

# A Major Step Forward for Scope 3 Carbon Emissions

Reporting on Scope 3 emissions continues to raise challenges for companies and institutional investors due to poor disclosure, data incompleteness, and high volatility. Yet, these indirect upstream and downstream emissions tend to represent the largest share of a company's – or a portfolio's – total emissions. This report highlights the importance of comparable Scope 3 estimates when managing climate change risks facing investment portfolios.

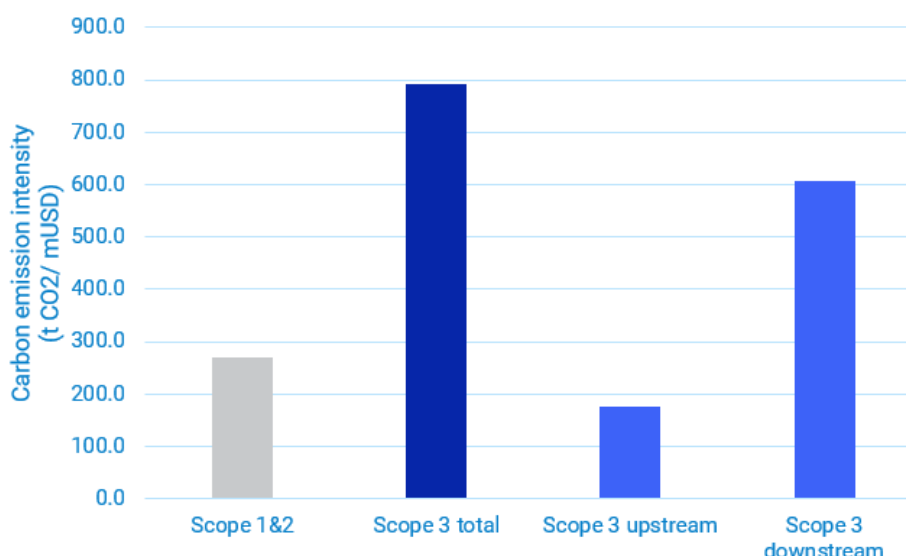
**David Bokern, Brendan Baker, Antonios Panagiotopoulos**

**October 2020**

## Scope 3 Carbon Emissions – Why Are They Important?

As highlighted in the recommendations from the TCFD,<sup>1</sup> institutional investors continue to be asked to use carbon footprints as a key metric to understand and manage climate related risks and opportunities. The focus has traditionally been on direct emissions (Scope 1) and indirect emissions from purchased electricity (Scope 2), but we have seen investors increasingly realize that the indirect emissions associated with a company's upstream and downstream value chain could carry significant risk and warrant closer investigation.<sup>2</sup> These "Scope 3" emissions include the emissions emitted during the use of a company's sold products (e.g. a mining company's coal being burnt in another company's power plant) and those emitted through the transportation and distribution of products from its upstream suppliers. Scope 3 emissions can oftentimes dominate a company's overall carbon footprint (see Exhibit 1).

**Exhibit 1. Weighted Average Carbon Intensity (WACI) of the MSCI ACWI Investable Market Index (IMI), as of July 10, 2020**



Source: MSCI ESG Research LLC

This paper identified three major concerns that institutional investors grapple with surrounding Scope 3 emissions data: **limited coverage, incompleteness in reporting, and high volatility.**

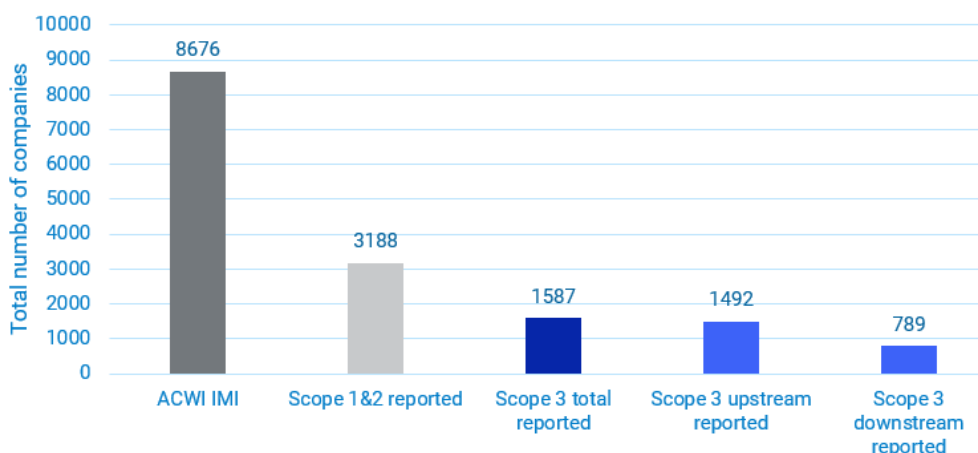
<sup>1</sup> Task Force on Climate-related Financial Disclosures (TCFD), "Implementing the Recommendations of the Task Force on Climate-related Financial Disclosures", June 2017.

