

Independent Limited Assurance Report to the Directors of HSBC Holdings plc

HSBC Holdings plc ("HSBC") engaged us to provide limited assurance on greenhouse gas emissions in their operations and supply chain as described below and set out in HSBC's Annual Report and Accounts 2022 and ESG Data Pack 2022.

Our conclusion

Based on the procedures we have performed, as described under the 'Summary of work performed as the basis for our limited assurance conclusion' and the evidence we have obtained, nothing has come to our attention that causes us to believe that the following Subject Matter Information:

- HSBC's greenhouse gas emissions in their own operations for 2022 and supply chain emissions for 2021 and 2022, set out on page 63 of HSBC's Annual Report and Accounts 2022, and
- the supply chain emissions for 2019 and 2020, set out on page 9 of HSBC's ESG Data Pack 2022,

have not been prepared, in all material respects, in accordance with HSBC GHG Emissions - Reporting Guidance 2022 ('Reporting Criteria').

Our limited assurance conclusion does not extend to information to any other information included in, or linked from, the Annual Report and Accounts 2022 or the ESG Data Pack 2022, available on HSBC's website!

Subject matter information and reporting criteria

The Subject Matter Information is set out in the table in Appendix A and the Reporting Criteria are as set in Appendix B.

The Subject Matter Information needs to be read and understood together with the Reporting Criteria, which HSBC is solely responsible for selecting and applying.

Inherent limitations

The absence of a significant body of established practice on which to draw to evaluate and measure emissions allows for different, but acceptable, measurement techniques and can affect comparability between entities, and over time. The precision of different measurement techniques may also vary. Non-financial performance information is subject to more inherent

Non-financial performance information is subject to more inherent limitations than financial information, given the characteristics of the subject matter information and the methods used for determining such information.

It is generally acknowledged by stakeholders globally, including regulators, that there are significant limitations in the availability and quality of GHG emissions data from third parties, resulting in reliance on proxy data. These limitations are reflected in the assigned data quality categories for the reported supply chain emissions.

It is anticipated that the principles and methodologies used to measure and report the Subject Matter Information will develop over time and may be subject to change in line with market practice and regulation, impacting comparability year-on-year.

HSBC's responsibilities

As explained in the Directors' Statement on page 45 of HSBC's Annual Report and Accounts 2022 and the ESG Data Pack 2022, the Directors of HSBC are responsible for:

- determining appropriate reporting topics and selecting or establishing suitable criteria for measuring or evaluating the underlying subject matter;
- ensuring that those criteria are relevant and appropriate to HSBC and the intended users of the Annual Report and Accounts 2022 and the ESG Data Pack 2022;
- the preparation of the Subject Matter Information in accordance with the Reporting Criteria including designing, implementing and maintaining systems, processes and internal controls over information relevant to the evaluation or measurement of the Subject Matter Information, which is free from material misstatement, whether due to fraud or error, against the Reporting Criteria; and
- producing the Annual Report and Accounts 2022 and the ESG Data Pack 2022, including underlying information and a statement of Directors' responsibility, which provides accurate, balanced reflection of HSBC's performance in this area and discloses, with supporting rationale, matters relevant to the intended users of the Annual Report and Accounts 2022 and the ESG Data Pack 2022, available on HSBC's website.

Our responsibilities

We are responsible for:

- planning and performing the engagement to obtain limited assurance about whether the Subject Matter Information is free from material misstatement, whether due to fraud or error;
- forming an independent conclusion, based on the procedures we have performed and the evidence we have obtained; and
- · reporting our conclusion to the Directors of HSBC.

Professional standards applied and level of assurance

We performed a limited assurance engagement in accordance with International Standard on Assurance Engagements 3000 (Revised) 'Assurance Engagements other than Audits or Reviews of Historical Financial Information' and, in respect of the greenhouse gas emissions, in accordance with International Standard on Assurance Engagements 3410 'Assurance engagements on greenhouse gas statements', issued by the International Auditing and Assurance Standards Board.

Our Independence and quality control

We have complied with the Institute of Chartered Accountants in England and Wales Code of Ethics, which includes independence and other requirements founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behaviour, that are at least as demanding as the applicable provisions of the International Ethics Standards Board for Accountants International Code of Ethics for Professional Accountants (including International Independence Standards).

