

Carbon Footprint Investment Portfolio

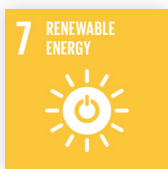
Q2 2018

Introduction

As signatory of the Paris Pledge for Action, a.s.r. is aware of the urgency of action on climate change and our responsibility herein as an insurance company, asset owner, asset manager and real estate manager. For a.s.r., climate change is a direct risk to our business both on our liabilities; the claims we pay out and on our assets; the value of our investments. But, as significant as climate risks may be, it only represents half the story. Climate change also presents unprecedented opportunities for action.

The precise balance of investment risks and opportunities will partly depend on future climate scenarios and agreements (like the Paris 1.5 degrees ambition, the agreed 49% reduction of CO₂ emissions in the Netherlands in 2030, the 14% target for energy production out of renewable sources in 2020, the ban for coal-fired power stations as of 2025 or potential carbon pricing) and what investment decisions will be made to help mitigate the problem (like shifting the demand in the portfolios towards clean energy, energy efficiency, clean tech, but also choosing those companies which are best positioned to profit from these changes: the winners of the future).¹

Since 2016, a.s.r. has integrated Climate Change and Energy Transition as explicit themes/drivers within its strategic asset allocation and investment policy. As a consequence, budget has been allocated to various asset classes where a.s.r. intends to increase its positive impact on these themes. a.s.r. will periodically measure and evaluate the results of our efforts, with the final goal to support the energy transition and to contribute to limiting the temperature rise to 1.5 degrees Celsius. We will explore opportunities and improvements to further reduce the carbon footprint of the a.s.r. investment portfolio in line with the Paris Agreement. And through these actions, to actively contribute to achieving the Sustainable Development Goals (SDGs) 7 and 13.



We will report on our results on a quarterly basis, giving a regular update on the a.s.r. scope 3 carbon footprint regarding the a.s.r. investment portfolio. While recognizing that climate-related financial reporting is still evolving, a.s.r. endorses the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD), which aims to facilitate the energy transition by improving global transparency over climate-related reporting.

Platform Carbon Accounting Financials

Dutch financial institutions have joined forces to develop open source methodologies to measure the carbon footprint of their investments and loans: Platform Carbon Accounting Financials (PCAF). a.s.r. is an active member of the PCAF and participates in two working groups: Mortgages & Commercial Real Estate and Indirect Investments.

¹ In February 2017, a.s.r. published a research paper to analyze the impact of the 'carbon bubble' and the consequences for a.s.r. investment portfolio. With this Climate Positioning Paper, a.s.r. aims to provide a follow up to the work already done and increase the transparency about the current policy and positioning, the actions taken and those initiatives in which a.s.r. is participating to mitigate the climate change and contribute to the required energy transition.

Methodology

a.s.r. Asset Management measures the carbon footprint for both sovereigns and corporates (equity and credits) for the own account and third party assets. This measurement is periodically updated and expanded with the final goal to be able to measure the carbon footprint for the entire investment portfolio in an aggregated and consistent manner.

The data and graphs included in this report give an overview of the carbon footprint of the a.s.r. investment portfolio for corporates and sovereigns, taking into account the recommendations of the current PCAF methodology. Emissions are expressed in tons of carbon dioxide equivalents per million Euro invested (CO₂eq/M€) with a specific focus on scope 1 and 2. Scope 3 emissions are excluded from these calculations as data is not yet reliable and/or available. Nonetheless, a.s.r. has the ambition to include scope 3 into reports as soon as methodically feasible, which is driven by data availability.

Sovereigns

Investments into sovereign bonds are considered a challenging topic when it comes to carbon calculations: there is still debate on the extent to which a government has influence on carbon emissions within its borders. In line with the PCAF 'follow the money' principle, the scope in this report are the investments and subsidies that a government makes (scope 1, scope 2 and scope 3 purchased goods and services). This is the most consistent with calculations for our corporate investments, which will be described later on.

In order to calculate the carbon footprint of our sovereign bond investments, data is provided by the Eurostat website. Eurostat provides both sovereign debt information and carbon information with the granularity necessary to conduct the calculations.

$$(1) \text{ Total Emission} = \sum_{i=1}^n \frac{\text{Investment}_i}{\text{GDO}_i} * \text{GHG}_i$$

GHG = greenhouse gasses in ton CO₂eq

GDO = Government debt outstanding

Corporates

Carbon calculations for our corporate investments are conducted very similar to our sovereign investments. A few differences are that the carbon data provider for corporates is Vigeo Eiris. The emissions used in this assessment are taken either from CDP, other company's reported data or Vigeo Eiris' estimations via a proprietary regression model based on two main factors: the nature of the company's activities and the size of the company.

