer's emissions cannot

be retrieved through the steps a. to c., the customer is not in-scope of the baseline.

Customer revenues Definition

Customer revenues, refers to the sum of the total amount of income generated by the customer through the sale of goods or services.

In line with the PCAF standard, revenues are used as the standard denominator when determining insurance-associated emissions.

The revenues considered for each customer are at the same level of the emissions matched (i.e., if emissions are matched at subsidiary level, revenues need to be at subsidiary level; if emissions are at holding level, revenues need to be at the holding level).

Source

For Allianz's baseline, the customer's revenues are sourced from Refinitiv, escalating to a holding company level whenever revenues are not available at a subsidiary level.

Renewables policies

Renewables policies are a special case in the process of our portfolio's emission baseline calculation. These are policies specifically stipulated to insure renewables projects or assets as defined in the Allianz Statement on renewable/ low-carbon energy. To incentivize the underwriting of such policies, we apply a percentage factor (currently 10 %) to the calculation of insurance-associated emissions linked to these policies. This is in general a conservative approach and will be applied until methodologies to calculate the insurance-associated emissions of green assets are available. Renewables / low-carbon energy policies are identified via a respective flag from our internal database.

Checks on external data providers

Before calculating our total portfolio emission baseline, customers' emissions and revenue data from external data providers is checked for accuracy. For this purpose, we check the emissions and revenue data retrieved from MSCI and Refinitiv for a representative sample of policies in our portfolio. Outliers are then manually verified against the customer's published annual reports and corrected if necessary.

Data quality score

Based on the methodology provided by PCAF, the data quality score of the portfolio in scope of the emission

Target portfolio data quality score =

 $\sum_{i=1}^{n} (insurance \, premium_i * policy \, data \, quality \, score_i)$

 $\sum_{i=1}^{n} \text{ insurance premium}_{i}$

reduction target is calculated by summing up the individual weighted data quality scores for all policies in that portfolio. The data quality score formula is shown above:

- In this formula, insurance premium, is the gross written premium minus external acquisition costs of each policy in the portfolio in target scope. Policy data guality score, is the data guality score assigned to each policy according to the PCAF definition which takes into account the data source (reported, verified or estimated) and the company hierarchy at which data is available (parent holding level or subsidiary level). For the portfolio in scope, only companies with reported data (verification status unknown) are considered, therefore score 2 is the default. Depending on whether data is available on a holding or subsidiary level the following additional logic is applied:
- A score of 2 is assigned to policies where emissions and revenues are reported on the same company hierarchy/subsidiary level as the insured customer i.e., if the insured customer is a subsidiary company, the revenues and emissions used to calculate that customer's IAE are those of the same insured subsidiary.
- A score of 4 is used when the emissions and revenue used to calculate the IAE of the insured customer are reported on the customer's parent/holding level.
- Example: if company A is a subsidiary of company B, a score of 2 will be assigned if company A reports its own emissions and revenue numbers. A score of 4 will be assigned to the policy if only company B reports the revenues and emissions of the whole company.

Σ^{n}

∠i=1 insurance premium; is the portfolio's total gross written premium minus external acquisition costs.

Coverage calculation

The coverage of the portfolio in scope of the emission reduction target gives an indication of the current share of premium in scope of the emission reduction target.

The coverage is calculated in terms of Gross Written Premium (GWP), where the coverage is the ratio of the total GWP of the baseline portfolio in target scope divided by the total GWP of the commercial insurance portfolio's seaments/lines of business where a methodology is available based on the PCAF standard. The coverage percentage is calculated using the formula below.

In this formula, the total GWP of portfolio in target scope is the sum of GWP of all policies in the baseline portfolio where

the policyholder reports their emissions and is therefore in the target sub-portfolio scope. The total GWP of Allianz's Property & Casualty (P&C) commercial segment in scope of PCAF methodology is equal to the total GWP of Allianz's P&C commercial Solvency II lines of business where a carbon accounting methodology exists. The solvency II lines of business include:

- credit and surety,
- fire and other damage to property,
- general liability; legal expense,
- marine, aviation and transport,
- miscellaneous financial loss,
- motor vehicle liability; other motor, and
- worker's compensation.

While PCAF also excludes products in specific lines of business and for specific customer segments (for example, Contractors All Risk (CAR) and Erection All Risk (EAR) products in the Engineering/ Property lines of business, insurance sold to public entities), the GWP associated with those products has only been excluded from the baseline portfolio (numerator in coverage formula). Exclusions at product and customer segment levels have not been applied to the total GWP of Allianz P&C commercial segment in scope of PCAF methodology (denominator in coverage formula).

Coverage percentage =

Total GWP of portfolio in target scope

*100

Total GWP of Allianz P&C commercial segment in scope of PCAF methodology

Introduction

Allianz has committed to ambitious decarbonization strategies and aims to transition its P&C underwriting portfolios to net-zero greenhouse gas (GHG) emissions by 2050.

Our inaugural Net-Zero Transition Plan (NZTP) focuses on the decarbonization of two core portfolios within our P&C book; Commercial and Motor Retail.¹ For Motor Retail, we aim to reduce carbon emissions within in-scope portfolios by 30 % by 2030 compared to a 2022 baseline.² To measure and steer the decarbonization of the motor retail portfolio, and for our sustainability reporting, we need to calculate the carbon footprint of our portfolio.

GHG accounting is a necessary step for organizations to better understand, manage and reduce their emissions. In September 2019, the Partnership for Carbon Accounting Financials (PCAF) was launched globally to harmonize GHG accounting methods starting with guidance on Financed Emissions to enable financial institutions to consistently measure and disclose the GHG emissions financed by their loans and investments.³ From October 2021 the standard for Insurance-Associated Emissions (IAE) has been available.⁴

The current scope of application of the IAE standard is Commercial and Personal Motor lines of business. The metrics and methodology described in this chapter were defined for Personal Motor only, referred to by the Allianz portfolio classification of Motor Retail. They have been produced to provide clarity on how we calculate the IAEs in a generally accepted and consistent manner. In alignment with the PCAF standard, our absolute emissions baseline is calculated to measure the total IAE in our in-scope Motor Retail portfolios. This will be used as the baseline against which portfolio decarbonization will be measured over time.

According to the PCAF standard, the following privately used vehicle types are in scope for Personal Motor:

- Passenger car,
- Motorcycle/Motorbike/Moped,
- Passenger van,
- Passenger truck, and
- Motorhome.

Definitions and portfolio scope

Vehicle types in scope

Definition Category Examples / In-scope common name Motor vehicles having at least four wheels and for Category M the carriage of passengers M1 Cars/ Vans Vehicles used for the carriage of passengers and Yes comprising not more than eight seats in addition to the driver's seat. M2 Mini Buses Vehicles used for the carriage of passengers, No, for comprising more than eight seats in addition to commercial the driver's seat, and having a maximum mass not purposes exceeding 5 tons. Category N Power-driven vehicles having at least four wheels and for the carriage of goods N1 Vehicles for the carriage of goods and having a Vans Yes maximum mass not exceeding 3.5 tons

1 Allianz Inaugural Net-Zero Transition Plan 2023.

2 The target covers in-scope portfolios in nine key European markets, namely: Austria, Belgium, France, Italy, Germany, the Netherlands, Spain, Switzerland, and the UK.

3 The Global GHG Accounting & Reporting Standard Part A – Financed Emissions.

4 The Global GHG Accounting & Reporting Standard Part C – Insurance-Associated Emissions.

Since it is the responsibility of each insurance company to define the specific vehicle types which they include in their respective inventories of insuranceassociated emissions, Allianz follows the E.U. classification of vehicle types. This means the following vehicle types are included:

Definitions and portfolio scope continued

Vehicle types in scope

Category	Examples / common name	Definition	In-scope
Category L	Mopeds, Motorcycles, Motor Tricycles and Quadricycles	Motor vehicles with less than four wheels and some lightweight four-wheelers.	
L1	Mopeds, Electric bicycle	A two-wheeled vehicle with an engine cylinder capacity in the case of a thermic engine not exceeding 50 cm ³ and whatever the means of propulsion a maximum design speed not exceeding 50 km/h.	Yes
L2	Auto Rickshaw	A three-wheeled vehicle of any wheel arrangement with an engine cylinder capacity in the case of a thermic engine not exceeding 50 cm ³ and whatever the means of propulsion a maximum design speed not exceeding 50 km/h.	Yes
	Mopeds, Motorcycles, Motor Tricycles and Quadricycles	Motor vehicles with less than four wheels and some lightweight four-wheelers.	
L3	Motorcycles	A two-wheeled vehicle with an engine cylinder capacity in the case of a thermic engine exceeding 50 cm ³ or whatever the means of propulsion a maximum design speed exceeding 50 km/h.	Yes
L4	Motorcycles with sidecar	A vehicle with three wheels asymmetrically arranged in relation to the longitudinal median plane with an engine cylinder capacity in the case of a thermic engine exceeding 50 cm ³ or whatever the means of propulsion a maximum design speed exceeding 50 km/h (motorcycles with sidecars).	Yes

Scope 1 and scope 2 emissions

To calculate and report the insuranceassociated emissions of the portfolio, scope 1 and scope 2 emissions of the vehicles are considered:

- Scope 1: Direct emissions from fuel combustion in vehicles.
- Scope 2: Indirect emissions from electricity generation consumed in plug-in hybrid vehicles and electric vehicles.

All other emissions, including scope 3 (e.g., emissions associated with the production, maintenance, repair or decommissioning of a car) are out of scope of the Motor Retail IAE calculation.

All scope 1 and scope 2 emissions are calculated based on CO₂ only, not CO₂e (equivalents), to be consistent with the available data as most sources (e.g., EEA and Australia NTC) are in CO₂ only.

Attribution of emissions

The rationale behind calculating insuranceassociated emissions for Motor Retail is that of an "enabler". The insurance cover for a motor vehicle enables the driving and therefore the respective emissions. However, it is not solely insurance companies who contribute to vehicles being roadworthy. Several private company and government activities either contribute to the existence of each motor vehicle or enable its usage. Examples of such enablers include motor vehicle manufacturers, dealers, maintenance services, gas stations, and repairers. All are players within the value chain of motor vehicles, aiding their circulation.

As such, the accounting of GHG emissions associated with insurance activities requires the usage of an Attribution Factor which apportions a share of the responsibility to insurers whilst recognizing the role of other companies and governments.

The calculation of insurance-associated emissions for Motor Retail is summarized by the following formula for an underwriting portfolio:

IAE =

Attribution factor p * Emissions of insured vehicles within portfolio p

- Attribution factor: represents the insurance industry's total premium from the motor line of business for all insurance covers divided by the total costs associated with vehicle ownership of all vehicles represented by the industry premium, which includes insurance as well as depreciation, fuel expenses, maintenance, repairs, taxes, registrations, tolls, parking expenses etc.
- Emissions of insured vehicles: can be calculated in a variety of ways depending on available data regarding the insured vehicles.

