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Climate Change & Equities - EM Asia

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SPOTLIGHT

ESG Integrated 3.0

Scope 3 emissions: The next great challenge

Our Scope 3 series finds Asia has lower rates of Scope 3 emission disclosures than developed markets while only a small proportion of companies have Scope 3 emission reduction plans

But we expect disclosure rates and quality to rise over the next 3-5 years

As emissions disclosures improve and reduction strategies develop, our analysis can help corporate managers and institutional investors better integrate ESG

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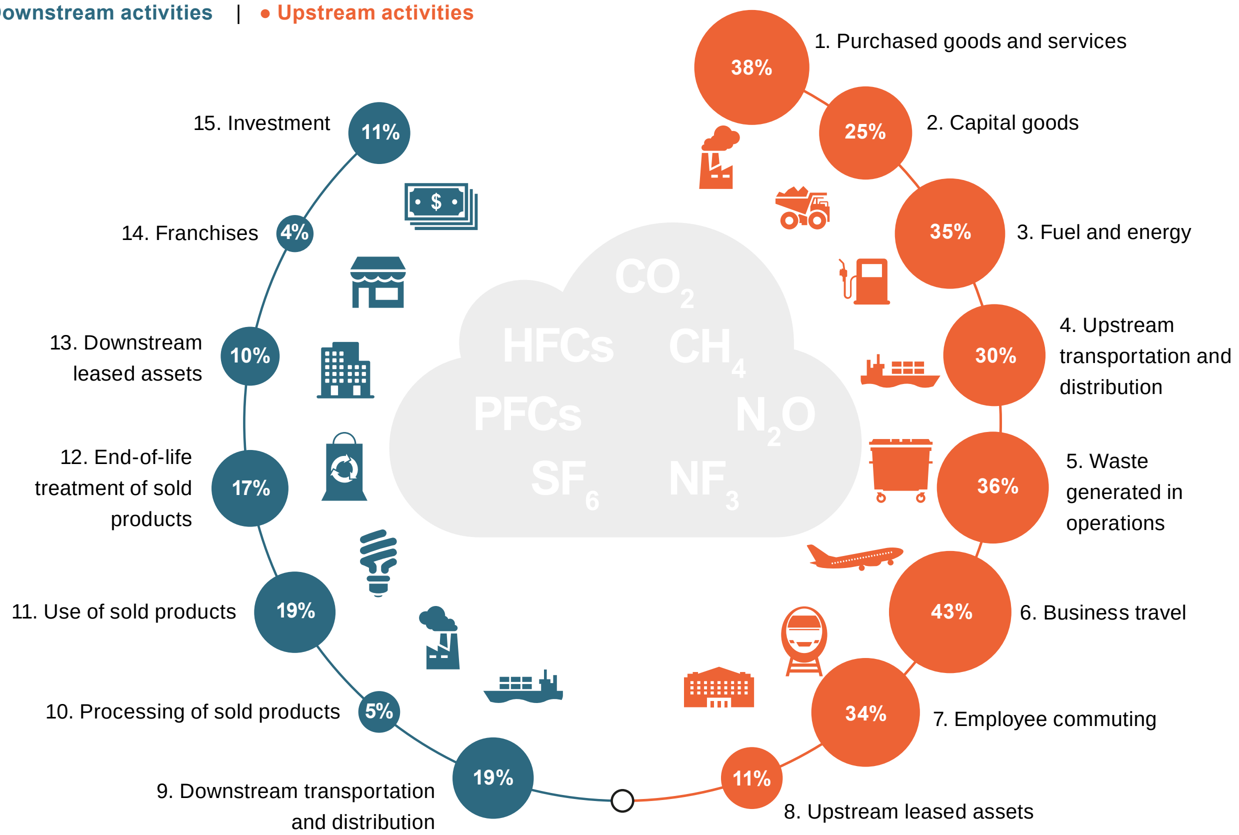
Scope 3 emissions in a nutshell