The PCAF methodology used for the measurement of a.s.r.'s carbon footprint for corporates is based on the indirect ownership of carbon emissions via investments, relative to the representative enterprise value. However, enterprise value is not always available. In that case we estimate the ownership relative to total assets, to comply with our commitment to full disclosure. While this may lead to an underestimation of the actual carbon footprint, this enhancement of the calculation procedure provides a clearer picture to the full extent of our carbon footprint. The exact formula used in the PCAF approach is described below.

$$\text{Total Carbon Footprint in ton CO}_2\text{eq: } (2) \text{ Total Emission} = \sum_{i=1}^n \frac{\text{Investment}_i}{\text{EV}_i} * \text{GHG}_i$$

$$\text{Carbon footprint per M€ invested: } (3) \text{ GHG Per Mln invested} = \frac{\text{Total Emission}}{\text{AuM}} * 1,000,000\text{EUR}$$

GHG = greenhouse gasses in ton CO₂eq

EV² = enterprise value

AUM = assets under management

² The footprint has increased in comparison to the last reported carbon footprint in the positioning paper of a.s.r published in September 2017. This increase is not driven by more emissions by our investments, but rather due to the adoption of the PCAF methodology. As our methodology in the positioning paper was based on total assets and enterprise value is lower than total assets for a company. This means that every Euro invested weighs more under the PCAF methodology, and therefore results in a larger ownership of carbon emissions.

Acknowledgement of the shortcomings of a developing methodology

a.s.r. carbon foot-printing work is a useful tool to understand high carbon emitting holdings. While broad asset-class level figures are not unequivocal, a breakdown into sub-sectors shows highly different levels of carbon intensity per industry. However, shortcomings remain: there is no consistent global carbon measurement framework for balanced investment portfolios, carbon data coverage can be incomplete for the Scope 3 of companies and certain asset classes. Available carbon data (scope 1 and 2) is a snapshot of current emission levels, but is not forward-looking. It highlights today's carbon emitters, but not tomorrow's low carbon solutions providers. a.s.r. aims to address this part of the shortcomings with E(SG) company assessments, by analyzing climate strategies besides the actual carbon footprint.

Carbon footprint a.s.r. Q2 2018

The overall carbon footprint of the a.s.r. investment portfolio was calculated by using the PCAF methodology as much as possible (58.11% of AuM). For our corporate investments that have not reported numbers to calculate an enterprise value, we have used total assets as an estimation for ownership value. The total asset estimation approach accounts for another 24.93% of AuM. The remaining 16.96% either have data gaps in the carbon emissions or on financial levels. a.s.r. is committed to maximize the coverage of our footprint to reflect the true amount of GHGs financed by our investments. Figure 1 provides an overview of the ratio between the calculation methods.

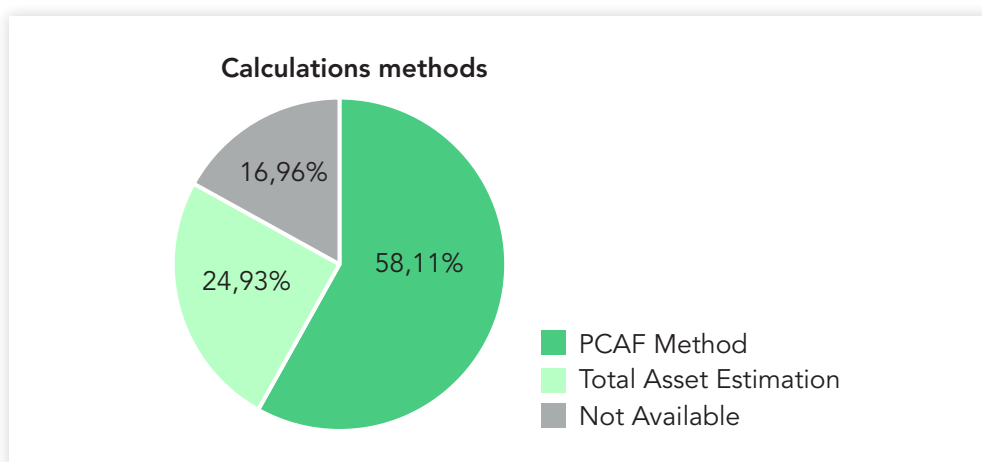


Figure 1: Calculation method used for the calculation of the greenhouse gases attributable to a.s.r. Asset Management. It depends on the availability of an enterprise value. If this is not available, then the total assets of a company will be used as an estimation of total ownership ratio.

The above described calculation methods lead to a carbon footprint of 113.16 ton CO₂eq per million EUR invested at the end of June 2018.⁴

³ Despite best efforts, it isn't possible to calculate greenhouse gases for 100% of our investments. For a fair calculation the assets under management will be adjusted. This means that investments that do not have reported or modeled carbon data will not be included in total assets under management.