The industry attribution factor is calculated and provided by PCAF using publicly available information and opensource research from markets globally. PCAF validate and publish a value at the highest level of granularity possible, citing all sources of information.

The attribution factor published by PCAF and used for the purposes of insuranceassociated emissions reporting in 2023 is 6.99 %.¹ This represents a global value.

The PCAF provided attribution factor will be updated at a minimum of every five years, which could trigger a need for recalculating the baseline.

Data quality score

The emissions of motor vehicles can be calculated in several ways depending on the availability of data. Overall, PCAF distinguishes three options to calculate the emissions factor of motor vehicle policies depending on the data used. Based on the availability of emission intensity and vehicle usage data, five quality scores have been defined, with score 1 being the highest data quality and score 5 being the lowest: In case a mix of options to calculate the absolute emissions of an insured vehicle are used, the data score for the lowerrated option is assumed e.g., if the actual distance traveled is available for the vehicle, but emission intensity is not available on vehicle or make and model level, meaning the emission intensity of an average vehicle type will be used, the corresponding quality score is 4.

Data quality score	Options to estimate absolute emissions		When to use each option (what data should be available)		
			Emission data / Calculation		
			Vehicle usage data	Emission intensity	
Score 1	Option 1: actual vehicle-specific	1a	Actual fuel consumption	Emission intensity of the fuel type	
	emissions	1b	Actual distance traveled	Emission intensity of the actual vehicle	
Score 2	Option 2: estimated vehicle- specific emissions and local distance driven averages	2a	Estimated distance traveled of an average vehicle type (cars, vans, motorcycles) on the province / state / country	or of the vehicle's make and model	
Score 3	-	2b	Estimated distance traveled of an average vehicle for the province / state / country		
Score 4	Option 3: estimated vehicle- unspecific emissions and continental distance driven averages	3а	Estimated distance traveled of an average vehicle on the subcontinent / continent	Emission intensity of an average vehicle type (cars, vans, motorcycles) and/or fuel type (fossil fuel, hybrid, electric)	
Score 5	_	3b	-	Emission intensity of an average vehicle	

1 PCAF Personal Motor Industry Attribution Factor Approach.

Allianz data sourcing and methodology guidelines

Local data matched on vehicle level is the preferred option however in cases where such data is not available, the next best option is to use averages, which are managed and provided centrally.

Data for emission intensity of a vehicle

To capture emissions, the following data is used:

- Scope 1, i.e., CO₂ emission data of the vehicle for combustion engine cars.
- Scope 2, i.e., Electric consumption of the vehicle * Electricity Emission Factor for the respective country for electric vehicles.

• Scope 1 and scope 2 for (plug-in) hybrid vehicles.

In cases where the local data does not allow for BEV, HEV and/or PHEV, the least-best emission average is used, for example if BEV and HEV cannot be distinguished, they are grouped together as General Electric Vehicles (GEV) and the EEA average for HEV is applied.

Data for emission intensity of a vehicle

Data quality score	Emission intensity	Data source	
Score 1	Emission intensity of the fuel type	Not applicable as not yet available	
Score 1 – Score 3	Emission intensity of the actual vehicle or of the vehicle's make and model	CO ₂ data (scope 1):	
		 Database from local provider using Vehicle Identification Number (VIN) (or current vehicle key) or, if not available, Make Model Trim (MMT) matching 	
		If no local database is available: EEA database using MMT matching	
		Electricity consumption (scope 2):	
		 Database from local provider using VIN (or current vehicle key) or, if not available, MMT matching 	
		If no local database is available: EEA database using MMT matching	
		Electricity Emission Factor (scope 2)	
		Environmental Reporting Conversion factor from IEA	
Score 4	Emission intensity of an average vehicle type (cars, vans, motorcycles) and/or fuel type (fossil fuel, hybrid, electric)	Average values per vehicle type and fuel type / size managed centrally. Sources are as follows:	
		Local governmental statistics or scholarly sources on emission averages	
		 If no local database is available: EEA / GOV.UK database average, IEA for grid electricity mix emission factor for scope 2 emission calculation. 	
Score 5	Emission intensity of an average vehicle	Average values managed centrally	
		Local governmental statistics or scholarly sources on emission averages	
		 If no local database is available: EEA / GOV.UK database average 	

Data for annual distance driven

To capture annual distance driven the following data is used:

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Data quality score	Emission intensity	Data source
Score 1	Actual fuel consumption	Not applicable as not yet available
	Actual distance traveled	Data per vehicle sourced locally through Telematics, Odometer reading, self-reporting from customers etc.
Score 2	Estimated distance traveled of an average vehicle type (cars, vans, motorcycles) on the province/ state /country	Average values per vehicle type at province/ state /country level managed centrally. Sources are as follows:
		 Local governmental statistics or scholarly sources on emission averages
		 If no local database is available: OECD and ICCT data
Score 3	Estimated distance traveled of an average vehicle for the province/ state / country	Average values at province/ state / country level managed centrally. Sources are as follows:
		 Local governmental statistics or scholarly sources on emission averages
		 If no local database is available: OECD and ICCT data
Score 4 – Score 5	Estimated distance traveled of an average vehicle on the	Average values at subcontinent / continent level managed centrally
	subcontinent / continent	 Local governmental statistics or scholarly sources on emission averages
		If no local database is available: OECD and ICCT data

Reporting of insurance associated emissions

A process has been established which utilizes the standard group procedures for reporting, with uploads provided by OEs on a quarterly basis. The data reported is used alongside our methodology to calculate metrics which allow the monitoring of our progress against targets on a YTD basis.

External reporting occurs on an annual pasis and includes the following metrics:

- 2022 baseline (MtCO₂),
- Coverage percentage (%), and
- Data quality score (#).

The emissions reported are calculated at the beginning of each year for the previous year. While premiums are generally available for the previous year,

Coverage percentage =

emissions data is usually only available for the year prior to the previous year. Therefore, there is a one-year time lag between financial data and emission data within the calculation. As an example, our 2022 baseline was calculated in 2023 based on financial data from year-end 2022, but CO_2 emissions data from 2021. This is in line with the approach described in the PCAF standard.

The coverage of the portfolio gives an indication of the current share of premium in scope of the emission reduction target. The coverage is calculated in terms of premium, where the coverage is the ratio of the total premium of the baseline portfolios in-scope of the target divided by the total premium of the Motor Retail line of business. The coverage percentage is calculated using the formula below.

Total premium of portfolio in target scope

* 100

Total premium of Allianz P&C Motor Retail line of business

Based on the PCAF methodology, the data quality score of the portfolios in-scope of the emission reduction target is calculated by summing the average of the data quality scores, weighted by premium, for each in-scope OE and dividing by the total premium of the in-scope portfolios for these OEs. The data quality score formula is as per the below:

Target portfolio data quality score =

 $\sum_{i=1}^{n} (premium_i * data quality score_i)$



Appendix

Average emission intensity data sources and methodology

When vehicle level information is not available averages are used as a proxy, which results in a lower data quality score. The averages provided have granularity per country, per year and per fuel type for cars and vans, and per country, per year, and per size in cubic capacity for motorcycles. These averages always result in a data quality score of 4. The following are the main sources of data for vehicle emission intensity related calculations:

- European Energy Agency (EEA) provides scope 1 emission and electricity consumption intensity averages for cars and vans for most European Union (EU) member states/ countries.
- GOV.uk United Kingdom's government website – provides scope 1 and scope 2 emission intensity for cars, vans and motorcycles.
- Australia's National Transport Commission (NTC) – provides scope 1 emission intensities for cars and vans.
- International Energy Agency (IEA) provides electricity grid mix emission factor for most countries, which is used to calculate scope 2 emissions.

Vehicle emission data is foreseen to improve in the future, thus sources will be revisited every year to review if more accurate or better quality data is available.

NEDC to WLTP conversion factor

Our reporting is aligned with the Worldwide Harmonised Light Vehicle Test Procedure (WLTP) standard, meaning vehicles which have New European Driving Cycle (NEDC) values for emissions are converted to WLTP. This means a factor was needed to convert NEDC values to WLTP. To obtain the conversion factor, the whole EU "Final" dataset for the years 2017 to 2020, which has both NEDC and WLTP values, were filtered and average values were calculated. The ratio of the average WLTP values and average NEDC values were used as the conversion factors.

Average distance traveled data sources and methodology

As above, when vehicle level information is not available average values are used as proxy value, which results in a lower data quality score. For sourcing average distance traveled, National Average statistics for the country is the most preferred.

If this is not available, reliable or up todate, then averages are used from the Organization for Economic Co-operation and Development - International Transport Forum (OECD-ITF) website and the International Council on Clean Transportation (ICCT) Global Transportation Energy and Climate Roadmap.

Within OECD-ITF there are 2 types of sources of averages. The first (OECD-ITF1) is a calculated value based on the total annual distance traveled, divided by the total vehicle stock. The second (OECD-ITF2) is the annual average distance traveled value directly extracted from the source table. The OECD-ITF1 is preferred as it offers data on the vehicle type granularity (by car, vans, motorcycles), while OECD-ITF2 only has data for an average vehicle.

Where the average distance traveled has granularity per country, per year and vehicle type (car, van, motorcycle), it results in a data quality score of 2. If country level data does not have vehicle type granularity, then this results in a data quality score of 3. If data is not available on the country level then subcontinental or global averages from ICCT are used, which results in a data quality score of 4.

Methodology for Corporates, Real Estate and Public Debt

Introduction

Allianz, as a founding member of the U.N.convened Net-Zero Asset Owner Alliance (NZAOA), advocates for ambitious decarbonization strategies in the real economy, and financing by industry. Our commitment is to support real world decarbonization while also reaching net-zero greenhouse gas (GHG) emissions in our proprietary investment portfolio by 2050.

For measuring and steering the decarbonization of our portfolio, and for our sustainability reporting, we calculate the carbon footprint of the corporates, real estate and public debt in our proprietary portfolio, in proportion to the amount of that corporate, real estate or public debt we hold. This is termed our 'financed emissions' and we calculate it on an annual basis. Our financed emissions represent part of Allianz's scope 3 emissions, as outlined in category 15 of the GHG protocol.¹

This document details the financed emissions calculation approach for our on balance sheets assets in order to provide clarity on how we compute our financed emissions in a generally accepted and consistent manner. The assets on our balance sheet consist of corporates with a balance sheet (including infrastructure projects etc.), real estate, public debt (Sovereign and sub-sovereign bonds as well as supranationals) cash and securitized products. For corporates, real estate and sovereigns we apply three different methods for calculating our financed emissions. Cash is not in scope as it does not have a carbon footprint and for securitized products there is no calculation approach yet, which is why they are out of scope so far.

