

UK Pension Industry Carbon Emissions Analysis: *October 2021*



Make My Money Matter



Route2

Industry Landscape

The UK's financial institutions have a critical role to play in meeting the country's net zero targets. Where the trillions of pounds invested by our banks and pension funds go will determine what kind of world we live in; one ravaged by the worst effects of climate change - or one which prioritises the planet and the people who live on it.

With £2.7 trillion in Assets Under Management, the UK's pensions industry plays a significant part in setting this agenda. However, action on greening our pensions industry has been too slow: a recent [report](#) from Make My Money Matter showed that 70% of leading pension schemes have failed to set robust net zero commitments despite growing public demand and ever starker climate science.

These failings are built upon an absence of data and poor transparency across the industry; creating opacity for the public, both on where their money is held and the environmental impacts of those investments.

This research aims to address these issues by quantifying the carbon emissions associated with UK pensions to drive awareness and encourage government and industry action.

Headline Findings

- The UK pensions industry enables more CO₂ than all UK carbon emissions.
- Schemes fund an estimated 330 million tonnes of carbon emissions every year.
- If the pensions industry were a country, it would find itself in the top 20 carbon emitters globally.
- To offset its emissions, the industry would need to reforest over 50 percent of the UK's entire landmass.
- Pension schemes are estimated to invest £112 billion into fossil fuels – that's £60 for every £1,000 invested.

Call To Action

- Make My Money Matter is calling for the government to introduce urgent legislation to make net zero mandatory for all pension schemes.
- In doing so the UK can dramatically reduce emissions, lead the world on green finance, and protect savers' investments from the worst effects of climate change.

If the government is prepared to set a legally binding target to cut national emissions to net-zero, why not do the same for an industry which enables an even higher carbon output than that of the UK?

Approach

This analysis was undertaken by sustainability research agency [Route2](#) and followed the three-step process identified below.

1. Defining Scope

The first step was to define the scope of the analysis:

- The total value of the UK's Pension Schemes' Assets Under Management (AUM) equals c. £2.7 Trillion (2019).
- ONS data shows that this includes £0.3 Trillion of derivatives and £0.5 Trillion of less defined assets such as cash, cash equivalents and unclassified assets
- Given the nature of those investments and the availability of data, they were deemed out of scope for this analysis.
- This left a total value of AUM in scope for this analysis of £1.9 Trillion which includes public equity, private equity, government bonds, corporate bonds, and other debt.

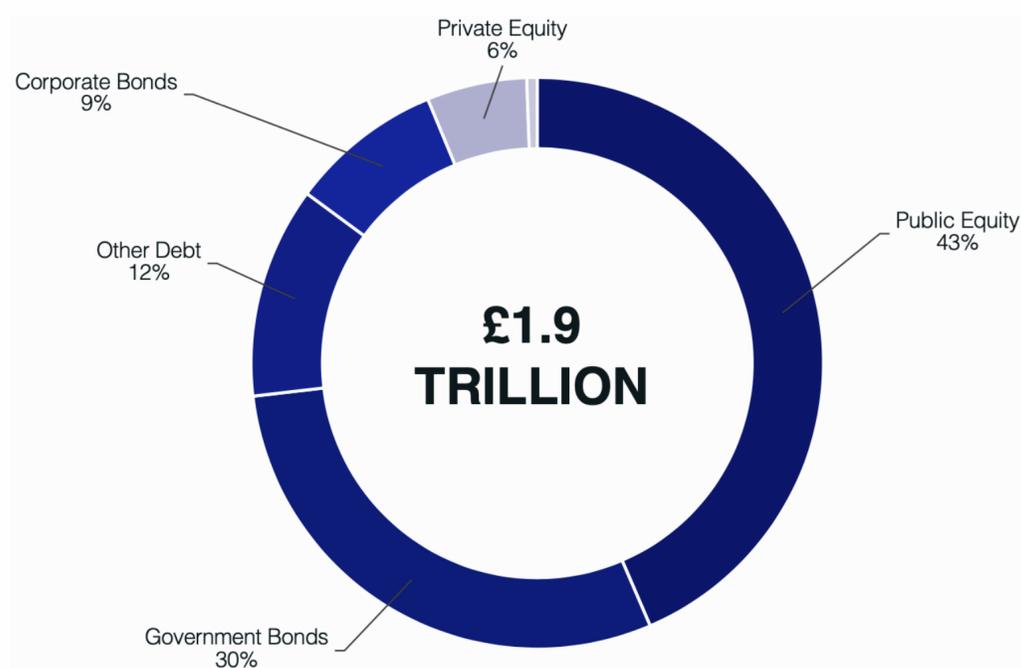


Figure 1: Project Scope Pension Schemes Asset Breakdown

2. Emissions Analysis

To work out the CO2 emissions of the UK pensions industry we carried out a bottom-up and a top-down analysis of emissions, before averaging the two for a final estimation. 'Bottom-up' builds upon the investment specific disclosures of selected, representative funds. 'Top-down' leaned on macro data published from the UK ONS, which provided the total value of all UK Pension Schemes and the asset class breakdown, alongside an MSCI index.

