



# Independent Limited Assurance Report to the Directors of HSBC Holdings plc on selected Subject Matter Information within the Annual Report and Accounts (“ARA”) and the ESG Data Pack for the year ended 31 December 2023

## Our limited assurance conclusion

Based on the procedures we have performed, as described under the “Summary of work performed” and in the “Key Assurance Matters” sections below, and the evidence we have obtained, nothing has come to our attention that causes us to believe that the information marked with the symbol † on pages 48, 61 and 67 of HSBC Holdings plc’s (“HSBC’s”) Annual Report and Accounts 2023 and pages 3, 7 and 8 of HSBC’s ESG Data Pack 2023 (the “Reports”), and summarised in Appendix A of this report (together, the ‘Subject Matter Information’), has not been prepared, in all material respects, in accordance with HSBC’s Financed Emissions and Thermal Coal Exposures Methodology, February 2024 (the ‘Reporting Criteria’) available on HSBC’s website<sup>i</sup>.

## What we were engaged to assure

The Subject Matter Information needs to be read and understood together with the Reporting Criteria which HSBC’s Directors are solely responsible for selecting and applying. The Subject Matter Information is set out in Appendix A and the Reporting Criteria are set out in Appendix B.

The scope of our work did not extend to information in respect of earlier periods or to any other information included in, or linked from, the Reports.

## Our work

### Professional standards applied

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 (GHG) 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 Management (UK) 1 and accordingly maintain a comprehensive system of quality management including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

### Summary of work performed

We performed a limited assurance engagement. As a limited assurance engagement can vary, we give more detail about the procedures performed, so that the intended users can understand the nature, timing and extent of the procedures we performed as context for our conclusion. These procedures 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.

In performing our assurance procedures, which were based on our professional judgement, we performed the following:

- Obtained the Reporting Criteria and assessed whether it is consistent with relevant industry guidance;
- Obtained an understanding of HSBC’s systems, processes and controls relevant to the preparation of the Subject Matter Information. Our limited assurance procedures did not include assessing the adequacy of control activities through assessing the design or testing the operating effectiveness of controls;

<sup>i</sup>The maintenance and integrity of HSBC’s website (<https://www.hsbc.com/who-we-are/esg-and-responsible-business/esg-reporting-centre>) is the responsibility of HSBC; the work carried out by us does not involve consideration of these matters and, accordingly, we accept no responsibility for any changes that may have occurred to the reported Subject Matter Information or Reporting Criteria when presented on HSBC’s website.



- Performed limited substantive testing on a selective basis of the Subject Matter Information. Our testing involved:
  - Comparing the categorisation of data by industry sector and nature of banking services between internal management systems and relevant external data sources;
  - Inspecting supporting internal evidence to determine whether HSBC's transactions, exposures and counterparties are consistent with its Reporting Criteria;
  - Inspecting HSBC's IT coding within their calculation models and reperforming the calculation of on-balance sheet financed emissions, facilitated emissions and weighted data quality scores;
  - Testing input data for the on-balance sheet financed and facilitated emissions and HSBC's Partnership for Carbon Accounting Financial ('PCAF') data quality scores, including company revenue, enterprise value, market value, company operational activity, GHG emissions, GHG emissions factors, to internal and external sources;
  - Comparing exchange rates used to external sources; and
  - Comparing the disclosures of the Subject Matter Information in HSBC's Annual Report and Accounts and ESG Data Pack to the results of our testing of the underlying data.

Our limited assurance procedures involved agreeing HSBC's data to information provided 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.

### Materiality

We are required to plan and perform our work to address the areas where we have identified that a material misstatement of the Subject Matter Information is likely to arise. We set certain quantitative thresholds for materiality. These, together with qualitative considerations, helped us to determine the nature, timing and extent of our procedures in support of our conclusion. We believe that it is important that the intended users have the information they need to understand the concept and the level of materiality to place our conclusion in context. Based on our professional judgement, we determined materiality for the Subject Matter Information as follows:

<b>Overall materiality</b>	<p>Materiality may differ depending upon the nature of the Subject Matter Information. We apply professional judgement to consider the most appropriate materiality benchmark for each aspect of the Subject Matter Information, having considered how the intended users may use the information.</p> <p>The benchmark approach for each aspect of the Subject Matter Information is indicated in the table in Appendix A by one of the following numbers:</p> <p>1: This metric is an absolute number. A benchmark materiality of 5% has been applied.</p> <p>2: This metric is a weighted average. A benchmark of 1 decimal place has been applied.</p>
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We also agreed to report to the Directors misstatements ('reportable misstatements') identified during our work at a level below overall materiality, as well as misstatements below that lower level that in our view warranted reporting for qualitative reasons. The Directors are responsible for deciding whether adjustments should be made to the Subject Matter Information in respect of those items.

### Key assurance matters

We considered the following areas to be those that required our particular focus and discussed these areas with HSBC's management. This is not a complete list of all areas of focus identified by our work.

Inclusion and exclusion of products associated with financed emissions	
<b>Nature of the issue</b>	<p>HSBC uses internal product codes to determine which counterparties and exposures are in-scope for reporting. The asset classes and products captured are defined on page 10 of HSBC's Financed Emissions and Thermal Coal Exposures Methodology, February 2024. Previously, some reported on-balance sheet numbers included non lending exposures for market products in error. As a result we identified a heightened risk of error in relation to the classification of products as in or out of scope.</p>

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<p>How our work addressed the key assurance matter</p>	<p>The following procedures were performed on a selective basis and are supplementary to those set out above:</p> <ul style="list-style-type: none"> <li>• Compared documentation of product codes associated with exposures in HSBC's systems to the business held product taxonomies;</li> <li>• Assessed HSBC's rationale for the inclusion or exclusion of products and consistency with guidance from PCAF; and</li> <li>• Inspected the product code inclusion and exclusion static data tables within the IT coding of HSBC's Financed Emissions Model to assess whether they are consistent with HSBC's Reporting Criteria.</li> </ul>
<p>Element(s) of the Subject Matter Information most significantly impacted</p>	<p>On-balance sheet financed emissions metrics and thermal coal financing exposure and the thermal coal mining financed emissions metrics detailed in Appendix A and on pages 48, 61 and 67 of HSBC Holdings plc's ("HSBC's") Annual Report and Accounts 2023 and pages 3 and 7 of HSBC's ESG Data Pack 2023.</p>

<b>Industry and sector classification of relevant exposures for reporting</b>	
<p>Nature of the issue</p>	<p>HSBC determines a counterparty's industry sector for financed emissions metrics using internal management information systems, supplemented by a business validation review and where relevant, comparison to third party industry sector information. The determination of a counterparty's industry sector in some cases is judgemental and some company activities could be interpreted as relating to more than one industry sector. There is a risk that counterparties have been allocated to the incorrect industry sector.</p>
<p>How our work addressed the key assurance matter</p>	<p>The following procedures were performed on a selective basis and are supplementary to those set out above:</p> <ul style="list-style-type: none"> <li>• Inspected evidence retained by HSBC on their validation of industry sector allocated to counterparties, and compared this to independent industry evidence;</li> <li>• Inquired with counterparty relationship managers to understand the information and factors considered to identify the sector a counterparty is categorised into for reporting when it has an exposure in-scope; and</li> <li>• Verified the inclusion or exclusion of counterparties, based on HSBC's assessment of industry sector classification, for determining the total weighted exposures (for thermal coal only), thermal coal mining financed emissions, on-balance sheet financed emissions and facilitated emissions calculations</li> </ul>
<p>Element(s) of the Subject Matter Information most significantly impacted</p>	<p>On-balance sheet financed emissions metrics, facilitated emissions metrics and thermal coal financing exposure and the thermal coal mining financed emissions metrics detailed in Appendix A and on pages 48, 61 and 67 of HSBC Holdings plc's ("HSBC's") Annual Report and Accounts 2023 and pages 3, 7 and 8 of HSBC's ESG Data Pack 2023.</p>

## Challenges of non-financial information

The absence of a significant body of established practice upon which to draw to evaluate and measure non-financial information allows for different, but acceptable, evaluation and measurement techniques that can affect comparability between entities, and over time.

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

As a result of this non-financial information is subject to more inherent limitations than financial information, given the characteristics of the underlying subject matter and the methods used for measuring or evaluating it. The precision of different measurement techniques may also vary.

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## Reporting on Other Information

The other information comprises all of the information in the Reports other than the Subject Matter Information and our assurance report. The Directors are responsible for the other information. As explained above, our 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. In doing so, we 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.

## HSBC's responsibilities

HSBC's management 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 Reports;
- the preparation of the Subject Matter Information in accordance with the Reporting Criteria including designing, implementing and maintaining systems, processes and internal controls over the evaluation or measurement of the underlying subject matter to result in Subject Matter Information that is free from material misstatement, whether due to fraud or error; and
- documenting and retaining underlying data and records to support the Subject Matter Information; and
- producing the Reports that provides a balanced reflection of HSBC's performance in this area and discloses, with supporting rationale, matters relevant to the intended users of the Reports;
- Comparing exchange rates used to independent external sources; and
- producing a statement of HSBC's responsibility, as set out on page 43 of HSBC's Annual Report and Accounts.