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 Standards² and the guidance of the Task Force on Climate-related Financial Disclosures.³ Additionally, we calculate and report in line with second edition of the U.N. NZAOA Target Setting Protocol.⁴

In alignment with these above referenced works, we calculate multiple KPIs. Our absolute financed emissions are used to determine total financed GHG emissions and measure decarbonization over time. In order to compare investments, 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 the carbon footprint which is measured by emissions per EUR invested. The different KPIs are described in more detail in this chapter.

We target reasonable assurance for all financed emissions.

Furthermore, we would like to emphasize the importance of carbon disclosure by investors as well as investee companies and sovereigns, 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 financed emissions methodology and portfolio coverage based on available methodologies, data and standards set out.

We divide this document into different chapters for the financed emissions calculation approaches of the various asset classes we cover. Additional asset classes will be added step-by-step to the document as we increase the portfolio coverage of our financed emissions calculation.

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

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

Corporates

Listed equity and corporate bonds

Portfolio scope

The financed emissions of our public equity and corporate bond portfolio cover the asset classes listed below. Derivatives and unit- linked products¹ are excluded from our financed emissions calculation.

Listed equity portfolio:

In scope:

• Public equity (single stocks on IFRS consolidated balance sheet).

Out of scope:

• Mutual funds.

Corporate bond portfolio:²

In scope:

- Corporates,
- Agencies,
- Private Placements,
- Corporate-like Supranationals, and
- Corporate-like Sub-Sovereigns.

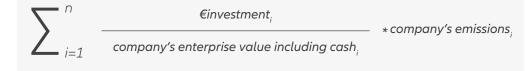
Out of scope:

- Asset Backed Securities,
- Mortgage Backed Securities,
- Collateralized Mortgage Obligations,
- Covered Bonds, and
- Mutual Funds.

For sector comparisons and the sector average method (see section "Emissions"), 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 categorized into 'Manufacture of basic metals' (level 2) then 'Casting of metals' (level 3) and finally 'Casting of iron' (level 4).

Financed emissions:



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.³

Calculation methodology

We calculate the financed 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 including cash, multiplied with the company's total emissions. Our total financed emissions are the sum of all those financed emissions in our portfolio, expressed as carbon dioxide equivalents (CO₂e). For computing our financed emissions, the following input is required (described in more detail in the next sections):

investment; refers to the exposure in EUR for the *company*;³ in our investment portfolio, where 'exposure' is defined as market value for equities and nominal value for all fixed income securities.

- company's emissions, refers to the sum of scope 1 and scope 2 GHG emissions of the company, according to the GHG Protocol.⁴
- The company's enterprise value including cash; (EVIC) is calculated as the sum, at year-end, of the market capitalization of ordinary shares, the market capitalization of preferred shares, and the book value of total debt and non-controlling interests, without the deduction of cash or cash equivalents.
- 1 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 "https://www.bafin.de/SharedDocs/FAQs/DE/Verbraucher/Versicherung/Produkte/Kapital/01_besonderheiten_fondsgebundene_lv.html".
- 2 The bonds in our portfolio are categorized according to the Bloomberg Global Sector Classification Scheme (BCLASS) which groups bonds by industry, government.
- 3 EUR-Lex 32006R1893 EN EUR-Lex (europa.eu).

4 https://ghgprotocol.org.

The financed emissions of our listed equity and corporate bond portfolio are 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 financed emissions in 2021 were 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 NZAOA Target Setting Protocol, Option 2 (page 41).¹

Investment Definition

*€investment*_i is the exposure for the company_i in our investment portfolio, here referring to our listed 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.

EVIC Definition

The company's enterprise value including cash_i refers to the sum of the market capitalization of ordinary shares at yearend, 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.² In line with the EU SFDR Final Report on Draft Regulatory Technical Standards and the Principal Adverse Impact screening set forth herein, EVIC is used as the standard denominator when determining financed emissions.³

Source

For the financed emissions of public equity and corporate bonds, 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.

Emissions Definition

company's emissions, refers to the sum of scope 1 and scope 2 emissions of a company. As defined in the GHG Protocol⁴, 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

Financed emissions 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 Method for determining GHG emissions used for financed emissions calculations of company_i.

- 3 https://www.esma.europa.eu/sites/default/files/library/jc_2021_50_-_final_report_on_taxonomy-related_ product_disclosure_rts.pdf
- 4 https://ghgprotocol.org

¹ NZAOA-Target-Setting-Protocol-Second-Edition.pdf (unepfi.org).

² https://ec.europa.eu/info/sites/info/files/business_economy_euro/banking_and_finance/ documents/192020-sustainable-finance-teg-benchmarks-handbook_en_0.pdf

a. Current year:

- i. Look at **Ultimate issuer** of the investment and if GHG emissions are available from MSCI, choose MSCI data, if not, choose Refinitiv data;
- ii. and look at **Parent issuer** of the investment and if GHG emissions are available from MSCI, choose MSCI data, if not, choose Refinitiv data;
- iii. and look at **Direct issuer** of the investment and if GHG emissions are available from MSCI, choose MSCI data, if not, choose Refinitiv data.
- iv. 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 financed emissions for the investment. vears are considered to ensure that up-to-date carbon emission data.
- 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. 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. 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 eight companies, use global emission intensity.
- 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.
- 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 financed 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.

Non-listed investments with a corporate balance sheet (currently only infrastructure)

Portfolio scope

The financed emissions of the non-listed investments with a corporate balance sheet portfolio cover the asset classes listed below. Derivatives and unit-linked products¹ are excluded from our financed emissions calculation.

Non-listed investments with a corporate balance sheet portfolio:

In scope:

- Infrastructure equity investments, and
- Infrastructure debt investments.

Out of scope:

- Funds, and
- Co-investments.

¹ 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.

Calculation methodology

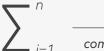
We calculate the financed emissions of an investment in our portfolio by computing the fractional share of the respective company's total GHG emissions relative to the amount of the company that we 'own'.

This is determined by the ratio of our exposure in the company and the company's total enterprise value including cash, multiplied with the company's total emissions. Our total financed emissions are the sum of all those financed emissions in our portfolio, expressed as carbon dioxide equivalents (CO₂e).

For computing the financed emissions of non-listed investments with a corporate balance sheet, the following input is required (described in more detail in the next sections):

- €investment_i refers to the exposure in EUR for the company_i¹ in our investment portfolio, where 'exposure' is defined as market value for equity and nominal value for debt investments.
- *company's emissions*, refers to the sum of scope 1 and scope 2 GHG emissions of the company i according to the GHG Protocol.²
- 1 The index "i" refers to any given individual company in our portfolio.
- 2 https://ghgprotocol.org/

Financed emissions:



€investment_i

* company's emissions

company's enterprise value including cash_i

• The company's enterprise value including cash; (EVIC) is calculated as the sum, at year-end, of the Net Asset Value and the gross debt.

Our financed emissions of the nonlisted investments with a corporate balance sheet portfolio 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.

Investment

Definition

*€investment*ⁱ is the exposure for the companyⁱ in our infrastructure equity portfolio. For equity investments, this corresponds to the market value

at year-end, for debt investments this is the nominal value at year-end.

EVIC Definition

EVIC is calculated as the sum, at yearend, of the Net Asset Value and the gross debt. The Net Asset Value of an investment refers to the value of the equity including shareholder loan (if any) as of the respective valuation date. It is calculated in line with IFRS 13 by applying the income approach, i.e., discounting future cash flows to equity shareholders (i.e., dividends) with the asset-specific cost of equity.

Under specific circumstances, the market or cost approach may be applied instead. Gross debt is a company's total short-term and long-term interest-bearing debt.

Source

Since the non-listed investments with a corporate balance sheet portfolio typically comprise non-quoted investments, most of the applied valuation parameters are based on unobservable inputs from using the best information available in the circumstances.

Emissions Definition

company's emissions, refers to the sum of scope 1 and scope 2 emissions of a company. As defined in the GHG Protocol², 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

Emission data is sourced directly from the companies by our internal asset managers Allianz Capital Partners and Allianz Global Investors.

Sovereigns, sub-sovereigns and supranationals

Sovereign Bonds

Portfolio scope

The financed emissions of our sovereign bond portfolio cover the asset classes listed below. Derivatives and unit-linked products¹ are excluded from our financed emissions calculation.

Sovereign bond portfolio

In scope:

- Treasuries, and
- Government related Sovereigns.

Out of scope:

- Government related Agencies,
- Government related Sub-Sovereigns,
- Government related Supranationals, and
- Mutual funds.

Calculation methodology

We calculate the financed emissions of a sovereign bond investment in our portfolio by computing the fractional share of the

respective sovereign's total GHG emissions relative to the amount of the sovereign that we 'own'.

This is determined by the ratio of our exposure in the sovereign and the sovereign's total value, multiplied with the sovereign's total emissions. In accordance with PCAF², we take Purchasing Power Parity (ppp)-adjusted GDP as proxy for the value of a sovereign. Our total sovereign portfolio financed emissions are the sum of all those financed emissions in our portfolio, expressed as carbon dioxide equivalents (CO_2e).

For computing our sovereign portfolio financed emissions, the following input is required (described in more detail in the next sections):

• *€investment*_i refers to the exposure in EUR for the sovereign³ is in our investment portfolio, where 'exposure' is defined as nominal value for sovereign bonds with the exception of zero coupon bonds for which market values are used.

Financed emissions:



- sovereign's emissions, refers to scope 1 emissions of sovereign, excluding land use, land use change, and forestry (LULUCF).
- The sovereign's ppp-adjusted GDP_i refers to the value of a country's output as a proxy for the 'value of the country'.

Our sovereign portfolio financed emissions are calculated in the beginning of each year for the previous year. While our exposure is generally available for the previous year, sovereign GHG emissions data usually has a time-lag of one or two years depending on the specific sovereign issuer. Therefore, there is a time-lag between exposure data and emission data within the calculation. For each sovereign issuer, we take the latest GHG emission data and ppp-adjusted GDP data available in the respective databases we use.

Investment

€investment, is the nominal bond value for sovereign i in our alobal investment portfolio at vear-end.

PPP-adjusted GDP Definition

The sovereign's ppp-adjusted GDP_i is reflecting the value of a country's output as a proxy for the 'value of the country.¹

The ppp-adjustment of GDP allows for comparing the real sizes of the economies and the output by subtracting the exchange rate effect. This effect becomes relevant for countries with a relatively stronger exchange rate effect in particular and allows for a fairer comparison of the countries.

