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Low Carbon Indices

London Borough of Hammersmith & Fulham Pension Fund

November 2018

1 Introduction

This paper has been prepared for the Pensions Sub-Committee ("the Sub-Committee") of the London Borough of Hammersmith & Fulham Pension Fund ("the Fund"). The purpose of this paper is to provide the Sub-Committee with information on two low carbon indices, more specifically:

- The MSCI World Low Carbon Target Index; and

- The FTSE All-World ex CW Climate Index.

This paper will also provide details on implementation offerings available for each index through Legal & General for the MSCI index and DWS and StateStreet Global Advisors ("SSgA") for the FTSE Russell index.

2 What are the options?

2.1 MSCI World Low Carbon Target Index

Details

The MSCI Low Carbon indices were developed to address the requirement for investors to target a passive option with a lower 'carbon footprint' than traditional market-cap weighted indices. The MSCI World Low Carbon Target Index is designed to:

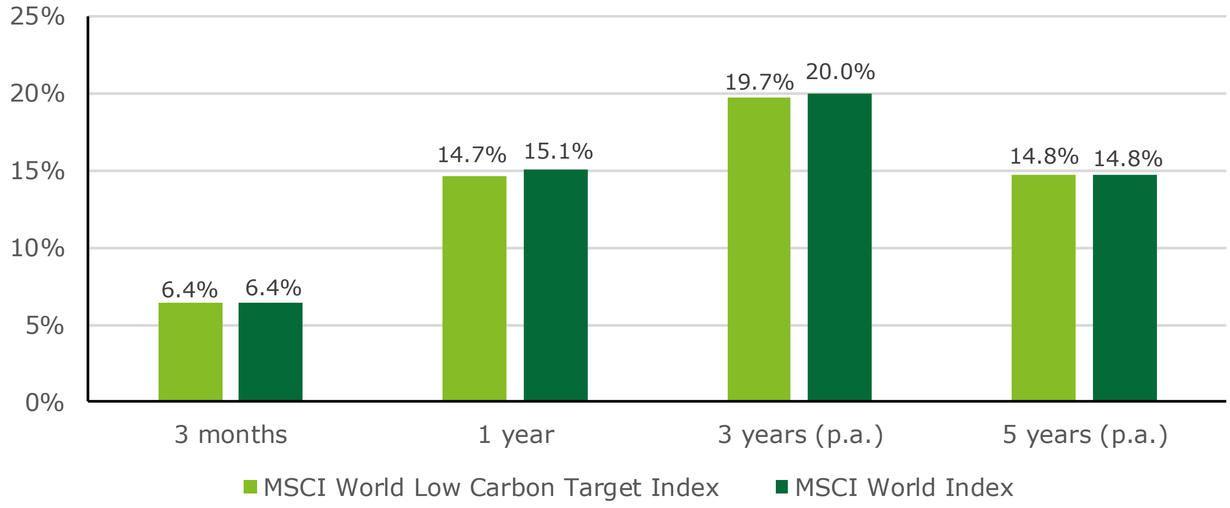
- reduce exposure to carbon emitting companies, measured in current carbon emissions (relative to sales) and potential emission from future fossil fuel reserves (per dollar of market capitalisation); and
- to maintain global equity exposure with close tracking to the MSCI World Index.

The emissions data is produced by MSCI and is based on data from annual reports, corporate social responsibility reports, the Carbon Disclosure Project (an organisation which runs a global disclosure system that enables companies, cities, states and regions to disclose greenhouse gas emissions), oil and gas industry bodies and other relevant third-party sources.

The constituents of the Index are selected from the parent (MSCI World) index using MSCI's optimisation process. This process seeks to minimise the carbon exposure of the constituents of the index relative to the parent index, whilst also aiming for a 0.30% cap on the tracking error. The optimisation process also seeks to limit the extent to which the weightings of the companies, sectors and countries represented in the index differ from the weightings of those companies, sectors and countries in the parent index. The weight of each company in the index will not exceed 20 times its weight in the MSCI World Index and the weight of each country and sector represented in the index will not deviate more than 2% (upwards or downwards) from its weighting in the MSCI World Index (with the exception of the energy sector, where no such constraint is applied).

Performance

Performance of the MSCI World Low Carbon Target Index versus the MSCI World Index is shown in the graph below. The MSCI World Low Carbon Target Index has consistently tracked the MSCI World Index over all periods to 30 September 2018.



