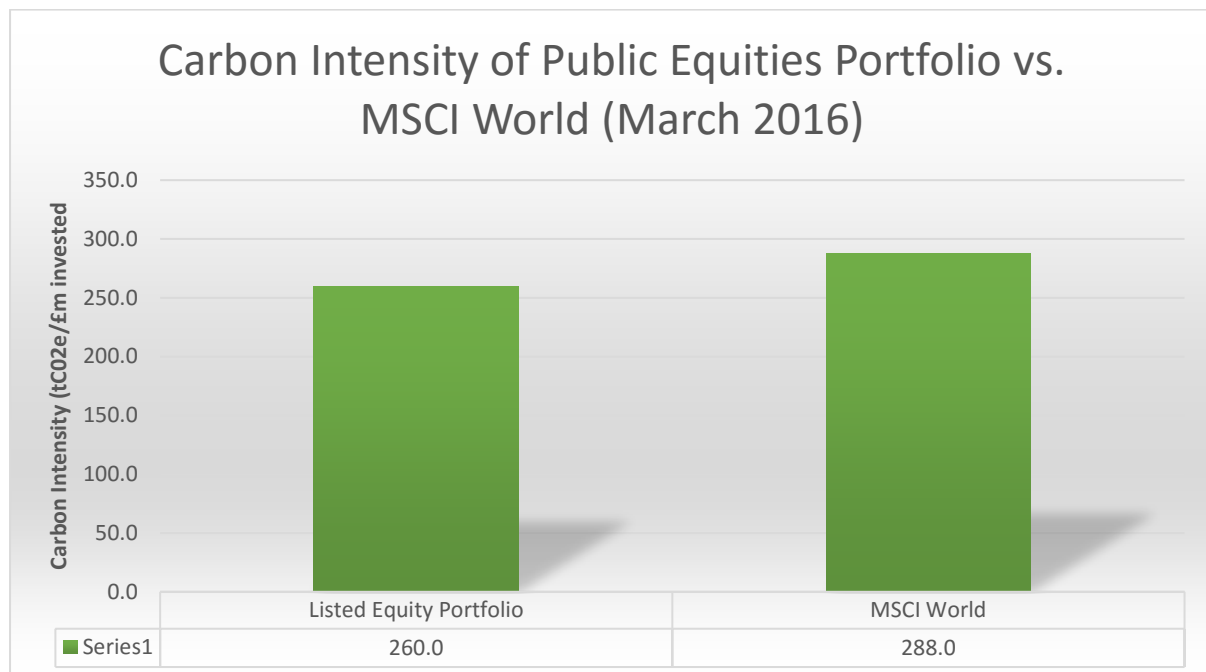


Carbon footprint the USS Public Equity Portfolio 2016

Summary

Universities Superannuation Scheme (USS) is a proud signatory to the Montréal Pledge¹. As part of our commitment to the Pledge, we have calculated the carbon intensity of the USS public equity portfolio and compared it against the MSCI World Index. In addition to being able to estimate a total footprint for public equities against the benchmark, the footprint also enables us to identify and analyse the most carbon intensive companies in each equity portfolio, helping to inform our engagement and voting activity and allowing carbon risk to be integrated into our investment analysis.

The overall footprint of the scheme's public equity portfolios, when assessed on 31 March 2016, was as follows:



For this analysis, carbon intensity is defined as thousands of metric tons of carbon dioxide emitted per million £ invested. On this measure the USS public equity portfolio has a carbon footprint approximately 10% below that of the MSCI World Index). As USS is an active manager, the holdings in its portfolio will change over time as it invests in different companies in line with its fiduciary responsibilities. As a result the USS carbon footprint will also fluctuate over time. In addition as more companies begin to disclose their actual carbon emissions data the MSCI World carbon footprint will change.

The footprint reported for 2016 is not easily comparable to the figure reported in our 2015 Montréal Pledge disclosure. In 2016 we used an external provider, Trucost², to carry out the assessment whereas in 2015 we used internal capability drawing upon data available via Bloomberg. Trucost were used on this occasion to provide the scheme with external verification on the veracity of its approach to carbon footprinting. In addition to the methodologies being incomparable we also adjusted the scope of the assessment to include an externally managed passive portfolio tracking the FTSE All Share index and the inclusion of two internally managed factor based funds.