Source

For Allianz's sovereign financed emissions, ppp-adjusted GDP is sourced from the Worldbank database (GDP, PPP (current international \$))⁴ without further adjustments.

1 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.

- 2 https://carbonaccountingfinancials.com/en/standard
- 3 The index "i" refers to any given individual sovereign in our portfolio.
- 4 GDP, PPP (current international \$) | Data (worldbank.org).

Emissions Definition

Sovereign's emissions, refers to production emissions of sovereign, defined as emissions from sources located within a country territory including emissions from domestic consumption and exported goods and services. This is in line with the UNFCCC definition of domestic territorial emissions (scope 1). For the time being we are calculating the Sovereign financed emissions excluding the emissions related to LULUCF. The main reasons are high uncertainty around LULUCF data and that there is no commonly accepted standard for accounting of LULUCF emissions.

Also, LULUCF emissions have the potential to distort the overall trends of key sectors that contribute to global warming. We are planning to calculate the Sovereign financed emissions including LULUCF in the near future.

Source

Based on (a) country coverage, (b) recency of data, and (c) data quality considerations, we use sovereign emission data from the following data bases: For Annex I countries: UNFCCC database,¹ For Non-Annex I countries: PRIMAP (Potsdam Institute for Climate Impact Research) database.²

For each sovereign issuer, we take the latest emission and GDP data available.

Sub-sovereign and supranational bonds

This chapter needs to be read in conjunction with section "Listed equity and corporate bonds" and section "Sovereign Bonds" of this document.

Portfolio scope

The sub-sovereign and supranational bond portfolio financed emissions cover the asset classes listed below. Derivatives and unit-linked products³ are excluded from our financed emissions calculation.

Sub-sovereign and supranational bond portfolio:

In scope:

- Government Related Sub-Sovereigns
- Government Related Supranationals

Out of scope:

• Mutual funds

Split in corporate-like and sovereign-like

After a detailed review of all issuers within the sub-sovereign and supranational scope defined above, we realized that there are certain issuers that are more like a sovereign (e.g., State of Bavaria, European Union) and others that are more like a corporation with a balance sheet.

Therefore, we have implemented an automated split into these two categories based on the industry subgroup information available from Bloomberg. We have selected the following industry subgroups as the ones defining the scope of sovereign-like sub-sovereign and supranational issuers:

- Municipal-City
- Municipal-County
- Sovereign
- Sovereign Agency
- Regional Authority
- Municipal Local Authority
- US Municipal

All other industry subgroups (e.g., regional agency, water) are used to map issuers to the corporate-like issuer bucket.

Calculation methodology

Given that there is no official guidance from PCAF or any other carbon accounting standard setting initiative on how to calculate the financed emissions of sub-sovereign and supranational debt, we adapted and applied the currently existing methodologies for sovereigns and corporates to these two asset classes to the best of our knowledge:

- We apply one-to-one our corporates financed emissions methodology outlined in section "Listed equity and corporate bonds" to all investments that fall into the corporate-like subsovereign and supranational buckets.
- Likewise, we apply the sovereign financed emissions methodology outlined in section "Sovereign Bonds" to all investments that fall into the sovereign-like sub-sovereign and supranational categories. However, there is some differences with respect to the input data used. Details are provided in section "Input data: Sub-Sovereigns" and section "Input data: Supranationals" below.

The rest of section "Sub-Sovereign and Supranationals Bonds" deals with our financed emissions methodology for sovereign-like sub-sovereign and supranational debt only.

¹ GDP, PPP (current international \$) | Data (worldbank.org).

² Greenhouse Gas Inventory Data - Time Series - Annex I (unfccc.int).

³ The PRIMAP-hist national historical emissions time series (1750–2021) v2.4 | Zenodo.

Investment Definition

€investment^{*i*} is the nominal bond value for sovereign-like sub-sovereign / supranational issuer^{*i*} in our global investment portfolio at year-end with the exception of zero coupon bonds for which market values are used.

Input data: sub-sovereigns

In order to acknowledge that emission intensities of regions can be very different from the emission intensity on national level, all sovereign-like sub-sovereign issuers are mapped to one level below the sovereign (e.g., Bundesländer in Germany, States in the US). We are not going deeper than this as we have not found reliable, consistent and recent data on a more granular level for all covered countries. We then use regional GHG emission and ppp-adjusted GDP data for our financed emissions calculation. In case no or no reliable regional emission and/or ppp-adjusted GDP data is available, we are using GHG emissions and ppp-adjusted GDP of the respective sovereign (see sections "PPP-adjusted GDP" and "Emissions"). Currently, we are using regional emission and ppp-adjusted GDP data for below countries/union covering the majority of our investments in sovereign-like sub-sovereigns:

- The European Union
- USA
- Canada
- Australia

PPP-adjusted GDP

As ppp-adjusted GDP is usually not available on regional level, we use GDP per region as key to allocate ppp-adjusted GDP on sovereign level to the respective regions.

- 1 GDP, PPP (current international \$) | Data (worldbank.org).
- 2 Statistics | Eurostat (europa.eu).
- 3 GDP by State | U.S. Bureau of Economic Analysis (BEA).
- 4 Add/Remove data Gross domestic product, expenditure-based, provincial and territorial, annual (statcan gc.ca).
- 5 Australian National Accounts: State Accounts, 2019–20 financial year | Australian Bureau of Statistics (abs.gov.au).
- 6 EDGAR The Emissions Database for Global Atmospheric Research (europa.eu).
- 7 Greenhouse Gas Inventory Data Explorer | US EPA.
- 8 Canada's Official Greenhouse Gas Inventory Environment and Climate Change Canada Data.
- 9 Datasets and API | ANGA (climatechange.gov.au).

Sources for regional data

- The ppp-adjusted GDP on sovereign level is sourced from the Worldbank database (GDP, PPP (current international \$))¹ without further adjustments.
- Regional GDP data for European Union: "Regional gross domestic product by NUTS 2 regions - million EUR" from Eurostat².
- Regional GDP data for USA: "GDP by State" from the U.S. Bureau of Economic Analysis, US Department of Commerce³.
- Regional GDP data for Canada: Gross domestic product at market prices, provincial and territorial from Statistics Canada⁴.
- Regional GDP data for Australia: Australian National Accounts: State Accounts from Australian Bureau of Statistics⁵.

GHG emissions

We are using regional GHG emission data that is consistent with the GHG emissions delivered to UNFCCC.

Sources for regional data

 Regional emission data for European Union: EDGAR (Emissions Database for Global Atmospheric Research), version 7.0 (2022) European Commission⁶.

- Regional emission data for USA: EPA (2022), Inventory of U.S. Greenhouse Gas Emissions and Sinks by State: 1990-2020, U.S. Environmental Protection Agency⁷.
- Regional emission data for Canada: Government of Canada, Canada's Official Greenhouse Gas Inventory⁸.
- Regional emission data for Australia: National Greenhouse Accounts 2021: State and Territory Greenhouse Gas Inventory, Australian Government Department of Climate Change, Energy, the Environment and Water (DCCEEW 2023)⁹.

Input data: supranationals

We have only two types of sovereign-like supranational bonds in our portfolio: 1) Issued by the EU; 2) Issued by the European Financial Stability Mechanism or the European Stability Mechanism (EFSF / ESM). Most supranational issuers are multinational development banks that are treated like corporates.

PPP-adjusted GDP Sources

In scope:

- European Union: Worldbank database (GDP, PPP (current international \$))¹.
- EFS / ESM: the ppp-adjusted GDP of receiving countries are taken from Worldbank database (GDP, PPP (current international \$)) and are weighted with the respective disbursement split.

Emissions

Sources

- European Union: UNFCCC database².
- EFS / ESM: GHG emissions of receiving countries taken from UNFCCC database weighted with disbursement split.

Real estate

Real estate equity

Portfolio scope Organizational boundaries

The scope of PIMCO Prime Real Estate's (PPRE) direct portfolio financed emissions is limited to real estate investments of Allianz SE and its subsidiaries that are managed by PPRE.

Direct investments (Directly held investments and Joint Ventures classified as Direct investment). PPRE accounts

for GHG emissions according to the operational control approach. Under this approach, PPRE accounts for 100 percent of GHG emissions from operations over which it has control (Directly held investments and JVs >50 % share) as scope 1 and 2 emissions and where it does not have control the associated emissions fall into indirect scope 3 emissions.

Out of scope:

Indirect investments (Funds) and Debt, own use/special assets and assets not managed by PPRE.

Operational boundaries In scope:

In scope are the following operational emissions:

- Scope 1: Natural gas, fuel oil, refrigerant losses (landlord emissions from Directly held investments and JVs >50 % share).
- Scope 2: Purchased electricity, district heating/cooling, geothermal energy (landlord emissions from directly held investments and JVs >50 % share).

• Scope 3: scope 1 and 2 emission sources from 'Downstream leased assets' (tenant emissions from Directly held investments and JVs >50 % share) and 'Investments' (tenant and landlord emissions from $JVs \le 50$ % share), Distribution losses (from directly held investments and JVs >50 % share).

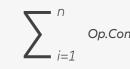
Out of scope:

Non-operational emissions (e.g., capital goods), emissions from distribution losses originated in Joint Ventures with \leq 50 % share, and scope 3 emissions from other GHG Protocol categories assessed as not significant.

Calculation methodology

Total emissions kgCO₂e per scope per asset are calculated by applying the following general equation:

Total emissions



Op.Control * Activity Data,

of primary data relevant to calculate

operational control,

• "Op.Control" refers to the

(e.g., S1, S(1,2,3)),

Where:

emissions per emission source (e.g., kWh of electricity consumption, kg of refrigerant losses), and

• "Sx" refers to the scope of emissions

• "m" is the number of assets in the portfolio,

• "n" is the number of emission sources,

percentage of ownership and time of

• "Activity Data" refers to the quantity

• "Emission factor" refers to the coefficient kgCO₂e/unit which converts the activity data into emission values in the standard metric kgCO₂e. For electricity and district heating/cooling emissions a marketbased approach is applied.

* Emission factor.

2 Greenhouse Gas Inventory Data - Time Series - Annex I (unfccc.int).

Data sources

PPRE's portfolio financed emissions are calculated based on the following input data:

- Property-specific data, such as energy consumption, that is collected in an annual data collection process.
- Input data and calculations from the previous years.
- Master and financial data from PPRE Global Data Warehouse system.
- Conversion factors e.g., emission factors and benchmark factors from recognized sources (e.g., IEA, CRREM).

Reporting period

The PPRE direct portfolio financed emissions are calculated for the period from 1 January to 31 December.

