

ISS-Ethix 

Climate Solutions

Carbon Footprint Report 2018: **OPM - *Private Equity Fund***

ISS-Ethix Climate Solutions

<http://www.issgovernance.com/esg>

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HIGHLIGHTS

51,591 tCO₂e

The 2017 Scope 1 & 2 financed emissions (tCO₂e) of the *Private Equity Fund* compared with 288,415 tCO₂e for the URTH Index benchmark.

255,885 tCO₂e

The 2017 Scope 1, 2 & 3 financed emissions (tCO₂e) of the *Private Equity Fund* compared with 1,170,131 tCO₂e for the URTH Index benchmark.

17%

Of companies in the *Private Equity Fund* disclose their emissions, compared to 74% in the URTH Index benchmark.

42%

Is the contribution to overall emissions by the highest emitter of the portfolio, Berkshire Hathaway.

82%

Is the amount that the *Private Equity Fund* is less emissions- intense than the URTH Index benchmark.

99%

With an allocation of 90%, the financial sector is the biggest contributor (99%) to the *Private Equity Fund* emissions.

Executive Summary

ISS-Ethix Climate Solutions assessed the climate impact of OPM's *Private Equity Fund* as of 31st December 2017. In this assessment, the Scope 1 & 2 financed emissions were 51,591 tCO₂e for the *Private Equity Fund*, and 288,415 tCO₂e for the URTH Index benchmark.

The portfolio outperformance in comparison to benchmark, is attributed to the nature of companies in the portfolio. Majority of the companies in portfolio stem from Financial sector, which makes portfolio much less emission intensive in comparison to the benchmark.



The largest contributors to the emissions of the portfolio are Berkshire Hathaway, Aurelius Equity and Leucadia National which are responsible for 42%, 22% and 13% of the emissions, respectively.

1. Introduction

The following assessment is the annual review of the companies in the OPM *Private Equity Fund*, benchmarked against the URTH Index.

In Section 2, the key themes and trends in the sustainable finance universe in relation to climate change are reviewed, analysed and discussed. Recent and overarching global initiatives such as the Taskforce on Climate-Related Financial Disclosures (TCFD), the Paris Agreement and scenario analysis have a significant impact on climate-related topics within investment, and so they are useful to include in the overall analysis. An understanding of these themes ensures that investors are best placed to make informed decisions regarding their approach to climate change issues.

Section 3 covers the findings from the Carbon Footprint assessment.

The report concludes with Section 4, covering opportunities for next steps. Reading this report is an important first step in increasing knowledge and understanding of climate related issues, but moving forward, there are practical steps that investors can take.

In the Appendix, introductions, explanations and methodologies of the carbon footprint assessment can be found.

2. Key trends in the global market

This section highlights the major trends that have occurred throughout 2017 in the climate and investment field. It includes initiatives and trends that might have taken place prior to 2017, but experienced new milestones or updates during the year. The topics covered include specific events that have taken place with their respective outcomes, alongside themes around governance and regulation, a significant influencer of climate and investment market behaviour.

2.1 The Paris Agreement and Conferences of Parties (COP22 and COP23)

Two years on from the Paris Agreement at COP21, the international climate change scene has moved on significantly. Since the landmark event in 2015, there have been two further COPs focused on global approaches to, and national government strategies for, climate change. These come in conjunction with other events including the annual New York climate week and the December 2017 One Planet conference hosted by France President Emmanuel Macron in Paris.

Having entered into force on November 4th, 2016 with 55 Parties accounting for 55% of total global greenhouse gas (GHG) emissions, the Paris Agreement (as of January 2018) stands at 172 ratified parties. Having achieved global ratification, the focus of COP events and global climate discussions is now fully focused on the 'how'. This 'how' deals with countries putting their Nationally Determined Contributions¹ (NDCs) into action and the extent to which the aggregation of those NDCs contribute towards the 2 degrees target. This was demonstrated at COP22 in Marrakech and COP23 in Bonn, with discussions on the Paris "rulebook", which establishes the technical rules and processes required to fulfil the Paris Agreement, with the deadline for the finalised rulebook being COP24 in late 2018. The question for countries to answer during COP22 and COP23 was the extent to which they are meeting their NDCs covering two aspects – financing climate change mitigation (such as through green investment vehicles) and implementing carbon emissions reductions (including changes in national energy policy for example).

2.2 Progress on Decarbonisation Efforts

Three underlying levers exist to address low-carbon objectives: *improving energy efficiency, reducing carbon intensity of electricity and the end-use of energy by corporates*. Progress in key technologies needed for the low-carbon transition as tracked by the International Energy Agency (IEA)² has so far been insufficient, with many sectors currently failing to develop or deploy the necessary technologies.

One tool considered important for decarbonisation efforts is carbon pricing. In practical terms, carbon pricing can take two overarching forms (with hybrids often utilised) – a carbon tax and cap-and-trade system. In Europe, the EU Emissions Trading System (ETS) is used as a continent-wide cap-and-trade scheme, with national carbon taxes in countries such as France and the UK. Due to the influence of the UK, Brexit is seen as a risk to the stability and pricing levels of the ETS.

