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Why Firms Are Not Reporting Their Scope 3 CO2 Emissions

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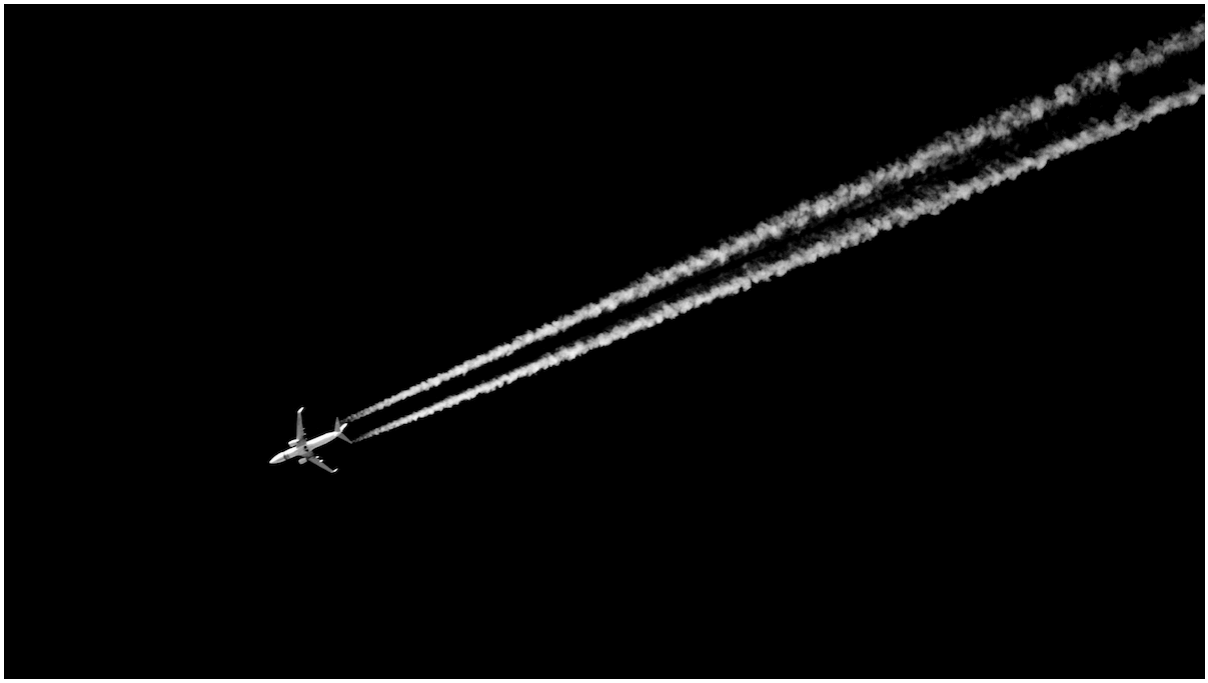

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Scope 3 reporting is not merely an "ESG activity" but is also a broader strategic management tool.

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Supply chain emissions ("scope 3 emissions") often make up the overwhelming share of a firm's total carbon footprint but are difficult to measure and hard to abate. According to the **Carbon Disclosure Project**, firms' scope 3 emissions can amount to more than 11 times of

their direct emissions, thus often representing the largest lever firms possess to reduce their impact on climate change. This is especially true for firms that rely on carbon-intensive industries as their suppliers, e.g., the automotive or electronics industry.

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However, many firms are not adequately prepared to comprehensively measure, report, and reduce their scope 3 emissions. In 2022, only 53% of the >5,000 firms covered by the **MSCI climate database** reported scope 3 emissions, down 2% and 6% from 2020 and 2021, respectively.[1] The adoption of scope 3 reporting further shows stark regional differences (78% of European firms report, compared to 45% of North American and 31% of East Asian firms) and differences by firm size (69% and 43% of firms with above and below $10bn annual revenue report, respectively). The **Boston Consulting Group** found that only 10% of global firms comprehensively measured and reported scope 3 emissions (i.e., included all relevant emission sources), which suggests that a large share of the disclosed scope 3 emission reports are not fully comprehensive. In addition, more than 80% of firms either do not have scope 3 reduction targets or their reduction targets approved by the **Science Based Targets initiative** (leading global institution for assurance of CO2 reduction targets). Thus, commitments for supply chain decarbonization are currently insufficient to meet the targets of the Paris agreement, posing a severe risk to society.

