Scope 3: Omission impossible

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Measuring decarbonisation throughout the economy requires a logical and systematic approach. Including Scope 3 emissions is vital in our view. Yet a significant improvement in dataset quality is required to derive meaningful long-term investment insights.

At a glance:

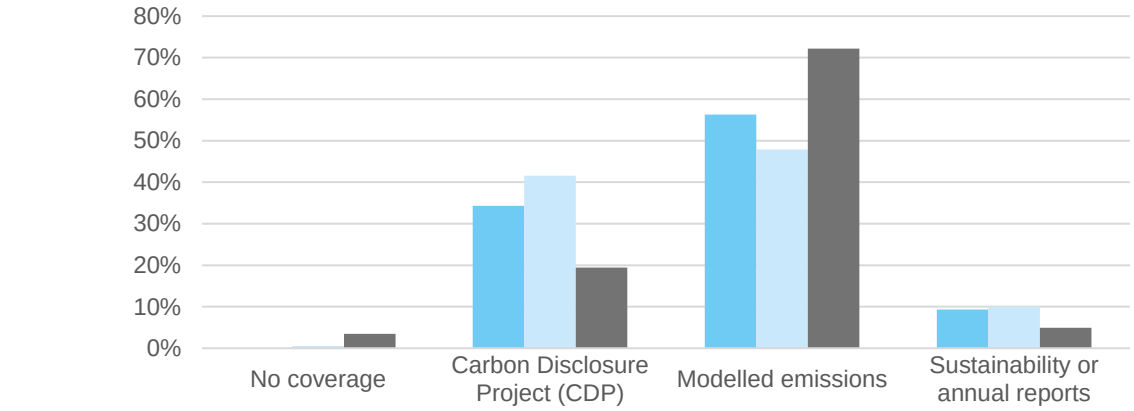
- Scope 3 covers all the emissions *not* accounted for in the direct emissions from company operations (Scope 1) and the indirect emissions from generating energy purchased to run those operations (Scope 2)
- Scope 3 is a vital tool for measuring decarbonisation progress at a systems level and inadequate disclosure may blind stakeholders to efficient decarbonisation options and transition risk.
- Yet today's data quality makes the use of Scope 3 challenging for investors. Company trends and relative positioning are more likely to be driven by methodology than the real world
- Lower Scope 3 emissions relative to a peer is just as likely to mean 'less complete disclosure' as it is 'better for climate'
- We are advocating for improved and standardised Scope 3 disclosure to facilitate comparisons between similar companies, and the same company across time, allowing for meaningful insights to be drawn

Climate change has become a defining factor in companies' long-term prospects. It is a systemic risk that is impacting – and will exponentially impact – our entire global economy without exception[1]. For investors with diversified long-term portfolios, climate risk poses a substantial investment risk in our view. As fiduciaries of our clients' assets, we have a responsibility to advocate on their behalf and mitigate financial risks. Measuring the risk is a crucial first step to allow investors to price climate risks – and therefore allocate capital – appropriately. In our view carbon emissions largely remain an under-priced risk for investors. Fewer than 1 in 4 tonnes of greenhouse gas emissions are subject to a carbon tax, while many investors are placing increasing emphasis on understanding the size of this 'under-priced' problem. The growing focus on the calculation and disclosure of corporate emissions is therefore unsurprising.

Measuring corporate emissions is challenging. They are defined in three scopes: Scope 1 covers direct emissions from operations, Scope 2 the indirect emissions from the generation of purchased energy to run those operations and Scope 3 all the other indirect emissions across a company's value chain. Estimates suggest that Scope 3 accounts for over 80% of total emissions in the median MSCI World company.