<sup>2</sup> For example: Aviva Investors, "Evidence and ambition: The new rules of engagement on climate change", June 2020; Investor Group on Climate Change (IGCC), "Climate Action 100+ investors seek net zero business strategies through company engagement", October 2019.

## Scope 3 Disclosure Remains Low

Corporate reporting on Scope 3 emissions has been sparse and incomplete, posing challenges for institutional investors that aim to consider broader value chain climate risks into their climate related risk management and portfolio construction practices. While the proportion of companies that report on Scope 1 and 2 emissions has increased from 27% of the MSCI ACWI IMI as of March 2018, to 32% as of March 2020, only 18% reported Scope 3 emissions (see Exhibit 2).

**Exhibit 2. Disclosure of reported and estimated emissions for all scopes, constituents of the MSCI ACWI IMI as of July 10, 2020**



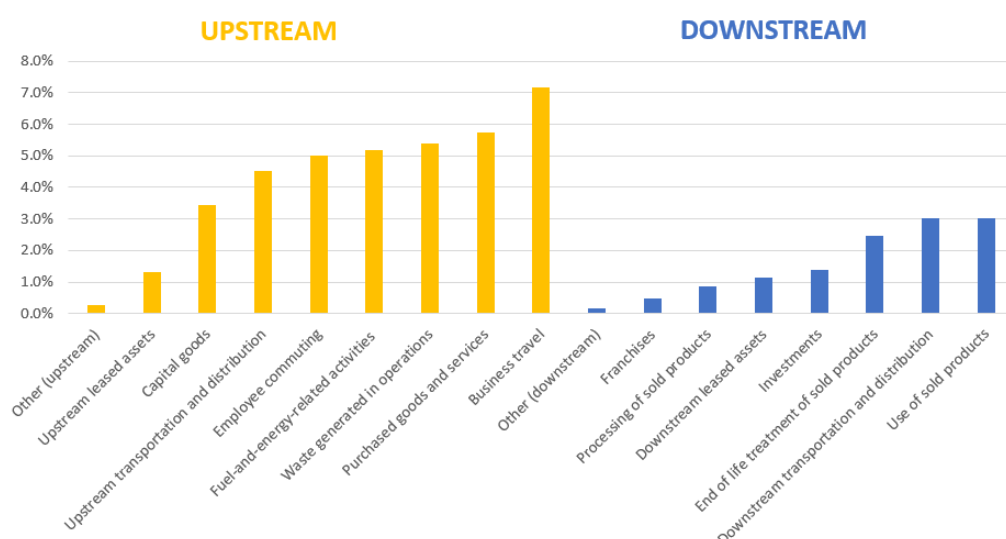
Source: MSCI ESG Research LLC

Despite Scope 3 reporting remaining quite low, there are promising signs that companies are increasing their reporting of indirect carbon emissions. For example, upstream Scope 3 disclosure increased to 17% of the MSCI ACWI IMI in 2018 (from 15% in 2017), and downstream scope 3 disclosure increased to 9% in 2018 (from 7% in 2017).

## Scope 3 Reporting is Incomplete

From a more granular perspective, Scope 3 emissions can be broken down into categories, each relating to different parts of the corporate value chain (e.g. “business travel”, “use of sold products” or “purchased goods and services”) as shown in Exhibit 3 below.

**Exhibit 3. Share of companies reporting emissions in each scope 3 category, of the MSCI ACWI IMI as of March 31, 2020**



Source: MSCI ESG Research LLC

We note stronger corporate disclosure levels on upstream Scope 3 categories such as business travel, purchased goods and services, waste, energy-related activities and employee commuting, but very low disclosure on other categories, including those associated with downstream emissions. A company’s upstream value chain is linked to input costs and its downstream value chain is linked to revenue and top-line growth. Therefore, transparency around the size and category of Scope 3 carbon emissions may yield valuable insight when evaluating the financial impacts of climate change policies or the strength of companies’ own risk management practices. For example, a company’s strategy to reduce its upstream supply chain Scope 3 emissions could markedly vary compared to reducing its Scope 3 emissions stemming from its highly emitting products.