Source: MSCI Low Carbon Target Index Factsheet

LGIM MSCI Low Carbon Target Fund

The LGIM fund aims to track the performance of the MSCI World Low Carbon Target Index (less withholding tax where applicable) to within +/- 1.00% p.a. for two years out of three.

The fund employs an index tracking strategy, aiming to replicate the performance of its MSCI based benchmark. LGIM follows a pragmatic approach to managing index funds, either investing directly in the securities of that index, or indirectly through other LGIM funds. The fund may also hold index and single stock futures for efficient portfolio management.

The LGIM MSCI World Low Carbon Target Index Fund has 7 LGPS clients in total (across unhedged and currency hedged share classes), with a total AuM of c. £2.1bn as at 30 September 2018.

The Fund would be subject to the following discounted LCIV flagship Low Carbon fee:

London Borough of Hammersmith and Fulham would be charged:

- an Annual Management Charge (AMC) of 0.02%; and
- On Fund Costs (OFC) of 0.0476%.

This equates to a total of 0.0676% TER, inclusive of license fee.

An additional 2.5bps will be applied to the AMC for currency hedging if required.

2.2 FTSE Russell All-World ex CW Climate Index

Details

The FTSE Russell All-World ex CW Climate index focuses on achieving sustainable returns, taking into account:

- Fossil fuel reserves;
- Operational carbon emissions; and
- Green revenues.

The index places emphasis on being underweight companies with fossil fuel reserves and overweight green revenue companies i.e. companies engaged in the transition to a green economy. Regarding operational carbon emission, the index will seek to be underweight companies with high greenhouse gas emissions.

The FTSE Russell All-World ex CW Climate index selects resources from the parent FTSE Russell All-World index and uses its internal Sustainable Investment Data ("SID") platform to assess the levels of green revenue of each stock. The index aims to collect the broadest possible range of green revenues, with green revenues classified based on the following sub sectors:

- Energy generation;
- Energy equipment;
- Energy management;
- Energy efficiency;
- Operational shift;
- Modal shift;

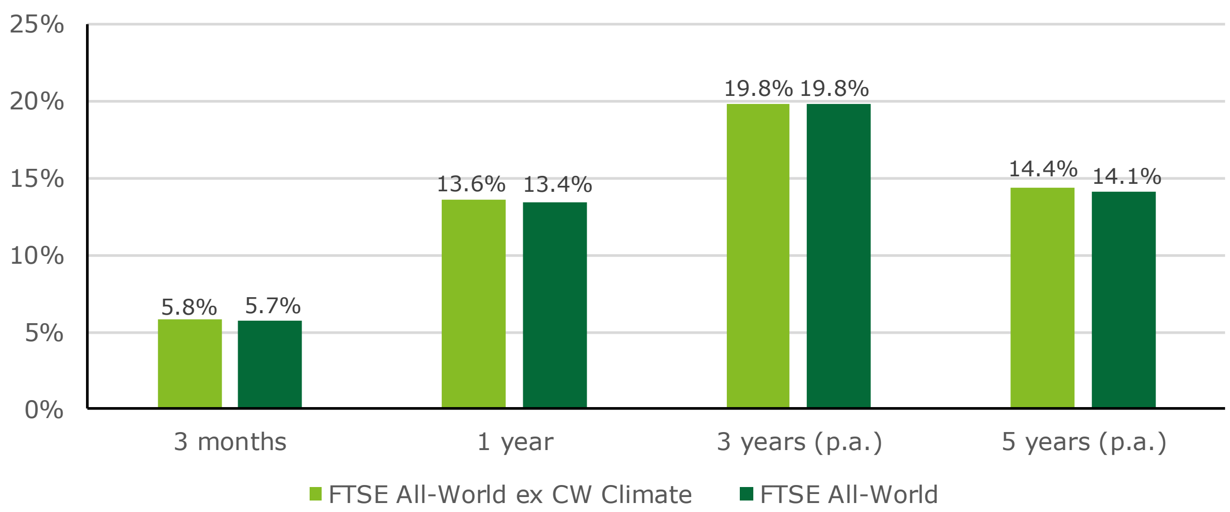
- Environmental resources; and
- Environmental infrastructure.

Information is taken from company annual reports, ESG reports and other sources such as Trucost, who are used as a provider of carbon emission reporting on specific companies. However reporting in this area is not widely formalised and therefore the data can often be inconsistent or incomplete. The SID platform therefore provides estimated green revenues generated by each company and where a range is provided, FTSE will always assume the lower end of this range.

