The CO_2 footprint of the equity portfolio

We have calculated the CO_2 footprint of the equity portfolio, which we will reduce from 2016. This is in response to instructions issued by one of our clients that we should halve the CO_2 footprint by 2020, and also enables us to comply with the requirements of the Montreal Pledge, which we signed in 2014. The Montreal Pledge is a joint declaration by a large group of investors worldwide who have committed to measure and publicly disclose the carbon footprint of their investment portfolios on an annual basis. By signing the Montreal Carbon Pledge and developing a CO_2 reduction method we wish to signal that climate change is an important factor in relation to our investments, focusing and influencing our decision-making in this regard.

CO_2 footprint

Investments in listed equities account for a substantial part of the investment portfolio. We started in this investment class because we have sufficient data available to make reliable measurements. Furthermore, our relationship with CO_2 emissions in this class is clear, since, as a shareholder, we jointly own the companies that cause CO_2 emissions.

The CO_2 footprint of the equity investments is as follows:

Relative CO_2 footprint	339 tonnes CO_2 / company turnover in millions of dollars
Absolute CO_2 footprint	12.9 million tonnes CO_2

These CO_2 footprint figures apply to:

Investment classes	All listed shareholdings in the PGGM funds:
	• PGGM Developed Markets Alternative Equity PF Fund • PGGM Developed Markets Equity PF Fund • PGGM Emerging Markets Equity PF Fund This covers 95% of PGGM's total assets invested in listed equities.
Reference date	31 December 2014
Invested assets	EUR 52.5 billion

Explanation of our methodology

We purchase data on the carbon emissions of companies in which we invest from Trucost, a specialised supplier of (environmental) data. They examine not only carbon emissions, but also emissions of other greenhouse gases, such as methane and nitrous oxide, and convert them into *CO_2 equivalents*, the widely accepted standard for measuring emissions from greenhouse gases. The data we purchase have been reported by the companies themselves and checked by Trucost, or have been calculated by Trucost.

Relative footprint

We measure the carbon footprint of a company by examining its CO_2 efficiency. This is the volume of CO_2 emissions per dollar of company turnover. In order to determine CO_2 efficiency, we first calculate the entity's total CO_2 emissions:

• We start by taking the company's own CO_2 emissions. For a manufacturer, for example, this is the amount of CO_2 released during the manufacturing process.

• We then examine the company's energy consumption. The manufacturer uses electricity to power the machines and heat for parts of the manufacturing process. We also include the CO_2 emissions produced in generating electricity and heat in our calculations.

- Finally, we calculate the carbon emissions of the company's suppliers. This is because a company may outsource part of the manufacturing process to another entity, for example, and limit its own operations to assembly. In order to ensure maximum comparability between companies in the same sector, we also add this part of the CO_2 emissions to the company's CO_2 emissions.

We divide the CO_2 emitted by a company in this manner during one year with that company's turnover in the same year. This gives us a measure for *CO_2 efficiency*: how much CO_2 does a company have to emit in order to achieve a certain volume of turnover? This enables us to compare companies and find out which companies have the least impact on the climate.

We calculate the CO_2 efficiency of all the companies in which we invest in the equity portfolio. We then take the average CO_2 efficiency of all the companies in which we invest in order to determine the footprint of the entire portfolio. A company's weighting in this regard varies according to its relative size in the portfolio: the companies in which we are heavily invested contribute more to this average figure than companies in which we hold a smaller interest. This allows us to adjust our portfolio in future to achieve a reduction: by investing less in companies with a large CO_2 footprint we can reduce the CO_2 footprint of the portfolio as a whole.

Absolute footprint
In order to determine how much CO_2 the companies in portfolio actually emit, we also report the absolute footprint of the equity portfolio, expressed in tonnes of CO_2. To do this we isolate that part of the CO_2 emissions of companies we (partly) own which is attributable to us. If we own 0.2% of the shares of a company, for example, we attribute 0.2% of that company's CO_2 emissions to ourselves. As we disregard a company's efficiency when expressing the absolute CO_2 footprint of the equity portfolio, we only take into account each company's own emissions when determining the absolute footprint. This is done in order to avoid double-counting, since we invest in the wider economy, including in many suppliers therefore.

Reduction plans
In its 2020 Investment Policy, Pensioenfonds Zorg en Welzijn (Pension Fund for the Healthcare and Social Sectors), PGGM's largest client, has formulated the objective of halving the CO_2 footprint by 2020. In order to realise this ambition, we will alter the weightings of companies in portfolio during 2016 so as to reduce the CO_2 footprint of the equity portfolio as a whole. We measure the CO_2 efficiency of companies and compare the companies in the most CO_2-intensive sectors: Utilities, Materials and Energy. We will gradually phase out the companies with the highest CO_2 emissions per dollar of company turnover from the portfolio, and reinvest the money thus released in the less polluting companies in the aforementioned sectors. In this way we give the companies operating more efficiently within their sector the financial means to continue their good performance.

We will combine this gradual approach with intensive dialogue, engagement, which we will pursue with several of these companies with the aim of stimulating and incentivising them to enhance their CO_2 efficiency.

Other investment classes
We will investigate how we can measure and reduce the CO_2 footprint for other investment classes also. In some cases reliable data are not yet available, while in other cases the relationship between our investment and CO_2 emissions is less clear, as we do not always invest directly in something that emits CO_2. Examples are derivative products or government bonds. We will therefore initially focus on the real estate and company bonds investment classes. For these classes we expect to be able to clearly establish our relationship with actual CO_2 emissions, and to acquire sufficient data and achieve a reduction in the footprint.