### Example – incomplete reporting

A hypothetical portfolio of 100 stocks includes ten oil and gas companies. All ten of these companies reported on their “business travel” upstream emissions, yet only two of them reported on their “use of sold products” downstream emissions. This could lead one to substantially underestimate the other eight companies’ Scope 3 emissions (potentially by

a factor of 2000<sup>3</sup>) and, consequently, the portfolio's total Scope 3 carbon footprint. With carbon regulation increasing and a growing downward demand pressure on typical oil and gas products, such underestimation could misdirect investment strategies that intend to reduce carbon emissions or capture opportunities by investing in companies with leading carbon management practices.

## Scope 3 Reported Data is Volatile

Furthermore, we identified high levels of year-on-year volatility in company-reported emissions. Even considering annual fluctuations in business activities that can have an impact on corporate carbon emissions and their variability, volatility of a significant proportion of the sample appears to be very high; more than 400 companies' Scope 3 emissions fluctuated by 50-100% between 2018 and 2017.

### Example – data volatility

The example below in Exhibit 4 demonstrates a company with consistent reporting on emissions from purchased goods and services, business travel and employee commuting, yet intermittent reporting on emissions from investments. This is quite common, as measuring emissions from investments comes with great uncertainties. This reporting issue creates large swings in company emissions and subsequent footprints, directly impacting company-level and portfolio-level footprint analysis, and adding to the complexities that institutional investors face when using such Scope 3 data.

**Exhibit 4. Reported emissions for a large insurance company (anonymized) [Mt/Yr].**

Category	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
Purchased goods and services	0.16	0.17	0.16	0.11	0.13
Business travel	0.56	0.61	0.65	0.63	0.65
Employee commuting	0.71	0.81	0.83	0.87	1.09
Investments		120.3			42.9
<b>Total</b>	<b>1.43</b>	<b>121.9</b>	<b>1.64</b>	<b>1.61</b>	<b>44.8</b>

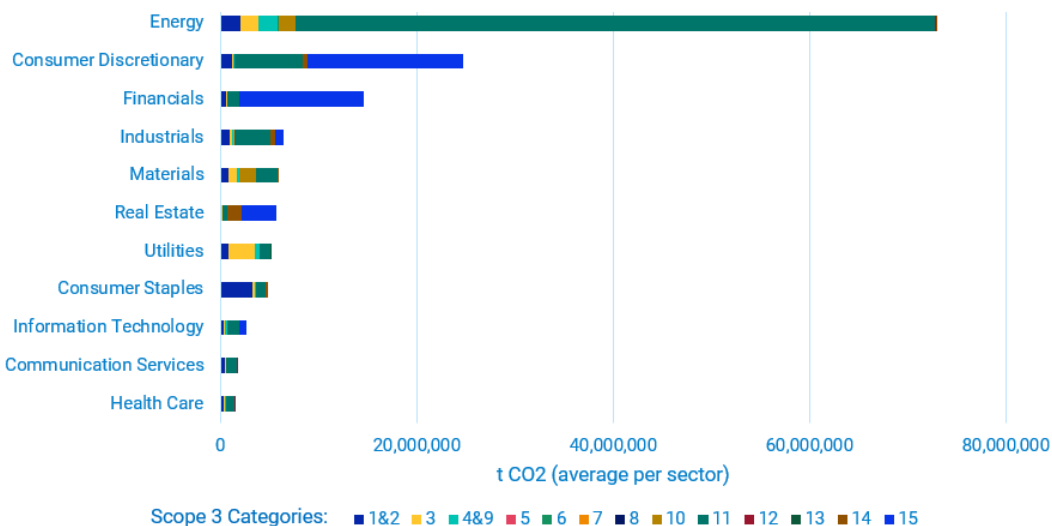
## Scope 3 Estimation Dataset

Our recently launched Scope 3 estimation model provides an opportunity for institutional investors to integrate comparable Scope 3 emissions into their investment processes. Moreover, these estimates can shed light on which specific areas of the value chain are contributing most to a company or portfolio's emissions.

<sup>3</sup> According to our estimates, the average oil and gas company's "use of sold products" Scope 3 emissions were 82,780,501 t CO<sub>2</sub> eq, while those associated with "business travel" were 41,346 t CO<sub>2</sub> eq., based on analysis of MSCI ACWI IMI constituents as of July 10, 2020.

The Scope 3 data set contains estimated Scope 3 emissions for over 8,800 companies, across all GICS<sup>®4</sup> sectors and all 15 Scope 3 categories. As an example, Exhibit 5 below highlights the exposure of each GICS sector to each category of Scope 3 emissions. This can provide insight into the potential risks facing each sector and the location of these risks within their upstream or downstream value chain, while overcoming the challenges associated with company-reported data.