Scope 3 emissions come from a company's value chain …

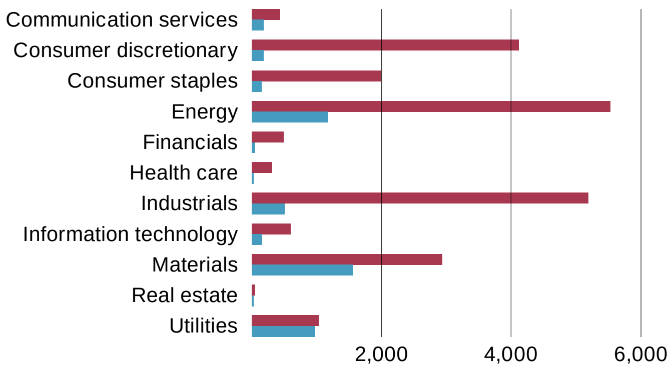
Disclosure rate, by each of Scope 3's 15 categories (end-2022, among companies under HSBC's Global Equity Research coverage)

● **Downstream activities** | ● **Upstream activities**

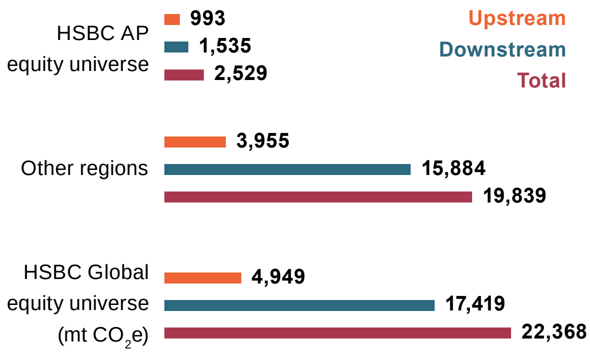


… and are generally much larger than reported Scope 1 and Scope 2 emissions

HSBC Asia Pacific equity research coverage: reported **Scope 3** vs **Scope 1+2** (emissions disclosed, mt CO_2e, 2022)



HSBC Global equity research coverage, reported Scope 3 upstream and downstream emissions (mt CO_2e)



Source: Company reports, Bloomberg, GHG Protocol, HSBC

Executive summary

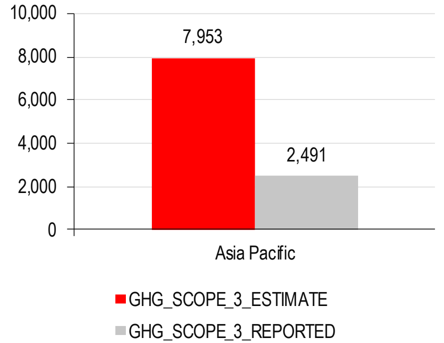
- Reducing value chain emissions and increasing energy efficiency is critical to reducing the future impact of climate change
- Current Scope 3 emission disclosures and reduction targets in Asia are inadequate
- More active stakeholder engagement will be required to accelerate emission reduction plans to meet climate change ambitions

The need to reduce emissions remains urgent

More needs to be done on Scope 3 emission disclosures; stakeholders need to drive improvements

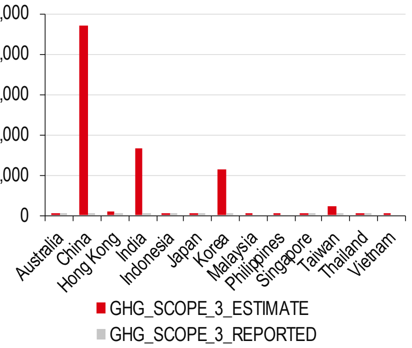
In total, our universe of Asian equity coverage discloses only c2.5Gt of Scope 3 emissions, through corporate sustainability reports and Carbon Disclosure Project (CDP) questionnaires. But we believe that Scope 3 emissions in the region are likely more than three times this amount. This means that a rapid acceleration in Scope 3 disclosure rates and reduction targets is needed to create strategies that will reduce value chain emissions. These reductions are needed to help meet climate change ambitions.