[1] WEF Forum – the Global Risk Report 2022

Chart 1: Source of Scope 3 carbon data for companies in the FTSE All World Index (split by company count, index weight and proportion of total Scope 3 greenhouse gas (GHG) emissions)



	No coverage	Carbon Disclosure Project (CDP)	Modelled emissions	Sustainability or annual reports
Scope 3 GHG	0%	34%	56%	9%
Index weight	1%	42%	48%	10%
Company count	3%	19%	72%	5%

Source: ISS, Carbon Disclosure Project (CDP), LGIM analysis. Carbon data as at 31/12/2021

Scope 1: Uncontroversial and essential

Scope 1 emissions are directly under a company's control. They are still complex to measure but are subject to well-understood and generally agreed calculation methodologies. Importantly, assuming we were to apportion all emissions appropriately, we could add up the Scope 1 emissions of all the companies in the world and not 'double count' a single tonne.

Scope 2: The dangers of fictional accounting

Scope 2 emissions are more complex. They cover, mostly, the emissions generated to produce the power and heat that a company consumes. Most of the time, a company's Scope 2 emissions are the Scope 1 emissions of another company – typically a utility. Scope 2 emissions are *moderately* within the control of the company – they can choose how much energy to consume and may have some indirect control over the emissions intensity of their supplier.

Yet Scope 2 emissions are not *directly* controlled by each company (setting aside certain specific actions – like putting solar panels on their factory roof), which has led to the emergence of an 'alternative' basis for measuring Scope 2 emissions. This allows companies to report a different Scope 2 emissions number using technical contracting devices like forward purchases of renewable electricity, which is sometimes called reporting under a 'market-based' approach (rather than 'location-based'). We find these contracting devices pretty unhelpful; they do not represent the real emissions associated with the company's activity, allow companies to substantially overstate the impact they have on real-world emissions, and require highly uncertain assumptions that lead to

'multiple counting' of the reductions in real-world emissions that have occurred[2]. Wherever possible, in our internal analysis of emission profiles we ignore 'market-based' reported numbers and look only at the *real,* 'location-based' number.

Scope 3: Controversial and complex, but crucial

But what about all the other emissions that result from a company's activities? Those generated by their suppliers, or by the transportation of their goods to their warehouse are also vital to understand – simply because a company outsources manufacturing does not mean they are not financially exposed to the risks associated with the carbon emissions generated during the manufacturing process. There are also emissions associated with activities downstream – for example when products are transported to the consumer. These emissions are referred to as 'Scope 3'. Ignoring, for instance, the emissions from a company that outsources the manufacturing of their products (which fall under Scope 3), whilst counting the emissions of a company that controls their own manufacturing processes, would clearly leave an investor with a badly distorted view of their exposure to carbon risks.

Despite this, the disclosure of Scope 3 emissions has elicited much debate[3], while this year's SEC climate ruling[4] has strong proponents against it, including many of our peers[5]. We disagree with these voices. If investors are to be able to properly price climate risk and opportunities, and allocate capital efficiently, there needs to be widespread disclosure of Scope 3 emissions.

By calculating Scope 3 emissions, corporates will deepen their understanding of the highest-emitting parts of their value chain and gain important insight into their exposure to transition risks. This should inform better decision making and foster robust risk management practices and strategies to cope with, and capitalise on, a net zero transition.

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[2] This double counting can be understood by conducting a simple thought experiment. If we assume a world with only four companies – two consumers of electricity – who each consume 50 units of electricity – and two producers. Producer A produces 100 units of coal-fired electricity and generates one tonne of emissions per unit. Producer B produces zero units of renewable electricity, and if it did, would produce electricity at zero tonnes per unit. This means 100 tonnes of emission and 100 units of electricity. Now let's assume that Consumer A signs a 'power purchase agreement' with Producer B, to finance the generation of 50 units of renewable electricity. Real-world emissions would fall by 50% (a fantastic outcome). Under a 'market based' reporting convention, Consumer A would report a Scope 2 emissions reduction of 50 tonnes. Consumer B would report a reduction in emissions however of 25 tonnes (because 50 units of coal fired electricity have been displaced). Therefore, under a 'market-based' standard, a real-world reduction of 50 tonnes results in a reduction in reported emissions of 75. This double counting shows – in our opinion – that market-based emissions numbers are fictional and should be disregarded by investors.