**Exhibit 5. Estimated Scope 3 emissions per category for each GICS sector of the MSCI ACWI IMI, as of July 10, 2020**



Source: MSCI ESG Research LLC

<sup>4</sup> The Global Industry Classification Standard (GICS) was developed by and is the exclusive property of MSCI and Standard & Poor's.

## Contact us

clientservice@msci.com

### AMERICAS

Americas	1 888 588 4567 *
Atlanta	+ 1 404 551 3212
Boston	+ 1 617 532 0920
Chicago	+ 1 312 675 0545
Monterrey	+ 52 81 1253 4020
New York	+ 1 212 804 3901
San Francisco	+ 1 415 836 8800
São Paulo	+ 55 11 3706 1360
Toronto	+ 1 416 628 1007

### EUROPE, MIDDLE EAST & AFRICA

Cape Town	+ 27 21 673 0100
Frankfurt	+ 49 69 133 859 00
Geneva	+ 41 22 817 9777
London	+ 44 20 7618 2222
Milan	+ 39 02 5849 0415
Paris	0800 91 59 17 *

### ASIA PACIFIC

China North	10800 852 1032 *
China South	10800 152 1032 *
Hong Kong	+ 852 2844 9333
Mumbai	+ 91 22 6784 9160
Seoul	00798 8521 3392 *
Singapore	800 852 3749 *
Sydney	+ 61 2 9033 9333
Taipei	008 0112 7513 *
Thailand	0018 0015 6207 7181 *
Tokyo	+ 81 3 5290 1555

\* = toll free

## About MSCI

MSCI is a leading provider of critical decision support tools and services for the global investment community. With over 50 years of expertise in research, data and technology, we power better investment decisions by enabling clients to understand and analyze key drivers of risk and return and confidently build more effective portfolios. We create industry-leading research-enhanced solutions that clients use to gain insight into and improve transparency across the investment process.

## About MSCI ESG Research Products and Services

MSCI ESG Research products and services are provided by MSCI ESG Research LLC, and are designed to provide in-depth research, ratings and analysis of environmental, social and governance-related business practices to companies worldwide. ESG ratings, data and analysis from MSCI ESG Research LLC are also used in the construction of the MSCI ESG Indexes. MSCI ESG Research LLC is a Registered Investment Adviser under the Investment Advisers Act of 1940 and a subsidiary of MSCI Inc.

To learn more, please visit [www.msci.com](http://www.msci.com).

## Notice and disclaimer

This document and all of the information contained in it, including without limitation all text, data, graphs, charts (collectively, the "Information") is the property of MSCI Inc. or its subsidiaries (collectively, "MSCI"), or MSCI's licensors, direct or indirect suppliers or any third party involved in making or compiling any Information (collectively, with MSCI, the "Information Providers") and is provided for informational purposes only. The Information may not be modified, reverse-engineered, reproduced or disseminated in whole or in part without prior written permission from MSCI. All rights in the Information are reserved by MSCI and/or its Information Providers.

The Information may not be used to create derivative works or to verify or correct other data or information. For example (but without limitation), the Information may not be used to create indexes, databases, risk models, analytics, software, or in connection with the issuing, offering, sponsoring, managing or marketing of any securities, portfolios, financial products or other investment vehicles utilizing or based on, linked to, tracking or otherwise derived from the Information or any other MSCI data, information, products or services.

The user of the Information assumes the entire risk of any use it may make or permit to be made of the Information. NONE OF THE INFORMATION PROVIDERS MAKES ANY EXPRESS OR IMPLIED WARRANTIES OR REPRESENTATIONS WITH RESPECT TO THE INFORMATION (OR THE RESULTS TO BE OBTAINED BY THE USE THEREOF), AND TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, EACH INFORMATION PROVIDER EXPRESSLY DISCLAIMS ALL IMPLIED WARRANTIES (INCLUDING, WITHOUT LIMITATION, ANY IMPLIED WARRANTIES OF ORIGINALITY, ACCURACY, TIMELINESS, NON-INFRINGEMENT, COMPLETENESS, MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE) WITH RESPECT TO ANY OF THE INFORMATION.

Without limiting any of the foregoing and to the maximum extent permitted by applicable law, in no event shall any Information Provider have any liability regarding any of the Information for any direct, indirect, special, punitive, consequential (including lost profits) or any other damages even if notified of the possibility of such damages. The foregoing shall not exclude or limit any liability that may not by applicable law be excluded or limited, including without limitation (as applicable), any liability for death or personal injury to the extent that such injury results from the negligence or willful default of itself, its servants, agents or sub-contractors.