¹ NDCs are the commitments of countries, specifying their contribution towards achieving the international climate goal

² http://www.oecd-ilibrary.org/energy/iea-technology-roadmaps_22182837

2.3 Disclosure, Reporting Standards and Frameworks

Having previously been viewed as a laggard, the financial sector is now seeing an unprecedented commitment to climate leadership by taking prominent roles in international climate initiatives. The topic of climate change and investment is gathering increasing attention from stakeholders and the primary ask to the financial sector is to provide transparency on climate risk and impact by means of disclosure. Figure 1 below shows a selection of the main initiatives in the field.

Location	Initiative	Description	Owner	Requirement	Status
Global	Task Force on Climate-related Financial Disclosure (TCFD)	Voluntary, consistent climate-related financial risk disclosures for use by companies in providing information to investors and other stakeholders.	Self-governance	Voluntary	In place
	Portfolio Decarbonization Coalition (PDC)	Coalition of investors committing to decarbonizing their investment portfolios	Self-governance	Voluntary	In place
	Montréal Pledge	The Pledge formalizes commitment to the PDC, mobilizing investors to measure, disclose and reduce their footprints.	Self-governance	Voluntary	In place
	ISO 14097	Framework and principles for assessing and reporting investments and financing activities linked to climate change.	Self-governance	Voluntary	Expected
	Asset Owners Disclosure Project (AODP)	A ranking of climate financial disclosures of pension funds, insurers, sovereign wealth funds and endowments.	Civil Society	Voluntary	In place
Europe (EU)	IORP II	EU pensions directive with specific content on climate change requirements.	Regulator	Mandatory	In place
	High Level Expert Group (HLEG)	A body of 20 experts advising the European Commission on how to better integrate sustainability considerations in the EU's financial policy framework.	Regulator	TBD	Expected
France	Article 173 of the Energy Transition Law	Legislation on mandatory carbon disclosure requirements for listed companies and carbon reporting for institutional investors.	Regulator	Mandatory	In place
California	Climate Risk Carbon Initiative	Initiative to evaluate the degree to which California investors are impacted by effects of climate change on the economy.	Regulator	Voluntary	In place
Sweden	National Pension (AP) funds	Co-ordination of carbon footprint reporting for portfolios within the AP funds.	Self-governance	Voluntary	In place
Switzerland	Ministry of the Environment (FOEN)	Report by the FOEN to Swiss pension funds and insurers testing the climate compatibility of portfolios.	Regulator	Voluntary	Announced
Netherlands	Platform Carbon Accounting Financials (PCAF)	Collaboration of 12 Dutch financial institutions to develop an accounting methodology for emissions.	Self-governance	Voluntary	In place

Figure 1 - Climate change and investment initiatives³

³ Source: ISS-Ethix Climate Solutions

Carbon Footprint Analysis:

OPM Private Equity Fund

Benchmark:

URTH Index

Key Data

Total Investment Analyzed (USD)	2,367,162,901
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	OPM Private Equity Fund	URTH Index	Difference
Total Emissions Scope 1&2 (tCO ₂ e)	51,591	288,415	236,824
Total Emissions Scope 1,2 & 3 (tCO ₂ e)	255,885	1,170,131	914,246
Percentage of Disclosing Holdings	17.4%	74.2%	-57 p.p.*
Emissions (tCO ₂ e) per million USD Invested	21.8	121.8	82.1%
Weighted Average Carbon Intensity (tCO ₂ e) / Revenue USD Million	32.8	198.5	83.5%
Financed Emissions (tCO ₂ e) / Financed Revenue USD Million	36.8	225.4	83.7%

*p.p. - Percentage Points

The burning of fossil fuels contributes to the increase of carbon dioxide in the atmosphere, which causes Climate Change. By investing in a company, you also finance the emission of greenhouse gases. The OPM Private Equity Fund is associated with greenhouse gas emissions of 51,591 tonnes per year (Scope 1 & 2). The same amount invested in the URTH Index yields emissions of 288,415 tonnes per year (Scope 1 & 2).

Unless stated otherwise, the emissions used in this assessment are Scope 1 & 2 emissions that were reported in 2016, for the financial year 2015. In order calculate ownership %, ISS-Ethix Climate Solutions used the market cap data for each company from the same date as holdings assessed.

Summary of 10 Largest Portfolio Companies

Company	Sector	Portfolio Weight	Data Source	% of Total Emissions	Financed Emission (tCO ₂ e)
APOLLO GLOBAL MANAGEMENT	Financials	9.25%	APPROX	0.35%	180.7
AURELIUS EQUITY OPPORTUNITI	Financials	8.70%	APPROX	22.45%	11,584.6
BLACKSTONE GROUP LP/THE	Financials	8.49%	APPROX	0.12%	63.5
KKR & CO LP	Financials	7.80%	APPROX	0.13%	68.4
CARLYLE GROUP/THE	Financials	7.15%	APPROX	0.35%	182.9
EURAZEO SA	Financials	6.87%	CDP	0.00%	1.2
BERKSHIRE HATHAWAY INC-CL /	Financials	6.19%	APPROX	41.87%	21,600.9
BROOKFIELD ASSET MANAGE-CL	Financials	6.16%	APPROX	3.91%	2,016.1
3I GROUP PLC	Financials	4.99%	CDP	0.01%	3.6
INDUS HOLDING AG	Industrials	4.25%	CDP	0.02%	8.9