[3] Responsible Investor – Scope 3 disclosure rules become US battleground

[4] The rule proposed by the SEC requires companies to significantly increase their reporting on climate risk including required material Scope 3 disclosures.

[5] E.g. BlackRock's SEC consultation response which states: *'we respectfully disagree with the Commission's approach to requiring disclosure of Scope 3 emissions in SEC filings.'*

The importance of Scope 3 emissions goes beyond company-specific risks. Addressing the *systemic* risks posed by the climate crisis requires a systemic response. Improved understanding and transparency of the emissions profiles of suppliers' emissions across the value chain may create system-wide pressure forcing all actors to transition to low carbon operations. Customer voices can be hugely impactful. Large companies that integrate emissions into routine supplier due diligence can create waves of change. All associated smaller and private companies, often framed as beyond the scope of stewardship teams, will likely respond to this pressure, and reduce emissions.

Proper calculation and reporting of Scope 3 emissions will – like focusing on location-based rather than market-based Scope 2 – help defend against corporate actors that 'game' the system by outsourcing emissions-intensive activities to third parties. Only if Scope 3 is properly disclosed will investors be able to adjust for any perceived reductions in Scope 1 and 2 achieved via outsourcing. A GHG reporting baseline that ignores Scope 3 will – as defined by leading voices – preclude net zero. This jeopardises both corporate and investor science-based commitments.

We are not alone in viewing disclosure of Scope 3 emissions as essential:

- The Science Based Targets Initiative (SBTi) require Scope 3 for approved targets if they make up over 40% of total emissions
- The Task Force on Climate-Related Financial Disclosures (TCFD) strongly encourages the disclosure of Scope 3
- Standard setters such as the International Sustainability Standards Board's (ISSB) and the European Financial Reporting Advisory Group (EFRAG), align on mandatory Scope 3 reporting
- Climate Action 100+ integrate Scope 3 expectations into their core requirements for company engagements
- Net Zero Asset Manager (NZAM) signatories are expected to account for material portfolio Scope 3 emissions

The challenge is in the details

There are a number of complex challenges around Scope 3 emissions that require careful handling.

1. There is no fully developed and agreed methodology

Whilst the principle of calculating and reporting on Scope 3 emissions is clear, implementation is a challenge. Importantly, how far 'upstream' of a company's own operations should they report on? For example, if you are a watch maker, should you include the methane emissions from the cattle that provide the leather for your straps? What about some of the emissions from the farmer's tractor, or even the emissions generated from producing the steel in the tractor itself? Whilst there are many possible standards emerging on setting the 'boundary' of a company's Scope 3 emissions, it's clearly a highly complicated question requiring careful handling, especially in the absence of one universally agreed standard across sectors.

2. Not all Scope 3 emissions are within a company's control; even when they are, companies can't take the credit for it in their reported numbers

Figuring out how to handle the emissions downstream of a company, when those emissions are not directly under their control, is also challenging. For example, a car maker knows that an average diesel-powered car will be driven a certain number of miles, at a certain efficiency and producing a certain quantity of emissions over its lifetime. However, how far it is actually driven is something they don't control. A taxi driver and a retired businessman living in a city centre will likely drive very different distances. If a company were to attempt to sell

preferentially to the businessman and not the taxi driver, then even though the emissions profiles are different, challenges with data collection mean that most companies wouldn't actually be able to report the resulting lower emissions number associated with this genuine attempt to reduce their customers' emissions.

3. A calculation approach that is sensible in one situation can result in non-sensical results in another

A further challenge is calculating fair attribution. For example, a mining company that produces both metallurgical coal and iron ore is allowed to 'split' the CO2 generated when the two ingredients are combined in a steel mill between the two inputs. However, this arguably logical division leads to some perplexing analytical results: a mining company that used to produce small quantities of metallurgical coal, that then sells their coal mine would be forced to report *higher* Scope 3 emissions number as a result – because they would no longer be able to divide downstream emissions between the factors of production. There are many similar challenges with the attribution of factors of production, but these tend to be concentrated amongst *downstream* calculations rather than *upstream*.