Due to delayed data availability from third parties (e.g., tenants), the KPI reported in the reporting year is the portfolio financed emissions of the previous year (e.g., 2022 data will be reported to AIM for reporting year 2023).

Validity Check

PPRE implemented an internal control approach including several checks on Asset Management and central PPRE level to ensure high data quality and to significantly prevent and rectify errors in the data collection, calculation and reporting process.

Commercial real estate loans

Portfolio scope Organizational boundaries

The scope of PIMCO Prime Real Estate's (PPRE) debt portfolio financed emissions is limited to real estate investments of Allianz SE and its subsidiaries that are managed by PPRE.

In scope:

Indirect investments Debt

Out of scope:

Indirect investments (Funds), and own use/ special assets and assets not managed by PPRE.

Operational boundaries

PPRE does not calculate emissions data for assets financed using Commercial Real Estate Loans (CREL), as the necessary data is not available. PPRE therefore applies reasonable effort to obtain financed emissions data for the assets financed from reports created by the borrower. Preferably such reports are confirmed by an independent auditor. If the required information is not provided, no GHG data can be reported for these loans by PPRE.

Calculation methodology

Financed emissions kgCO₂e per Scope per building are calculated by applying the following general equation:

Financed emissions (AZ share)_{sx} =

AZ Outstanding loan amount

Property Value

* 100% whole building emissions_{sx}

Where:

- "Sx" refers to the scope of emissions (e.g., S1,S(1,2,3)).
- "AZ Outstanding loan amount" refers to the loan amount (in respective currency unit) financed by Allianz that remains to be repaid.
- "Property Value" refers to the Net Asset Value of the financed building.
- "100 % whole building emissions " refers to the emissions data kgCO₂e which was collected from the counterparty.

Data sources

PPRE's CREL financed emissions are calculated based on the following input data:

- Collateral-specific GHG data, that is collected directly by the counterparty or publicly disclosed by them.
- Master and financial data from PPRE Global Data Warehouse system.

Due to the limited data available to PPRE, estimation calculations do not take place to fill data gaps.

Reporting period

The PPRE CREL financed emissions data is calculated for the period from 1 January to 31 December.

Due to delayed data availability from borrowers (e.g., tenants), the KPI reported in the reporting year refers to carbon footprint data of the previous year (e.g., 2022 data will be reported to AIM for reporting year 2023). Where a larger lag in coverage exists, PPRE may also consider data from the year before the prior year to provide a higher coverage.

Validity check

PPRE implemented an internal control approach including checks on Loan Asset Management and central PPRE level to ensure high data quality and to significantly prevent and rectify errors in the data collection, calculation and reporting process. Included in these controls are sanity checks for completeness of data provided as well as a benchmark check to assess plausibility of the data provided.

Green bonds

Green bonds are a special case in the process of our financed emissions calculation. These are bonds where the money raised by the issuer 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 financed emissions for green bonds. This is in general a conservative approach and will be applied until financed emissions of areen bonds are available from our data providers. Green bonds are identified via a respective flag from our data provider.

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



sovereign's ppp – adjusted GDP,
total portfolio value
(oighted gyorgae carbon intensity (i.e., portfolio weighted gyorgae)

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

n n	
	portfolio weight _i *
$\sum_{i=1}$	

company's emissions

company's sales,

Weighted metrics

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

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*; refers to a company's sales data as given by Refinitiv for the relevant company.
- *portfolio weight*; refers to the weight of the corresponding company i in the investment portfolio, calculated as:

portfolio	_	€investment _i
weight _i	-	total portfolio value

01.2 Carbon Footprint from Proprietary Investments

Validity check

Before calculating financed emissions KPIs, we check the input data for accuracy.

For this purpose, we examine year over year development of emissions and EVIC/GDP data for the top emitters in the various asset classes. Outliers are then manually verified against publicly available data (e.g., company's published annual reports) and corrected if necessary.

Emission attribution analysis

To better understand the drivers of the decarbonization of the investment portfolio, an emission attribution analysis is calculated. For now, the analysis is only conducted for listed corporates (equity and bonds) in line with the absolute decarbonization target of Allianz. For other asset classes data quality is not yet sufficiently reliable.

This analysis is splitting in the main factors of investment portfolio decarbonization:

• Emission changes (scope 1 and 2): derived from the decarbonization of the investee companies.

- Portfolio re-allocation: new investments, divestments (including final maturity of bonds) and exposure re-allocation.
- EVIC changes: decarbonization derived from changes in enterprise value including cash of investee companies, which is the denominator of the absolute financed emissions.
- The background, methodology and the formulae of the emission attribution analysis implemented at Allianz can be found in the NZAOA Discussion Paper "Understanding the Drivers of Investment Portfolio Decarbonisation".1 Allianz's calculation is thereby following the so called "simplified approach".² In the simplified approach one does not calculate with averages for carbon emissions and EVIC but with the values of the base year respectively the current year. Changes in data coverage is not calculated as Allianz is filling data gaps with estimations based on sector averages.

1 https://www.unepfi.org/industries/understanding-the-drivers-of-investment-portfolio-decarbonisation/

² See appendix of NZAOA discussion paper page 17

The Explanatory Notes refer to the environmental footprint of Allianz Group's operations.

Reporting standards

Our reporting on environmental data generally follows the GRI Standards of the Global Reporting Initiative (GRI). For further details, please refer to the GRI index available on our website.

The Group's carbon footprint is oriented towards the Greenhouse Gas (GHG) Protocol's Corporate Accounting and Reporting Standard. For data compilation, Allianz further applies the standards developed by the Association of Financial Institutions for Environmental Management and Sustainability (Verein für Umweltmanagement und Nachhaltigkeit in Finanzinstitutionen 'VfU') as they are tailored to financial services institutions. Detailed guidance for environmental data compilation is further defined in internal guidelines for environmental reporting.

Organizational boundaries

Allianz defines its organizational boundaries applying the operational control approach as defined in the GHG Protocol. Operational control is established when Allianz or one of its entities has full authority to introduce and implement its operating policies and thus has operational control of the entity. The emissions of all operations over which Allianz has operational control, all owned and leased facilities that the company occupies and vehicles the company operates, are included in the environmental data either based on measurements or calculations where possible. Where data cannot be determined by measuring or calculating, it is extrapolated based on employee headcount.

Allianz collects environmental data for a significant proportion of the entities over which it has operational control, whereby entities with more than 400 employees are in focus of direct environmental data delivery. In 2023, this resulted in coverage of 97 percent of the total employee base. To achieve 100 percent coverage, the indicators are extrapolated based on Group average figures.

Methodology updates

Continuous improvement

As part of our efforts to continuously improve the quality of our environmental data, we closely follow developments in the GHG Protocol and further develop our systems appropriately. The implications from the GHG Protocol reporting requirements for scope 2 emissions have been analyzed and implemented.

Our emissions data consistently includes upstream emissions e.g., from the production of energy and Well-to-Tank emissions for air, car and train travel. Our emissions data is in CO₂e.

Our GHG methodology as well as our GHG targets for Allianz Group are based on gross emissions reporting and continues to reflect a market-based approach for scope 2, i.e., we use the contractual emission factors provided by our suppliers.

Systems, processes and internal controls for environmental data collection are subject to regular review and continuous development in order to continuously improve overall data quality at both Allianz Group and entity level.

Data coverage updates

Allianz undertakes reasonable efforts to collect relevant environmental data from all its entities and their operations.

Within the scope of our environmental reporting boundary are entities that have been part of Allianz for a full reporting year. At Group level, the headcount from entities that do not meet this criteria but for HR purposes are included in the official Group HR figure for a current reporting year are subtracted from the Group HR figure. This results in a total Group headcount figure for environmental reporting purposes, which represents 100 %. In 2023, six entities were first consolidated in Allianz's financial statements and, combined with further headcount linked to non-core business or 'non-consolidated but affiliated entities' (NCAEs), a total of 5,693 were outside the reporting boundary and excluded as described above.

However, in some instances, not all the required performance data is available given reasonable efforts (for example for small or remote offices). In those instances, data is extrapolated to 100 %. Data is extrapolated for either part of an entity or for entire entities. The basis for these extrapolations is the total headcount of the individual entity or of the Group and for extrapolating:

- Part of an entity, the entity's average values are used; and
- Entire entities, the Group's average values are used.

This enables performance monitoring as well as comparison and benchmarking of entities using comparable system boundaries.

Allianz's environmental monitoring and reporting processes cover two aspects:

- 1. Carbon footprint
- 2. Environmental footprint

01.3.1 Carbon Footprint

01.3.1.1 Carbon footprint by scopes

In line with the relevant reporting standards, Allianz has developed methods to measure and analyze CO₂e, differentiating between the three scopes:

Scope 1 – direct GHG emissions

Emissions from sources that are owned or controlled by Allianz:

- Stationary Combustion: gas and oil heating systems, back-up generators.
 Data is based on meter readings (where available), invoice amounts (where available) and estimations from entities.
- II. Mobile Combustion: companyowned vehicles. Data is based on expenses data (where available) and estimations from entities.

Scope 2 – indirect GHG emissions

Emissions from the consumption of purchased electricity heat or steam:

- Electricity Office and data centers: Data is based on invoice amounts or meter readings (where available) and estimations from entities.
- II. District heating Office: Data is based on invoice amounts or meter readings (where available) and estimations from entities.

In line with external requirements by the Greenhouse Gas Protocol for accounting of scope 2 emissions, we calculate two scope 2 emissions:

• Market-based approach

This is in line with our existing carbon accounting approach; emissions factors are based on 'International Energy Agency (IEA)'. As the annual preparatory steps for reporting requires conversion factors to be available in the autumn of each year, the preliminary IEA version of these factors is being applied.

• Location-based approach

To fulfill the requirements of the additional 'location-based' method for scope 2 reporting, we also calculate and publish scope 2 emissions on the basis of Grid-average emission factors (national, based on IEA, preliminary version) applied to all scope 2 energy consumed (including 'green electricity'). This approach reflects the current absence of global 'residual mix' factors that can be consistently applied. Please note that associated scope 3 emissions, e.g., from Transport & Distribution (T&D) Losses are not considered in this recalculation.

Scope 3 – other indirect GHG emissions

Emissions from other sources, including travel, paper, public cloud and related upstream emissions:

- Business travel data includes employees travelling by air, rail and car only.
- Air travel: business flights are split into short (<500 km) and long-haul flights (>500 km); extrapolation of CO₂-equivalents is based on the actual distance traveled and/or the costs. Emission factors applied for air emissions do not account for radiative forcing due to the very significant scientific uncertainty.
- **Train travel:** emissions from train travel are calculated based on the actual distance traveled or the cost multiplied by the appropriate CO₂e conversion factor.

