

CLIMATE CHANGE DISCLOSURES LEAVE BANKS EXPOSED

BUSINESS POTENTIAL IS BEING IGNORED

Climate Risk Perspectives

CODE RED INSIGHTS

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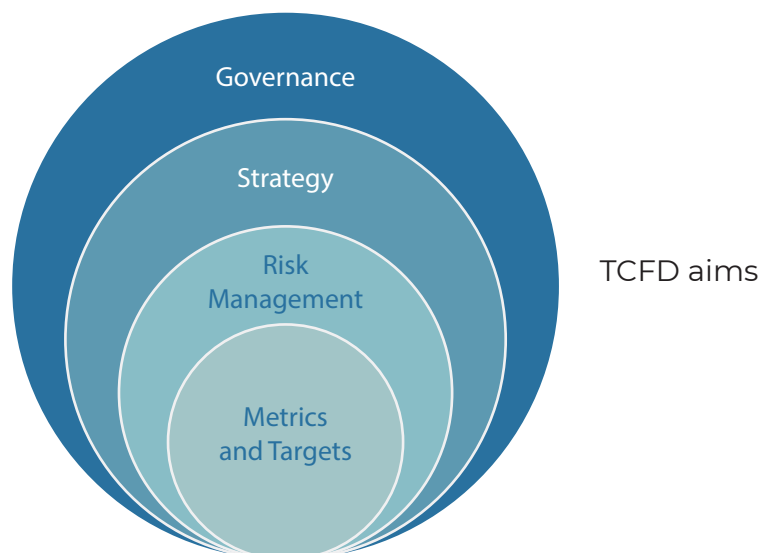
In 2021, the world is focused on climate change, with the physical impacts of the Anthropocene wreaking havoc across the world, including central Europe and North America, with 'once in a century' floods and fires becoming regular news items. Governments and scientists around the world have identified potential pathways and outcomes and have developed systems to audit greenhouse gas (GHG) emissions. The financial system has been pulled into this global program with many banks disclosing the GHGs they finance, but we need to ask whether this represents risk management in the crucial sector of climate change.

First, we need to understand the GHG emission disclosures themselves.

Who defines the disclosure framework?

The Financial Stability Board is an international body that was established to identify and assess vulnerabilities within the global financial system. As an ongoing exercise, the FSB aims to promote a culture of regulatory best practice globally, with a remit to continually review and develop regulatory best practices as markets develop.

The Task Force on Climate-Related Financial Disclosure (TCFD) was established by the FSB to specifically develop effective climate-related disclosures to improve investment, credit, and insurance underwriting within the global financial system. The focus of the TCFD is the carbon-related concentration of businesses, and to that end, they have developed a framework of scope 1, 2, and 3 disclosures that are designed to bring transparency to this area.



An important feature of the framework is that it applies across industrial sectors, including the financial sector. It is intended to be useful for investors, regulators, and governments when looking at the economy as a whole, with respect to its GHG emissions.

What are the differences between scopes 1, 2, and 3?

Scope 1 - Direct Emissions

Direct GHG emissions are those that are directly produced by the firm. This includes actual CO₂ emissions from any equipment, vehicles, etc that are produced as a result of the firm's normal business.

Scope 2 - Indirect Emissions - Purchased Electricity Emissions

Indirect emissions are basically defined as the emissions created by the production of electricity used by a firm. This forces businesses to look at both the amount of electricity they use and the source of that electricity.

Scope 3 - Other Non-Direct Emissions

Optional reporting on emissions that are a consequence of the activities/services of the firm, but not created by the firm. This is the scope where banks are specifically asked to audit their balance sheets for the amount of CO₂ emission they finance through loans and credit facilities.

The full report and recommendations of the TFCD are included in the report 'Recommendations of the Task Force on Climate-related Financial Disclosures' which can be read here [here](#)

Are the disclosures mandatory for banks?

The TFCD makes 'best-practice' recommendations based on general consensus, but these need to be adopted by regional regulators to become mandatory. This is happening, with financial bodies around the world adopting the framework, and with many banks voluntarily making the disclosures. An example of this is the EU, where the European Commission has published 'Guidelines on reporting climate-related information' (which can be read here)

As an example of reporting, we can take a deeper dive into the EU guidelines to see exactly how banks are impacted.