A) Bottom-up approach

- We identified 10 leading Defined Benefit (DB) and Defined Contribution (DC) schemes based on size of AUM (representing £295 Billion) and availability of data (including the disclosure of their top public equity holdings).
- We subsequently identified the most representative fund of each scheme. We deemed 'default' funds representative, and when such funds were not disclosed or signposted, equity funds were selected according to the availability of data related to sectors and top holdings.

- Next we identified the most representative fund of each scheme. We deemed 'default' funds representative, and when such funds were not disclosed or signposted, equity funds were selected according to the availability of data related to sectors and top holdings.
- To gain a CO2 intensity estimate of the equities and corporate bonds portion of the funds, we used their sector and top holdings disclosures – calculating CO2 based on the sector and geography of their activities.
- These geo-sector CO2 intensities, both direct and indirect, were generated from an extended multi regional input-output (EMRIO) model. This modelling approach is frequently used to help quantify indirect CO2 emissions.
- We then scaled up to scheme level based on the schemes' asset class and sector breakdown, and from there up to UK market level based on ONS market asset class data – to understand CO2 emissions for in-scope assets at a whole-of-market level.
- To gain a CO2 estimate for the government bonds, we looked at governmental functions contained within the core EMRIO model, for example, state government, local government, defence activities, public security, and law and order activities – and applied that intensity to the pension market percentage of government bonds.

B) Top-down approach

- Given limited transparency in UK pensions, often only a small number of top holdings are publicly available.
- Therefore, we validated the bottom-up approach by using data from ONS showing the country breakdown of the different asset classes of UK pension investments.
- We used the MSCI ACWI index to provide geo-specific sector breakdowns of each country.
- The CO2 was calculated by inputting the investment by country and sector into the core EMRIO model, which contains a direct CO2 intensity for all sectors in all countries as well as the upstream CO2 requirements of a sector to operate.
- For government bonds the same approach was used as in the bottom-up approach.

3. Fossil Fuel investments

- For both approaches, we also looked at estimated investments into the fossil fuel industry.
- For levels of fossil fuel investment, we identified the proportion of industry sectors associated with the extraction, mining / transporting and extracting of fossil fuels.
- We used this proportion to estimate the UK pension market level.

Results

- To increase the reliability of the analysis, the two methods outlined above (top-down and bottom-up) were used to generate results.
- A final result was calculated based on the average result of the two methods as both were deemed to be valid.

- Key findings are identified below for bottom up, top down and average:

Attribute / Method	Bottom Up	Top Down	Average
Total CO2 (MT)	292	368	330m Tonnes
FF Inv (GBP Billions)	66	158	£112 Billion

Limitations

- Given this report only assessed £1.9trillion of the £2.7trillion in AUM in UK pensions, it is inevitable that the total CO2 estimate will be an underestimate, given that there will be some attributable emissions within the c.£800bn of 'out of scope' assets.
- The paucity of data on holdings within schemes means that estimates and extrapolations have been made where there is an absence of information.
- Limited disclosure of corporate emissions means that an input-output model has been used to calculate the estimated emissions of investee companies, based on sectors and geographies.

While mandatory net zero is crucial to drive emission reductions, this report also highlights the paucity of data available for pension holders. Individual savers are neither able to see where their money is being invested, nor assess the environmental impacts of those investments. This analysis demonstrates the need for dramatically improved data transparency to enable savers - and pension providers - to make informed, proactive and environmentally responsible investment decisions

Data Sources

- [UK Pensions Survey](#)
- [UK Occupation Pension Schemes](#)
- [UK Pensions Regulator](#)
- [Our World In Data](#)
 - Emission Database for Global Atmospheric Research (EDGAR)
 - CO2 Emissions from Fuel Combustion - IEA
 - World Population Prospects: The 2019 Revision - UN Population Division
- [ONS market asset class data](#)
- [MSCI ACWI Index](#)