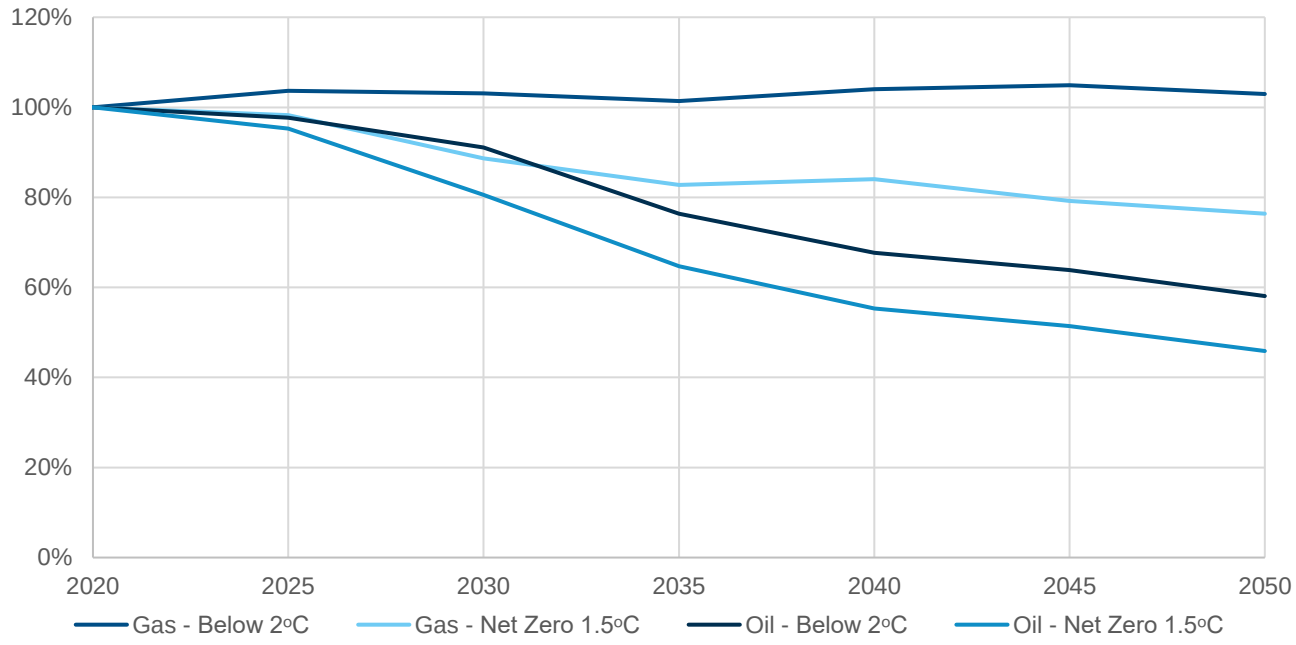
4. Many categories of emissions are not directly comparable

Upstream and downstream Scope 3 emissions are mostly non comparable in the effective real-world impact that their reduction can have. For example, a company that produces the same number of units of output with a lower Scope 1 and upstream Scope 3 impact will typically be displacing real tonnes of emissions from the real world. However, the same is not always true of downstream emissions. For example, a company that chooses to sell their oil production facility to a second company will reduce reported emissions, but would hardly impact real-world emissions at all. In fact, companies who dispose of emissions-intensive activities may even cause real-world emissions to rise if they sell operations to a company that cares less about environmental performance. In our view, it is therefore not sensible for investors to compare upstream and downstream Scope 3 emissions; instead, it is preferable to compare upstream Scope 3 to other upstream Scope 3 numbers.

5. Not all downstream Scope 3 tonnes are equal; they can distract attention from the upstream (and Scope 1)

The oil and gas industry comes under particular scrutiny around Scope 3 emissions, and has peculiar challenges. As the energy transition accelerates, it is clear we will consume proportionally far less oil over time than gas. Even though gas has a far lower carbon intensity, it is not necessarily proportionate to the lower capital intensity of gas projects. For investors to accurately judge the alignment of an energy company to the Paris goals it is simply not possible to use a combined Scope 3 number. In our view investors need to compare expected future oil and gas production separately to make any semblance of a reasonable judgement of this.