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Carbon Footprint Analysis

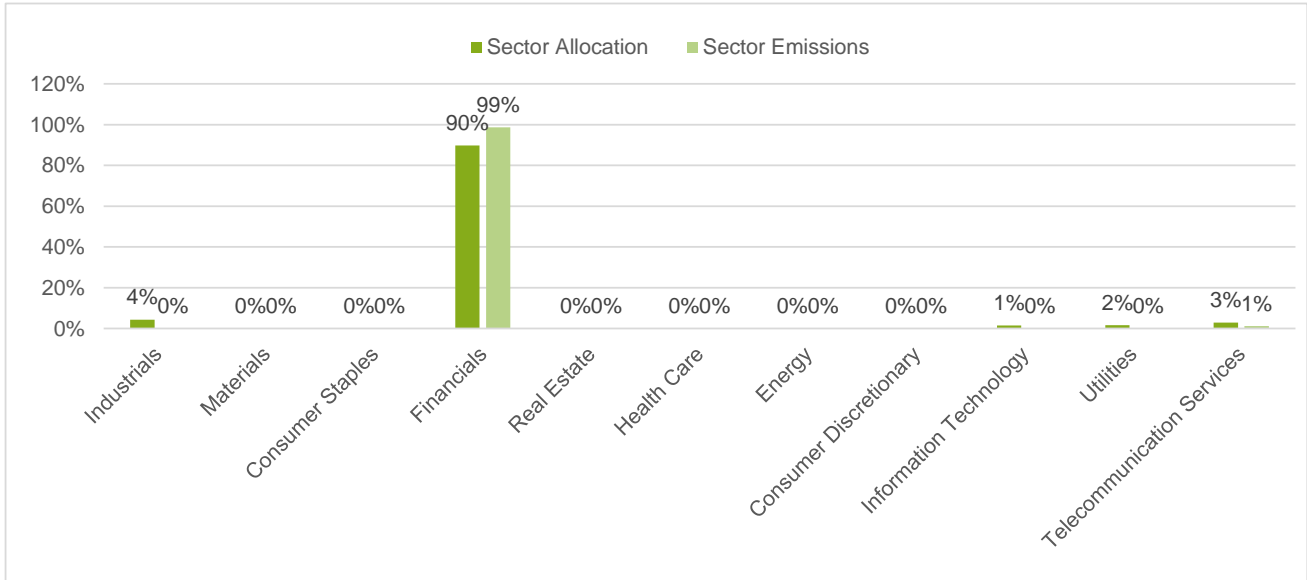
OPM Private Equity Fund

Benchmark:

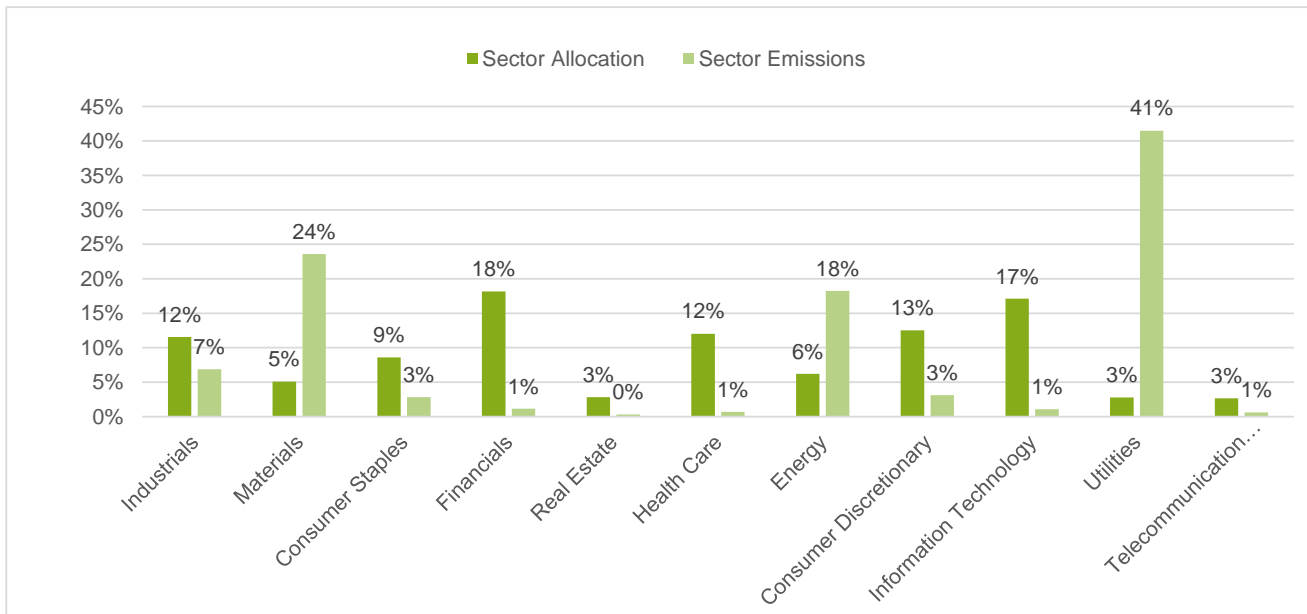
URTH Index

Sector Analysis

The greenhouse gas emissions of OPM Private Equity Fund stem from different sectors. The light coloured bar shows what percentage of total emissions stems from what sector. The dark coloured bar shows what percentage of OPM Private Equity Fund is invested in what sector. You can see that certain sectors are much more greenhouse gas intensive than others.



