Sustainable Finance

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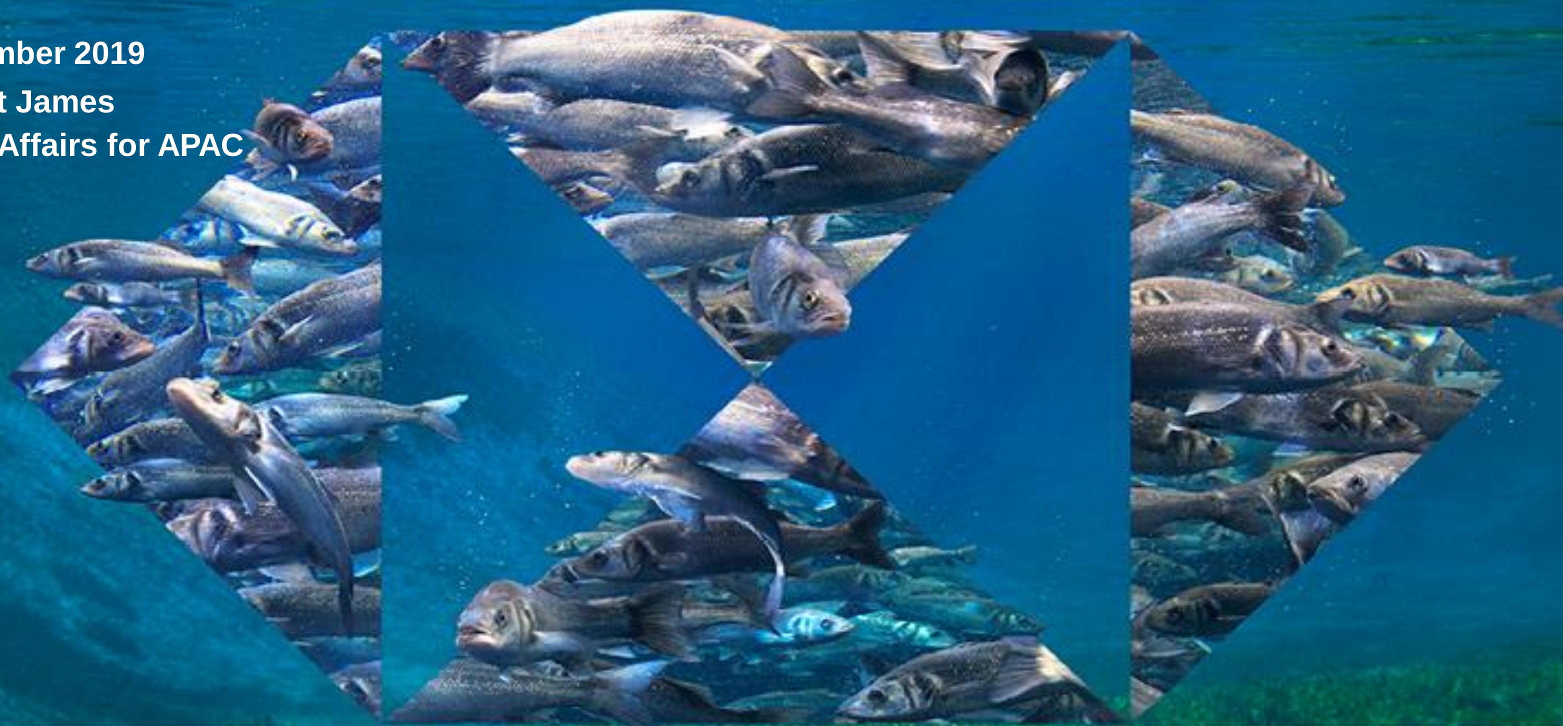
- Author: Stewart James
- Head of Public Affairs for APAC



HSBC

HSBC's ESG Profile

HSBC's commitments to support the transition to a low carbon economy

Context

- **Climate change** represents an urgent and irreversible threat to human society, as recognised by the **almost 200 countries** that have **signed the 2015 Paris Agreement** on climate change.
- An estimated **USD90 trillion of investment is needed** in new green infrastructure over the next 15 years – **double the current annual rate** of spending – just to keep the global temperature increase below two degrees.
- Major injections of **capital are needed** to pay for **more efficient and less carbon-intensive technologies** and **infrastructure**, to **reduce the carbon footprint** of established companies and industries, and to **cover the costs of climate adaptation**.