The aim of the EU report is to provide sufficient information for investors and financial institutions to direct capital to sustainable ventures across the economy. The 6 principles that apply to the reporting are that it should be;

- Material
- Fair, balanced and understandable
- Comprehensive but concise
- Strategic and forward-looking
- Stakeholder oriented
- Consistent and coherent

Banks are expected to report scopes 1 and 2, as operational businesses, but these are expected to be small. Particular attention is expected on their scope 3 disclosures, set out as specific KPIs as follows

KPI	Unit of Measure	Example	Rationale	Alignment with Other Reporting Frameworks	EU Policy Reference
Amount or percentage of carbon assets in each portfolio in M€ or as a percentage of the current portfolio value ³¹	M in reporting currency / percentage	€20 m or 20% carbon-related assets of bank's equity portfolio	Show awareness of the exposure of portfolio to sectors affected to varying degrees by climate-related risks and opportunities.	TCFD Common Carbon Footprinting and Exposure Metrics	2030 climate & energy framework
Weighted average carbon intensity of each portfolio, where data are available or can be reasonably estimated ³²	tCO ₂ e/ M revenues in reporting	A bank reports the carbon intensity of its equity portfolio in terms of tCO ₂ c per € m using	Show awareness of the exposure of portfolio to sectors affected to varying degrees by climate-	TCFD Common Carbon Footprinting and	2030 climate & energy framework

KPI	Unit of Measure	Example	Rationale	Alignment with Other Reporting Frameworks	EU Policy Reference
	currency	third-party carbon data	related risks and opportunities.	Exposure Metrics	
Volume of exposures by sector of counterparty.	Reporting currency % of the total risk exposure	€1 250 m in energy sector accounting for 17% of total investments	Show the concentration of exposures towards high-carbon and low-carbon sectors.	TCFD Common Carbon Footprinting and Exposure Metrics	EU Low Carbon Economy Roadmap

KPI	Unit of Measure	Example	Rationale	Alignment with Other Reporting Frameworks	EU Policy Reference
Credit risk exposures & volumes of collateral by geography/country of location of the activity or collateral, with an indication of those countries/ geographies highly exposed to physical risk.	Reporting currency	€ 750 m	Show the concentration of exposures and collateral in countries and geographies highly exposed to physical risks.		EU Low Carbon Economy Roadmap

KPI	Unit of Measure	Example	Rationale	Alignment with Other Reporting Frameworks	EU Policy Reference
Volume of collaterals related to assets or activities in climate change mitigating sectors.	% of the total volume of collaterals	12% of collaterals	Show the volume of green collaterals, e.g. with lower carbon exposure.		2030 climate & energy framework
Volume of financial assets funding sustainable economic activities contributing substantially to climate mitigation and/or adaptation (absolute figures and compared to total exposures) according to the EU taxonomy.	Reporting currency % of the total risk exposure	€650 m accounting for 12% of lending portfolio	Show the concentrations of green investments and their resilience to climate change.		EU Low Carbon Economy Roadmap
Total amount of the fixed income portfolios invested in green bond certified according to a potential EU Green Bond Standard if and when such a standard is approved, or according to any other broadly recognised green bond framework (at year-end) divided by (a 5-year rolling average of) total amount of holdings in fixed income portfolios.	Percentage and total amount in Reporting currency	Green Bond compared to vanilla bonds underwritten or emitted	This indicator demonstrates commitment to green finance & the investor's strategy & transition path towards alignment with a well below 2°C scenario. It helps demonstrate track-record & forward-looking data can underpin the investor's transition strategy with a robust key-performance indicator	The proposed draft version of ISO 14030 (October 2018) on green bonds already requires reporting on this indicator.	Upcoming EU eco-label on green financial Products. ³³

The intent is clearly to fully audit the material CO2 impact of the banks' lending & financing activities. This information is then fully available for public scrutiny.

Is this compliance, best practice, or risk management?

It is important to think about disclosures in the context of the wider efforts of the EU, and ultimately all other regional governments. The economy as a whole needs to be audited and monitored with regards to its GHG emissions and banks are just one part of that. The disclosures in themselves are in compliance with the reporting directives and good practice from a holistic economic viewpoint. They are not, however, risk management. They do not tell the bank anything about the potential losses it faces as a result of climate change, but rather act as the start point for that analysis.

How can banks perform risk management against climate change?

Risk management is a live process of comparing opportunities with the risks of loss they represent and determining whether they both fit the bank risk appetite and represent a risk-adjusted value within that appetite. Climate change related risk is no different, and banks must view the disclosures from its current and potential customers as data points to properly price the risks it takes, whilst its own disclosures are data points for the government, as it makes policy.

To build from this, banks have to make use of some other core data sources.

- Intergovernmental Panel on Climate Change (IPCC) - This group performs constant analysis of the global warming situation, including projections for increased heating (by 2100) and provides pathways (scenarios) by which that heating can be held to specified levels. Notably, governments have signed up to a 2 degree heating maximum and so those pathways that have that end state are of most interest
- Net Greening of the Financial System (NGFS) - This group is made up of economists and central bankers who cost out the pathways from a quick starting, well planned perspective (orderly) and a late start starting reactive perspective (disorderly). This set of scenarios are then costed-out in terms of GDP impact, both globally and locally.
- International Energy Agency (IEA) - This group analyses policies and projections in the energy production and use and maps these to industrial sectors, providing predictive impacts across the global economy.