Information containing any historical information, data or analysis should not be taken as an indication or guarantee of any future performance, analysis, forecast or prediction. Past performance does not guarantee future results.

The Information should not be relied on and is not a substitute for the skill, judgment and experience of the user, its management, employees, advisors and/or clients when making investment and other business decisions. All Information is impersonal and not tailored to the needs of any person, entity or group of persons.

None of the Information constitutes an offer to sell (or a solicitation of an offer to buy), any security, financial product or other investment vehicle or any trading strategy.

It is not possible to invest directly in an index. Exposure to an asset class or trading strategy or other category represented by an index is only available through third party investable instruments (if any) based on that index. MSCI does not issue, sponsor, endorse, market, offer, review or otherwise express any opinion regarding any fund, ETF, derivative or other security, investment, financial product or trading strategy that is based on, linked to or seeks to provide an investment return related to the performance of any MSCI index (collectively, "Index Linked Investments"). MSCI makes no assurance that any Index Linked Investments will accurately track index performance or provide positive investment returns. MSCI Inc. is not an investment adviser or fiduciary and MSCI makes no representation regarding the advisability of investing in any Index Linked Investments.

Index returns do not represent the results of actual trading of investible assets/securities. MSCI maintains and calculates indexes, but does not manage actual assets. Index returns do not reflect payment of any sales charges or fees an investor may pay to purchase the securities underlying the index or Index Linked Investments. The imposition of these fees and charges would cause the performance of an Index Linked Investment to be different than the MSCI index performance.

The Information may contain back tested data. Back-tested performance is not actual performance, but is hypothetical. There are frequently material differences between back tested performance results and actual results subsequently achieved by any investment strategy.

Constituents of MSCI equity indexes are listed companies, which are included in or excluded from the indexes according to the application of the relevant index methodologies. Accordingly, constituents in MSCI equity indexes may include MSCI Inc., clients of MSCI or suppliers to MSCI. Inclusion of a security within an MSCI index is not a recommendation by MSCI to buy, sell, or hold such security, nor is it considered to be investment advice.

Data and information produced by various affiliates of MSCI Inc., including MSCI ESG Research LLC and Barra LLC, may be used in calculating certain MSCI indexes. More information can be found in the relevant index methodologies on [www.msci.com](http://www.msci.com).

MSCI receives compensation in connection with licensing its indexes to third parties. MSCI Inc.'s revenue includes fees based on assets in Index Linked Investments. Information can be found in MSCI Inc.'s company filings on the Investor Relations section of [www.msci.com](http://www.msci.com).

MSCI ESG Research LLC is a Registered Investment Adviser under the Investment Advisers Act of 1940 and a subsidiary of MSCI Inc. Except with respect to any applicable products or services from MSCI ESG Research, neither MSCI nor any of its products or services recommends, endorses, approves or otherwise expresses any opinion regarding any issuer, securities, financial products or instruments or trading strategies and MSCI's products or services are not intended to constitute investment advice or a recommendation to make (or refrain from making) any kind of investment decision and may not be relied on as such. Issuers mentioned or included in any MSCI ESG Research materials may include MSCI Inc., clients of MSCI or suppliers to MSCI, and may also purchase research or other products or services from MSCI ESG Research. MSCI ESG Research materials, including materials utilized in any MSCI ESG Indexes or other products, have not been submitted to, nor received approval from, the United States Securities and Exchange Commission or any other regulatory body.

Any use of or access to products, services or information of MSCI requires a license from MSCI. MSCI, Barra, RiskMetrics, IPD and other MSCI brands and product names are the trademarks, service marks, or registered trademarks of MSCI or its subsidiaries in the United States and other jurisdictions. The Global Industry Classification Standard (GICS) was developed by and is the exclusive property of MSCI and S&P Global Market Intelligence. "Global Industry Classification Standard (GICS)" is a service mark of MSCI and S&P Global Market Intelligence.

MIFID2/MIFIR notice: MSCI ESG Research LLC does not distribute or act as an intermediary for financial instruments or structured deposits, nor does it deal on its own account, provide execution services for others or manage client accounts. No MSCI ESG Research product or service supports, promotes or is intended to support or promote any such activity. MSCI ESG Research is an independent provider of ESG data, reports and ratings based on published methodologies and available to clients on a subscription basis. We do not provide custom or one-off ratings or recommendations of securities or other financial instruments upon request.

Privacy notice: For information about how MSCI collects and uses personal data, please refer to our Privacy Notice at <https://www.msci.com/privacy-pledge>.