Chart 2: LGIM Destination@Risk Scenarios - Oil and Gas Demand Divergence



Source: LGIM Destination@Risk

The path forward

1. Despite the complexity, companies should report on, and regulators support the disclosure of, accurate and standardised Scope 3 emissions data. We agree that asking a company to make an accurate calculation of their Scope 3 footprint is going to be challenging, complex, expensive and consume scarce management resources. However, we still believe it is crucial. In fact, it may well be that *not* spending the effort to calculate this now will lead to greater cost in time, if companies do not consequently understand their future carbon price risk and therefore take the reasonable and shareholder return focused decisions today to manage this number down. Overall, these future risks will almost certainly, in our view, far exceed any increase in the risk of losses from litigation that results in disclosing these numbers. Therefore frequently cited litigation risks should not stand in the way of improved Scope 3 disclosure over time.
2. Investors should only incorporate currently available Scope 3 data into investment decisions with careful consideration of inaccuracy, estimation bias, and methodology constraints. Scope 3 reporting is maturing in both coverage and, to an extent, quality. However, investors are still currently forced to supplement reported data with estimates from third parties. Our internal evaluation of their methodologies raises some concerns that these estimates are highly uncertain; we are not confident that the quality of the data available today is sufficiently high for use without internal specialist knowledge and expertise. However, it is likely to improve rapidly, and should start to be incorporated further into analytical and reporting processes. We are actively working on our approaches and engaging with data providers on these developments, as well as with companies on their reporting.
3. Investors should treat Scope 3 emissions separately from Scopes 1 and 2 – and ideally should separate upstream from downstream emissions within Scope 3, which are very clearly distinct. Given this, and the largely non-comparable nature of downstream emissions versus ‘midstream’ and ‘upstream’, we believe investors should also ask companies to set targets on these two halves of Scope 3 separately.