• **Road travel:** emissions from cars are calculated based on the actual distance traveled or the cost multiplied by the appropriate CO₂e conversion factor.

Business travel data is, where available, based on sources including travel booking information, travel expenditure data, fuel consumption and estimations from entities.

- II. **Paper:** data is based on invoice amounts (where available) and estimations from entities.
- III. **Remote working**: linked to heating, cooling, lighting and IT.
- IV. Public cloud services.

01.3.1.2 GHG accounting

We use CO₂-equivalents (CO₂e) in our carbon accounting where available, as they are the universal unit of measurement to indicate the global warming potential of each of the six greenhouse gases, expressed in terms of the global warming potential of one unit of carbon dioxide. It is used to evaluate the release (or avoided release) of different greenhouse gases against a common basis. The source of Global Warming Potential (GWP) is from the IPCC 4th Assessment Report (AR-100 year).

Our carbon footprint target is based on gross carbon accounting (marketbased approach for scope 2). We use the contractual emission factors provided by our suppliers.

We use 2019 as our baseline year as it is the first reporting year for which actual, audited data at reasonable assurance level in our Group-wide reporting system is available.

The scope of our data for electricity from renewable sources is electricity from hydro, wind, solar, geothermal and biomass power plants.

Note:

In 2022, the electricity-related scope 3 emissions were calculated based on the prior year percentage share of scope 2 emission factors at country level, following the discontinuity of DEFRA provision of emissions factors for Well- to-Tank (WTT) Generation and Transport and distribution losses for oversees. In 2023, IEA published a pilot data set including CO₂e conversion factors for electricity-related scope 3 upstream emissions which we applied.

01.3.2 Environmental Footprint

In line with the relevant reporting standards, Allianz has developed methods to measure and analyze the company's environmental footprint across five indicators.

01.3.2.1 Energy use

Energy consumption from sources that are owned or controlled by Allianz, such as heating and cooling and IT equipment, is monitored and reported on the following basis:

a) Electricity:

- electricity from hydroelectric power stations,
- electricity from wind power stations,
- electricity from biomass power stations,
- electricity from photovoltaic power stations,
- electricity from geothermal power stations,
- electricity from average market mix, and
- electricity from remote working.

b) Fossil fuels:

- natural gas,
- heating oil, and
- fuels for emergency power units (petrol, diesel).

c) Other energy:

- biogas,
- direct heating or cooling energy from other renewable sources,
- fossil-fuel based or mixed sources for district heating or cooling,
- Renewable district heating or cooling, and
- heating/cooling energy from remote working.

Energy consumption data is based on invoice amounts or meter readings (where available) and estimations from entities.

Data centers

The energy consumption of our data centers plays a material part in Allianz's environmental and carbon footprint and was brought into scope of Allianz's non-financial, environmental reporting in 2015. For the purpose of environmental reporting, data centers are divided into strategic data centers and local data centers. Whilst actual energy consumption data is collected for larger data centers (generally minimum 1 GWh annual energy demand), the energy consumption of our declining legacy server capacity of local data centers is either collected if data is available or calculated based on the actual number of physical servers. The energy consumption of all strategic and local data centers is reported either by Allianz Technology or by Allianz entities depending on the legal ownership of the data center.

Public cloud:

Since 2022, emissions from our use of public cloud services are included in the Allianz Group GHG emissions.

The scope of public cloud reporting is based on the GHG emissions (scope 3) linked to the usage of public cloud services/accounts as provided by public cloud service providers. Where GHG emissions data is not available/provided, the spend in € is used to calculate the GHG emissions by applying a certain conversion factor. The conversion factor will be reviewed on an annual basis in order to reflect changes with regard to the carbon intensity (e.g., an increase of renewable electricity in the data centers of the public cloud providers).

Remote working

Following the COVID-19 pandemic, the matter of remote working started to play a more material role in our operational setup. Therefore, since 2022, GHG emissions from remote working are included in our environmental reporting.

The scope of remote working emissions is based on the energy consumption linked to heating, cooling, lighting and IT which is calculated on the basis of:

- the Flexible Working Metric (%),
- country specific energy intensities values, and
- average remote working area.

The energy consumption for remote working is then converted into GHG emissions (scope 3) on the following basis:

- Remote working electricity: the IEA market mix at country level.
- Remote working heating/cooling: district heating/cooling factors.

Please note that remote working related energy is in scope of Allianz Group GHG emissions targets and out of scope of Allianz Group share of renewable electricity and energy in office buildings targets.

01.3.2.2 Business travel

Business travel is monitored and reported on the following basis:

- a) rail travel:
- train travel.
- b) road travel:
 - fleet cars,
 - private cars,
 - rental cars.
- c) air travel:
- short-haul air travel (<500 km),
- long-haul air travel (>500 km).

Business travel data is, where available, based on sources including travel booking information, travel expenditure data, fuel consumption and estimations from entities.

01.3.2.3 Paper use

Paper use is monitored and reported under the following categories:

Paper use for internal or external purposes, with the following environmental attributes:

- a) paper from certified sustainable sources recycled or virgin fibers, and
- b) paper from non-certified sources.

Paper data is based on invoice amounts (where available) and estimations from entities.

01.3.2.4 Water use

Water use is monitored and reported under the following categories:

- a) rain water,
- b) natural water (please note: this is equal to the GRI term 'unpurified water from surface/ground water'), and
- c) drinking water.

Water data is based on meter reading (where available), invoice amounts (where available) and estimations from entities.

01.3.2.5 Waste output

Waste output is monitored and reported under the following categories:

- a) valuable materials separated and recycled,
- b) waste incinerated,
- c) waste disposed of in landfills, and
- d) special waste treatment.

Please note: the waste data reported includes 'hazardous waste' as defined on the basis of treatment method (special treatment); the definition and approach to reporting is subject to review as part of our standard Group processes. Waste data is based on invoice amounts (where available) and estimations from entities.

01.3.2.6 Action on plastic

Plastic for the purpose of 'action on plastic' is defined as action on 'single-use plastic' items specifically, the minimum scope of 'single-use plastic' includes; plastic bags, plastic cutlery, plastic plates, straws, drink stirrers, sticks for balloons.

For each building, OE shall report the appropriate level of action plan measures which are defined at three levels:

- Level 1: Assessment of baseline usage of single use plastic across our operations.
- Level 2: Definition of targets and action plans per operating entity, including allocation of resources and launch of implementation.
- Level 3: Progress assessed and reported to the project management sponsor, action plan checked and reviewed within reporting period.

Each building meeting the requirements of having an action on plastic level shall be identified and the corresponding contracted headcount of each building will be counted towards the final total percentage share for an OE.

Comparability

The GHG Protocol requires that, in the case of a structural or methodology change, companies adjust historic inventories if the change has a significant effect on reported emissions. Allianz uses a significance threshold for:

- Structural changes: 5 % per indicator category of the current year's total emissions.
- Methodological changes: 5 % on Group level or 10 % on entity level per indicator category of current year's total emissions.
- Errors: 5 % on Group level or 10 % on entity level per indicator category.

That is, a structural change that increases or decreases the total inventory by 5 % or more, or a methodology change or aggregate errors that increases or decreases the total inventory by 5 % or more on a Group level or 10 % on an entity level per indicator category, will trigger an adjustment of historic data. A structural change that increases or decreases the total inventory by less than 5 % will be considered only going forward. As such, historic data relevant to the GHG emissions from business travel (per employee and absolute) in 2019 were restated, as a result of data quality improvement and methodology change for fleet in 2023.

Data quality

We will continue to improve and formalize our systems, processes and internal controls for environmental performance reporting on both Group and entity level to continuously improve data quality.

As part of our efforts, we seek to include further entities in our data collection and hence increase the scope of data being measured or calculated.

Introduction

The European Union launched the EU Action Plan on Financing Sustainable Growth (Sustainable Finance) in March 2018. The EU Action Plan's objectives are supported by legislation such as the EU Taxonomy Regulation (TR), the Sustainability Finance Disclosure Regulation (SFDR) as well as supplements to the Insurance Distribution Directive (IDD) and the Solvency II Directive (SII).

Allianz classifies investments as sustainable if these are E.U. Taxonomy aligned or sustainable according to the definition of EU SFDR Article 2 (17). One important element of Sustainable Finance is for financial products to make "sustainable investments".

Article 2 (17) SFDR defines a "sustainable investment" as: "an investment in an economic activity that contributes to an environmental objective, as measured, for example, by key resource efficiency indicators on the use of energy, renewable energy, raw materials, water and land, on the production of waste, and greenhouse gas emissions, or on its impact on biodiversity and the circular economy, or an investment in an economic activity that contributes to a social objective, in particular an investment that contributes to tackling inequality or that fosters social cohesion, social integration and labor relations, or an investment in human capital or economically or socially disadvantaged communities, provided that such investments do not significantly harm any of those objectives and that the investee companies follow good governance practices, in particular with respect to sound management structures, employee relations, remuneration of staff and tax compliance".

Allianz applies this notion of sustainable investments for:

- Listed Corporates and Agencies¹ (equity and debt),
- Sovereigns,
- Supranationals,
- Real Estate Direct Holdings and Commercial Real Estate Loans,
- Renewables, and
- Funds following impact and/or blended finance strategies and meeting the criteria of Article 9 SFDR.

For investments to be considered as sustainable in the meaning of Article 2 (17) SFDR they have to comply with all of the following three criteria:

- Positive contribution to an environmental and/or social objective,
- Follow Good Governance Practices (GGP), and
- Do Not Significantly Harm any other environmental or social objective (DNSH)

Please note that DNSH, where applicable, implies the screening of Principle Adverse Impact (PAI) indicators. PAI disclosure requirements are specified in the SFDR Regulatory Technical Standards (RTS).²

The SFDR RTS specifically define PAI indicators for investee companies, sovereigns, and real estate assets.

While the regulation does not provide specific PAI indicators for infrastructure or project finance³, the European Supervisory Authorities clarified that financial market participants are still required to assess adverse impacts based on the indicators provided for other investment types. At this stage, existing Allianz processes such as the screening of non-listed assets based on the Sensitive Business Areas⁴ are applied as a proxy for adverse impact assessment. In case of missing data, Allianz collects data directly from asset managers.

Sustainable investments calculation approach

With respect to the criteria mentioned above, Allianz has developed an assessment approach to identify sustainable investments across a range of asset classes. The assessment is data driven and based on best available data from internationally recognized data aggregators and Allianz proprietary assessment. The overall approach is periodically reviewed and data sources expanded to develop a best-in-class sustainable investments framework.

1 Agencies refer to state owned undertakings.

3 Specifically referring to renewables projects.

4 See Allianz ESG Integration Framework for reference.

² See Commission Delegated Regulation EU (2022/1288) of 6 April 2022 (SFDR RTS) or reference.