1. HSBC Asia Pacific equity coverage: estimated and reported Scope 3 emissions (Mt CO_2e)



China is Mainland China
Source: Company reports, Bloomberg estimates

2. Coverage by market: estimated and reported Scope 3 emissions (Mt CO_2e)

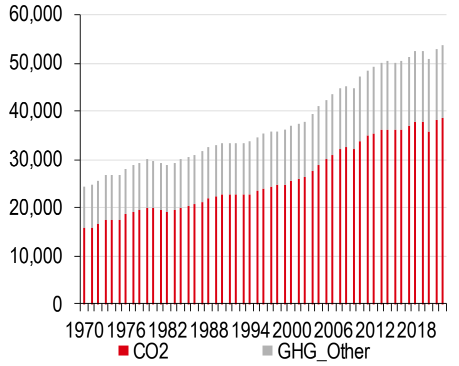


China is Mainland China
Source: Company reports, Bloomberg estimates

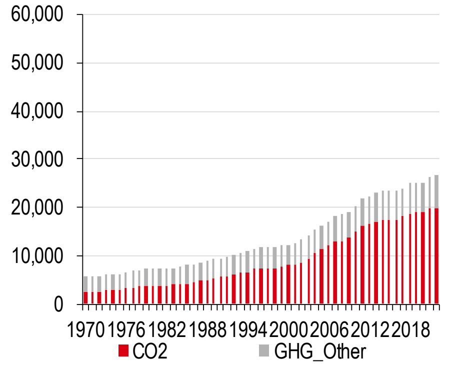
In 2022, global GHG emissions totalled 54Gt; Asia is responsible for c50%

Scope 3 emissions in the Asia Pacific value chain need to be put into the context of overall global GHG emissions. Globally, CO_2 is the biggest contributor to GHG emissions as expressed as CO_2 equivalent (CO_2e). In 2022, CO_2 comprised just over 70% of the 54Gt of CO_2e GHG emissions, according to the Emissions Database for Global Atmospheric Research (EDGAR) database. Asia is responsible for about c50% of global GHG emissions or about 25Gt, mainly from CO_2 emissions, and most significantly from industrial combustion and the power industry.

3. Global GHG and CO_2e emissions (Mt CO_2e)



4. Asia GHG and CO_2e emissions (Mt CO_2e)



Source: Source: EDGAR (Emissions Database for Global Atmospheric Research) Community GHG Database

CO_2 emissions get the most attention and in some ways are the easiest to monitor and measure and represent about 80% of total GHG emissions in Asia. But other gasses also contribute to GHG emissions like methane (CH_4) which represents the second-largest volume of GHG emissions, after CO_2. Methane and other GHGs such as flouro gases (including SF_6) and nitrous oxide (N_2O) are emitted in significant volumes that require attention given their higher global warming potential (GWP). In particular, methane has received attention because it has a high GWP and relatively short lifespan, depending on the assumptions for (1) atmospheric residence times, (2) ability to absorb energy, and (3) ability to reduce the rate at which energy escapes the atmosphere. But methane emissions are increasingly trackable with modern technology and can potentially be reduced.

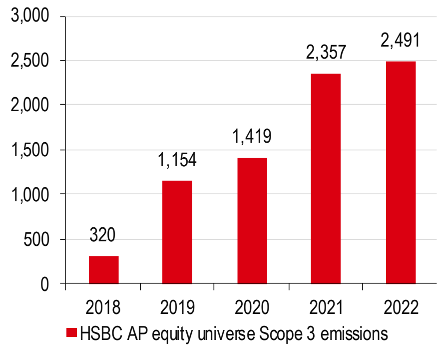
At COP 28 in December 2023, there was a significant development for the oil and gas industry. The Oil and Gas Decarbonisation Charter (the Charter) was launched and is comprised of 50 oil and gas companies dedicated to high-scale impact, with the goal of speeding up climate action within the industry. The Charter creates alignment around key topics for meeting climate ambitions: (1) achieving net zero emissions by or before 2050, (2) zeroing methane emissions, (3) eliminating routine flaring by 2030, and (4) working towards industry best practices in emission reductions. Notably, the Charter companies represent 40% of global oil production, and 60% of the signing companies are National Oil Companies (NOCs). Unfortunately, the Charter focuses only on reducing Scope 1 and Scope 2 emissions and does not address Scope 3 emissions.