¹ <http://montrealpledge.org/>

² <https://www.trucost.com/>

On a like-for-like basis Trucost estimate that the carbon intensity of the overall USS Equities Portfolio increased by 11% between 31 March 2015 and 31 March 2016. This is due primarily to the high footprint of the Low Volatility Equity Portfolio which was launched in mid-2015, and is reflected in the assessment for the first time this year. In both cases the USS footprint was below the MSCI World benchmark.

All USS's public equity portfolios are more carbon efficient than their corresponding benchmarks with the exception of the Low Volatility portfolio (a quantitatively driven factor fund). Low Volatility portfolios by their nature have higher allocations to defensive stocks³ such as utilities, and utilities are by far the most carbon intensive stocks in MSCI World.

Calculating carbon intensity allows us to compare the carbon efficiency of companies across different industries in order to identify the companies that make the biggest contribution to the overall carbon intensity of the portfolio. This contribution is a function of a company's weighting within the portfolio and its carbon intensity.

USS will always invest in line with its fiduciary goals (defined in terms of portfolio risk and return) which means that we may invest in companies that increase the scheme's carbon footprint.

Background

USS's public equity portfolio is predominantly internally actively managed selecting individual stocks based on fundamental research and analysis. In addition, we have two internally managed quantitatively driven factor portfolios, Low Volatility and Sustainable Income (this tracks sustainable dividend growth), and an externally managed passive portfolio tracking the FTSE All Share index.

USS has been conducting carbon footprint analysis of its public equity portfolio for a number of years, with external footprints initially undertaken in 2009 and 2013. The external analysis was undertaken by Trucost, a research provider that specialises in the provision of environmental data and carbon footprinting. The trustee now has the capacity to undertake this analysis internally, and the footprint disclosed in 2015 for the Montréal Pledge was undertaken internally using Bloomberg data. In 2016, as part of a broader climate change and carbon project, the scheme again appointed Trucost to calculate the carbon footprint.

Footprinting process

The methodology applied by Trucost for public equities is a standardised approach to footprinting portfolios. In this footprint we have considered the Scope 1 and Scope 2 greenhouse gas (GHG) emissions of investee companies. GHG scopes are defined as per the GHG Protocol Corporate Standard. For the purposes of this analysis, each investee's total absolute GHG emissions is the sum of its annual scope 1 and scope 2 GHG emissions.

This analysis is based on the data that companies report, and sometimes these data contain errors that are not always identifiable. A significant number of public companies now report GHG inventory data in line with accepted good practice guidelines such as the GHG Protocol. Where a company discloses GHG data of sufficient quality and completeness, Trucost assimilates these data into its database and uses them in its footprinting analyses.

Unfortunately, many companies do not yet report and some data have to be estimated by Trucost. In the absence of GHG data, Trucost looks for production data (e.g. for an airline passenger km flown

³ <http://www.investopedia.com/terms/d/defensivestock.asp>

in one year, or for a mining company tonnes of iron ore mined in a year) from which to make an estimate as to the annual GHG emissions. In the absence of any corporate level data from which to make an estimate, Trucost uses its proprietary (input-output) model to estimate GHG emissions. Of the £21,551m invested in public equities at the time of the 2016 footprint, £21,053m was included in the carbon footprinting analysis, which is 97.7% of the total. The data for the remaining 2.3% were not sufficient upon which to make accurate estimations.

There is also a lag in carbon data disclosure by companies such that the current carbon footprint may be based on 2014 data. This is because at the time the analysis was conducted not all companies had reported their 2015 carbon data. It should also be noted that any analysis is only as accurate as the data reported by the companies.

The GHG emissions of an investee company are apportioned to USS based on its ownership of the company, which is calculated here as the value invested in the company divided by the Enterprise Value of the company. Where Enterprise Value is a negative number, Market Value has been used instead.

At total public equity level, the footprint is calculated against the MSCI World Index. It is these numbers that the scheme is disclosing under the Montréal Commitment for 2016.

We are conscious that this analysis has limitations but where it is possible we are always careful to validate our findings through further investigation.

USS use of the data

The most carbon intensive companies in the portfolio can be compared to their peer group to identify if any of USS's holdings are outliers in terms of carbon intensity. The footprinting data provided to each of the equity desks includes their overall footprint vs individual benchmark, and the top ten assets which contribute to this exposure.

An additional benefit of this process is that it allows us to identify these companies and engage with them if they operate in a carbon intensive industry and we think they should be reporting. This is in addition to the support USS has been giving to the Carbon Disclosure Project (CDP) since its inception in 2000.

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