HSBC's Commitments

Provide USD100bn of sustainable financing and investment by 2025	▪ Provide USD 100bn of financing/investment to develop clean energy, lower-carbon technologies, and projects that contribute to the delivery of the Paris Agreement and the UN Sustainable Development Goals ▪ Lead the development of sustainable capital markets, support corporate and institutional clients in managing risks and promote sustainable investment products for retail and private banking clients
Source 100% of our electricity from renewables sources by 2030 (90% by 2025)	▪ Use direct investment and direct purchases via PPAs and similar mechanisms that directly help the financing of new renewable electricity assets. ▪ Collaborate with RE100, governments and regulators to open up renewable energy markets where PPAs or similar are not currently available ▪ Reduce electricity per FTE by 20% by 2020
Reduce our exposure to thermal coal and actively manage the transition for other high carbon sectors	▪ Discontinue financing of new thermal coal mines (including new customers dependent on it) and new coal-fired power plants in developed countries and continuously reinforce lending criteria in developing countries ▪ Engage with clients in high carbon sectors to influence their transition strategies ▪ Continuously review our risk policies on low carbon technologies
Adopt recommendations of Task Force on Climate-related Financial Disclosures (TCFD)	▪ Report according to governance/ strategy/ risk management recommendations of the task force ▪ Engage with academia/ industry associations/ civil society networks to support robust climate scenario analysis to price transition and physical risk. ▪ Promote uptake of these recommendations across our global network
Lead and shape the debate around sustainable finance and investment	▪ Establish a Centre of Sustainable Finance to provide thought leadership about climate change and the role of the financial services sector. ▪ Promote the development of industry-wide definitions, standards, tools and metrics to enhance market analysis of ESG issues and impacts.

HSBC's ESG Profile

Taskforce for climate-related Financial Disclosures

TCFD recommendations

Governance	▪ Describe the board's oversight of climate-related risks and opportunities. ▪ Describe management's role in assessing and managing climate-related risks and opportunities.
Strategy	▪ Describe the climate-related risks and opportunities the organization has identified over the short, medium and long term. ▪ Describe the impact of climate-related risks and opportunities on the organization's businesses, strategy and financial planning. ▪ Describe the resilience of the organization's strategy, taking into consideration different climate-related scenarios, incl a 2°C or lower scenario.
Risk Management	▪ Describe the organization's processes for identifying and assessing climate related risks. ▪ Describe the organization's processes for managing climate-related risks. ▪ Describe how processes for identifying, assessing and managing climate related risks are integrated into the organization's overall risk management.
Metrics and Targets	▪ Disclose the metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process. ▪ Disclose Scope 1, Scope 2 and, if appropriate, Scope 3 greenhouse gas (GHG) emissions and the related risks. ▪ Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets.

2017 and 2018 disclosure

- ✓ **Two years of TCFD disclosures published in the Annual Report.**
- ✓ **Qualitative disclosure on Governance, Strategy, and Risk Management topics.**
- ✓ **Approach to transition risk published in April 2018 ESG Update**
- ✓ **Quantitative data on impacted industry sectors published using a materiality based approach**

Next steps

- ✓ **Engage with academia, industry associations and civil society networks to support robust scenario analysis to price transition and physical risk**
- ✓ **Develop transition metrics and disclosures**

TCFD External Reporting Plan – Five Year Roadmap

2017	***Qualitative submission, focus on Governance, Strategy, Risk Management***
2018	***Expansion on Governance and Strategy, Quantification of lending to high environmental impact sectors, qualitative discussion on Transition lending***
2019	***Quantification of Transition lending and 'targets'***
2020	***Stress Testing Plan disclosure***
2021	***Climate stress Testing, scenario analysis results disclosure***

HSBC's TCFD 2018 disclosure

Task Force on Climate-related Financial Disclosures ('TCFD')

We all have a role to play in limiting climate change and supporting the transition to a low-carbon economy, and we are a signatory to the disclosure recommendations by the Financial Stability Board's task force. This represents our second disclosure under the framework.