Policies preventing climate change and encouraging sustainability, responsible business and Environmental Social and Governance (ESG) agendas have a significant impact on corporate operations and strategies in Asia. For climate, we expect it to be another year of hurry up and wait. The steady rise in global emissions will likely accelerate climate impacts under El Niño conditions; many scientists expect temperature records to be broken in 2024, surpassing 2023's records. The calendar holds a number of important gatherings in 2024, including the interlinked RIO conventions – climate change COP29, biodiversity COP16 and desertification COP16.

Regarding sustainability and ESG efforts by global corporations and governing bodies, the 2024 calendar holds even more. There are many initiatives which may help corporates reduce their supply chain emissions by supporting upstream and downstream value chains to adapt and mitigate factors which contribute to climate change. This requires understanding of the best available science.

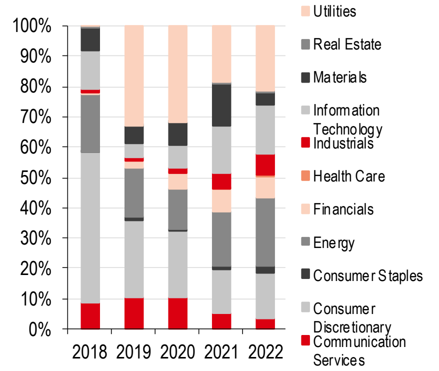
What we did. Our sector analysts expanded their knowledge about value chain emissions from their sector by assessing Scope 3 disclosure rates and Scope 3 reduction plans of the companies in their coverage. While more companies are disclosing Scope 3 emissions as evidenced in figure 5, the proportion of companies reporting remains below 50%.

5. HSBC AP equity universe: Reported Scope 3 emissions, 2018-2022 (Mt CO_2e)



Source: Company reports, Bloomberg

6. HSBC AP equity universe: Reported Scope 3 emissions share, 2018-2022 (%)

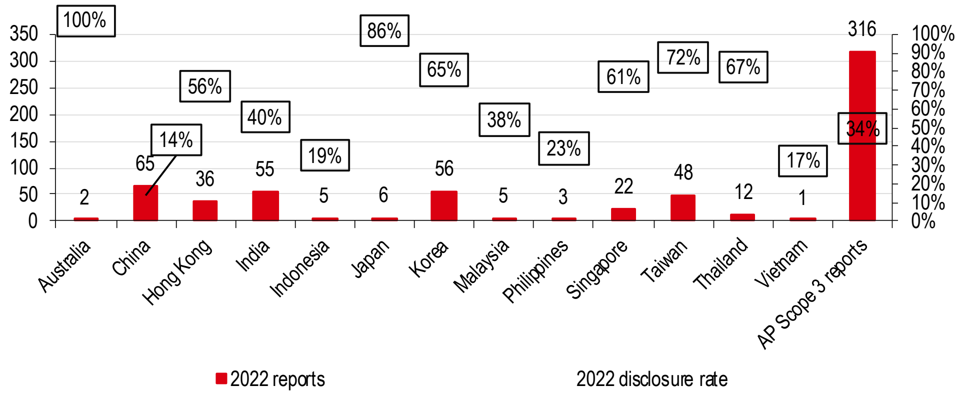


Source: Company reports, Bloomberg

Regional disclosure rates – Mainland China, India and Korea each have over 50 companies reporting and each represent c20% of the total number of companies reporting Scope 3 emissions in 2022. However, disclosure rates vary significantly with mainland China having among the lowest overall disclosure rate of below 15%, while Korea leads at 65%, and India sits near the average at 40%.

Regional disclosure amounts – Korean companies have the most complete Scope 3 disclosures of any of the regions in Asia. In 2022, reported Korean Scope 3 emissions represented almost half the total amount of Scope 3 emission disclosures we identified, followed by India, mainland China and Taiwan. At present, none of the regulators in the Asian markets requires disclosures of Scope 3 emissions. But the momentum for voluntary disclosures aligned with Task Force on Climate related disclosures (TCFD) recommendations and International Sustainability Standards Board (ISSB) disclosure standards is building, and we expect this to continue as stakeholders continue to push companies towards more responsible business practices and encourage stronger sustainability efforts.