## 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.

## Use of our report

Our report, including our conclusion, has been prepared solely for the Directors of HSBC in accordance with the agreements between us dated 23 November 2023 and 7 December 2023 (the "agreements"). 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 our report except where terms are expressly agreed between us in writing.

**PricewaterhouseCoopers LLP**  
**Chartered Accountants**  
**London**  
**21 February 2024**

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## Appendix A – Subject matter information

### HSBC on-balance sheet financed emissions

Sector	Year	Scope 1 & 2 (MtCO <sub>2e</sub> ) <sup>1</sup>	Scope 3 (MtCO <sub>2e</sub> ) <sup>1</sup>	PCAF data quality score Scope 1 & 2 <sup>2</sup>	PCAF data quality score Scope 3 <sup>2</sup>
Oil & Gas	2021	2.1	18.4	2.8	2.9
	2022	1.3	16.2	3.2	3.2
Power & Utilities	2021	8.1	N/A	2.9	N/A
	2022	7.6	N/A	3.3	N/A
Cement	2021	2.2	N/A	2.8	N/A
	2022	4.5	N/A	2.9	N/A
Aluminium, Iron & Steel	2021	2.0	N/A	3.0	N/A
	2022	2.7	N/A	3.0	N/A
Aviation	2021	2.7	0.16	3.0	3.3
	2022	2.6	0.15	3.3	2.4
Automotive	2021	0.07	3.6	2.8	2.9
	2022	0.12	5.4	2.7	2.9
Thermal coal mining	2020	0.17	3.8	3.0	3.0

[1], [2] Please refer to "Overall materiality" table for materiality thresholds.

### HSBC thermal coal financing exposures

#### Total thermal coal financing exposure

Position as at 31 December 2020 (\$) <sup>1</sup>

\$1bn (rounded)

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## HSBC facilitated emissions (2019, 2020, 2021 and 2022)

### Facilitated emissions (33% weighting)

Sector	Year	Scope 1 & 2 (MtCO <sub>2</sub> e) <sup>1</sup>	Scope 3 (MtCO <sub>2</sub> e) <sup>1</sup>	PCAF data quality score Scope 1 & 2 <sup>2</sup>	PCAF data quality score Scope 3 <sup>2</sup>
Oil & Gas	2019	1.6	12.7	2.3	2.7
	2020	2.7	24.0	2.0	2.1
	2021	0.90	10.5	2.9	3.1
	2022	0.36	4.7	3.3	3.3
Power & Utilities	2019	2.8	N/A	2.5	N/A
	2020	2.1	N/A	2.5	N/A
	2021	1.5	N/A	2.9	N/A
	2022	1.2	N/A	2.9	N/A

[1], [2] Please refer to "Overall materiality" table for materiality thresholds.

### Facilitated emissions (100% weighting)

Sector	Year	Scope 1 & 2 (MtCO <sub>2</sub> ) <sup>1</sup>	Scope 3 (MtCO <sub>2</sub> e) <sup>1</sup>	PCAF data quality score Scope 1 & 2 <sup>2</sup>	PCAF data quality score Scope 3 <sup>2</sup>
Oil & Gas	2019	4.9	38.4	2.3	2.7
	2020	8.1	72.8	2.0	2.1
	2021	2.7	31.7	2.9	3.1
	2022	1.1	14.1	3.3	3.3
Power & Utilities	2019	8.5	N/A	2.5	N/A
	2020	6.3	N/A	2.5	N/A
	2021	4.5	N/A	2.9	N/A
	2022	3.8	N/A	2.9	N/A

[1], [2] Please refer to "Overall materiality" table for materiality thresholds.

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## **Appendix B – Financed Emissions and Thermal Coal Exposures Methodology, February 2024 (the “Reporting Criteria”)**

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# Financed Emissions and Thermal Coal Exposures Methodology

February 2024





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# How we measure financed emissions

Financed emissions are calculated based on guidance from PCAF which defines how financial institutions should account for their scope 3 category 15 (investments) emissions (otherwise known as their financed emissions).

Our model estimates counterparty emissions and attributes a proportion of these emissions to the client responsible for financing them. Specific calculations vary by asset class and sector, and guidance is provided on how to aggregate emissions intensities. HSBC's methodology follows the Partnership for Carbon Accounting Financials ('PCAF') Standards<sup>1</sup> and any divergence is explained within the methodology below.

Our analysis of financed emissions comprises 'on-balance sheet financed emissions' and 'facilitated emissions', which we distinguish where necessary in our reporting.

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## On-balance sheet financed emissions

The on-balance sheet calculation, shown below, uses company emissions and an attribution factor to assign emissions to HSBC's financing activities for general corporate purposes (i.e., unknown use of proceeds as defined by the GHG Protocol).

$$\text{On-balance sheet financed emissions} = \sum_c \text{attribution factor}_c \times \text{emissions}_c$$

*Where* company (c) is defined as a borrower or investee.

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<sup>1</sup> PCAF (2022). The Global GHG Accounting and Reporting Standard Part A: Financed Emissions. Second Edition and PCAF (2023) The Global GHG Accounting and Reporting Standard Part B: Facilitated Emissions for the Financial Industry

## Attribution factor

The attribution factor, defined as HSBC’s share of total annual greenhouse gas (‘GHG’) emissions of each counterparty, is calculated by taking HSBC’s outstanding amount of financing divided by a measure of company value. The calculation and its components are summarised as follows:

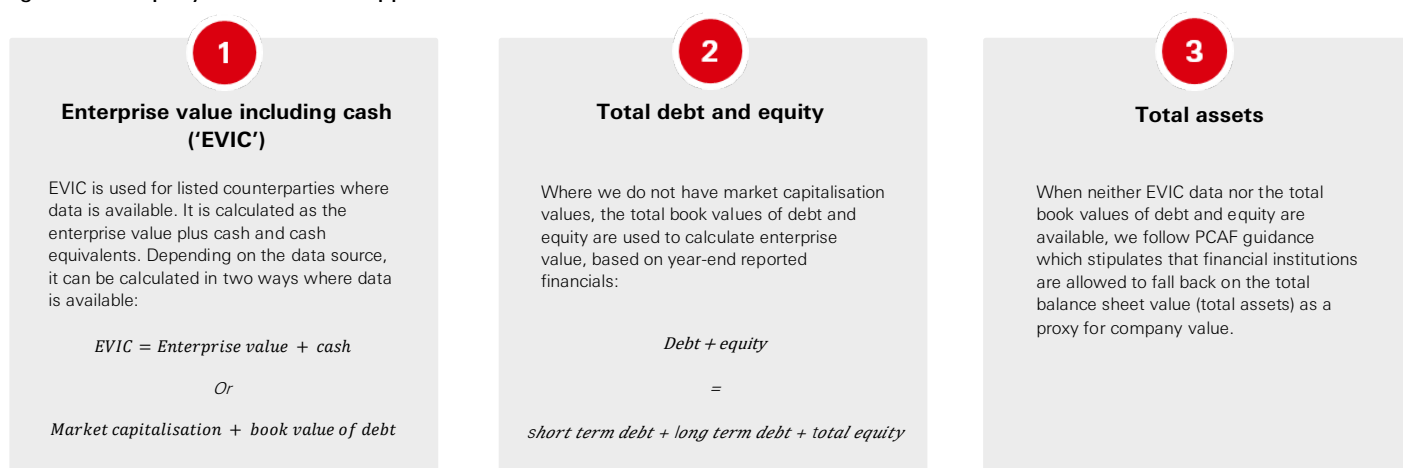
$$\text{Attribution factor} = \frac{\text{outstanding amount}_c}{\text{company value}_c}$$

Where outstanding amount = drawn amount<sup>2</sup> which is sourced from HSBC systems.

## Company value data

Company value from external data providers is sourced based upon a waterfall hierarchy<sup>3</sup>, determined by quantitative and qualitative factors. Private firms do not have market capitalisation values, so total assets are used to calculate company value.

Figure 1 - Company value waterfall approach



## Facilitated emissions

Facilitated emissions for capital underwriting activities are calculated and reported separately to on-balance sheet financed emissions.

Capital underwriting “facilitates” access to financing, but underwriters do not provide financing directly to clients. The calculation of facilitated emissions is based on the flow (annual transaction volume) instead of a stock (outstanding balance) as for financed emissions. This is reflective of the transactional nature of capital markets activities and the time period during which banks generate revenue from capital markets activities. We do not differentiate between equity and debt capital markets in our facilitated emissions methodology.

The model produces two sets of outputs for facilitated emissions at different weighting factors, using the transaction volume over 1 year.