Governance

Mitigating climate change is a key priority for our senior leadership, with sustainable finance metrics included in the Group's strategic priorities. In 2018, there were two presentations on sustainability to the HSBC Holdings Board, two to the Group Audit Committee, four to the Group Risk Committee, and two to the HSBC Group Management Board. Senior leadership have engaged with regulators, industry associations and non-governmental organisations on this topic, such as through the Bank of England consultation on climate change, the Group Chairman's participation in the One Planet Summit and the Group Chief Executive's designation as a World Economic Forum climate leader. A summarised list of HSBC's sustainability-related memberships is available at: www.hsbc.com/our-approach/measuring-our-impact/sustainability-memberships.

Strategy

Supporting the transition to a low-carbon economy is a key part of HSBC's strategy, and new products have been offered to facilitate this, along with a pledge to provide $100bn of sustainable finance by 2025. To date, we have reached $28.5bn of that goal. For further information, see page 28. We recognise many clients across sectors are making significant shifts towards the low-carbon economy. During 2019, we intend to develop new metrics to help measure these activities, with an aim to publish in next year's disclosure.

We believe education of our people is crucial on this topic. We gave sustainability training to more than 2,300 employees during 2018 and launched a sustainability online learning programme for all employees globally, with content developed in collaboration with the University of Cambridge Institute for Sustainability Leadership.

We report on the emissions of our own operations via CDP (formerly the Carbon Disclosure Project). This is available, as well as other information related to the sustainability of our own operations, at: www.hsbc.com/our-approach/measuring-our-impact.

Risk management

We are increasingly incorporating climate-related risk, both physical and transition, into how we manage and oversee risks internally and with our customers. Climate risk is now included as a theme in our 'Top and emerging risks report' to ensure that it receives monthly management oversight via the Risk Management Meeting of the Group Management Board ('RMM') (see page 30). In addition, our Board-approved risk appetite statement contains a qualitative statement on our approach to sustainability, which will be further expanded in 2019 to include climate risk explicitly.

We have a number of sustainability risk policies covering specific sectors. In 2018, we updated our energy policy to limit the financing of high-carbon-intensity energy projects, while still supporting energy customers on their transition to a low-carbon economy. From the release of the new energy policy in April 2018 until the end of 2018, HSBC financed no new coal-fired power plants.

Transition risk, in the context of climate change, is the possibility that a customer's ability to meet its financial obligations will deteriorate due to the global movement from a high-carbon to a low-carbon economy. HSBC is working to embed transition risk into its day-to-day credit risk management. The aim is that over time, each wholesale counterparty will receive a client transition risk rating based on their susceptibility to, and ability to manage transition risk.

We have identified six higher transition risk sectors based on their contribution to global carbon dioxide emissions. These sectors are: oil and gas; building and construction; chemicals; automotive; power and utilities; and metals and mining. Over time we may identify additional sectors as having higher transition risk depending on a variety of factors, including country-level carbon dioxide reduction plans per the Paris Agreement.

The table below presents our exposure to the six higher transition risk sectors. These figures capture all lending activity, including environmentally responsible customers and sustainable financing. Further details on our approach to the quantification of exposures can be found in footnote 37 on page 67. This is expected to evolve over time as we develop new climate-related metrics.

Next steps

HSBC's TCFD disclosures will continue to evolve and expand over time. In line with TCFD recommendations, our *Annual Report and Accounts* will start to disclose the additional climate risk-related metrics relating to our portfolio for specific sectors, as the availability of sufficient, reliable and relevant customer data permits.

Sector	% of total wholesale loans and advances to customers and banks in 2018[37]
Oil and gas	≤ 3.9%
Building and construction	≤ 3.8%
Chemicals	≤ 3.9%
Automotive	≤ 3.4%
Power and utilities	≤ 3.0%
Metals and mining	≤ 2.8%
Total	≤ 20.8%

Total wholesale loans and advances to customers and banks amount to $668bn.

For footnotes, see page 67.

How climate risks impact HSBC and our customers

HSBC is focusing on two main channels of climate-related risk – transition and physical. Physical risks being due to impacts of climate events, e.g. weather, sea level rise; and transition risks arising from the process of moving a low-carbon economy, e.g. carbon tax, new technologies.