7. Corporate disclosures and disclosure rate, by region (companies and percent)



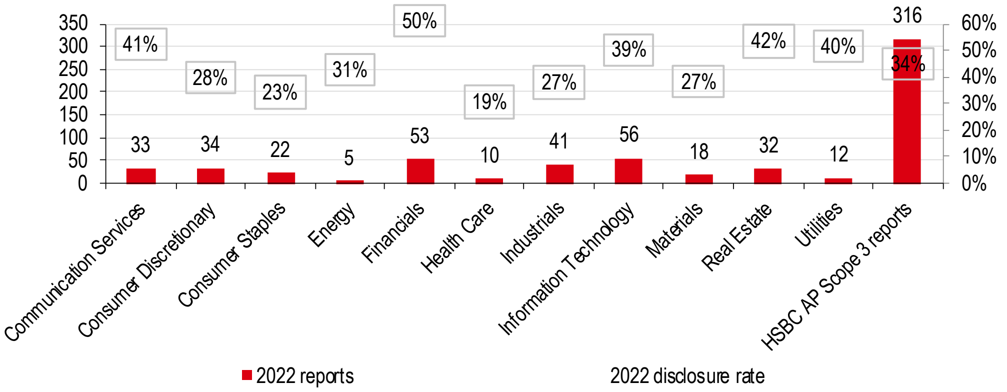
Source: Company reports, Bloomberg

Sector disclosures rates – Technology, Financials and Industrials have the highest disclosure rates, with more than 150 companies making some form of Scope 3 disclosure.

Sector disclosure categories – Industrials, Consumer Discretionary and Financials disclosed the most categories, each with more than 800 separate datapoints.

Sector disclosure amounts – based on current disclosures, Energy, Utilities, Consumer Discretionary, Technology and Industrials have the most significant Scope 3 footprints, although we acknowledge that these datasets are relatively incomplete. Together these five sectors accounted for 85% of reported Scope 3 emissions in 2022.