Listed corporates, agencies and sub-sovereigns (corporate-like)

1. Positive environmental/ social objective	Investments in companies generating % of revenues from pre-defined selection of positive environmental/social objectives are considered as sustainable on activity level.
2. Do no significant harm	Companies with the following criteria are not considered as sustainable investment:
	• Bottom 10 % lowest ESG rating scoring companies by region (Europe, North America, Asia-Pacific and Emerging Markets regional thresholds) ¹ ,
	• Companies generating more than 1 % revenue from pre-defined selection of negative activities i.e., adult entertainment, alcohol, gambling, fossil fuels ² , tobacco, weapons ³ , etc.,
	Companies that fail the United Nations Global Compact (UNGC) compliance assessment,
	• Bottom 10 % lowest theme-rating scoring companies for Toxic Emissions and Waste, Biodiversity and Land Use, and
	• Companies with severe and very severe controversies reported in the field of Toxic Emissions and Waste, Biodiversity and Land Use.
	In addition, Allianz enforces a group-wide exclusion policy relating to controversial weapons in investments of proprietary assets. ⁴
3. Good governance	Companies need to pass the Governance and Labor Rights controversy screening.
practices	Companies with severe risk exposure in good governance practices are included in the engagement selection process. In particular, if bad governance practices persist for more than three consecutive years and/or the engagement process has failed, companies are excluded from Allianz's proprietary portfolio, i.e., excluded for new investments and equity investments are sold thereof.

Data retrieved from internationally recognized third party data providers. Sub-sovereigns are split into two categories depending on whether the issuer is more like a sovereign (e.g., State of Bavaria) or more like a corporate with a balance sheet.

Sovereigns and sub-sovereigns (sovereign-like)

1. Positive environmental/ social objective	Using NGO data from Net-Zero Tracker, all investments in Sovereigns that have 'in law' or 'in policy paper' net-zero 2050, climate or carbon neutral targets are considered as sustainable.
	Decarbonization requires for all stakeholders to act together. It's vital to support Sovereigns that have 1.5°C aligned targets, so that they can set the right boundaries and incentives for companies and citizens to act on these.
2. Do no significant harm	Using public NGO data sources (i.e., HRMI Rights tracker, Walk Free, Transparency International etc.) and proprietary qualitative assessments, Allianz has developed a Human Rights Risk Score for countries. The top 15 % highest scoring countries, representing low exposure to human rights risk, pass the do no significant harm screening.
3. Good governance practices	Bottom 10 % lowest ESG rating scoring countries as well as countries with severe human rights risk exposure are not considered as sustainable and are excluded from the proprietary portfolio.

Data retrieved from internationally recognized third party data providers, publicly available NGO data as well as proprietary assessments. Sub-sovereigns are split into two categories depending on whether the issuer is more like a sovereign (e.g., State of Bavaria) or more like a corporate with a balance sheet.

1 Please refer to the ESG Scoring approach under the Allianz ESG Integration Framework.

2 Only ESG bonds such as green bonds issued by utility companies are exempted if these bonds pass the DNSH and GGP criteria.

4 Please refer to Exclusion Policies under the Allianz ESG Integration Framework.

³ Zero tolerance for controversial weapons as described under Controversial weapons exclusions in the Allianz ESG Integration Framework.

Supranationals

Allianz distinguishes between the nature of activities and institutional structure of supranationals. Separate approaches have been developed for three distinct categories:

- 1. Multilateral Development Banks (MDBs),
- 2. Disbursement-based Supranational Administrative Bodies (SABs), and
- 3. Other Supranational Administrative Bodies.

Multilateral Development Banks (MDBs)

1. Positive environmental/ social objective	MDBs that have a public climate commitment in line with 1.5°C pathway based on Paris Agreement via net-zero, climate neutral or Paris aligned targets in charter of policies and/or policies that contribute to positive development in pre-defined selected areas (i.e., basic needs, major disease treatment, social impact etc.) are considered as sustainable.
2. Do no significant harm	MDBs with the following criteria are not considered as sustainable investments:
	• Bottom 10 % lowest ESG rating scoring MDBs by region (Europe, North America, Asia-Pacific and Emerging Markets) ¹ , and
	MDBs that fail the UNGC compliance assessment.
3. Good governance practices	MDBs need to pass the Governance and Labor Rights controversy screening.

Data retrieved from internationally recognized third party data providers, publicly available NGO data as well as proprietary assessments.

Disbursement-based Supranational Administrative Bodies (SABs)

1. Positive environmental/	The assessment for disbursement-based SABs is based on the share of sustainable sovereigns in the disbursement split of the body. If, for instance, 50 % of the
social objective	bodies' funds are disbursed to sustainable sovereigns, 50 % of exposure is considered sustainable. The disbursement split is sourced from the SAB's website.
2. Do no significant harm	Using public NGO data sources (i.e., HRMI Rights tracker, Walkfree, Transparency International etc.) and proprietary qualitative assessments, Allianz has developed a Human Rights Risk Score (HRRS) for countries. The top 15 % highest scoring countries, representing low exposure to human rights risk, pass the do no significant harm screening.
3. Good governance practices	Bottom 10 % lowest ESG rating scoring countries as well as countries with severe human rights risk exposure according to our HRRS are not considered as sustainable and are excluded from the proprietary portfolio.

Data retrieved from internationally recognized third party data providers, publicly available NGO data as well as proprietary assessments.

1 Please refer to the ESG Scoring approach under the Allianz ESG Integration Framework.

Other Supranational Administrative Bodies (SABs)

Other SABs are those where we do not have a look through into the use of proceeds.

1. Positive environmental/ social objective	All investments in SABs with no look-through into use of proceeds that have 'in law' or 'in policy paper' net-zero, climate or carbon neutral targets based on publicly available policies or charters are considered as sustainable.	
2. Do no significant harm	SABs that do not pass the following criteria are not considered as sustainable investment:	
	• Greenhouse gas emission intensity is managed via a legally binding net-zero target and 2030 interim targets.	
	Violations of social objectives can be ruled out via publicly available information.	
	 In case of EU, violations of social objectives are reviewed annually by Allianz with reference to Court of Justice of the European Union (CJEU) rulings on sanctioning EU institutions and NGO data such as the Human Rights Watch. 	
3. Good governance practices	All SABs that have sound management structures, employee relations, remuneration of staff and tax compliance ensured via dedicated publicly available policies, charters, code of conducts etc. are considered as sustainable.	

Data retrieved from publicly available NGO data as well as proprietary assessments.

Renewables

1. Positive environmental/ social objective	Renewable assets contribute to positive environmental objectives and are therefore considered as sustainable investment.
2. Do no significant harm	All renewables are screened for Sensitive Business Areas prior to the investment. ESG guidelines are developed across thirteen sensitive business areas material to Allianz Group. Each guideline is based on internationally recognized standards and best-practice. Each guideline contains criteria, which are reviewed in the context of a given transaction. ¹
3. Good governance practices	Allianz checks for existing reputational, risk and compliance screenings by asset managers as well as existing ESG policies.

Data retrieved from asset managers and proprietary assessments.

Real Estate Direct Holdings and Commercial Real Estate Loan

1. Positive environmental/ social objective	Real estate assets are deemed green buildings with globally recognized labels (e.g., LEED, BREEAM) and/or locally dominant ones (i.e., HQE in France). Additionally, for investments in these buildings to be considered as sustainable, the certification level needs to be above an internally set threshold (for example:	
social objective	BREEAM 'very good' or better, DGNB and LEED 'silver' or better).	
2. Do no significant harm	Buildings that do not pass the PAI assessment as set out by SFDR RTS are not considered as sustainable investment:	
	• Investments in real estate assets involved in the extraction, storage, transport or manufacture of fossil fuels, and	
	Investments in energy inefficient real estate assets.	
3. Good governance practices	d governance practices Allianz checks for existing reputational, risk and compliance screenings by asset managers as well as existing ESG policies.	

Data retrieved from asset managers and proprietary assessments.

1 Please refer to Sensitive Business Guidelines in the Allianz ESG Integration Framework.

Funds following impact, blended finance and/or decarbonization strategies

1. Positive environmental/	Dedicated impact, blended finance and/or decarbonization strategies with sustainable objectives.
social objective	
2. Do no significant harm	Confirmed by asset manager to be in line with Article 2 (17) SFDR.
3. Good governance practices	Confirmed by asset manager to be in line with Article 2 (17) SFDR.

Data retrieved from asset managers and proprietary assessments.

Scope

This approach is applicable to Allianz's proprietary investments only, which is steered by Allianz Investment Management (AIM) globally across all portfolios, regions and asset classes.

AIM is the main group-wide investment management function for proprietary assets. Our internal asset managers PIMCO and Allianz Global Investors (AllianzGI) have their own independent sustainable investments framework.

Data validity check

Allianz continuously works on expanding the data coverage and data quality for sustainable investments. Data is retrieved from internationally recognized third party data providers, directly from asset managers and/ or based on proprietary data and

assessments. Sustainable investments data is audited externally on reasonable assurance level on an annual basis. Furthermore, Allianz uses its internal data management system, which features a complete and coherent view on Group's assets along value functions and across organization. It provides consistent, consolidated, quality assured information, common measures based on uniformed calculations, predefined portfolio analysis as well as standardized financial reporting. All ESG related data and information (external and inhouse) is stored and centrally provided on issuer level to further downstream processes. ESG level information is pushed down to investment and position level and historized monthly. Engagement data is stored centrally by a dedicated engagement team.

Limitations to methodologies and data

The SFDR RTS only define PAI indicators (for DNSH screening) for companies, sovereigns and real estate investments. For renewable investments, Allianz applies an own internal screening of sensitive business areas and internal asset manager compliance screenings to ensure compliance with good governance practices. Likewise for investments in dedicated impact and/or blended finance funds, Allianz requests confirmation on compliance with SFDR Article 9 requirements from asset managers.

Given stark differences in data availability across the principle adverse impact metrics (as defined by SFDR) and asset classes, Allianz is in continuous discussions with asset managers and looks for new data sources to address data gaps and broaden the understanding of potential adverse impact. Despite best effort, data availability limits the degree of consideration of specific principle adverse impact metrics. In those cases Allianz considers the underlying adverse sustainability indicator themes (such as waste or social and employee matters sourced from internationally recognized third party data providers and/or proprietary data).

03 Sustainable Solutions

Introduction

In response to the changing regulatory and market environment, as well as the increasing urgency to act on climate change, Allianz has developed the Sustainable Solutions framework. The framework aims to develop sustainable property and casualty insurance products and services that generate value and financial impact by adapting to future developments, particularly the transition towards net-zero economies. It also addresses reputational risks such as greenwashing and emphasizes corporate responsibility towards the environment, communities, societies, and future generations.