Our insights shine light on why firms are not reporting their scope 3 emissions, portray the adverse consequences of no or low-quality scope 3 reporting to argue why they should report, and provide actionable recommendations to managers on how to do it right. Drawing upon extensive in-depth interviews with managers from the European steel

industry integrated with the extant academic literature in the field, we posit that scope 3 reporting is not merely an "ESG activity" but also entails elements of a broader strategic management tool. By providing this perspective, we enable managers to not only enhance their scope 3 reporting capabilities but also leverage those capabilities to reap additional strategic benefits beyond improved sustainability. Ultimately, this article strives to contribute to a more widespread adoption of scope 3 reporting to drive supply chain decarbonization for the greater good.

Why firms do not report their scope 3 emissions

We identified three main reasons why firms do not report scope 3 emissions: Reporting is not worthwhile, firms are unable to report, and firms intentionally avoid reporting.

Scope 3 reporting is considered not worthwhile. First, some firms simply consider scope 3 reporting not worthwhile. As of today, it is not part of any enforced regulatory framework, thus voluntary in nature. Aside from a lack of commitment to supply chain decarbonization, which may partly be caused by managers' cognitive biases that lead to corporate climate change inertia,[2] many firms neglect or underestimate the potential of scope 3 reporting for other strategic purposes besides sustainability. Such strategic purposes include, for example, risk management,[3] investor relations,[4] or marketing.[5] In our interviews series, we noted that only few managers were aware of these purposes. Lastly, for many firms, executive compensation is not yet linked to climate performance, which may be another reason why scope 3 reporting is considered not worthwhile.[6]

Firms are unable to report their scope 3 emissions due to implementation barriers. Second, some firms are unable to report their scope 3 emissions due to various internal and external barriers for implementation.

Internally, the main barriers for implementation are insufficient knowledge, a lack of human or financial resources, and poor data quality. Measuring and reporting scope 3 emissions can be a very complex task and requires extensive know-how. Many firms do not possess that know-how and therefore struggle with implementing scope 3 reporting.[7]

Furthermore, it requires significant resources. One of our interview respondents spoke of "building a second controlling department which works not in € but in CO2". Thus, the implementation of scope 3 reporting triggers transaction costs, which many firms are not able to provide, or for which allocated budgets are insufficient.[8] Lastly, poor data quality hinders the implementation of scope 3 reporting. Data is often unavailable, incomplete, or inconsistent[9] as one of our respondents directly hinted at: "I am sure we would be happy to report this [scope 3 emissions] but, as a matter of fact, the data basis simply does not allow for that yet". Scope 3 reporting can be conducted using primary (i.e., the product carbon footprint (PCF) of goods and services determined by a firm-specific analysis) or secondary (i.e., global average emission factors used to approximate the PCF of goods and services) data.[10] Most firms first report mostly secondary data due to the widespread unavailability of primary data. However, secondary data is less accurate and not always available either, and while this method allows firms to determine an initial estimate, it does not allow them to compare their suppliers to ultimately make more informed procurement decisions.

Externally, the main barriers for implementation of scope 3 reporting are insufficient progress among firms' suppliers, regulatory uncertainty, and a lack of industry-specific guidance. Many upstream suppliers have not progressed far enough to determine the specific PCFs of the goods and services that they sell. Thus, they are not able to provide primary data to their customers. Further, although scope 3 reporting is widely expected to become mandatory through future regulatory changes[11, 12] the exact scope, timing, and enforcement of such regulatory changes remain uncertain. Therefore, firms often prefer to postpone the implementation of scope 3 reporting until the requirements for future compliance are articulated more clearly. This uncertainty is exacerbated by a lack of industry-specific guidance for adhering to global scope 3 calculation standards such as the **GHG Protocol**. Such guidance would be needed to accommodate certain industry-specific circumstances not covered by the rather universally (and at times vaguely) verbalized standards[13] and to support the firms' knowledge development process.[14]

Firms intentionally avoid reporting their scope 3 emissions. Third, some firms intentionally avoid reporting scope 3 emissions. They do so to prevent damage to their competitive position by disclosing poor environmental performance or creating the perception of a higher total carbon footprint. One of our respondents even admitted that they "consciously left it [scope 3 emissions] out of their reporting" because they "do not

want themselves to be viewed worse than needed". This issue is further exacerbated by the "organizing-performing paradox", which posits that, during the first years after implementation, the reported total scope 3 footprint increases.[15] As firms improve their scope 3 reporting capabilities, they reveal previously overlooked emission sources and conduct more accurate analyses, which in turn often leads to higher total figures. For many firms, this paradox further strengthens their tendency to avoid reporting scope 3.