8. Corporate disclosures and disclosure rates by sector (companies and percent)



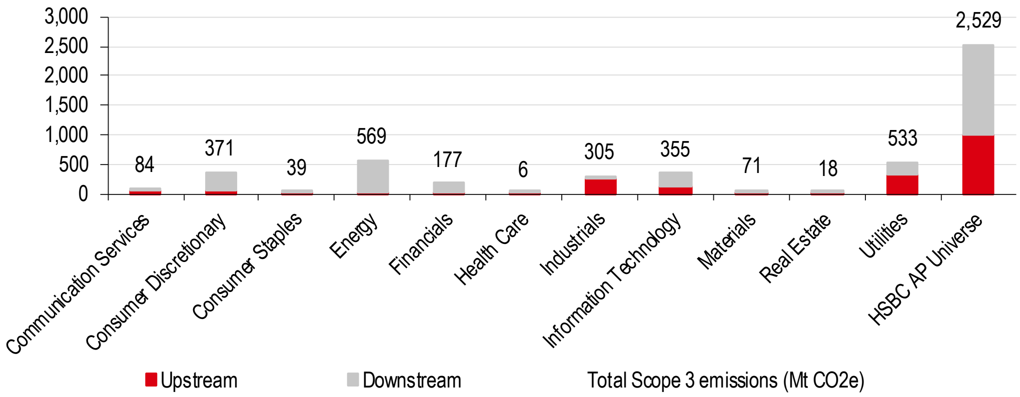
Source: Company reports, Bloomberg

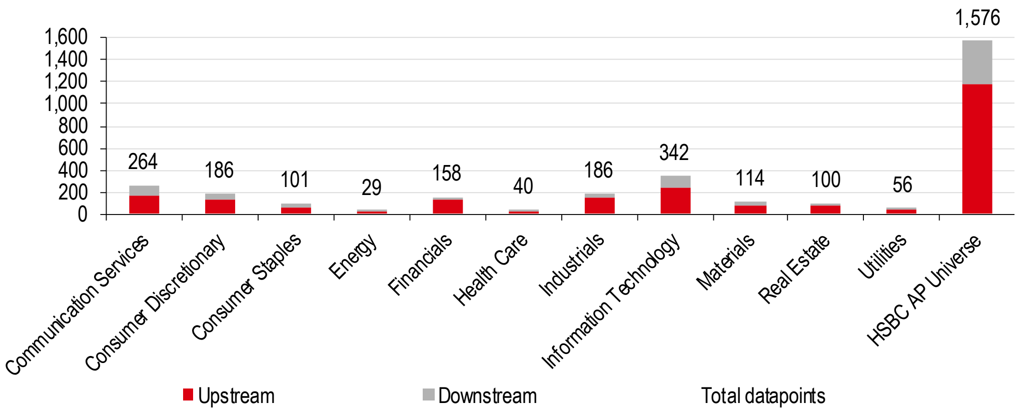
More regulatory guidance on environmental disclosures is emerging. Moving forward, more stock market regulators are aligning with new reporting guidelines outlined in two new standards (S1 and S2) from the ISSB, which will be incorporated into the broader International Financial Reporting Standards (IFRS). As per stock exchange requirements, IFRS standards are used by most companies in our coverage.

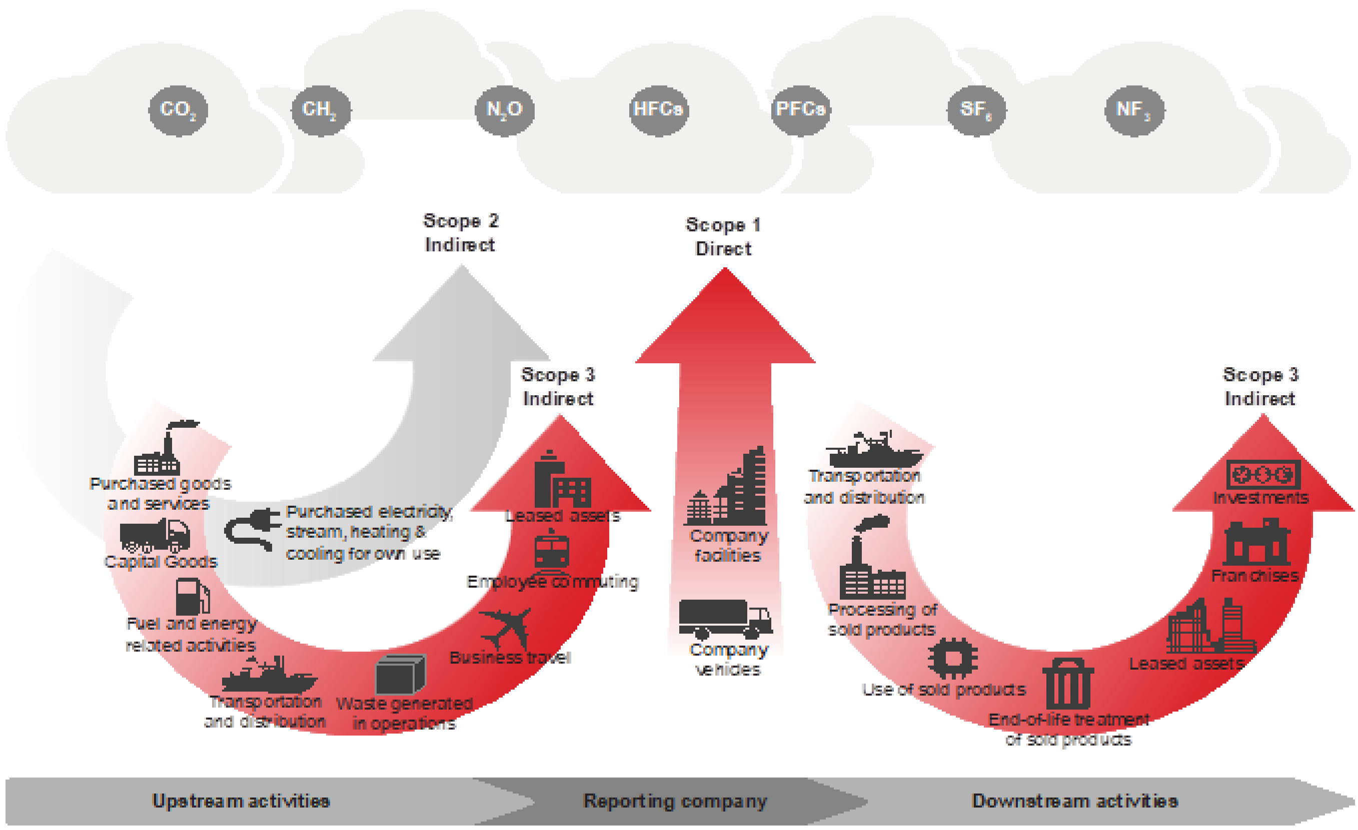
New voluntary reporting standards starting in 2024