Allianz defines a Sustainable (P&C insurance) Solution as an insurance product or service that substantially contributes to climate change adaptation and to one or more further environmental, social, or governance objectives, without doing significant harm to any of the other objectives, is in line with the principles of Minimum Safeguards and hence supports our customers in transitioning towards an environmentally or socially sustainable way of doing business or living.

The Sustainable Solutions framework is built on the EU Taxonomy Regulation (2020/852) which focuses on the

environmental objective climate change adaptation. The aim of climate change adaptation is to take appropriate actions to prevent or minimize damage caused by the adverse effects of climate change (e.g., preventive activities by risk management mechanisms and loss prevention measures). This regulation sets out the Technical Screening Criteria that must be fulfilled to classify an activity as sustainable. These criteria reflect instances in the insurance value chain regarding e.g., pricing, product design, underwriting, data sharing, distribution and claims initiatives. Starting from FY2023, we are required to disclose Taxonomy-alignment, which indicates the portion of our revenues that align with the underlying taxonomy requirements and are sustainable and can be labeled as such.

However, with the Sustainable Solutions framework, Allianz has chosen to go beyond the regulatory requirements with our ambition to create real world impact and actively support our customers' transition to sustainable choices via insurance solutions. Consequently, Allianz has developed additional criteria which comprise an additional component of Sustainable Solutions. These criteria address the other environmental objectives in addition to two social dimensions.

EU-	Taxonomy criteria	Example of Allianz guidelines to fulfill criteria	
1	Use State-of-the- art modelling techniques	The product has an Allianz Technical Pricing Certificate with advanced general modelling plan for natural perils and modelling natural hazards per policy	
2	Disclose how the climate change risks are considered	This is considered in Annual Report by describing how Allianz in general is considering climate change risks (See p. 71 in AR)	
3	Provide incentives for risk reduction	Incentives are provided for risk reduction through risk-mapping which considers climate related exposure in the pricing of insurance products	
4	Inform how contract can be renewed after climate event	The renewal letter informs the customer under which conditions the contract can be continued after a climate event and includes information on preventative measures addressing climate-related risks relevant to the insured asset	
5	Provide risk- based rewards for preventive actions	A customer's preventive measures on climate-related risks related to the insured asset is reflected in the price (e.g., reduced premium if flood barrier is installed on premises)	
6	Provide information on relevance of preventive measures	The distribution strategy ensures that both new and existing customers are informed about the preventative measures addressing climate- related risks relevant to the insured asset and their effect on the premium	
7	Offer coverage for the climate- related perils	Insurance coverage must be provided for all relevant climate-related perils and local climate-related hazards must be monitored to identify needs for hedging climate risks	
8	Offer specific risk transfer solutions	The product includes specific risk transfer solutions such as protection against business interruption	
9/ 10	Free share of claims data to public authorities	The intention to make claims data available free of charge to public authorities is declared publicly (e.g., on AZ website)	
11	Provide high level of service in post- disaster situation	The Allianz approach to high level of service in post-disaster situations is codified in the Claims Functional Rule and the NatCat Claims Management Framework	
12	Do no significant harm: climate change mitigation	The product is not specifically designed to cover activities or assets in the fossil fuels value chain, and there is a process to identify those policies insuring activities or assets in the fossil fuels value chain through e.g., ISIC codes (See p. 96 in AR)	
13	Compliance with Minimum Safeguards	Compliance with e.g., OECD Guidelines for Multinational Enterprises, the UN Guidelines on Business and Human Rights (See p. 96 in AR)	

Criteria and guidelines

The 13 EU Taxonomy requirements are sourced from the technical screening criteria for non-life insurance business as well as do no significant harm criteria (DNSH) and minimum safeguards, as outlined in the regulation. These requirements are outlined in the table on the previous page, along with examples from Allianz's internal guidelines on how to fulfill them.

Allianz's commitment goes further than the regulatory requirement. This is reflected in criteria 14-22 which entail additional conditions to be met to receive a Sustainable Solutions certification (see table Allianz Criteria). The first two criteria are minimum requirements, while conditions 16–22 require that the product or service is screened against predefined sustainable product elements addressing environmental and social objectives.¹ Each element scores between 1–4 depending on its impact on customer needs and contribution to the overall environmental or social objective.

A product must achieve a minimum score of 4 (for FY2023) from sustainable product elements to pass this part of the certification process. We have developed and identified insurance product elements or services within our P&C portfolio which contribute to many of these objectives, for example:

- The product element "Pay as you Drive – Telematics" contributes to the objective of climate change mitigation by charging a lower premium to motor insurance customers who drive less, thus incentivizing customers to reduce their emissions.
- The claims service "Repair instead of Replace" makes repair (or use of refurbished parts) as the preferred method of settling a claim. This contributes to the transition to a circular economy by steering policyholders to repair and increasing demand for refurbished parts.
- Allianz's social objective to encourage and expand access to insurance and services for helpers or socially disadvantaged groups is addressed through the element "Discount for helpers and/or socially disadvantaged people" which enables access to these groups by for instance providing premium discounts or increasing our risk appetite for a social cause.

To qualify for a Sustainable Solutions certification, an insurance product must meet all Taxonomy requirements cumulatively, if applicable, and in addition Allianz criteria 14–15, as well as achieving a minimum score of 4 from criteria 16–22.

Allianz criteria

14	Do no significant harm to any environmental and social objective
15	Policy admin: Paperless communication with customer
16	Climate change mitigation: avoid, reduce or remove greenhouse gas (GHG)
17	Sustainable use and protection of water and marine resources: contribute to good status of water bodies
18	Transition to a circular economy: durability, re-use, recycling
19	Pollution prevention and control: improve quality of air, water & land
20	Protection and restoration of biodiversity & ecosystems: protect, conserve or restore biodiversity & ecosystems
21	Encourage and expand access to insurance and services for helpers or socially disadvantaged groups
22	Foster socially responsible behavior or engagement

1 For definitions of the environmental objectives, please see the EU Taxonomy Regulation (2020/852).

Scope of application

The Sustainable Solutions framework applies to all business in the P&C segment, including Retail, SME, Fleet, MidCorp and Corporate business.

While all P&C Line of Businesses (LoBs) fall under the scope of the Sustainable Solutions framework, only eight nonlife insurance LoBs are subject to the EU Taxonomy requirements, as laid down in Annex 2 Climate Delegated Act (10.1). The P&C LoBs in scope (eligible) of the EU Taxonomy are:

- Income protection insurance;
- Workers' compensation insurance;
- Motor vehicle liability insurance;
- Other motor insurance;
- Marine, aviation and transport insurance;
- Fire and other damage to property insurance;
- Assistance.

Criteria 1–13 of the framework are mandatorily applied to the LoBs listed above. Nevertheless, for the remaining (non-eligible) LoBs within the P&C domain we use the Taxonomy regulation as guidance for the development of sustainable insurance solutions. Hence, all Allianz P&C LoBs are subject to criteria 14–22 of the Sustainable Solutions framework. This includes, in addition, the following LoBs:

- General liability insurance;
- Legal expense insurance;
- Credit insurance;
- Miscellaneous financial loss insurance;
- Non-insurance services.

Governance

To ensure Allianz Group-wide compliance, the Sustainable Solutions framework is codified in policies (Allianz Standard for P&C Underwriting) and applies as a harmonized and mandatory framework for all Allianz P&C entities, including a certification process for sustainable products or services. A dedicated function within our Group Center Global P&C is responsible for the global coordination of P&C Sustainable Solutions. This team updates and further develops the Sustainable Solutions framework with regards to internal and external developments and screens products against the framework to approve or reject them as Sustainable Solutions.

The P&C organisational entities are required to ensure that Sustainable Solutions are processed in an effective way and create a plan to deliver on targets. The local CUO is accountable for the screening of their P&C portfolio and developing sustainable solutions to capture local business opportunities. The local CFO is responsible for the quality assurance of the reported data which they sign-off through the Statement of Accountability (SoA) to ensure accurate reporting to Allianz Group.

Assessment and certification process

A certification process which consists of three steps has been defined to ensure that only products and services which meet the sustainability criteria are classified as sustainable. First, the operating entity completes a Self-Assessment to evaluate if the product fulfils the defined criteria. OE evaluation must be paired with proof documents and rationales supporting their assessment. As a second step, the results are validated by a dedicated function within our Group Center Global P&C which validates the Self-Assessment preresult by examining whether the product meets each criterion requirement with the provided evidence. The third and final step entails the decision and communication of the validation to the organisational entity. The product is either approved (certified) or rejected (not certified) as a Sustainable Solution. Finally, the results are communicated with recommendations and/or guidance of what steps should be taken in order to fulfil the outstanding requirements (if applicable).

Sustainable Solutions KPIs

The new Allianz Sustainable Solutions framework was launched in January 2023 with the overall ambition to make a real-world impact and aid our customers' transition to net-zero. In order to accelerate the development of Sustainable Solutions in our P&C products and services qualitative targets have been set for Board of Management of Allianz SE and CEOs across our OEs. To track our progress, our entities will continue reporting on a regular basis report on the following KPIs:

- EU Taxonomy Regulationaligned revenues
- Sustainable Solutions-certified revenues

In line with the requirements that are set forth by the EU Taxonomy Regulation, Allianz follows the principle to use figures as premium base that relate to financial reporting and are communicated externally through Allianz financial statements – IFRS 17 Total Business Volume (TBV). TBV presents a measure for the overall amount of business generated during a specific reporting period. As TBV does not only include premium related to the insurance coverage (it also includes fee and commission income), the following adjustment has been performed: As fee and commission income are not directly linked to the provision of insurance coverage, they are deducted to determine the premium figure related to coverage.

EU-Taxonomy-aligned revenues

EU Taxonomy-aligned revenues stem from products which meet the Technical Screening Criteria of the EU Taxonomy. However, the guidance on EU Taxonomy Reporting published by the EU Commission in December 2023 states that only the insurance premiums that pertain to the coverage of climate-related perils can be considered when computing Taxonomy-alignment. Hence, only the portion of the premium from EU Taxonomy aligned products related to the exposure stemming from climate related perils could be reported as sustainable revenue.

Sustainable Solutionscertified revenues

Sustainable Solutions revenues similarly arise from those premiums which are classified as sustainable under the Sustainable Solutions framework (see section on Criteria and guidelines). Importantly, here we disclose the full premiums, with no restriction to the coverage of climate-related perils.



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Allianz SE Königinstraße 28

80802 Munich

Germany

Date of publication: 7 March 2024