We apply International Standard on Quality Control (UK) 1 and accordingly maintain a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

Summary of work performed as the basis for our limited assurance conclusion

In carrying out our limited assurance engagement we:

- made enquiries of HSBC's management and those with responsibility for governance, management and reporting;
- considered the suitability in the circumstances of HSBC's use of the Reporting Criteria as the basis for preparing the Subject Matter Information;
- obtained an understanding of the key organisational structures, systems, processes and controls for managing, recording and reporting the Subject Matter Information, including the use of third-party data;
- performed limited substantive testing on a selective basis of the Subject Matter Information, including:
- analysing the emissions data from a number of sites, selected on the basis of their inherent risk and materiality to the group, to understand the key processes and controls for reporting site performance data to the group team;
- agreeing reported data to internal and external sources, for example, categorisation of expense data by industry sector, nature of spend, invoice values, supplier revenues, GHG emissions and emissions factors; and
- reperforming the calculations for a limited number of items, for example, GHG emissions and HSBC's quality scores.
- performed analytical procedures by comparing for example: emissions intensities across different HSBC locations and HSBC's suppliers, and made inquiries of management to obtain explanations for significant differences we identified; and
- \bullet considered the disclosure and presentation of the Subject Matter Information.

Our limited assurance procedures involved agreeing HSBC's data to information submitted by third parties, however our scope did not extend to testing the completeness and accuracy of the information supplied to HSBC by those third parties.

Our procedures did not include evaluating the suitability of design or operating effectiveness of control activities used by HSBC in the preparation and reporting of the Subject Matter Information.

The procedures performed in a limited assurance engagement vary in nature and timing from, and are less in extent than for, a reasonable assurance engagement. Consequently, the level of assurance obtained in a limited assurance engagement is substantially lower than the assurance that would have been obtained had a reasonable assurance engagement been performed.

Other information

The other information comprises all of the information in the Annual Report and Accounts 2022 and ESG Data Pack 2022 other than the Subject Matter Information and our assurance report. The directors are responsible for the other information. As explained above, our assurance conclusion does not extend to the other information and, accordingly, we do not express any form of assurance thereon. In connection with our assurance of the Subject Matter Information, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the Subject Matter Information, or our knowledge obtained during the assurance engagement, or otherwise appears to contain a material misstatement of fact. If we identify an apparent material inconsistency or material misstatement of fact, we are required to perform procedures to conclude whether there is a material misstatement of the Subject Matter Information or a material misstatement of the other information, and to take appropriate actions in the circumstances.

Use and distribution of our report

This report, including our conclusions, has been prepared solely for the Board of Directors of HSBC in accordance with the agreement between us dated 6 February 2023 (the "agreement"), in order to assist the Directors in reporting HSBC's own operational emissions and supply chain emissions as set out in Appendix A.

Our report must not be made available to any other party save as set out in the agreement. To the fullest extent permitted by law, we do not accept or assume responsibility or liability to anyone other than the Board of Directors and HSBC for our work or this report except where terms are expressly agreed between us in writing.

PricewaterhouseCoopers LLP Chartered Accountants London

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21 February 2023

Appendix A: HSBC CO2 Emissions Reporting – own operations and supply chain

Energy and travel greenhouse gas emissions Scope and category	Reporting period (12 months to 30 Sept 2022)
Scope 1 absolute emissions (tCO2e)	19,000
Scope 2 market based absolute emissions (tCO2e)	224,000
Scope 2 location based absolute emissions (tCO2e)	347,000
Scope 3 (business travel – category 6) absolute emissions (tCO2e)	42,000