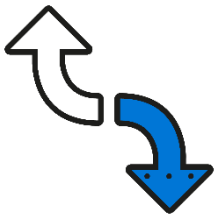
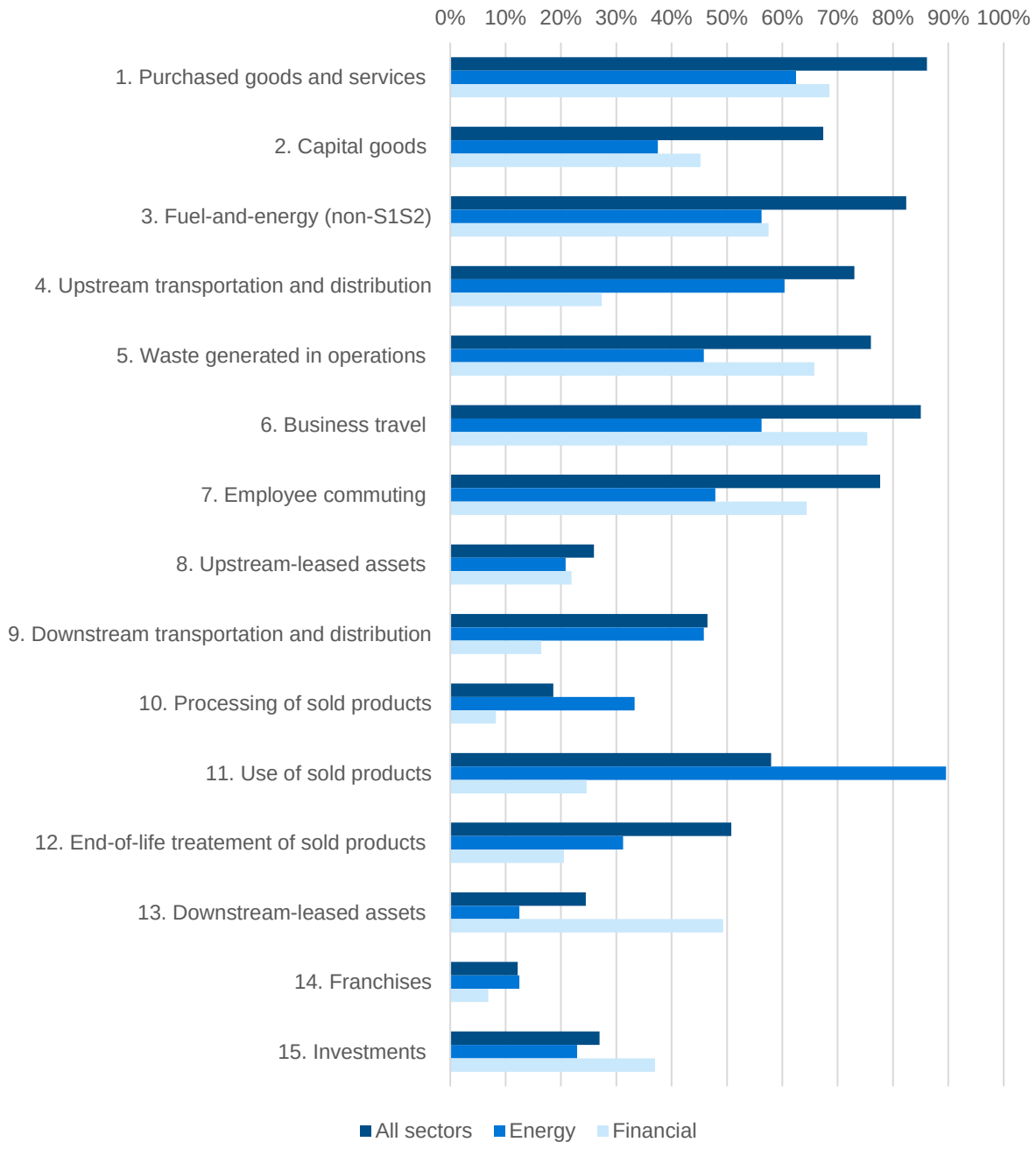
Upstream / downstream	Scope 3 category
Upstream Scope 3 emissions	1. Purchased goods and services
	2. Capital goods
	3. Fuel-and-energy related activities (not included in Scope 1 or Scope 2)
	4. Upstream transportation and distribution
	5. Waste generated in operations
	6. Business travel
	7. Employee commuting
	8. Upstream-leased assets
	
Downstream Scope 3 emissions	9. Downstream transportation and distribution
	10. Processing of sold products
	11. Use of sold products
	12. End-of-life treatment of sold products
	13. Downstream-leased assets
	14. Franchises
	15. Investments

Chart 3: Percentage of companies including the Scope 3 category in reported figures



Source: ISS, Carbon Disclosure Project (CDP), LGIM analysis. Carbon data as at 31/12/2021

Inadequate disclosure of Scope 3 emissions is a material risk for both companies and investors

Scope 3 emissions are far too important to ignore. Including them in corporate disclosures is fundamentally a question of investment risk and return; we can see no good reason for regulators to stand in the way of disclosure by listed companies. In fact, we think not disclosing Scope 3 emissions will lead to market inefficiencies and the potential undercalculation of the financial risks created by the energy transition. However, we recognise that there are a number of complexities that need to be carefully handled if Scope 3 emissions are to be included in investors' decision-making processes. These can be overcome by careful standardisation and the intelligent handling of the data by investors and policymakers. The energy transition is and will continue to be complicated – but its complexity is not a reason to ignore it. Scope 3 emissions need more, not less, attention if climate risks are to be properly priced and both companies and investors are to be ready to take the actions required to protect themselves.

Further information

For further information on this topic email climatesolutions@lgim.com or investmentstewardship@lgim.com. For further inflation about LGIM, please visit lgim.com or contact your usual LGIM representative.

Key risks

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