In comparison, the sector allocation and the emission allocation of URTH Index can be found below.



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Carbon Footprint Analysis

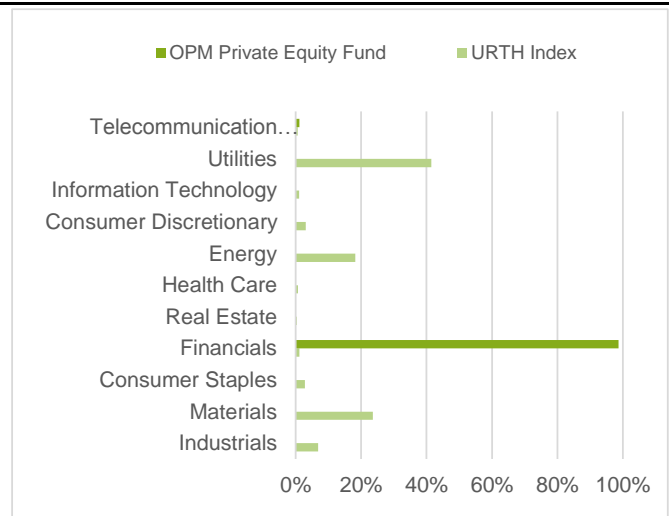
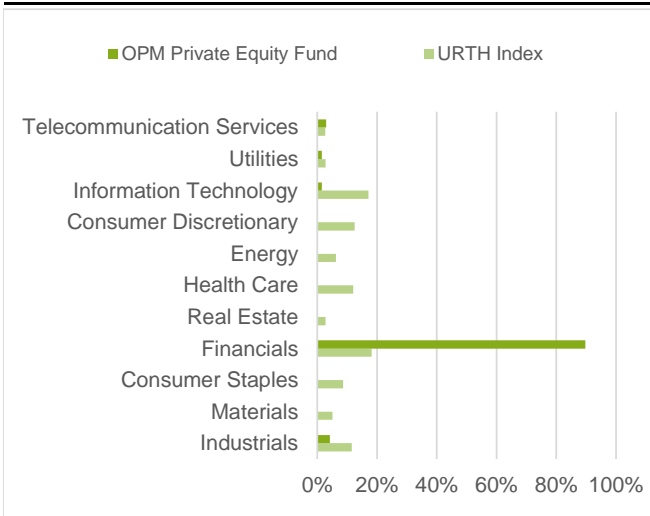
OPM Private Equity Fund

Benchmark:

URTH Index

Sector Allocation

Sector Emissions

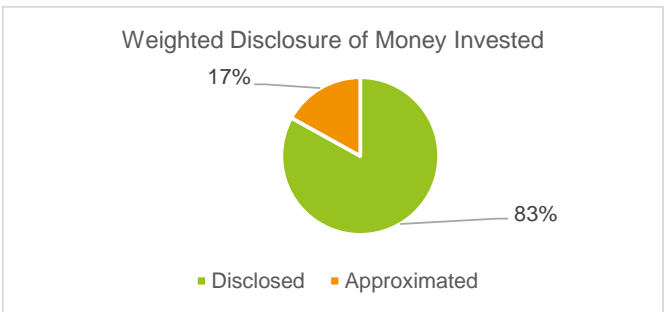
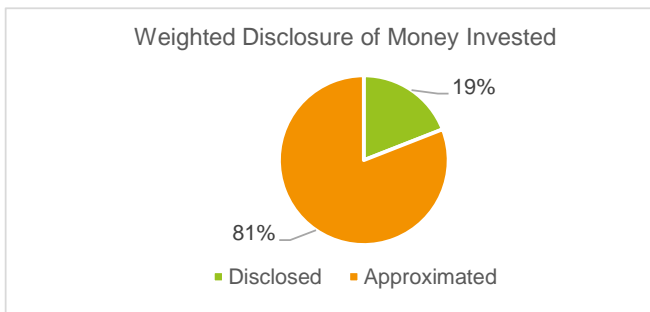
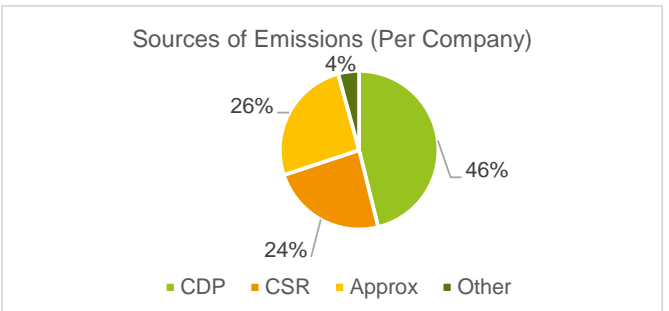
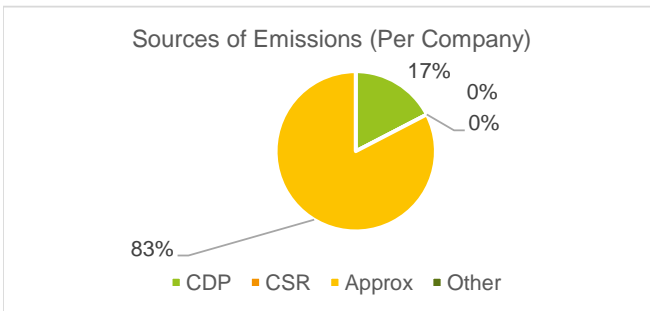