<sup>2</sup> For business loans, this is defined as the value of the debt that the borrower owes to the lender (i.e., disbursed debt minus any repayments). It will be adjusted annually to reflect the correct exposure, resulting in the attribution to decline to 0 at the end of the lifetime of the loan (i.e., when it is fully repaid). at a fixed point in time (calendar year end).

<sup>3</sup> In a deviation from PCAF guidance, where the total company equity value according to the client’s balance sheet is negative, we source company value using total assets.

The calculation and its components are summarised below.

$$\text{Facilitated emissions} = \sum_c \frac{\text{facilitated amount}_c}{\text{company value}} \times \text{weighting factor} \times \text{annual emissions}_c$$

Where company (c) is defined as the issuing company.

## Attribution factor

The attribution factor uses league table credit, total raised amount of the counterparty, a weighting factor and the company value of the firm. To split the total emissions facilitated to different arrangers (facilitators), we assign responsibility based on league table credit and split deals based on apportioned value provided by Dealogic.

The attribution factor numerator was set to facilitated amount in which HSBC is a bookrunner for equity capital markets ('ECM') and debt capital markets ('DCM') and bookrunner or lead manager for syndicated loans, whereas the denominator corresponds to the total company value, analogous to financed emissions.

For facilitated amount, the apportioned value in USD field from Dealogic is utilised in alignment with the criteria for Dealogic league table credit, without any further currency conversion performed.

The Dealogic data for 2019/2020 was extracted in August 2022 and for 2021/2022 was extracted in July 2023.

- ◆ For DCM, short-term debt and money market transactions are excluded due to the minimum period threshold requirements.
- ◆ For ECM, shelf deals are excluded as such deals are only filings for companies to register their interest in issuing new securities in the future and are not offerings in themselves.
- ◆ Transactions excluded from the analysis are asset backed securities, mortgage-backed securities, government bonds, and bonds issued by multinational organisations as these are out of scope for the facilitated emissions analysis.
- ◆ For syndicated loans, the bookrunner apportioned value is calculated by Dealogic through equal apportionment of bookrunner-eligible deal value among bookrunners. The mandated lead manager apportioned value is calculated by Dealogic through equal apportionment of all eligible deal value among mandated lead arrangers. In Dealogic, all bookrunners are automatically also assigned as a mandated lead arranger role on the deal. On loan deals where HSBC is both a bookrunner and mandated lead arranger, the apportioned value for bookrunner may differ to the apportioned value for mandated lead arranger<sup>4</sup>.

## Company value data

Company value from external data providers is sourced based upon a waterfall hierarchy<sup>3</sup>, determined by quantitative and qualitative factors (see Figure 1 on page 5).

When none of the above options are available, PCAF guidance stipulates that financial institutions are allowed to fall back on the total balance sheet value (total assets) as a proxy for company value.

## Weighting factor

As per the PCAF Standard for Facilitated Emissions, the figures are weighted at 33%. For 100% values, please refer to the Annual Report and Accounts 2023 ESG Data Pack.

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<sup>4</sup> For syndicated loans, where HSBC has both a bookrunner role and lead manager role (or mandated lead arranger), the apportioned value based on bookrunner is taken if available. If not, the apportioned value based on lead manager role is used



## Project financed emissions

This asset class includes all loans to projects for specific purposes (i.e., with known use of proceeds as defined by the GHG Protocol that are on the balance sheet of HSBC. To calculate emissions, only the financed (ring-fenced) activities are included. Emissions and financials related to existing activities outside the financed project but within the financed organisation are not considered. Project level details are captured for facilities that are identified as project finance.

$$\text{Project financed emissions} = \sum_p \text{attribution factor}_p \times \text{emissions}_p$$

Where  $p$  = project.

Data for projects, including project-level financials, production, and activity type, are sourced from deal memos manually. As a result, not all data necessary for project-level calculations is available. In cases where the data is available at a project level, the methodology for attributing emissions follows the project finance calculation methodology. In cases where we are unable to obtain project level production data, revenue is used at project level. If revenue is not available at project level, the project is treated as general lending. If the counterparty group is not part of the general lending, then the production data is treated as PCAF score five, using the standard calculation within the model.

### Attribution factor

$$\text{Attribution factor} = \frac{\text{outstanding amount}}{\text{equity}_p + \text{debt}_p}$$

Where outstanding amount = drawn amount<sup>5</sup> which is sourced from HSBC systems.

### Project value data

For project equity and debt, company emissions, production and revenue data at the counterparty level, several data points are available from internal and external sources. A hierarchy among these sources and data points is needed to establish a process for choosing between sources where more than one data point is available. Due to differences in data matching and methodological differences between vendors, data provided from different sources may not always be accurate or consistent. The purpose of developing a hierarchy is to help ensure that coverage of data sources is properly weighed against quality.

## Emissions estimation

PCAF provides guidance on estimating emissions using different data sources. Emissions can be estimated using data on production, revenue, or outstanding loan amounts in combination with emission factors specific to that data.

PCAF provides a data quality scorecard with specific guidance per asset class to prioritise data used in emissions calculations. PCAF provides guidance on data quality scoring for each asset class to help ensure that financial institutions use the best available data in accordance with the data hierarchy shown in Figure 2 on page 8. We endeavour to use the best available dataset according to PCAF but at this stage, we have prioritised the use of vendor data to help ensure data consistency. Recommendations are provided to financial institutions to score and disclose data quality, and to seek to improve data quality over time. In general, a lower PCAF data quality score is preferred.

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<sup>5</sup> For business loans, this is defined as the value of the debt that the borrower owes to the lender (i.e., disbursed debt minus any repayments). It will be adjusted annually to reflect the correct exposure, resulting in the attribution to decline to 0 at the end of the lifetime of the loan (i.e., when it is fully repaid). at a fixed point in time (calendar year end).

Data sources are assessed to define the hierarchy in which they are used at a point in the year that enables us to perform the necessary data sourcing and validation required to meet our annual disclosures. When multiple data sources are available, they are ranked based on an analysis of both quantitative and qualitative factors.

The data supplied by vendors in many instances is considered to be the highest quality data available, coming from third-party sources including Refinitiv, Capital IQ, Bloomberg, DB, S&P Trucost, CDP and Asset Impact and national databases.

Finally, where data is not available from third party vendors or outliers are identified, data is sourced directly from companies for material counterparties (through annual reports or other disclosures). HSBC has moved away from reliance on manually scraping annual reports in preference of data from external vendors.

**Figure 2 - Emissions data hierarchy**

PCAF data quality score <sup>6</sup>	Proxy type	Calculation	Data required	Description
1	N/A	N/A	Counterparty reported emissions data (verified)	
2	N/A	N/A	Counterparty reported emissions data (un-verified)	
3	Estimate of physical intensity	Primary physical activity of counterparty's production consumption * emissions factors specific to primary data	<ul style="list-style-type: none"> <li>◆ Counterparty production data</li> <li>◆ Emissions factors</li> </ul>	Emissions are calculated using primary physical activity data for the counterparty's production and emissions factors specific to that primary data.
4	Estimate of revenue intensity	Counterparty revenue * emissions factors for the sector	<ul style="list-style-type: none"> <li>◆ Counterparty revenue</li> <li>◆ Emissions factors</li> </ul>	Sector-based emissions factors. Average taken using revenue intensity factors for all counterparties where data is available.
5	Estimate of asset intensity	Outstanding amount in the counterparty * emissions factors for the sector	<ul style="list-style-type: none"> <li>◆ Outstanding amount provided to the counterparty.</li> <li>◆ Emissions factors</li> </ul>	Sector-based emissions factors per unit of asset. Average taken using asset intensity factors for all counterparties where data is available

## Production emissions factors

Production emissions factors are sourced from publicly available resources and when not available are calculated using external vendor data. Absolute emissions are calculated by multiplying production volume with physical emissions factor appropriate for the sector and production technology.

For automotive counterparties where emissions are sourced from Asset Impact, the scope 3 emissions are used to derive scope 1 and 2 emissions where there are data gaps, using publicly available scaling factors.

<sup>6</sup> (score 1 = highest, score 5 = lowest quality)

## **Model governance**

HSBC Holdings plc is responsible for the preparation and reporting of financed emissions information and all the supporting records, including selecting appropriate measurement and reporting criteria, in our Annual Report and Accounts, the ESG Data Pack and the additional reports published on our website.

The model we have developed to calculate our financed emissions baseline is subject to a governance process for all sectors that includes input from model users and peer review from external consultants and senior stakeholders across our businesses and functions. Subject matter experts from Global Banking and Markets ('GBM') and Commercial Banking ('CMB') reviewed and challenged model design choices and assumptions through a series of workshops. Model development and outputs are governed by the Climate Aligned Finance ('CAF') Programme Steering Committee. This meeting is made up of senior representatives across global lines of business (GBM and CMB) and business functions (Corporate Sustainability, Global Finance, Global Risk and Compliance, Data Architecture Office, Legal, Investor Relations). Subject matter experts and external consultants are also invited where appropriate. The CAF Programme Steering Committee is overseen by the Group Executive Committee and the Group ESG Steering Committee.