⁴ The footprint has increased in comparison to the last reported carbon footprint in the positioning paper of a.s.r. published in September 2017. This increase is not driven by more emissions by our investments, but rather due to the adoption of the PCAF methodology. As our methodology in the positioning paper was based on total assets and enterprise value is lower than total assets for a company. This means that every Euro invested weighs more under the PCAF methodology, and therefore results in a larger ownership of carbon emissions.

In figure 2 you can see the actual development of the carbon footprint over the last 5 quarters. Despite a small increase from 148.41 T CO₂eq/Mln Eur in June 2017 to 151.51 T CO₂eq/Mln Eur in September 2017, there has been a consistent reduction of emissions per million Euros invested through 3 quarters. There are different factors driving this reduction: a.s.r.'s policy to build a more climate resilient portfolio, the fact that investee companies have actively reduced their carbon footprint and a recent data update on emissions.

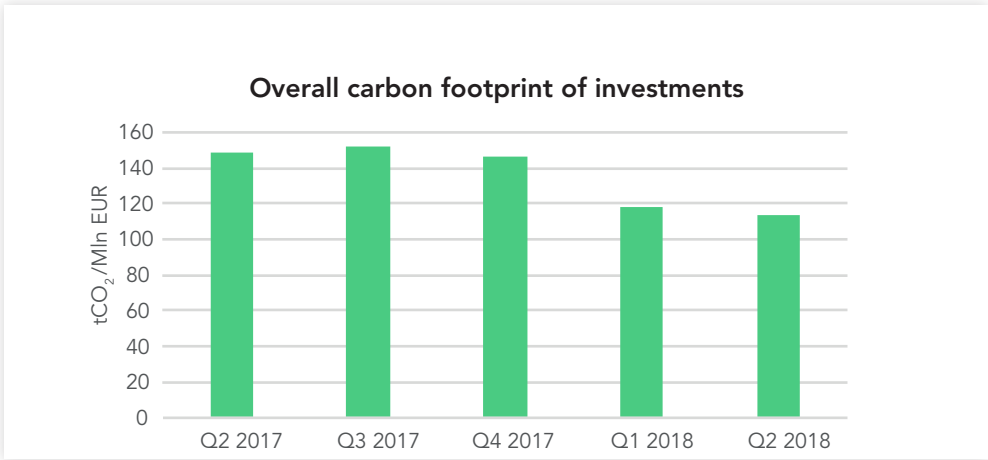


Figure 2: development of a.s.r.'s carbon footprint over the last 5 quarters

Evidently, the major part of the carbon footprint is caused by a small proportion of the analyzed AuM. Around 5% of our investments are responsible for 42,25% (1.439.804 t CO₂ eq) of the a.s.r. carbon footprint Scope 3. These are in general investments in companies that have the majority of their activities in sectors such as Utility; Basic Industry; Integrated Oil & Gas, etc. (BoA ML classification).

α.s.r. ESG fund range

a.s.r. shows its commitment to a sustainable future also with the launch of its three ESG funds for Euro government bonds, Euro corporate bonds and European equities. While already having a strict ESG policy for the overall investment process within a.s.r. Asset Management, these ESG funds have additional guidelines on ESG indicators. The ESG funds investing in corporates already achieve a lower carbon footprint compared to their respective benchmark, as can be seen in figure 3.

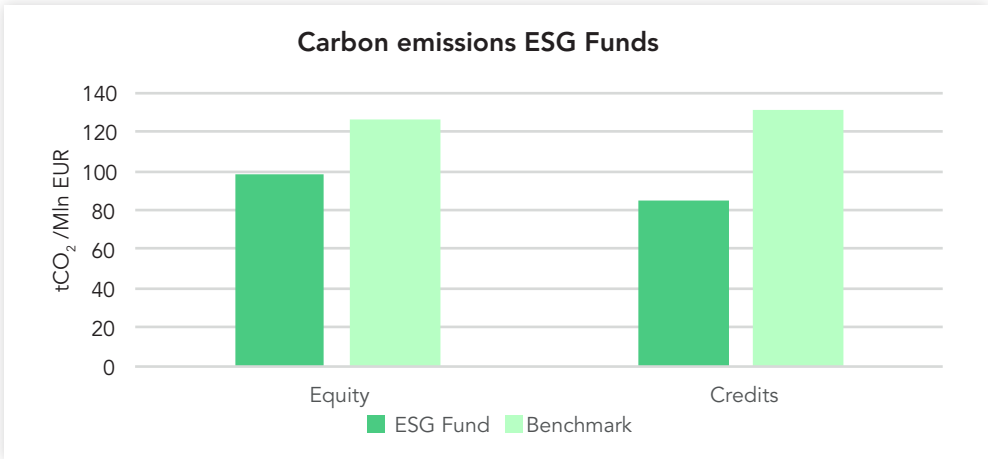


Figure 3: Carbon emissions for ESG credit and ESG equity fund. Results can be driven by coverage ratio of carbon disclosure, AUM of the funds, guidelines applicable to the fund and other factors.