IFRS S1 provides general disclosure requirements and directs companies to other topic-specific standards, e.g., the Sustainability Accounting Standards Board (SASB) Standards, while IFRS S2 covers climate-specific requirements based on the TCFD. A relatively limited number of companies under our coverage in Asia already follow the TCFD style of climate disclosure. The ISSB Standards will be effective for reporting periods beginning on or after 1 January 2024 – the first reporting under ISSB could come in 2025, although we note it will be initially on a voluntary basis. But both the Hong Kong Stock Exchange and the Singapore Stock Exchange are expected to eventually require use of these reporting standards for companies listed on the exchanges, potentially by 2026.

9. 2022: Total upstream and downstream emissions, by sector; category datapoints, by sector; and key sources of Scope 1, 2 and 3 emissions







Note: CH4-Methane, N20-Nitrous Oxide, HFCs-Hydrofluorocarbons, PFCs-Perfluorocarbons, SF6-Sulphur Hexafluoride, NF3-Nitrogen Trifluoride
Source: Company reports, Bloomberg, Greenhouse Gas Protocol, HSBC

Why Scope 3 matters

- Scope 3 emissions contribute the largest part of emissions in many sectors, but they are often neglected in net zero commitments
- Regulators are increasing their scrutiny over Scope 3 emissions as a means to improve the transparency of corporate climate disclosures
- A closer look into Scope 3 emissions could reflect exposure to climate transition risks and potential greenwashing

The most exposure, the least disclosure

Too big to ignore: Scope 3 emissions often comprise the lion's share of corporate-related GHG emissions. However, Scope 3 emissions tend to have a lower disclosure rate (and quality) relative to Scope 1 and 2 emissions. We think this does not reflect the complete picture on exposure to climate risk along value chains as the market is therefore unable to identify the sources of emissions and potential solutions.

Net zero targets but not Scope 3: More than 140 countries, covering 90% of global emissions, have committed to net zero emissions[1]. Aligning to growing global and national climate policies, the momentum of corporate-level net zero commitments is also rising. However, many companies with net zero commitments do not address emissions along their value chain (i.e. Scope 3 emissions). As reported by Net Zero Tracker, more than 40% of corporate net zero targets do not cover Scope 3 emissions, while only 18% of the companies have set Scope 3 reduction targets specifically.

What are Scope 3 emissions?
The scopes of carbon emissions depend on influence and control of a company. **Scope 1** emissions are the direct GHG emissions owned or controlled by the reporting company. **Scope 2** emissions refer to the indirect emissions through electricity, steam, heat, and cooling purchases (i.e. emissions released at the facilities where they are generated). **Scope 3** emissions include all indirect emissions from sources owned or controlled by other entities in the value chain beyond Scope 1 and Scope 2 emissions.