Transition

- Rapid decline in asset values linked to fossil fuel use, e.g. stranded assets
- Defaults due to new technologies disrupting high carbon industries
- Reputational risks from financing environmentally harmful companies

Physical

- Physical and economic disruption leading to defaults on mortgages, plus underlying assets could become uninsurable
- Re-pricing of sovereign debt possible
- Business continuity risk for HSBC

Photo sources: (1) Garissa Solar Plant, Kenya: Cleanleap.com, (2) Typhoon Haima approaching HK, wsj.com

Types of Risks and Impacts

- How can Transition Risk impact clients?

1. **Policy risks**: Implementation of carbon-pricing mechanisms to reduce GHG emissions (IPCC forecast $68/T in 2030 in a 2C degree scenario), driving energy use toward lower emission sources, adopting energy-efficiency solutions, encouraging greater water efficiency measures, and promoting more sustainable land-use practices. In a 1.5C scenario, CO2 emission should be cut to zero by 2050. If a company is emitting more CO2 than allowed by regulations, there will be a cost of this excess vs a baseline scenario.
   - Potential financial impacts include: increased inputs / operating costs, write-offs / early retirement of existing assets.
2. **End Market Risks**: shifts in supply and demand for certain commodities and end products. Changing customer behaviour as they increasingly take into account the impact on the Environment. As cost to transition will lead to an increase in price, products will become less competitive if these costs are passed through to the customers.
   - Potential financial impacts include increased raw material costs (e.g., energy, water) and output requirements (CO_2 capture equipment), abrupt and unexpected shifts in energy costs, changing revenue mix and sources, re-pricing of assets and speed of re-pricing (e.g., fossil fuel reserves, land valuations, securities valuations).
3. **Physical Risk**: increased severity of extreme weather events / related catastrophes (Wildfires).
   - Potential financial impacts include: reduction or disruption in supply chain and production capacity, reduced revenues from lower sales/output, impacts on the workforce (e.g., health & safety, absenteeism), increased capital costs (e.g., damage to facilities), write-offs and early retirement of existing assets (e.g., damage to property and assets in “high-risk” locations), increased operating costs (e.g., inadequate water supply for hydroelectric plants or to cool nuclear / thermal power plants), increased insurance premiums and potential for reduced availability of insurance on assets in “high-risk” locations.
4. **Technology risk / Adaptation cost (Capex)**: development and use of emerging technologies such as renewable energy, battery storage, energy efficiency, and carbon capture and storage will affect the competitiveness of certain organizations, their production and distribution costs, and ultimately the demand for their products and services from end users.
   - Potential financial impact risks include: early retirement of existing assets, reduced demand for products and services, upfront research and development (R&D) expenditures / potential unsuccessful investments in new technologies, upfront costs to adopt/deploy new practices and processes.
5. **Legal risks**: Parties who have suffered losses or damage from the effects of climate change may seek compensation from those they hold responsible. Potential to hit carbon extractors and emitters the hardest.
6. **Reputational Risk:** caused by community perceptions of an organization’s contribution to or detraction from the transition to a lower-carbon economy.
   - Potential financial impacts include: reduced demand for goods/services, delayed planning approvals, impacts on employee attraction / retention, reduction in capital availability due to exclusion policies from AM and Lenders.

Transition Risk – Common Example

- European Union lawmakers have agreed to seek a 35 percent cut in car emissions by 2030, a higher level than Germany had sought, after a U.N. report called for dramatic steps to slow global warming.
- Tesla continues to enter with new models which are rapidly gaining market share due to consumer preferences for non-polluting vehicles

- Recent Indicators - Plug-In Electric Car Sales In Europe Up 24% In October 2018

- To cut average fleet emissions of carbon dioxide in Europe by even 30 percent by 2030, Volkswagen needs to raise its share of fully electric vehicles to 30 percent of new car sales, or to half in the event of a 40 percent cut,
- The shift from combustion engines to electric cars would also cost 14,000 jobs at VW by 2020

Change of Portfolio and Production Strategy

- A combustion engine-powered car has 1,400 components in its motor, exhaust system and transmission. An electric cars battery and motor has only 200 components, according to analysts at ING
- German carmakers have sourced battery cells from Asian suppliers like LG Chem and Samsung SDI, which are currently supplying Audi and BMW.