Disclosing Companies

The following graphs analyse the amount of companies in the OPM Private Equity Fund and the URTH Index that disclose their emissions.

OPM Private Equity Fund

URTH Index



Carbon Footprint Analysis

OPM Private Equity Fund

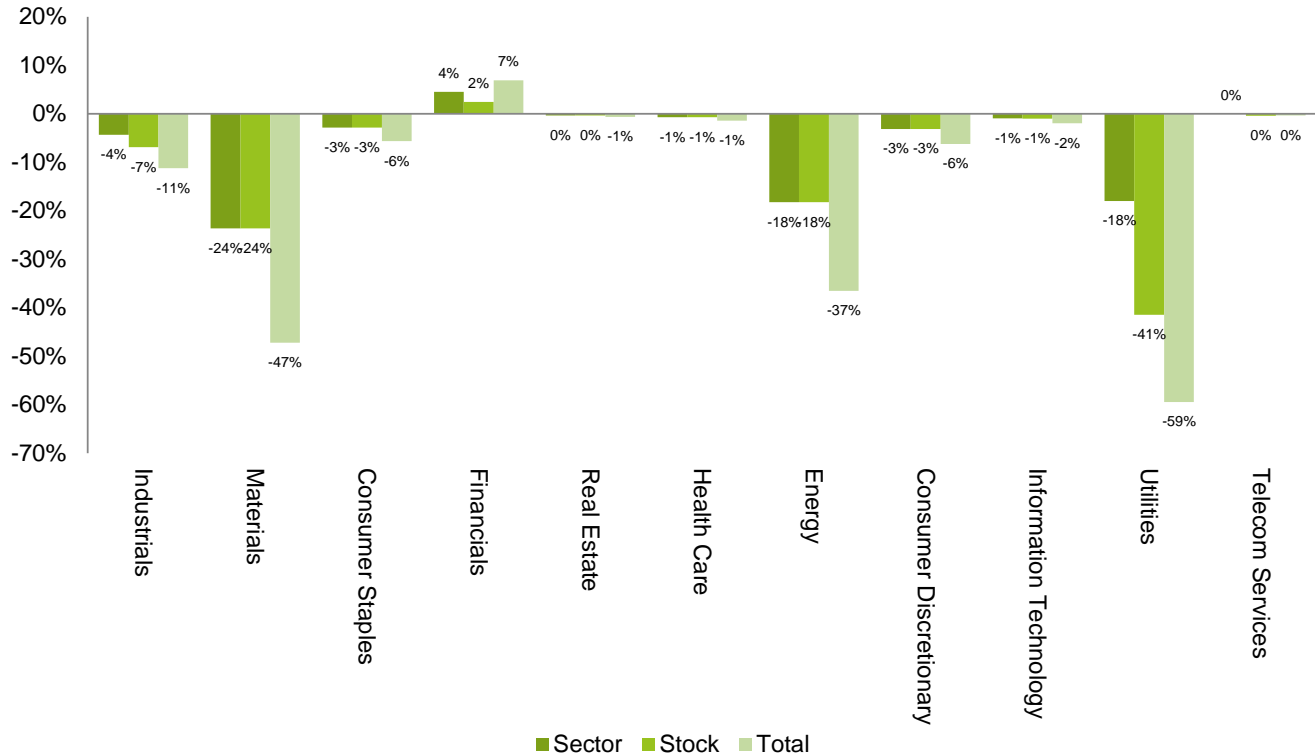
Benchmark:

URTH Index

Attribution Analysis

	Sector Allocation Contribution to Out / Underperformance (tCO ₂ e)	Sector Allocation Contribution to Out / Underperformance (%)	Stock Selection Contribution to Out / Underperformance (tCO ₂ e)	Stock selection Contribution to Out / Underperformance (%)
Industrials	-12,528	-4.3%	-19,814	-6.9%
Materials	-68,098	-23.6%	-68,098	-23.6%
Consumer Staples	-8,150	-2.8%	-8,150	-2.8%
Financials	12,971	4.5%	7,008	2.4%
Real Estate	-933	-0.3%	-933	-0.3%
Health Care	-2,029	-0.7%	-2,029	-0.7%
Energy	-52,637	-18.3%	-52,637	-18.3%
Consumer Discretionary	-8,998	-3.1%	-8,998	-3.1%
Information Technology	-2,763	-1.0%	-2,900	-1.0%
Utilities	-51,848	-18.0%	-119,520	-41.4%
Telecommunication Services	198	0.1%	-1,247	-0.4%
Cash/Others	-	0.0%	-	0.0%
Total	-194,813	-67.5%	-277,317	-96.2%
		Interaction Effect:	235,306	81.6%
		Portfolio Carbon Outperformance		-236,824 tCO₂e
		Portfolio Carbon Outperformance (%)		-82.1%
Invested Money		Explanation: The outperformance of the portfolio is based on the effect of over/underweighting certain sectors and selecting more/less carbon intense stocks within each sector for each of the underlying funds. A positive number indicates that the effect increased the greenhouse gas emissions (in tonnes of GHG Emissions) and a negative number indicates a decreasing effect. In this case, the sector weighting of OPM Private Equity Fund helped save 194,813 tonnes of GHG emissions, while the stock selection helped save 277,317 tonnes of GHG emissions versus the benchmark. This explains a 67.5% carbon outperformance through sector weighting and 96.2% carbon outperformance by stock picking.		
Portfolio	2,367,162,901			
Benchmark	2,367,162,901			
Total Emissions (tCO₂e)				
Portfolio	51,591			
Benchmark	288,415			
Difference	-236,824			

Attribution Analysis - Graph



Largest Contributors to Portfolio Emissions

Company	Weight in Portfolio	Financed Emissions (tCO ₂ e)	% of Total	Source
BERKSHIRE HATHAWAY INC-CL A	6.19%	21,601	41.87%	Approx
AURELIUS EQUITY OPPORTUNITIE	8.70%	11,585	22.45%	Approx
LEUCADIA NATIONAL CORP	2.62%	6,767	13.12%	Approx
WENDEL	4.25%	5,873	11.38%	Approx
ONEX CORPORATION	3.89%	2,083	4.04%	Approx
BROOKFIELD ASSET MANAGE-CL A	6.16%	2,016	3.91%	Approx
SOFTBANK GROUP CORP	2.95%	613	1.19%	Disclosed
INVESTOR AB-B SHS	2.25%	231	0.45%	Approx
CARLYLE GROUP/THE	7.15%	183	0.35%	Approx
APOLLO GLOBAL MANAGEMENT - A	9.25%	181	0.35%	Approx

Carbon Footprint Analysis

OPM Private Equity Fund

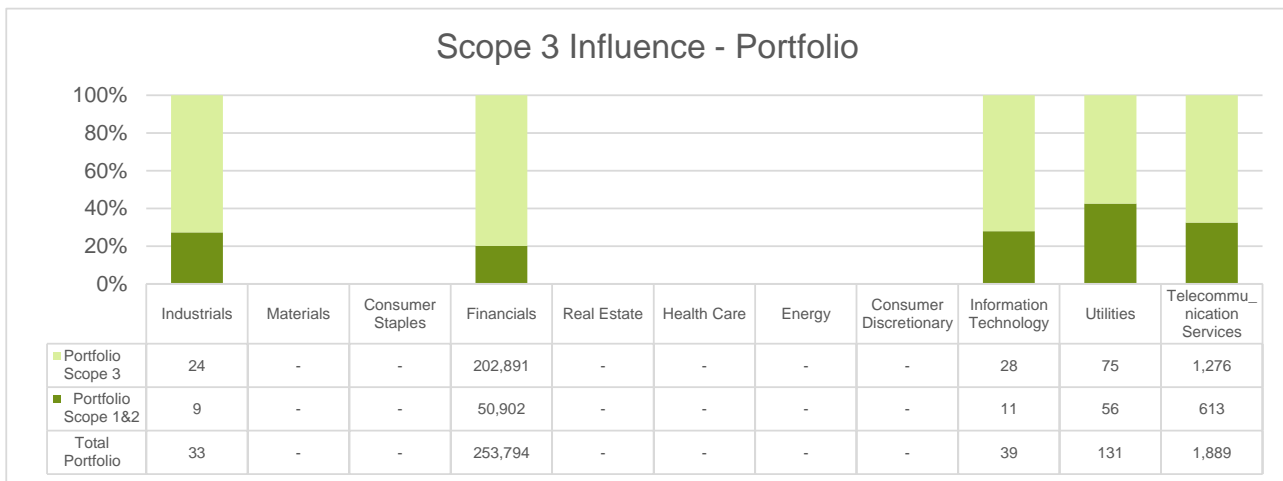
Benchmark:

URTH Index

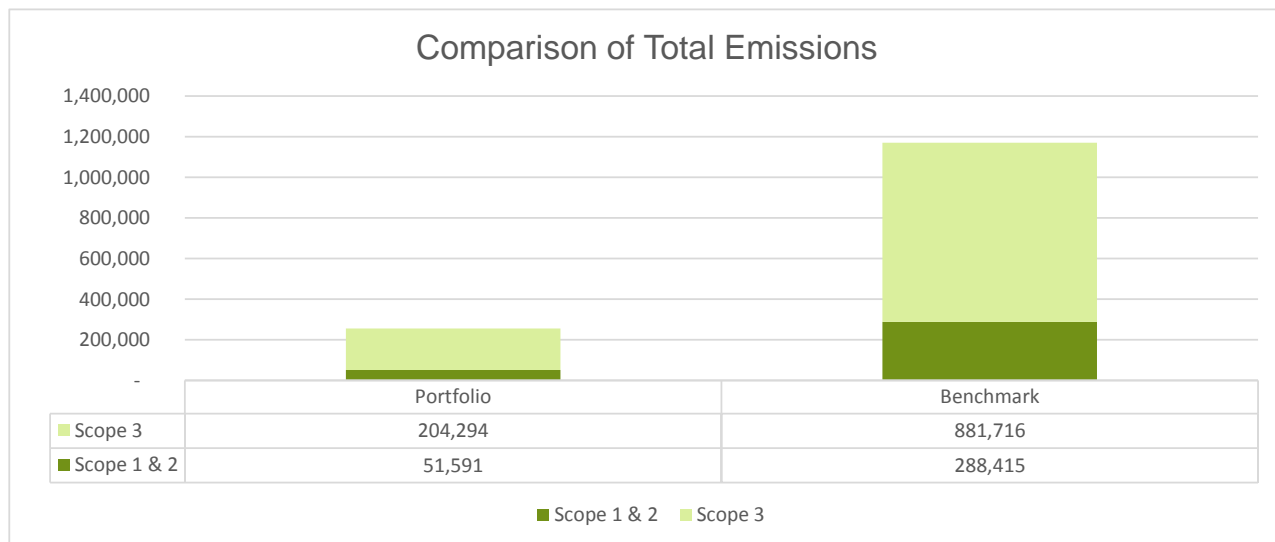
Scope 3 Overview

The following section provides a top-down approximation of the financed Scope 3 emissions from each sector. The purpose of this analysis is to give an order of magnitude of the emissions in the portfolio on a sector level, and should not be used as a basis for comparing two individual companies.

The following graph shows the financed Scope 1&2 emissions, in relation to the Scope 3 emissions of the portfolio.



The graph below compares the total emissions (including Scope 1, Scope 2 and Scope 3) between portfolio and benchmark



Appendix 1 - Carbon Footprint Description and Methodology

Investing in carbon-intensive companies through public equity, private equity, debt instruments or other investment vehicles, means participating in the extraction and usage of fossil fuels and the attendant GHG emissions of these companies. Some institutional and many individual investors remain unaware of the level of their exposure to high GHG emitting companies, and that by investing, they have a voice in the future of these investee companies.

The investment GHG footprint provides the basis for constructing or optimizing an investment portfolio based on GHG exposure, as well as reporting and positioning an investment product or house towards stakeholders concerned about carbon. It is easily replicable at intervals for measuring progress on portfolio climate impact.

General Approach

To conduct a carbon footprint analysis, an understanding of GHG emissions is essential. The definition is based on the GHG Protocol which splits emissions into three scopes: Scope 1, Scope 2 and Scope 3:

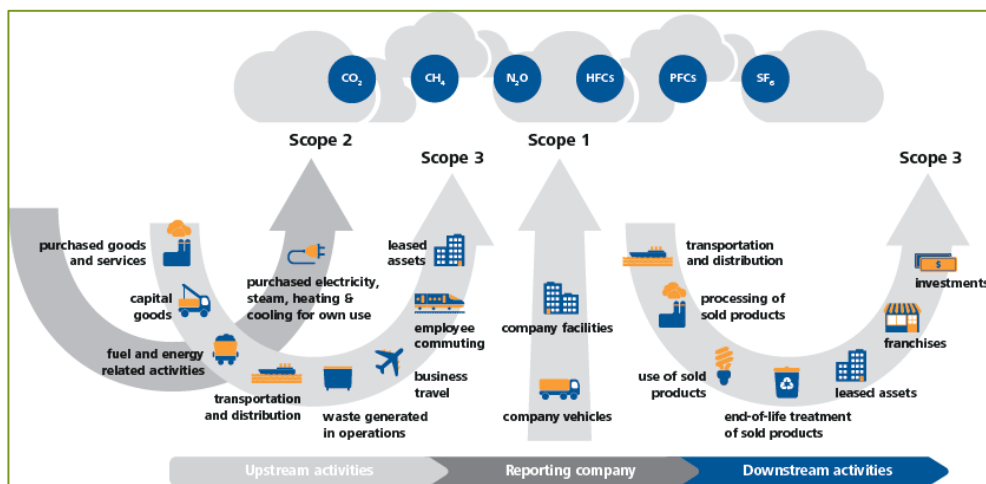


Figure 2 - GHG protocol breakdown of Scopes 1, 2 and 3⁴

As shown in Figure 4, CO₂ is not the only GHG, with others including (but not limited to) methane and nitrous oxide are also extremely impactful on the environment. Due to the high level of CO₂ compared with other GHGs, for calculations, the impact of all other GHGs are converted to CO₂ and as such is labelled as CO₂e (carbon dioxide equivalent).