In addition to these meetings and discussions, the end-to-end model was also subject to HSBC's three lines of defense governance processes.

# Our design choices

## Scope of analysis

When assessing financed emissions, we focus our analysis on those parts of the sector that we believe are most material in terms of GHG emissions, and where we believe engagement and climate action have the greatest potential to effect change.

Model scope is subject to change as industry methodologies evolve and data availability improves. We expect to revisit design choices as our methodology continues to develop.

## Asset classes and products

Our analysis covers financing from the global businesses of GBM and CMB, as the sectors and parts of the value chain that we currently include have limited retail exposure.

We calculate on-balance sheet financed emissions using the apportioned value of on-balance sheet financing related to wholesale credit and lending, which includes business loans, and project finance. Internal analysis of on-balance sheet lending products was used to determine which should be qualified for inclusion and which should be excluded.

We only include products for which the typical original term is 12 months or longer, having considered PCAF guidance, and consulted with subject matter experts from the business. The exclusions based upon product type are:

- ◆ Assets that are short term by design and are typically less than 12 months in duration;
- ◆ Interest bearing and non-interest-bearing current accounts;
- ◆ Balances with corresponding banks;
- ◆ Auto loans; and
- ◆ Market products.

Products are treated as project finance for calculation purposes based on the use of proceeds, where the data is available for the calculation. When use of proceeds or necessary data are unknown, they are treated as general lending.

For facilitated emissions we considered all capital market transactions in scope for the year of analysis. These include debt and equity capital markets and syndicated loans. We limit the calculation to DCM and ECM transactions in which HSBC had a bookrunner role, and syndicated loan transactions in which HSBC had either a bookrunner or lead manager role.

We exclude products where we consider there is a weak link to production activities. We continue to engage with industry bodies to help formulate our methodology for assessing and measuring financed emissions and aim to consider expanding coverage of our analysis as methodologies for new asset classes are published.

Regarding the different types of GHGs measured, we measure in CO2 equivalent (CO2e) using the Global Warming Potential ('GWP<sup>7</sup>') framework detailed by the GHG Protocol. We may consider analysing CH4 separately in the future as data and methodologies are made available.

We do not include avoided emissions in our calculations. These are emission reductions that a financed project produces versus what would have been emitted in the absence of the project (the baseline emissions).

## Sectors and GHG scopes

Figure 3 below shows the scope of our financed emissions analysis for the seven in-scope sectors, including upstream, midstream and downstream activities within each sector. The allocation of companies to different parts of the value chain is highly dependent on expert judgement and data available on company revenue streams. As data quality improves, we expect this will be further refined.

Figure 3 - Scope of our analysis

Sector	Scope of emissions	Value chain in scope			
		Upstream (e.g. extraction)	Midstream (e.g. transport)	Downstream (e.g. fuel use)	Integrated/ diversified
Oil and gas	1, 2 and 3	Upstream (e.g. extraction)	Midstream (e.g. transport)	Downstream (e.g. fuel use)	Integrated/ diversified
Power and utilities	1, 2	Upstream (e.g. generation)	Midstream (e.g. transmission and distribution)		Downstream (e.g. retail)
Cement	1 and 2	Upstream (e.g. raw materials, extraction)	Midstream (e.g. clinker and cement manufacturing)		Downstream (e.g. construction)
Iron, steel and aluminium	1 and 2	Upstream (e.g. raw materials, extraction)	Midstream (e.g. ore to steel)		Downstream (e.g. construction)
Aviation	1 for airlines, 3 for aircraft lessors	Upstream (e.g. parts manufacturers)	Midstream (e.g. aircraft manufacturing)		Downstream (e.g. airlines and aircraft lessors)
Automotive	1, 2 and 3	Upstream (e.g. suppliers)	Midstream (e.g. motor vehicle manufacture)		Downstream (e.g. retail)
Thermal coal mining	1, 2 and 3	Upstream (e.g. extraction)	Midstream (e.g. processing)		Downstream (e.g. retail)

<sup>7</sup> [https://ghgprotocol.org/sites/default/files/ghgp/Global-Warming-Potential-Values%20%28Feb%2016%202016%29\\_1.pdf](https://ghgprotocol.org/sites/default/files/ghgp/Global-Warming-Potential-Values%20%28Feb%2016%202016%29_1.pdf)



## Sector classification

The scope of clients analysed is determined based on sector classifications assigned using expert judgement from global relationship managers based on their relationship and knowledge of the customer's activity, with supporting data from NACE<sup>8</sup> and NAICS (North American Industry Classification System) codes assigned at the issuer level consistent with third party vendor datasets. In order to conduct necessary validation steps and perform calculations in time for our Annual Reports and Accounts, we allocate clients to a sector at an early point in the year, adopting the counterparty group structure used at that time.

For the capital markets portfolio we use the same approach as used for the wholesale lending portfolio to help ensure that financed and facilitated emissions methodologies are aligned. As data availability improves, we aim to strengthen our analysis of company groups by providing greater granularity, focusing our analysis at the issuer level.

As the scope of clients is mapped at the parent entity level (counterparty), the counterparty group may include subsidiary deals that may not be individually considered as in scope based on their activity or NAICS code, and it also may exclude deals that may individually be considered as in scope where the counterparty or parent is not. For instance, a counterparty group that is in scope for power and utilities may contain deals that are outside of the power and utilities sector value chain (e.g. deals with NAICS of "Electric Power Transmission, Control, and Distribution"); in reverse, deals that are in scope for power and utilities (e.g. deals with NAICS of "Electric Power Generation") may be out of scope for power and utilities if the counterparty group is in scope for a different sector (e.g. cement).

### Allocation of counterparties to sector and value chain

For the wholesale lending portfolio, we use NACE (FN13) codes and internal wholesale industry classifications to help determine the nature of a customer's main activity.

NACE codes are assigned to a counterparty at the counterparty group level by calculating the NACE with the highest and second-highest approved lending limits. The NACE classification codes used to select the in-scope counterparties are provided in Figure 4 on page 13. Where a counterparty has an in-scope wholesale industry classification or an in-scope NACE code (based on the counterparty-level highest and second-highest NACE), we propose it under that respective sector for assessment in the second stage (with primacy given to the wholesale industry classification if the proposed sectors are different). In the second stage, the proposed sector is validated by the business to confirm whether in or out of scope and to confirm the part of the value chain in which a counterparty group operates.

In circumstances where the largest total lending limit is associated with a financial or holding company NACE code, but the primary economic activity of that counterparty group is proposed to be in scope, we would still include the counterparty group in our analysis. As data availability improves, we plan to strengthen our analysis of counterparty groups by providing greater granularity, focusing our analysis at the individual counterparty level.

When a company has activities in more than one sector, the counterparty is assigned by the business to the sector where it has the majority revenue, based upon available data. Furthermore, based upon revenue data where available, if a counterparty group has diversified activities in three or more sectors, and none of these contribute a majority of revenues, it is then classified as a conglomerate. Where evidence is not readily available to determine revenue, a conglomerate classification can be assigned by the business based upon supporting evidence. Counterparty groups identified as conglomerates are excluded as these can have different activities covered by multiple sector targets. Once we define a methodology for conglomerates these may be covered according to their activity split.

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<sup>8</sup> NACE FN 13 NACE (Nomenclature of Economic Activities) is the European statistical classification of economic activities.

For the facilitated emissions population we use NAICS codes to help determine the nature of a customer’s main activity where there is no existing confirmed sector classification from the wholesale lending portfolio. The NAICS classification codes used are provided in Figure 5 on page 13.

**Figure 4 - L4 NACE codes in scope**

L4 NACE codes in scope	Proposed sector mapping
2910	Automotive
3091	Automotive
5110	Aviation
7735	Aviation
2351	Cement
0610	Oil and gas
0620	Oil and gas
3511	Power and utilities
2410	Iron, steel and aluminium
2442	Iron, steel and aluminium

**Figure 5 - NAICS codes in scope**

NAICS codes in scope	Proposed sector mapping
2111	Oil and gas
22111	Power and utilities

## Setting targets

We plan to continue to release sectoral targets for key transition sectors where the availability of appropriate data, methodologies and approaches allow, and expect to consider Net-Zero Banking Alliance (‘NZBA’) and other industry guidance in doing so. For each sector our target setting approach is focused on seeking to capture the most material GHG emissions (in the sector and in our portfolio of customers).

Our target-setting approach to date has been to utilise a single reference scenario (IEA NZE 2021). This scenario does not disaggregate by region and we have adopted a global pathway as our chosen reference scenario for targets related to key sectors. As our financing portfolio in a number of carbon-intensive sectors is weighted towards emerging markets, we plan to continue to monitor emerging 1.5°C-aligned scenarios including those that are released with regional disaggregation. Moving forwards we intend to consult with external scientific and international bodies to inform how we embed regional implications and enable our financed emissions portfolio alignment and target setting approaches to better reflect our business context.