Why firms should report their scope 3 emissions

No or low-quality scope 3 reporting has adverse consequences to both, society and individual firms.

For society, no or low-quality scope 3 reporting limits the pace of global supply chain decarbonization and leads to an ineffective allocation of investor capital. After the initial phase of the "organizing-performing paradox" (~5-6 years), scope 3 reporting allows firms to reduce scope 3 emissions. Consequently, not reporting scope 3 emissions limits a firm's ability to contribute to supply chain decarbonization and ultimately, decreases the probability of meeting the Paris agreement goals. Additionally, no or low-quality scope 3 reporting hinders investors from obtaining a complete and accurate picture of the industries, firms, and competitors they consider investing in. Consequently, investors may allocate their financial resources to firms that are less sustainable than others.

For individual firms, no or low-quality scope 3 reporting impairs their ESG rating, impedes their access to investor capital, lowers competitiveness, and leads to the disregard of strategic risks. According to the **MSCI climate database,** 45% of the firms reporting their scope 3 emissions receive an **ESG rating** of AAA or AA, while only 21% of non-reporting firms receive that. In turn, better ESG ratings tend to improve firms' cost of capital from investors.[16] Furthermore, not reporting scope 3 emissions may prevent firms from adhering to first customer requirements and building competitive advantage. One of our respondents explicitly stated: "If one steelmaker is able to transparently explain their Scope 3 emissions and another is not, then it's a clear competitive advantage for the first".

Finally, firms may disregard physical, regulatory, or supply chain related risks if they do not measure and report scope 3 emissions, which may lead, for example, to supply shortages or significant cost increases.[17]

How firms should report their scope 3 emissions

Analogous to the development of mitigation strategies to overcome cognitive biases that cause corporate climate change inertia,[18] we offer five actionable recommendations that help managers overcome the aforementioned barriers for implementation of scope 3 reporting. Drawing from our extensive research, we posit that scope 3 reporting is not merely an "ESG activity" but also entails elements of a broader strategic management tool. Below, we outline how our recommendations not only address these barriers but also serve additional strategic purposes.

Consider scope 3 reporting as a risk management tool: First, we urge managers to *consider scope 3 reporting as a risk management tool* instead of solely as an ESG reporting tool. Managers can use their scope 3 report to pinpoint emission hotspots that may lead to dangerous supply chain dependencies. If, for example, a large share of a firm's scope 3 emissions is born by few suppliers, regulatory or other changes affecting these suppliers could significantly impact the firm (e.g., via increased costs or supply shortages). Further, it allows managers to identify and monitor regions in which regulatory changes would be most impactful to their supply chain. Lastly, many suppliers may not be able to comply to future reporting requirements (e.g., providing 3rd party audited PCFs) and therefore, reporting scope 3 emissions can help identifying compliance risks. Additionally, if understood as a risk management tool, managers can argue that scope 3 reporting should become a higher priority among budgeted activities and therefore allow them to free up additional financial and human resources to properly implement it.

Use scope 3 reporting as a selling point in marketing: Second, we suggest managers *use scope 3 reporting as a selling point in marketing.* Many firms, especially in downstream industries, begin investigating their scope 3 emission profile and often struggle with unavailability of data about their upstream suppliers. One of our respondents explicitly

referenced their customers' influence: "It's [Scope 3 reporting] being driven largely by our customers. They're requiring full product carbon footprints including our Scope 3 emissions". Therefore, the suppliers who are first to provide that data should leverage that in their marketing strategy. In doing so, firms can generate benefits that otherwise would not be unlocked. For example, they can strengthen their existing customer relationships, win over new customers, and improve the firm's overall brand image as a more sustainable company. Furthermore, it can allow them to charge a premium for superior products with a lower carbon footprint, as another of our respondents specifically hinted at: "It's the green steel premium that will incentivize the steel industry to provide more transparency".