⁴ Source: GHG Protocol - <http://www.ghgprotocol.org/sites/default/files/ghgp/standards/ghg-protocol-revised.pdf>

The ISS-Ethix Climate Solutions methodology⁵ was developed over three years in collaboration with researchers from the Swiss Federal Institute of Technology (ETH Zurich) and includes about 800 sector and subsector-specific models, allowing ISS-Ethix Climate Solutions to calculate the GHG emissions of companies based on those criteria that are most relevant to their line of business. Figure 5 summarises the process:



Figure 3 - ISS-Ethix Climate Solutions carbon footprint methodology

Intensity Metrics

There are three main metrics used by investors for presenting the results of a carbon footprint. Each metric serves a different purpose and there is currently no standard that unifies investors' efforts.

In this study, ISS-Ethix Climate Solution presents the results with a primary intensity metric of emissions per Euro invested, attributing an investment's share of emissions to the investor. Secondary metrics are provided as well and described below. The first two of which comply with various requirements including the Swedish AP funds, whilst the third is a specific disclosure requirement from the TCFD.

- **Emissions per EUR invested:** This metric displays how many tonnes of CO₂e an investor is exposed to in relation to the respective ownership in a certain company or portfolio. The metric describes the carbon intensity of an investment amount. A company's share of emissions is determined by the value of shares held / the company's market cap. For this to be accurate, it is important to control for the date of measurement and financial information used.

⁵ ISS-Ethix Climate Solutions' unique and powerful approach to measuring the carbon footprint of investment portfolios delivers the largest coverage in the market and high levels of data quality and transparency. The analysis can be both standardized or customized to your specific needs.

$$\frac{\sum_{i=1}^n \frac{\text{Investment into Company}_i}{\text{Market Cap of Company}_i} \times \text{Total Emissions of Company}_i}{\text{Total Investment (Portfolio)}}$$

- **Emissions / Revenue:** This metric combines the above emissions / EUR invested approach with a similar logic to determine an investor's share of revenue and subsequently dividing one by the other. By linking to revenue, the metric aims at describing the greenhouse gas efficiency of the underlying companies.

$$\frac{\sum_i^n \frac{\text{Investment into Company}_i}{\text{Market Cap of Company}_i} \times \text{Total Emissions of Company}_i}{\sum_i^n \frac{\text{Investment into Company}_i}{\text{Market Cap of Company}_i} \times \text{Revenue of Company}_i}$$

- **Weighted Average Carbon Intensity:** This is a metric derived directly from the TCFD recommendations, which cites it as a key metric for investors to use in their disclosure. The metric calculates a portfolio's exposure to carbon-intensive companies, expressed in tCO₂e/€m revenue. As stated by the TCFD, "this metric measures exposure to carbon-intensive companies and addresses many of the concerns raised. For example, the metric can be applied across asset classes, is fairly simple to calculate, and does not use investors' proportional share of total equity and, therefore, is not sensitive to share price movements." The TCFD goes on to explain the methodology of the metric – "Scope 1 and Scope 2 GHG emissions are allocated based on portfolio weights (the current value of the investment relative to the current portfolio value), rather than the equity ownership approach. Gross values should be used."

$$\sum_i^n \frac{\text{Investment into Company}_i}{\text{Total Investment (Portfolio)}} \times \frac{\text{Total Emissions of Company}_i}{\text{Total Revenue of Company}_i}$$

Explanatory power and limitations

The 800 subsector-specific models developed by ISS-Ethix Climate Solutions, with their combination of financial and company information, have been proven to yield highly reliable results. However, extrapolating from reporting companies to non-reporting ones still carries a degree of uncertainty. While any model remains necessarily an approximation, the methodology of ISS-Ethix Climate Solutions provides a robust and improved reduction of such uncertainty and attempts to apply the best possible techniques to deal with today's situation. In the long run, only full and externally verified climate impact disclosure by an ever-increasing number of companies themselves will be able to further eliminate this uncertainty.

A second limitation is the availability of relevant data. The process of analysing the activities of a company is time consuming and presents several challenges, not least of which include interpreting nonstandard reports and a lack of available information. The model is thus always dependent on the quality of the available data.

ISS-Ethix Climate Solutions' data quality and coverage

- › Largest coverage of companies for the entire investible equity universe (approximately 25,000 companies)
- › Thorough approximation based on 800 sub-sector specific models
- › Largest coverage of Scope 3 data, both on upstream (supply chain) and downstream (product usage) emissions
- › Trust and quality ratings for every data point
- › Multi-asset class coverage – including private equity, all types of fixed income, real estate and infrastructure

Appendix 2: Contact

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ABOUT ISS

Founded in 1985 as Institutional Shareholder Services Inc., ISS is the world's leading provider of corporate governance and responsible investment (RI) solutions for asset owners, asset managers, hedge funds, and asset service providers. ISS' solutions include: objective governance research and recommendations; RI data, analytics, advisory and research; end-to-end proxy voting and distribution solutions; turnkey securities class-action claims management (provided by Securities Class Action Services, LLC); and reliable global governance data and modeling tools. Clients rely on ISS' expertise to help them make informed corporate governance and responsible investment decisions. For more information, please visit www.issgovernance.com.

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