For sectors where we have not yet set 2030 targets, we continue to consider a range of approaches that serve to help support the transition, with a focus on both real-world emissions impact, implementation effectiveness and just

transition considerations. This could include sector-relevant sustainable financing and investment objectives to support the decarbonisation of our portfolio for a given sector, alongside disclosing financed emissions progress.

We also plan to continue to monitor the latest scientific evidence and emerging scenarios of potential pathways to net zero, as well as real economy progress on the transition in the markets we serve. This will enable us to consider whether, how and when to iterate and update our approach to scenario-selection and target-setting, portfolio alignment, policies, supporting our customers' transitions, and financing and scaling viable technologies to support the transition to net zero.

The impact of our capital markets activities is now reflected in our combined financed emissions targets for the oil and gas and power and utilities sectors. Our facilitated emissions are weighted at 33% in accordance with the PCAF Standard for Facilitated Emissions. This approach dampens volatility, apportions responsibility between underwriters and asset owners, and allows for flexibility in deploying on and off-balance sheet financing in line with clients' needs. To further reduce inherent volatility in facilitated emissions, we apply a 3-year moving average across transactions for our target metric, building up from 2019 data.

Alternative, production-based benchmarks only exist for a small number of sectors. Using the scenario emissions projections, we model both absolute and emissions intensity activity figures. These are used to construct intensity pathways with differing rates of decarbonisation for the sectors which we are targeting.

Our approach for HSBC's emissions accounting does not rely on purchasing offsets to achieve any financed emissions targets we set.

## **Benchmark reference pathways**

As there are many possible pathways, we have chosen scenarios which meet the criteria shown below. We expect to update our published financed emissions sectoral targets following the release of new 1.5°C-aligned scenarios, including from the International Energy Agency ('IEA'), and the Energy Transition Commission, amongst others from time to time.

- ◆ The reference scenarios selected as our benchmarks form part of the analysis developed by the IEA in the World Energy Outlook ('WEO'). Choosing the IEA NZE 2021 scenario also allows us to make comparisons of our sector targets with other banks that use the same data to build a reference pathway.
- ◆ The scenario meets the requirements of our NZBA commitment to align our financing with outcomes consistent with a 1.5°C temperature rise with limited overshoot. The IEA NZE 2021 scenario projects energy-related and industrial process carbon dioxide (CO<sub>2</sub>) emissions to 2030 in line with a 1.5°C warming outcome with no or low temperature overshoot.
- ◆ The scenario has low reliance on negative emissions technologies and we believe has reasonable assumptions on carbon sequestration achieved through nature-based solutions and land use change.
- ◆ Key assumptions underpinning the IEA scenarios are publicly available.
- ◆ The scenario is peer-reviewed and uses a global energy model to generate sector-by-sector projections. The IEA's analysis and projections meet these criteria and have been used extensively for target setting and portfolio alignment.
- ◆ The IEA NZE 2021 scenario details more than 400 sectoral and technology milestones to help guide the global journey to net zero by 2050. We remain mindful that this scenario is one of many credible pathways to achieve net zero emissions globally by 2050 and there are many uncertainties that could affect any of these different pathways.

For each of the sectors, our sector deep dives provide more detail on any adjustments we make to build our sector reference benchmark.

## Target metrics

Both absolute financed emissions and financed emissions intensities are assessed in our analysis. We report both metrics for all in-scope sectors but set targets on the most appropriate metric for each sector.

Absolute financed emissions reductions targets are set for the oil and gas and thermal coal mining sectors. This absolute emissions metric helps preserve a direct link to reducing GHG emissions in the real economy and allows us to assess our alignment with the IEA NZE 2021 scenario.

All other sectors have physical intensity-based targets. Physical emission intensity metrics describe the attributed quantity of emissions released per unit of production and vary based on the sector and specific activity data. We use this target metric to help enable climate-positive investment in the real economy by directing capital towards green technologies and transition solutions. This is in line with peers and industry guidance.

The impact of our capital markets activities is now reflected in our combined financed emissions targets for the oil and gas and power and utilities sectors.

## Sector targets

We have set targets using the following forward-looking metrics:

- ◆ For oil and gas – combined absolute on-balance sheet and facilitated financed emissions percentage reduction target, by 2030 from a 2019 baseline. This is equal to the percentage reduction that the IEA indicates in its scenario for global sector emissions to 2030 from a 2019 baseline.
- ◆ For power and utilities – combined on-balance sheet and facilitated emissions intensity target, at 2030. This is equal to the global sector average emissions intensity for 2030 set out by the IEA with adjustments made to reflect our portfolio.
- ◆ For thermal coal mining we use an on-balance sheet absolute financed emissions percentage reduction target, by 2030 from a 2020 baseline. This is equal to the percentage reduction that the IEA indicates in its net zero emissions scenario for coal emissions. We use a 2020 baseline to align with the thermal coal phase-out policy for thermal coal financing exposure reporting metrics.
- ◆ For all other sectors – on-balance sheet financed emissions intensity targets, at 2030. Our emissions intensity targets are equal to the global sector average emissions intensity for 2030 set out by the IEA with adjustments made to reflect our portfolio.

## Limitations

Our methodology is based upon the PCAF Standards. However, for particular counterparties it has been necessary to deviate from the Standards across financed emissions, facilitated emissions across each sector and for thermal coal mining financed emissions. This has generally been due to data availability – in particular for the company value used in our estimates, production data for particular sectors, and details needed to calculate project specific emissions for our project finance portfolio. We rely primarily on vendors for data consistency and only add data collected from annual reports in selected cases where additional data can be found for material counterparties.

As we track financed emissions each year, estimates may be subject to changes to data, movement in our client sector portfolio and financing, changes to company valuations and other market factors.

We remain conscious that the attribution factor used in the financed emissions calculation is sensitive to changes in drawn amounts or market fluctuations, and that financed emissions figures may not be reconcilable or comparable year-on-year. Our initial set of baselines and targets may require updating as data inputs, assumptions and methodologies evolve over time including updates of scenarios based on real world developments. We plan to report financed emissions and progress against our targets annually and seek to be transparent in our disclosures about the methodologies applied.

We expect our data quality scores to improve over time as clients continue to expand their disclosures to meet growing regulatory and stakeholder expectations. We have found that data quality varied across the different sectors and years of our analysis, although not significantly. While we expect our data quality scores to improve over time, as companies continue to expand their disclosures to meet growing regulatory and stakeholder expectations, there may be upward or downward fluctuations in data quality scores within sectors year on year, and/or differences between the data quality scores between sectors due to more companies reporting emissions or a greater number of production statistics being available. This applies especially to the sectors with the highest exposure. As our time lag is now reduced to one year, the data quality score for the most recent year is lower than previously disclosed.

Our approach focuses on what we believe to be the most material parts of the sector value chains, and we seek to minimise double counting between the transactions within our portfolio. Double counting occurs when GHG emissions are counted more than once in financed emissions analysis and cannot be avoided. We remain committed to transparency around our methodology and scope of analysis.

The majority of our clients do not yet report the full scope of GHG emissions included in our analysis, in particular scope 3 emissions. In the absence of client-reported emissions, we estimate using proxies based on company production and revenue figures. Although we sought to minimise the use of non-company-specific data, we applied industry averages in our analysis where company-specific data was unavailable. As data improves, we expect estimates to be replaced with reported figures.

Third-party data sets that feed into our analysis may have up to a two-year lag in reported emissions figures, and we are working with data providers to help reduce this. Mapping external datasets to our internal client entities is challenging due to complex company ownership structures and due to checks, calculations and assurance requirements, we take the data as it corresponds to our internal company hierarchy for counterparties and counterparty groups at a specific point in time.

In line with the PCAF Standard for Financed Emissions, to calculate sector-level baselines and annual updates our portfolio-level financed emissions were weighted by the ratio of our financing in relation to the value of the financed company. We believe this introduced volatility and was dependent upon the availability of EVIC. We have now calculated sector level emissions intensity metrics using a portfolio weighted approach. We remain conscious that the attribution factor used in the financed emissions calculation is sensitive to changes in drawn amounts or market fluctuations, and we plan to be transparent around drivers for change to portfolio financed emissions where possible.



For facilitated emissions, we currently rely on one vendor and for thermal coal mining, we are also dependent on one vendor to estimate thermal coal-related emissions.

As we refine our methodology and approach, we hope to improve data linkages, work with data providers and industry bodies to improve the availability of certain data points, and to collect additional data from companies directly as part of our ongoing engagement process.