Risk assessment: Given the significance of Scope 3 emissions in corporate-related emissions, we think the market should look closely into the scope of corporate decarbonisation targets to evaluate the effectiveness and credibility of the climate strategy, as well as their exposure to climate risks. Value chain emissions offer colour on a company's reliance on carbon-intensive activities, products or supply chain. Higher reliance would mean a business requires more time and resources to adjust to a lower-carbon model and also be exposed to shifts in asset value and higher operating costs. Besides being a less effective overall climate strategy, we think the excluding or neglecting of Scope 3 in climate commitments raises the risk of greenwashing.

Tightening regulations: Regulators are increasing their scrutiny over value chain emissions. Several markets, such as the EU and the US, have already proposed to make Scope 3 disclosure mandatory for listed or large companies. Also, other markets (e.g. Hong Kong) require large fund managers to report climate risks and portfolio carbon footprints (investment emissions). We believe more and more jurisdictions will join the "mandatory disclosure club".

[1] Climate Action Tracker, CAT net zero target evaluations, November 2022

Dealing with double counting: Scope 1 and Scope 2 emissions of one company will be the Scope 3 emissions of another company. ***Scope 3 emissions should not be aggregated across companies*** or subsidiaries, nor should they add up Scope 1, Scope 2, and Scope 3 emissions to determine total emissions of a portfolio or a business. Scope 3 emissions provide a more complete picture of the overall exposure of a business to potential climate risks and impacts. Given the flexibility in accounting for Scope 3 emissions, we think the analysis of Scope 3 emissions should be done at an individual company level **to determine exposure**, and not aggregated across multiple companies.

Scope 3 emissions across varying time frames: While some emissions occur in the current year, the upstream nature of some Scope 3 categories means that the emissions may have occurred further in the past; the downstream nature of other categories mean they are yet to occur. This time dimension of Scope 3 emissions is another reason why Scope 3 emissions cannot be aggregated and used to count towards an emissions inventory, but rather, in our view, should be used to ascertain exposure and potential risk and impact.

There are 15 categories of Scope 3 emissions

Due to the wide range of activities that Scope 3 emissions can entail, the GHG Protocol separates Scope 3 into 15 distinct categories, from upstream to downstream activities (Figure 3). Scope 3 emissions accounting allows flexibility in selecting the relevant categories. Reporting companies should map their business activities to suitable categories.

10. Overview of Scope 3 categories

Value chain	Scope 3 category	Description
Upstream	Purchased good and services	Emissions that occur in the **life cycle of purchased products and services** (including extraction, production and transportation), up to the point of receipt by the reporting company
	Capital goods	Emissions that occur in the **life cycle of purchased fixed assets or plant, property and equipment**
	Fuel- and energy-related activities (not included in Scope 1 or 2)	Emissions related to the **production of fuels and energy** purchased and consumed by the reporting company, excluding emissions from the combustion of fuels or electricity consumed
	Upstream transportation and distribution	Emissions from **transportation and distribution services** purchased in vehicles not owned or operated by the reporting company
	Waste generated in operations	Emissions from third-party **treatment of waste** that is generated in the reporting company's operations
	Business travel	Emissions from the transportation of employees for **business-related activities** in vehicles owned or operated by third parties
	Employee commuting	Emissions from the transportation of employees **between their homes and worksites**
	Upstream leased assets	Emissions from the **operation that are leased** by the reporting company and not included in Scope 1 and Scope 2 emissions
Downstream	Downstream transportation and distribution	Emissions from **transportation and distribution of products sold** in vehicles not owned or controlled by the reporting company
	Processing of sold products	Emissions from **processing of sold intermediate products** by third parties subsequent to sale by the reporting company
	Use of sold products	Emissions from the **use of goods and services sold** by the reporting company
	End-of-life treatment of sold products	Emissions from the **waste disposal and treatment of the sold products**
	Downstream leased assets	Emissions from the operation of assets that are owned by the reporting company (as a lessor) and **leased to other entities**
	Franchises	Scope 1 and Scope 2 emissions of **franchisees**
	Investment	Scope 1 and Scope 2 emissions of **investees** (including equity, debt, project finance and managed investment)

Source: GHG Protocol, HSBC

Disclosure appendix

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