Supply Chain Disruptions/Realignment – Emergence of New Suppliers

- Audi rolled out its "E-Tron", BMW its "iNext" and Mercedes its "EQC", while Porsche presented an electric coupe, the "Mission E".
- In total, German carmakers have vowed a total of almost 40 billion euros (USD46.7 billion) of investment in battery-powered vehicles in the coming three years

High Capex Requirement – Catching Up

Transition Risk Scoring Tool

Step 1

Firstly, the framework aims to link Country / National level policy implications for CO2 production output with the Transition Risks inherent in different sectors to determine a Transition Risk score.

Country Transition Risk Score	*Sector Transition Risk Score*
❑ Countries ranked based on their commitment to reduce CO2 gases – higher commitment = higher score ❑ Other factors considered: ❖ Climate change policies ❖ Economic reliance on fossil fuels ❖ Exposure to physical risk factors	❑ Transition Risks are assessed for each sector to determine severity and immediacy of risk: ❖ Policy and legal risks ❖ Market risks ❖ Technology risks ❖ Reputational risks ❖ Physical risks

Combine to form an INITIAL TRANSITION RISK SCORE

	A – Intermediate/High	Sectors which are already experiencing impact of change in regulations or of climate events which are expected to impact cash flows/capital structure in next 3 years
	B – Medium Term/High	Sectors which have a clear exposure to Climate change Risk and which could be impacted between 3 to 7 years
	C – Medium Term/Average	Sectors where the impact is less certain over the 3- 7 year period
	D – Low	Sectors for which the Climate Change will not impact their credit quality materially over the next 7 years

Transition Risk Scoring Tool

Step 2

Secondly, analyze client's preparation for transition risk impacting the relevant sector/country. The objective is to assess what will be the impact of the transition risk on the credit standing, how companies' plan compares to peers/national pledges, how much it will cost to meet targets / if they have the ability to achieve this plan.

- ❑ What is the management's view of risk that the company may face over the next few years in the context of Climate Change – rate on a scale of LOW RISK to SHORT TERM HIGH RISK aspects such as Physical Risk, Regulatory Risk, Competition Risk, Reputational Risk.
- ❑ Is there a plan to publicly disclose the progress that is being made in implementing these policies?
- ❑ Are there specific plans CO2 emissions reduction Board policy or Senior Management plan in place, does this include specific targets including for CO2 emissions?
- ❑ By which year do you plan to have reduced your CO2 emissions? By what percentage do you plan to have reduced your CO2 emissions and are you in line with target?
- ❑ Please specify the steps the company is taking to deal with climate change.

Ability to MANAGE impact of Transition Risk

	4 Low	Unaware. Not reporting
	3 Average	Acknowledge and building reporting capacity
	2 Good	Integrate Climate change considerations in operational decisions.
	1 Leading	Integrate Climate change considerations in group wide strategy.

Transition Risk Scoring Tool

Step 3

Companies are placed within the assessment matrix based on Transition Risk Score and ability to manage Transition Risk impact

		Transition Risk Score (Sector/Country)			
		A – Immediate/ High	B – Medium Term/High	C – Medium Term/Average	D - Low
Ability to Manage Impact of Transition Risk	1 – Leading				
	2 – Good				
	3 – Average				
	4 – Low				

Transition Risk Matrix helps guide the bank's credit risk appetite to individual customers	
	Case-by-case determination of appetite for clients in the grey area
	Positive appetite for clients in the green area
	Selective appetite for clients in the amber area
	Restricted appetite for clients in the red area

Climate risk initiatives we are progressing internally

Supporting the transition to a low carbon economy is part of HSBC's strategic priority #1. Within Risk we are supporting this through the following initiatives:

1	Embed climate considerations into **ERMF** and consider forward looking **risk strategy**
2	Develop **stress testing** and **scenario** methodology
3	Translate **climate science into economics** to support stress testing and scenario analysis
4	Integrate **transition risk** into wholesale credit decisions
5	Assess **physical risk** to customers
6	Embed climate considerations into **asset and investment management** approach
7	Develop robust **disclosure** on climate-related risks (TCFD)
8	Develop **data** and **technology** to enable client-level and portfolio analysis and reporting
9	Review and refine relevant credit risk and sustainability **policies**
10	Position HSBC for the **future**