Within production data, gaps are currently present in availability of asset level production data across the most emissive sectors and further development across third party vendors is required to build modelled bottom-up data for physical intensity alignment metrics. We used scaling factors to derive scope 1 and 2 emissions from scope 3. This was done to avoid inconsistencies in estimates, where scope 1 and 2 were taken from different sources compared to scope 3, leading to non-realistic results. The final in-scope client population used for reporting the on-balance sheet financed emissions is used to derive the scaling factors as this is large and considered representative for each sector. This is used for both the on-balance sheet financed and facilitated emissions estimates.

Currently, there is insufficient industry and regional granularity in scenario data, resulting in greater challenges to disaggregate alignment trajectories that are consistent with our geographic portfolio mix.

Further detail on our approach to net zero aligned reference scenario selection, including how we intend to review and evolve our approach as updated net zero aligned scenarios evolve, is outlined in our Net Zero Transition Plan 2024.

# Sector based methodologies





## Oil and gas

<b>Metric</b>	MtCO <sub>2</sub> e
<b>Scope</b>	Scope 1, 2 and 3
<b>Value chain focus</b>	Upstream e.g. extraction and integrated/ diversified
<b>Target</b>	Absolute combined on-balance sheet financed and facilitated emissions, -34% by 2030 from 2019
<b>Scenario</b>	IEA NZE 2021

### Value chain and scope

Measuring absolute financed emissions in the oil and gas sector preserves a direct link to reducing GHG emissions in the real economy and allows us to assess our alignment with the NZE scenario. However, baselining using solely absolute emissions for oil and gas as a metric may disincentivise the innovation in efficiency gains necessary for the net zero transition. Therefore, we also use emissions intensities to measure the transition of counterparties relative to the benchmark scenario and each other, irrespective of size or absolute emissions footprint.

The majority of emissions in the oil and gas sector are focused on the upstream parts of the value chain. This observation is confirmed by the PACTA methodology document<sup>9</sup>, which states that the bulk of emissions in the oil and gas and power sectors is encompassed in the upstream part of the value chain.

The scope 3 emissions of an upstream oil and gas company corresponds to the scope 1 and 2 of midstream and downstream oil and gas companies. Considering the scope 1, 2 and 3 of upstream companies therefore allows to avoid double counting.

We focused on upstream (e.g., exploration, extraction, and drilling) companies, and integrated or diversified energy companies. Midstream (e.g., processing, storing and transportation of crude product) and downstream (e.g., refining and distribution) companies are excluded from our scope. By focusing on upstream and diversified energy producers and including scope 3 emissions we believe we are accounting for the majority of emissions across the sector<sup>10, 11, 12, 13</sup>. This includes emissions associated with the use of oil and gas products as a fuel source. We have excluded midstream and downstream companies within the oil and gas sectors in order to limit double counting within the sector level analysis and to concentrate engagement with customers whose products contribute most to GHG emissions in the global economy.

### Reference scenario

In line with the IEA NZE 2021 scenario we target an absolute reduction of 34% in combined absolute on-balance sheet financed and facilitated emissions ('Mt CO<sub>2</sub>e') by 2030, using 2019 as our baseline.

<sup>9</sup> PACTA for Banks Methodology, page 23.

<sup>10</sup> International Energy Agency (2018), CO<sub>2</sub> Emissions from Fuel Combustion 2018, IEA, Paris.

<sup>11</sup> International Energy Agency (2018), World Energy Outlook 2018, IEA, Paris

<sup>12</sup> McKinsey company (2020), <https://www.mckinsey.com/industries/oil-and-gas/our-insights/the-future-is-now-how-oil-and-gas-companies-can-decarbonize>.

<sup>13</sup> PACTA (2020), PACTA for Banks Methodology Document, Version 1.1.0.





## Power and utilities

<b>Metric</b>	tCO <sub>2</sub> e per GWh
<b>Scope</b>	Scope 1 and 2
<b>Value chain focus</b>	Upstream e.g. generation
<b>Target</b>	Combined on-balance sheet financed and facilitated emissions intensity, 138 tCO <sub>2</sub> e/GWh by 2030 from 2019
<b>Scenario</b>	IEA NZE 2021

### Value chain and scope

For the power and utilities sector, our analysis focused on upstream (e.g. power generation) companies. Midstream (e.g. transmission and distribution) and downstream (e.g. retail) companies are excluded from our scope. We believe power generation is where the majority of sector emissions occur through their use of fossil fuels (oil, gas and coal) as a source of energy.

For power generation companies, we focus on scope 1 and 2 GHG emissions. In analysing the power and utilities sector, we did not take account of upstream scope 3 GHG emissions because we believe them to be less material.

For the power and utilities sector we use an emissions intensity metric. This allows us to account for the anticipated increase in demand for electricity as electrification occurs, and the need to rapidly grow the proportion of renewable energy in electricity generation.

### Reference scenario

For this sector, we also follow the IEA NZE 2021 scenario and target a combined absolute on-balance sheet financed and facilitated emissions intensity of 138 tonnes of carbon dioxide equivalent per gigawatt hour ('tCO<sub>2</sub>e/GWh') by 2030, using 2019 as our baseline.

# Cement

<b>Metric</b>	tCO <sub>2</sub> e per tonne of cement
<b>Scope</b>	Scope 1 and 2
<b>Value chain focus</b>	Midstream e.g. clinker and cement manufacturing
<b>Target</b>	Intensity, 0.46 tCO <sub>2</sub> e/t cement by 2030 from 2019
<b>Scenario</b>	IEA NZE 2021

## Value chain and scope


For the cement sector, we included scopes 1 and 2 of the midstream (e.g. clinker and cement manufacturing) companies in the value chain. We believe the majority of emissions come from cement manufacturing, particularly the emissions associated with the sintering process. The upstream emissions of this sector will be covered when we expand our coverage to other sectors.

For the cement sector we set an emissions intensity metric. An emissions intensity metric for the cement sector allows us to work with clients and account for the anticipated increase in capital investments required for rapid decarbonisation.

## Reference scenario

In line with the IEA NZE 2021 scenario, we target an on-balance sheet financed emissions intensity of 0.46 tonnes of carbon dioxide per tonne of cement ('tCO<sub>2</sub>e/t cement'), using 2019 as our baseline.





## Iron, steel and aluminium

<b>Metric</b>	tCO <sub>2</sub> e per tonne of metal
<b>Scope</b>	Scope 1 and 2
<b>Value chain focus</b>	Midstream e.g. ore to steel
<b>Target</b>	Intensity, 1.05 tCO <sub>2</sub> e/t metal by 2030 from 2019 (1.43 tCO <sub>2</sub> e/t metal for MPP)
<b>Scenario</b>	IEA NZE 2021 (and MPP as alternative)

### Value chain and scope

For the iron, steel and aluminium sector, we focused on scope 1 and 2 emissions from the midstream (e.g. steel manufacturing, and the energy and raw materials used in aluminium smelting).

We have combined our analysis of iron, steel and aluminium owing to the relatively small size of our aluminium portfolio and both having the same production metric tonne of metal.

The combination of sectors was done as an attributed production-weighted average of emissions intensity by tonne of metal (steel or aluminium). We will look to refine this methodology if the sector becomes a more material part of our portfolio in the future.

### Reference scenario

For the iron, steel and aluminium sector, we target an on-balance sheet financed emissions intensity of 1.06 tonnes of carbon dioxide per tonne of metal ('tCO<sub>2</sub>e/t metal'), using 2019 as our baseline. We use the IEA NZE 2021 scenario as our core target scenario and have included the net zero-aligned Mission Possible Partnership ('MPP') Technology Moratorium as an alternative scenario.

# Aviation



<b>Metric</b>	tCO <sub>2</sub> e per million revenue passenger kilometre
<b>Scope</b>	Scope 1 for airlines, 3 for aircraft lessors
<b>Value chain focus</b>	Downstream e.g. airlines and aircraft lessors
<b>Target</b>	Intensity, 63 tCO <sub>2</sub> e/million rpk by 2030 from 2019
<b>Scenario</b>	IEA NZE 2021

## Value chain and scope

For the aviation sector, our analysis includes scope 1 for passenger airlines and scope 3 aircraft lessors' emissions and focuses on downstream (e.g. airlines and aircraft lessors) companies in the value chain. We have prioritised scope 1 emissions from airlines and scope 3 from aircraft lessors to focus action on the use of lower emissions aviation fuels and different propulsion systems for new aircraft<sup>14</sup>.

For the aviation sector we set an emissions intensity metric. An emissions intensity metric for this sector allows us to work with clients and account for the anticipated increase in investments required for rapid decarbonisation.

## Reference scenario

As per the IEA NZE 2021 scenario, we target an on-balance sheet financed emissions intensity of 63 tonnes of carbon dioxide per million revenue passenger kilometer ('tCO<sub>2</sub>e/million rpk'), using 2019 as our baseline. We modified the IEA NZE 2021 scenario to produce a global emissions intensity reference pathway for the scope of our analysis.