Supply chain greenhouse gas emissions	Reporting periods (12 months to 30 Sept)			
Scope and category	2022	2021	2020	2019
Scope 3 (purchased goods and services – category 1)				
Suppliers' Scope 1-2 absolute emissions (tCO2e)	218,000	252,000	212,000	268,000
Suppliers' Scope 1-2 data quality score	3.1	3.0	3.0	3.2
Suppliers' Scope 3 absolute emissions (tCO2e)	648,000	617,000	492,000	562,000
Suppliers' Scope 3 data quality score	3.3	3.3	3.3	3.5
Scope 3 (capital goods – category 2)				
Suppliers' Scope 1-2 absolute emissions (tCO2e)	30,000	31,000	15,000	13,000
Suppliers' Scope 1-2 data quality score	3.1	3.1	3.4	3.6
Suppliers' Scope 3 absolute emissions (tCO2e)	114,000	96,000	21,000	25,000
Suppliers' Scope 3 data quality score	3.4	3.3	3.6	3.7

The criteria against which the above own operations and supply chain GHG emissions metrics were prepared are set out in HSBC CO₂ Emissions - Reporting Guidance 2022, (the "Reporting Criteria"), see Appendix B.





HSBC Greenhouse Gas (GHG) Emissions

Reporting Guidance 2022

This greenhouse gas (GHG) Emissions Reporting Guidance ("GERG") document supports the preparation and reporting of greenhouse gas emissions data by HSBC Holdings plc (hereafter "HSBC"), for HSBC's own operations. It is the responsibility of HSBC management to ensure that appropriate procedures are in place to prepare its greenhouse gas emissions reporting in accordance with the GERG. HSBC has:

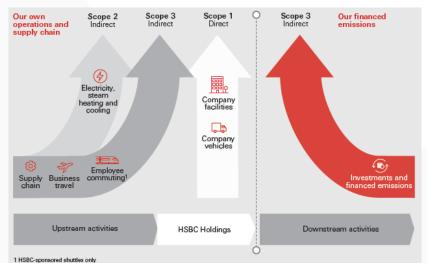
- designed, implemented and maintained internal controls and processes over information relevant to the measurement and preparation of carbon emissions data that is free from material misstatement, whether due to fraud or error;
- established objective reporting criteria (i.e. GERG) for measuring, preparing and reporting the GHG emissions data and applied them consistently;
- presented information, including the criteria, in a manner that provides relevant, reliable, comparable and understandable information; and
- measured and reported the GHG emissions data based on this reporting criteria.

General Reporting Principles

In preparing this guidance document consideration has been given to following principles:

- Information Preparation to highlight to users of the information the primary principles of relevance and reliability of information;
- Information Reporting the primary principles are comparability / consistency with other data including prior year and understandability / transparency providing clarity to users.

Reporting Scope



Since 2013, HSBC's annual data is prepared for the 12-month period to 30 September in accordance with internal reporting timelines. GHG emissions data comprises greenhouse gas emissions arising from:

- Energy used in commercial buildings, vehicles and other forms of transport owned or leased by HSBC and used for business
 purposes. By applying an emission uplift rate, energy used in residential building is also accounted for. This includes 100% of
 emissions from the assets of joint ventures or alliances where HSBC has management control¹;
- Emissions arising from off-shored operations where HSBC retains control over the outsourced operation via contractual agreement; and

¹ Management control: where HSBC Group or its member has full authority to implement the Group environmental policy and where there is control of facilities management.



- Other business travel including air; rail; fleet; taxi; hire car. By applying an emission uplift rate, elements of boat; bus/coach; ferry/junk; tram; and other travel are also included.
- Purchased goods and services, and capital goods, obtained from HSBC's upstream supply chain. This reporting will take place for the first time in 2022, reporting emissions for 2019, 2020, 2021 and 2022.

Greenhouse gas emissions from acquisitions and disposals are included and terminated respectively from the date of contractual completion of the transfer of asset ownership/ leasehold. This is consistent with HSBC's financial reporting. For acquisitions, where data are not available: estimates are prepared for additions which contribute more than 5% of the Reporting Unit (i.e. country level) annual data.

For scope 1, 2 and 3 (business travel), reporting levels are defined on the basis of the percentage of Full Time Equivalent Employee (FTE) as at 30 September (reporting year runs from 1 October to 30 September). A scale up calculation is made on the basis of the FTE coverage rate to account for any missing data component (typically less than 10% of FTE). In addition, emissions uplift rates are applied to allow for uncertainty on quality and coverage of emissions measurement and estimation. The uplift rates are: 4% for electricity, 10% for other energy, and 6% for business travel, based on Intergovernmental Panel on Climate Change (IPCC) Good Practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories and HSBC's own internal analysis of data coverage and quality.