**Collaborate with your suppliers to start collecting primary data over secondary data early: **Third, we emphasize that managers should *collaborate with their suppliers to start collecting primary data over secondary data early*. This is important because secondary data do not allow comparisons between suppliers. Therefore, managers should collect primary data from their suppliers to be able to actively reduce emissions by selecting suppliers with lower footprints. As suppliers are often not capable of providing primary data yet, firms should collaborate with their suppliers in the form of, for example, educational workshops, knowledge sharing and joint decarbonization efforts to help them build the required database. When doing so, managers can not only drive their own decarbonization agenda but also strengthen their supplier relationships.[19]

**Actively manage the perception of the reported scope 3 footprint: **Fourth, we recommend managers *actively manage the perception of their reported scope 3 footprint*. Managers should explain all emission sources and how they intend to reduce their emissions in detail, including concrete examples of reduction measures. Firms with above-average carbon performance may want to highlight respective industry averages and explicitly lay out what their competitors' (estimated) total carbon footprint would look like if they reported their scope 3 emissions. Firms with below-average carbon performance should focus on their prospective reduction pathway but also emphasize their voluntary transparency. Overall, this allows managers to control the narrative about their firms' impact on climate change, prevent greenwashing accusations that may arise when not or incomprehensively reporting scope 3 emissions, and create a better public image based on trust and

transparency through leading by example. Lastly it may also prevent a loss of access to capital due to investors withdrawing their funds in fear of missing their own sustainability targets.

Go beyond the sustainability department and instill a sustainability culture across the entire firm: Fifth, we advise managers to *go beyond the sustainability department and instill a sustainability culture across the entire firm*. Managers should prevent a "silo mentality" and instead, create a culture that makes all departments accountable for their firms' sustainability. This may, for example, include trainings on sustainability topics for all employees or the usage of sustainability KPIs for strategic steering and within employee compensation. One of our respondents explicitly mentioned that they "are using climate targets as one of their main metrics for strategy execution, on par with financial KPIs" and that they "include climate targets in personal incentives". This can boost employer branding as today's workforce pays more attention to their employers' sustainability, increase employees' motivation to enhance sustainability, and initiate further knowledge development and transfer. Furthermore, it can provide managers with additional support from employees from other departments who are willing to contribute but were not aware previously.

A roadmap towards high quality scope 3 reporting

Our respondents uniformly agreed that scope 3 reporting will become standard procedure at some point in the future, either through regulatory enforcement or market dynamics. Until then, scope 3 reporting can generate competitive advantages in various ways, as described above. Managers need to prepare their firms for that future. To do so, managers may use the following 3-step approach:

1. **Assess the status quo:** Managers shall first evaluate their firms' current scope 3 reporting capabilities. If their firm already reports scope 3 emissions, managers shall determine whether it is fully comprehensive. For that, managers should assess if all relevant sources of scope 3 emissions are included according to a scope 3 calculation standard (e.g., **GHG Protocol**). This could also be done via 3rd party verification (e.g.,

TÜV). If their firm does not yet report scope 3 emissions, managers shall start by understanding why that is. Either way, managers should identify which implementation barrier(s) for high quality scope 3 reporting apply to their firm. Subsequently, managers shall estimate how strongly their firm is affected by adverse consequences of no or low-quality scope 3 reporting to derive how urgent the implementation of higher quality scope 3 reporting is.

2. **Draft implementation plan**: Based on the results from step 1, managers shall begin with a prioritization. For example, if a lack of knowledge or resources is the critical implementation barrier, then managers should first aim at *going beyond the sustainability department and instilling a sustainability culture across the entire firm* focusing on knowledge development via workshops, trainings, or external support from consultants or others. If financial resources are scarce and allocated budget is insufficient, then *considering scope 3 reporting as a risk management tool* can help managers receive more budget for the next term, and if scope 3 reporting is viewed as detrimental to the firm's perception, then *actively managing the perception of the reported scope 3 footprint* is most important. Thus, the implementation plan should initially address the most critical barriers and then continuously apply the remaining actions. For example, *collaborating with suppliers to collect primary data* and *using scope 3 reporting in marketing* can always be done to an incrementally higher degree.
3. **Implement and monitor progress:** Once the plan is finalized, managers shall initiate implementation and subsequently monitor the progress on a consistent basis. For that, managers shall, for example, track the share of primary data used in the scope 3 report and measure the effectiveness of scope 3 information in marketing. Finally, managers shall collect feedback from employees, suppliers, and customers, and possibly adjust the plan accordingly.

Conclusion

The decarbonization of supply chains poses significant challenges for society and individual firms. Solving this complex issue requires firms to collaborate and transform. Viewing scope 3 reporting as a strategic management tool rather than merely an "ESG activity" has the potential to be an enabler of that such collaboration and transformation.

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