<sup>14</sup> This is a deviation from the PCAF guidance to report GHG scopes 1 and 2 across sectors.

# Automotive



<b>Metric</b>	tCO <sub>2</sub> e per million vehicle-kilometre
<b>Scope</b>	Scope 1, 2 and 3
<b>Value chain focus</b>	Midstream e.g. motor vehicle manufacturing
<b>Target</b>	Intensity, 66 tCO <sub>2</sub> e/million vkm by 2030 from 2019
<b>Scenario</b>	IEA NZE 2021

## Value chain and scope

For the automotive sector, we look at scope 1, 2 and 3 emissions from the manufacturing of vehicles, and tank-to-wheel exhaust pipe emissions for light-duty vehicles ('LDV'). We excluded heavy-duty vehicles ('HDV') from our initial draft population where possible following industry practice and peers. We will consider including them at a later stage of our analysis as data and methodologies develop. We also exclude original equipment manufacturers ('OEM') products and engine builders.

An emissions intensity metric for the automotive sector allows us to work with clients and account for the anticipated increase in capital investments required for rapid decarbonisation.

## Reference scenario

We target an on-balance sheet financed emissions intensity of 66 tonnes of carbon dioxide per million vehicle kilometre ('tCO<sub>2</sub>e/million vkm'), using 2019 as our baseline. This is in line with the IEA NZE by 2050 scenario. We modified the IEA NZE 2021 scenario to isolate LDV and produce a global emissions intensity reference pathway based on the share of sales by technology.



## Thermal coal

### Thermal coal phase out commitments

We are committed to phasing out the financing of thermal coal-fired power and thermal coal mining in EU and OECD markets by 2030, and globally by 2040. As part of this commitment, we intend to reduce thermal coal financing drawn balance exposure by at least 25% by 2025 and aim to reduce by 50% by 2030.

In addition to reporting thermal coal financing drawn balance exposure, in 2022 we set a separate target to reduce on-balance sheet financed emissions for thermal coal-fired power and thermal coal mining as part of our updated thermal coal phase-out policy. However, upon further review, we have since confirmed that the majority of customers in scope of the thermal coal-fired power target are already included in the power and utilities target population.

For power customers in scope of the power and utilities target that have coal assets, reducing emissions intensity in effect means replacing coal-fired power production capacity with cleaner power sources. To avoid duplication and better reflect real world customer segments, we plan to continue with only the financed emissions target for thermal coal mining.

### Thermal coal financing exposure reporting

Our basis of preparation for reporting on thermal coal financing drawn balance exposures is in line with our thermal coal phase-out policy and applies a risk-based approach to reporting on relevant exposures.

Our reporting approach applies materiality considerations to product type, customer type and exposure type, which informs inclusion and exclusion requirements. We calculate exposures based on drawn balances as at the end of the relevant reporting period. Applying materiality criteria helps us to focus our efforts on areas where we believe we can help drive meaningful change, whilst taking into account experience from policy implementation over time.

Our reporting approach is reliant on the information that clients provide to us, as well as external data sources. Whilst we undertake certain due diligence checks, we remain reliant on the accuracy and completeness of these data sources for exposure calculations.

We recognise the importance of this reporting and the quality of data underpinning it. We acknowledge that our internal processes to support this reporting currently rely on aggregating data from multiple source systems and require further development. Aggregation of data sources and client investigations are subject to enhanced verification and assurance procedures including through the first and second line of defense.

### Inclusion criteria

To determine the client population that is in scope for exposure reporting, we consider all clients that own, operate or control the following, as defined in our thermal coal phase-out policy:

- ◆ Thermal coal-fired power plants;
- ◆ Thermal coal mines, including any mountaintop removal; or
- ◆ Coal to gas/liquids plants.

Our exposure reporting does not include existing captive thermal coal-fired power plants and existing captive thermal coal mines; coal services; and underground coal gasification (coal bed methane) on the basis that they are exempted activities as defined in our thermal coal phase-out policy. Our reporting also does not include metallurgical coal mining activities.

We apply data and analytics capabilities on third-party lists of companies to assist in identifying potential exposures to thermal coal assets as defined by our thermal coal-phase policy (currently provided by Urgewald, Asset Impact and Global Energy Monitor). We also identify clients classified within industry codes associated with mining, production or manufacture of electricity, gas and coal. We also incorporate clients that we become aware of through our routine screening. For any client identified we undertake analysis to confirm exposure to thermal coal using the latest set of client information that existed as at the date of the thermal coal exposure calculation. We also consider the specific purpose of the lending, where relevant, or where the use of proceeds or restrictions on use have been agreed with our clients.

We also recognise that we provide financing to groups of connected companies where the wider group has thermal coal exposures. In such cases, we consider the nature and the extent of the connections and any restrictions on use of financing proceeds to fund the thermal activities. When calculating exposures in such cases, we apply a weighting based on the extent of thermal coal activities as part of the overall operation of the group. Where insufficient evidence of the nature of any thermal coal activity is available, it is assumed that this activity is in scope of the thermal coal phase-out policy.

## Exclusion criteria

We also apply certain exclusions<sup>15</sup> from the reporting analysis, including:

- ◆ Short-term lending products: excluded from exposure reporting in line with our methodology for calculating financed emissions;
- ◆ Sovereign entities: excluded due to the nature of these clients, however any lending directly to a state-owned entity that does have thermal coal exposure is included in scope;
- ◆ Smaller portfolio-managed corporate clients without dedicated relationship managers: excluded due to the nature of these clients and level of financing provided;
- ◆ Individuals: excluded in line with the thermal coal phase-out policy, due to it being unlikely that an individual will directly own, control or operate thermal coal assets. Separate controls operate within the Global Private Bank.
- ◆ Financial institutions and funds: excluded from exposure reporting due to the nature of these clients, however any lending directly to any majority owned subsidiary of a financial institution or fund that does have thermal coal exposure is included in scope;
- ◆ Aggregate financing drawn balance exposures less than \$15m: excluded from exposure reporting on the grounds of materiality and aligned with internal thresholds for enhanced transaction reviews. For the avoidance of doubt, this exclusion criteria applies only to exposure reporting analysis and does not apply to the application of the thermal coal phase-out policy;
- ◆ Clients with thermal coal-related activities which constitute less than 5% of their operations: excluded from exposure reporting, aligned to industry guidance<sup>16</sup>, unless the use of proceeds is directly to fund a thermal coal asset; and
- ◆ Green loans and other green qualified lending: excluded from exposure reporting on the basis that these products include use of proceeds clauses that are for defined purposes and cannot be used to fund thermal coal-related activities within scope of our exposures reporting.

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<sup>15</sup> While we note the exclusions above for reporting on thermal coal exposures, where the client or transaction falls in-scope of our thermal coal phase-out policy, these are managed and monitored by our internal risk and control frameworks to help ensure policy compliance.

<sup>16</sup> UN Environmental Programme Finance Initiative guidelines for climate target setting

## Thermal coal mining financed emissions

<b>Metric</b>	tCO2e
<b>Scope</b>	Scope 1,2 and 3
<b>Value chain focus</b>	Upstream
<b>Target</b>	Absolute, -34% by 2030 from 2019
<b>Scenario</b>	IEA NZE 2021

For the thermal coal mining sector we look at companies that are covered by our thermal coal phase-out policy. We include all emissions scopes under an absolute target as thermal coal is a fossil fuel with a high carbon emissions factor. We have established a baseline and defined interim targets for the on-balance sheet financed emissions of our thermal coal portfolio covering thermal coal mining.

### Thermal coal mining population

The population for the thermal coal mining financed emissions target is determined by our thermal coal phase-out policy. This takes into account the exclusions that have been made on the basis of materiality. We identify the thermal coal counterparties that are specifically focused on thermal coal mining using third-party data sources. Counterparties with exempted activities (such as captive use or metallurgical coal mining) as defined in the thermal coal phase-out policy are not in-scope of the financed emissions calculations.

We calculate a 2020 baseline to align with the baseline year used for our thermal coal financing exposure reporting (as per our thermal coal phase-out policy). For the other financed emissions sectors 2019 was used to remove the impact of the Covid-19 pandemic.

- ◆ Counterparties with thermal coal mining ownership are identified using coal mining emissions data from Asset Impact<sup>17</sup>. Counterparties that are in scope of the thermal coal phase-out policy but with only thermal coal power emissions are excluded from the thermal coal mining sector.
- ◆ Counterparties with emissions that have already been covered in another financed emissions sector (e.g. oil and gas or power and utilities) are excluded to reduce double counting. Emissions will already have been captured in the scope 1 and 2 sector financed emissions for the other sector. Some counterparties where thermal coal mining emissions are not available but with identified thermal coal mines (Global Energy Monitor) will not be included as thermal coal mining is a minor contribution. These emissions will be included as coverage expands in future.
- ◆ Counterparties with less than 5% thermal coal weighting (as defined by our exposure reporting) are included, in contrast with the thermal coal financing drawn balance exposure target, as these can have considerable thermal coal-related financed emissions.
- ◆ Counterparties who have been identified as conglomerates or companies with multiple activities without thermal coal-related emissions from Asset Impact are excluded as these can have different activities covered by multiple sector targets. Once we define a methodology for these firms, they may in future be covered according to their activity split.