Greenhouse gas emission reporting excludes emissions from investments (including loans to third party organisations), spend associated with use of financial intermediaries (e.g. exchanges) or interest payments made to depositors on interest bearing accounts and employee commuting (except where HSBC provides this service in its Global Technology Centres and Global Service Centres). It also excludes carbon equivalent emissions arising from other greenhouse gases on the basis that these are negligible and/or cannot be calculated with a sufficient level of reliability, however, CO2e factors were used wherever available, in which case elements of other greenhouse gases would have been included in total emissions. CO2e is reported in metric tonnes in HSBC reporting.

Further details on the preparation of emissions reported are presented below.

Data preparation

Property

Data are reported for electricity, primary fuel sources and locally generated energy sources. Energy consumption data where possible are obtained via meters and collated from the service provider invoices. Where metered data are only partially available or not available, energy consumption may be calculated on the basis of a comparable property, extrapolation of cost per unit or estimates using floor area or other published industry baselines.

Trave

For air and rail travel, actual data are obtained from the business travel service agents. Where journey details are not available, estimates of distance travelled are based on the cost of an average journey or by extrapolating from a single month of travel. Where tickets are ordered on a local basis through a travel company an estimated distance of the journey may be made by the traveler/claimant. For independent bookings the estimate of distance travelled is based on the cost of an average journey.

Road travel is measured by direct measurement of journeys made for business purposes. Details of road journeys, including distances travelled, engine size of vehicle and fuel type are submitted as part of expense claims/invoices or from the fleet providers. This may include company vehicles, personal/private vehicles and hire vehicles. Where only cost data are available, an estimate of distances travelled can be calculated on a local basis. Where journey data are not available, previously recorded data or industry baseline data may be used. In some rare instances, it is impossible to split the business travel from the personal travel for company cars. In this situation, the personal travel is included in our reporting.

Supply Chain (Purchase Goods & Services and Capital Goods)

For our supply chain emissions, data is obtained from HSBC's internal spend records and systems to define the scope of the supply chain and alignment of this spend to the scope 3 Purchased Goods & Services and Capital Goods categories under the GHG Protocol, based on whether the spend is capitalized in the general ledger. This capitalization information is available for spend data from HSBC's main internal spend system. For the approx. 10% of spend that is not from this system, we have assumed that it is non-capitalised, so contributes to Purchased Goods & Services.

Emissions are then calculated using the scope 1, scope 2 and upstream scope 3 (operational emissions) that our suppliers disclose through CDP (formerly the Carbon Disclosure Project). We consider CDP submissions from 500 of our largest suppliers based on spend (which HSBC invited to participate in CDP) in this emissions data calculation, emissions are reported to CDP at parent entity level for an organisation. Where we have this emissions data for a supplier, the proportion of their operational emissions allocated to HSBC is based on the bank's total Group-level spend with the supplier, as a proportion of the supplier's total revenue. Supplier emissions data where external verification/assurance has taken place, is prioritised. We have assumed that where emissions are reported by an organization, these account for 100% of the organisation's emissions for that scope. Where emissions data is publically available, but has not been externally verified/assured, it will also be used, however less precision in the emissions data for a supplier will be reflected by a less favourable data quality score, in line with HSBC's financed emissions reporting methodology, see figure 1 below. Where emissions data is not available for a supplier, or they sit outside of the list of 500 of our largest suppliers, the revenue-based industry average for the supplier's primary activity will be used to derive their emissions relevant to HSBC.



Figure 1. Data Quality Scoring

Data Quality	Options to estimate the em	issions	When to use each option		
Score 1	Option 1: Reported	1a	Verified emissions		
Score 2	emissions	1b	Unverified emissions		
	Ontion 2: Physical activity	2a	Emissions are calculated using primary physical activity data of the supplier's energy consumption		
Score 3	Option 2: Physical activity- based emissions	2b	Emissions are calculated using primary physical activity data of the supplier's production and emission factors specific to that primary data.		
Score 4		3a	Emission factors for the sector per unit of revenue are known (CDP Industry Average).		
Score 5	Option 3: Economic activity-based emissions	3b	Emission factors for the sector per unit of asset are known.		
	activity-based emissions	3c	Emission factors for the sector per unit of revenue and asset turnover ratios for the sector are known.		