Unlike the MSCI index described above, the FTSE Russell ex CW Climate index does not incorporate a cap on the tracking error regarding the performance or sector/stocks held in the index versus the parent index.

Performance

Performance of the FTSE Russel All-World ex CW Climate Index versus the FTSE Russell All-World Index is shown in the graph below. The FTSE Russel All-World ex CW Climate Index has consistently tracked the FTSE Russell All-World Index over all periods to 30 September 2018.



Source: FTSE Russell All-World ex CW Climate Index Factsheet

Implementers

Legal & General currently do not offer a fund that tracks this index. When setting up any new fund, LGIM must satisfy various criteria such as seed AuM, multi-investor pipeline, product approval and fee discussions. We therefore asked FTSE Russell to propose implementation options that they have used for this index. It should be noted that these terms are indicative and the Fund would need to engage with any implementation provider separately to confirm such terms. FTSE Russell have had the following indicative quotes:

- DWS – 4bps fee subject to a £75k minimum. This does not include operational fees and expenses.
- StateStreet Global Advisors – 8-12bps fee.

With both providers, there would be an additional 2.5bps index fee.

3 Conclusion

3.1 Performance

Performance figures as at 30 September 2018 for the MSCI World Low Carbon Target Index and the FTSE Russell All-World ex CW Climate Index are given in the table below.

Index	3 months (%)	6 months (%)	1 year (%)	3 years p.a. (%)	5 years p.a. (%)
MSCI World Low Carbon Target Index	6.4	14.9	14.7	19.7	14.8
FTSE Russell All-World ex CW Climate Index	5.8	13.3	13.6	19.8	14.4

The MSCI World Low Carbon Target Index has outperformed the FTSE Russell All-World ex CW Climate Index over the 3 months, 6 months and 12 months periods to 30 September 2018. Over the longer periods, the returns of the two indices are similar on a per annum basis with the MSCI index slightly outperforming the FTSE index by 0.4% p.a. over the 5 year period.

3.2 Implementation

DWS are a passive provider based in Europe with over €119bn of passive assets under management however are not commonly used within the UK Pension Scheme market. StateStreet Global Advisors ("SSgA") are one of the key index providers in the UK and Global market. With both managers, there is no pooled fund available and therefore the Fund would need to open a standalone mandate with the provider.

The Fund's current passive equity allocation is with LGIM and therefore moving to the MSCI Low Carbon fund would not involve any on-boarding documentation or set-up work. There is also the benefit of a preferential fee agreement with the London CIV. The Sub-Committee should look to understand to what extent LGIM could move the mandate in-specie, and therefore to what extent transition cost savings could be achieved from this approach.

3.3 Overall view

As we outlined in our previous paper to the Sub-Committee, "Carbon Exposure", there is the theory to suggest that carbon intensive companies will be negatively impacted as society moves towards a 'greener', low-carbon world. We believe that it is hard to predict when this change may happen, with there being very little historic evidence to suggest that adopting a more "carbon aware" approach to investment delivers better risk adjusted returns. That said, we do believe that any carbon strategy must focus on those investments that are likely to benefit from a low carbon regulatory environment and the Fund should seek to gain exposure to such assets, as well as avoiding those that are likely to be negatively impacted.

The main difference between the FTSE Russell All-World ex CW Climate Index and the MSCI World Low Carbon Target Index is that FTSE are taking green revenues into account, looking for overweight exposure to companies that are generating green revenues. However, given the lack of formal reporting requirements to report on carbon emissions, information is often inconsistent, incomplete and lacking in quality. Therefore FTSE's data collection process is very manual and data interpretation is more time consuming than we would usually see with a passive approach (which should be largely rules based). We expect this to change in the future as reporting requirements become more formalised.

For the reasons above, as well as taking into account implementation, product availability and fees, we feel that the MSCI Low Carbon Target Fund with LGIM is a more appropriate lower carbon option for the Fund.

Risk Warnings

- Past performance is not necessarily a guide to the future.
- The value of investments may fall as well as rise and you may not get back the amount invested.
- Income from investments may fluctuate in value.
- Where charges are deducted from capital, the capital may be eroded or future growth constrained.
- Investors should be aware that changing investment strategy will incur some costs.
- Any recommendation in this report should not be viewed as a guarantee regarding the future performance of the products or strategy.

Our advice will be specific to your current circumstances and intentions and therefore will not be suitable for use at any other time, in different circumstances or to achieve other aims or for the use of others. Accordingly, you should only use the advice for the intended purpose.

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