<sup>17</sup> As of 31 December of the year of analysis



- ◆ Counterparties within the metals and mining wholesale sector classification are included even if these do not have thermal coal mining emissions data from Asset Impact. These are only excluded if it can be evidenced that they do not have thermal coal mining activities.
- ◆ Counterparties with only metallurgical coal mines are excluded as these emissions are covered by the iron, steel and aluminium sector target.
- ◆ Project finance deals identified as being thermal coal-related are included for the counterparties in-scope. The project finance exposures are treated as general lending for these counterparties as the coal-related emissions are estimated using equity ownership attributed coal production. If project finance deals for these counterparties were previously included in another sector (e.g. power and utilities), we will not include them in the coal mining sector for the year previously disclosed but include them in the thermal coal mining sector for subsequent disclosures.

The methodology between thermal coal financing drawn balance exposure reporting and financed emissions reporting is largely aligned but there are a few differences (see Figure 6 on page 29).

- ◆ Counterparties with less than 5% coal weighting are still included in the thermal coal mining financed emissions population as these can have considerable thermal coal-related emissions.
- ◆ Thermal coal exposures are assessed based on the existence of thermal coal activity or revenue in the latest available financial statements or ESG reports as of 31 December 2020 (in most cases based on 2019 information). This may result in misalignment of exposures in certain cases between the two metrics.
- ◆ The counterparty group structure used is as of 31 December 2020 for the thermal coal exposures, whereas it is the latest available for financed emissions calculations. The thermal coal phase-out policy stipulates that information is used as of the time of policy application and therefore follows the counterparty group structure in that year. Financed emissions estimates use the best available data when the calculations are done so uses the latest counterparty group structure.
- ◆ For our thermal coal exposure reporting green loans and other green qualified lending has been excluded on the basis that these products include use of proceeds clauses that are for defined purposes and cannot be used to fund thermal coal exposures. For financed emissions, however, projects in these categories can still create emissions so are therefore not excluded at present.

Figure 6 - Inclusion differences between thermal coal financing exposures reporting and financed emissions

	Category	Thermal coal financing exposure reporting	Thermal coal mining financed emissions
Counterparties	Counterparties with <5% coal weighting	No	Yes
	Thermal coal mining	Yes	Yes
	Coal-fired power	Yes	No
	Thermal coal mining – asset presence	During the year <sup>18</sup>	As of 31 Dec
Exposure	Project Finance – Thermal coal facilities	Yes	Yes
	Project Finance – Non thermal coal facilities	No	No
	Specific Purpose – Green financing	No	Yes
	All other facilities	Yes	Yes
	Short term lending	No	No

## Thermal coal mining calculation

Financed emissions calculation:

$$Financed\ emissions = \sum \frac{exposure}{company\ value} * thermal\ coal - related\ emissions$$

The exposure used in the financed emissions calculation is the full non-weighted exposure whereas the thermal coal exposure reporting applies a thermal coal weighting to the exposure. Company value from external data providers is sourced based upon a waterfall hierarchy<sup>3</sup>, determined by quantitative and qualitative factors (see Figure 1 on page 5). Thermal coal related emissions include emissions from thermal coal mining and thermal coal-fired power plants, sourced from Asset Impact.

## Value chain and scope

Our analysis is focused on upstream (e.g., extraction) scope 1, 2 and 3 emissions<sup>19</sup> for the thermal coal mining sector. Most thermal coal value chain emissions occur in the combustion stage (downstream) which is included through our coverage of scope 3. Our target covers the parts of the sector value chain that we believe are most material in terms of GHG emissions, and where we believe engagement and climate action have the greatest potential to effect change. In comparison, the transport of thermal coal (midstream) does not contribute significantly to the value chain's emissions.

For thermal coal mining counterparties we are specifically targeting the reduction of thermal coal-related emissions. As a result, the emissions that are included in our calculations are only those that originate from thermal coal, not the full emissions of the counterparty. Where we have data available, we use Asset Impact emissions data as these are based on a bottom-up analysis of thermal coal mining emissions sources and have been calculated based on coal production. Although the counterparties are involved in thermal coal mining, we include both thermal coal mining and coal-fired power emissions to ensure that all thermal coal-related emissions are covered by our target and financed

<sup>18</sup> According to the relevant information available during the year of policy application (e.g. annual reports).

<sup>19</sup> World Resources Institute (2015), The GHG Protocol - A Corporate Accounting and Reporting Standard, USA



emissions measurements. For thermal coal mining we only include thermal coal emissions (excluding metallurgical coal).

### **Reference scenario**

For the thermal coal mining sector, we have set a 70% absolute on-balance sheet financed emissions reduction target, by 2030 from a 2020 baseline. The metric used is tonnes of CO<sub>2</sub> equivalent ('tCO<sub>2</sub>e').

This target is equal to the percentage reduction that the IEA indicates in its Net Zero Emissions scenario for global sector emissions to 2030 and are aligned with the 2050 net zero emissions pathway of the IEA which is calculated to limit global warming to within 1.5°C.

## Recalculation policy

We have defined the circumstances under which we consider a recalculation of baseline and/or progress against financed emissions target metrics is necessary to help ensure the consistency, comparability and relevance of the reported GHG emissions data over time. We expect our recalculation policy to evolve with further industry guidance. It covers revisions of target metrics due to changes in financed emissions accounting, such as changes to methodology, errors, and improvements to data.

### Key areas of change

Understanding the drivers of change allows us to perform quantitative and qualitative root cause assessments of any changes to the financed emissions metrics previously disclosed.

We decide whether to apply our recalculation policy to previously disclosed metrics when significance thresholds are breached for the aggregated effects of any methodology changes or errors. These thresholds are implemented only where the drivers are attributable to a methodology change or an error.

Figure 7 - Recalculation policy summary

Key areas of change	What we expect to disclose
<ul style="list-style-type: none"> <li>◆ Changes to the financed emissions methodology such as changes to design choices</li> <li>◆ Errors such as a failure to carry out our methodology or errors in internal financial data</li> </ul>	<ul style="list-style-type: none"> <li>◆ The reasons why applying the new metrics provide reliable and more relevant information;</li> <li>◆ The actions being taken to remediate same or similar errors in the future;</li> <li>◆ The nature of the change(s) and errors in financed emissions accounting impacting the baseline progress metric and all prior year progress metrics disclosed as far as is practicable;</li> <li>◆ The aggregate amount of any adjustments impacting the baseline progress metric and all prior year progress metrics disclosed as far as is practicable; and</li> <li>◆ The change in financed emissions accounting baseline progress metric and all prior year progress metrics disclosed as far as is practicable.</li> </ul>

The following data and process enhancements would not generally be considered to constitute a change to the financed emissions methodology or error, nor warrant revision of previous disclosures:

- ◆ Changes to the process by which the design choices are implemented such as choices of data from internal systems or control enhancements to enhance granularity;
- ◆ Enhancements to non-financial internal or external data, such as changes to the classification of the population to a business activity type or more data reported by clients, or choice of third-party data providers; or
- ◆ Errors in external data.

## Cautionary statement

This document contains both historical and forward-looking statements. All statements other than statements of historical fact are, or may be deemed to be, forward-looking statements. Forward-looking statements may be identified by the use of terms such as 'expects', 'targets', 'believes', 'seeks', 'estimates', 'may', 'intends', 'plan', 'will', 'should', 'potential', 'reasonably possible' or 'anticipates', variation of these words, the negative thereof or similar expressions. HSBC has based the forward-looking statements on current plans, information, data, estimates, expectations and projections about future events, and therefore undue reliance should not be placed on them. These forward-looking statements are subject to risks, uncertainties and assumptions, as described under 'Cautionary statement regarding forward-looking statements' and 'Additional cautionary statement regarding ESG and climate-related data, metrics and forward-looking statements' contained in the HSBC Holdings plc Annual Report on Form 20-F for the year ended 31 December 2023, expected to be filed with the Securities and Exchange Commission ('SEC') on or around 22 February 2024 (the '2023 Form 20-F') and in other reports on Form 6-K furnished to or filed with the SEC subsequent to the 2023 Form 20-F ('Subsequent Form 6-Ks'). HSBC undertakes no obligation to publicly update or revise any forward-looking statements, whether as a result of new information, future events or otherwise. In light of these risks, uncertainties and assumptions, the forward-looking events discussed herein might not occur. Investors are cautioned not to place undue reliance on any forward-looking statements, which speak only as of their dates. Additional information, including information on factors which may affect the Group's business, is contained in the 2023 Form 20-F and Subsequent Form 6-Ks.