International Sustainability Standards Board (ISSB) requires GHG accounting to align with the financial accounting period. In order to adhere to this, the time periods of the underlying data sets used in this methodology will not always align. HSBC spend data aligns to the consumption data for HSBC's own energy and travel emissions (Oct- Sept), while the emissions and revenue data for suppliers will have an end date in the prior calendar year. In 2022, this means that supplier spend will cover the period October 2021 to September 2022, while emissions and revenue data will have a period end date in 2021.

Conversion factors

Conversion factors enable determination of the amount of carbon dioxide equivalent released into the atmosphere per unit of energy consumption. Different types of energy source and modes of travel have different conversion factors reflecting the carbon intensity.

Scope 1 - Energy

Scope 1 emissions are calculated using 2022 factors provided by the UK Government's Department for Business, Energy and Industrial Strategy (BEIS) for each primary fuel source.

Scope 1 - Travel

Scope 1 emissions are calculated using 2022 factors provided by the Department for Business, Energy and Industrial Strategy (BEIS) for each engine type of own and leased cars.

Scope 2 - Energy

HSBC reports energy emissions under the location and market basis introduced by the revised scope 2 guidance of the GHG protocol. HSBC has reviewed the revised GHG Protocol Scope 2 Guidance and has worked with service providers in 2020 to integrate the revised GHG Protocol Scope 2 Guidance into HSBC's reporting methodology to enable HSBC to report using both location based and market based methodologies.

Market Based

For market based emissions reporting, HSBC applies the following hierarchy of emission factors, using the most recent factors available:

- 1. Factors provided by electricity attribute certificates or equivalent instruments;
- 2. Factors provided by contracts for electricity, such as power purchase agreements (PPAs).
- 3. Factors provided by energy suppliers
- 4. Factors provided by the Association of Issuing Bodies (AIB) for the residual mixes in Europe
- 5. Other grid-average emission factors (subnational or national)
- 6. Factors provided by the International Energy Agency (IEA).



Location Based

For location based emission reporting; HSBC applies the following hierarchy of emission factors:

- 1. Regional or subnational emission factors
- 2. National production emission factors
- 3. Factors provided by the International Energy Agency (IEA).

Scope 3 - Travel

For travel, factors are provided by the transportation services suppliers or from published sources of the countries, where the kilometers are travelled. In 2021 we updated our reporting methodology specially related to air travel emissions including the cabin seating class and the radiative forcing factors. Our 2019 baseline for the Net Zero strategy has been updated for air travel, and includes the cabin seating class and the impact of the radiative forcing,

Guidance on the use of conversion factors, including the most recent factors released by the IEA and BEIS is issued internally annually.

Scope 3 - Supply Chain

Where suppliers' emissions data is not available, or a supplier is outside HSBC's 500 largest suppliers, we use an industry average figure provided based on a supplier's primary activity to calculate HSBC's portion of their emissions. These industry average factors are presented as metric tonnes CO2e/US\$m and are sourced from CDP, who publish annual industry averages based on the CDP submissions they received that year. For our baseline year of 2019, CDP did not publish an industry average file, so we have used the 2020 industry averages in these calculations. These averages are available in quartiles and the 75th percentile will be used to ensure a conservative approach is taken to the industry averages calculations.

Prior year adjustments

The measuring and reporting of GHG emissions data inevitably involves a degree of estimation. In exceptional circumstances restatements of prior year reported emissions and offset data may be required. Restatements are considered where there is a change in the data and/or in the data collection or preparation that will have material impact on the total emissions and/or offset at Group level.

Prior year recalculations and adjustments

The measuring and reporting of GHG emissions data inevitably involves a degree of estimation. In exceptional circumstances restatements of prior year reported emissions and offset data may be required. Restatements are considered where there is a change in the data and/or in the data collection or preparation that will have material impact on the total emissions.