Taken with the TCFD firm level disclosures, these data sources provide a dataset that banks can use to create loss estimates across its balance sheet as well as for potential new customers. The general approach for climate change based risk management would be;

- Use the well researched outcomes and scenarios from the IPCC and NGFS to create the high (GDP) level losses that should be expected for the transition from a brown to a green global / regional economy
- Use the IEA data to correlate industries and sectors to the high level loss. This creates a benchmark, by sector, that can be applied to the loss calculation as a percentage
- Use the benchmark GDP loss to adjust the 'riskiness' of the current obligors via the Risk Weighted Asset (RWA) calculation, which informs banks and auditors how much capital must be held to secure the bank against credit based losses
- Use the TCFD disclosures to adjust, at obligor level, the exact correlation to the loss

This then provides a solid base to set funding targets that are in keeping with the bank risk appetite and stated climate change ambitions. The crucial difference between bank disclosures and climate

risk planning is the forward looking nature to the risk management and the fact that the bank can aim for specific levels. As the bank moves towards and achieves these targets, today's sustainability aims become tomorrow's disclosures. This provides stakeholders clear evidence of vision and action from the bank, as well as protecting the bank's balance sheet.

Can banks move past risk management to risk opportunity?

The data from the TCFD can also be used to advise obligors on ways that they can reduce their exposure to current and predicted climate-related regulation, and the physical impacts of climate change. The scope 1 and 2 disclosures provide the basis for this advice, which is then translated into lower financing as it translates directly into a risk mitigant. This incentivized financing can be both a catalyst for meaningful change and greater bank market share of the growing sustainable sector.

What else needs to be done by banks?

The focus of the disclosures is CO2 production and intensity. Banks finance industries and sectors that are exposed to a wider range of environmental risks and policies than those represented by the TCFD disclosures. These can range from forestry management to maritime activity, and all will face both transitional and physical impacts from climate change. These also need to be encoded in the losses and sector correlation matrices.

SUMMARY

- › Banks have a huge task ahead, in creating and managing a new risk category. Their success in this will have a material impact on the likelihood of reaching the aims and goals of the world's governments in terms of climate change. The nuances of how this risk interacts with traditional credit risk and RWA calculations will be the first major step in this process, and must be addressed immediately.

GreenCap is designed to assist banks in their climate change risk management and fits in entirely with the efforts of the TFCF, IPCC, NGFS and IEA.

Please visit [GreenCap.live](https://www.greencap.live) to learn more about this new and innovative risk management platform, and the resources needed to manage climate change risk.



ABOUT GREENCAP

- › GREENCAP is a turnkey 'Risk as a Service' (RaaS) solution, designed for banks to include climate change as a category in their risk management frameworks.
- › The solution allows banks to replicate climate pathways within their scenarios for economic impact and risk analysis.
- › Using GreenCap, banks can modify pathways and scenarios to include the timing effects of delayed sustainability transition measures.
- › Loans and credit facilities are measured and monitored against risks arising from both 'physical' and 'transition' impacts.
- › GreenCap provides support for risk reporting and governance in the areas of 'Responsible Banking' and climate change.
- › With GreenCap, banks can ensure that their climate strategies are financially grounded, and loan pricing is optimized throughout the transition to a green global economy.



ABOUT GREENPOINT FINANCIAL

- › GreenPoint Financial is a division of GreenPoint Global, which provides software-enabled services, content, process and technology services, to financial institutions and related industry segments.
- › GreenPoint is partnering with Finastra across multiple technology and services platforms.
- › Founded in 2006, GreenPoint has grown to over 400 employees with a global footprint. Our production and management teams are in the U.S, India and Israel with access to subject matter experts.
- › GreenPoint has a stable client base that ranges from small and medium-sized organizations to Fortune 1000 companies worldwide. We serve our clients through our deep resource pool of subject matter experts and process specialists across several domains.
- › As an ISO certified by TÜV SÜD South Asia, GreenPoint rigorously complies with ISO 9001:2015 and ISO 27001:2013 standards.
- › GreenPoint is owned by its founders and principals and is debt free.



Marcus Cree

MANAGING DIRECTOR AND
CO-HEAD OF FINANCIAL TECHNOLOGY AND SERVICES

Marcus has spent 25 years in financial risk management, working on both the buy and sell side of the industry. He has also worked on risk management projects in over 50 countries, gaining a unique perspective on the nuances and differences across regulatory regimes around the world.

As Managing Director, Marcus co-heads GreenPoint Financial Technology and Services and has been central in the initial design of GreenPoint products in the loan book risk area, including CECL and sustainability risk. This follows his extensive experience in the Finastra Risk Practice and as US Head of Risk Solutions for FIS. Marcus has also been a prolific conference speaker and writer on risk management, principally market, credit and liquidity risk. More recently, he has written and published papers on sustainability and green finance.

Marcus graduated from Leicester University in the UK, after studying Pure Mathematics, Psychology and Astronomy. Since graduation, Marcus has continually gained risk specific qualifications including the FRM (GARP's Financial Risk Manager) and the SCR(GARP's Sustainability and Climate Risk). Marcus's latest academic initiative is creating and teaching a course on Green Finance and Risk Management at NYU Tandon School of Engineering.



Sanjay Sharma, PhD

FOUNDER AND CHAIRMAN

Sanjay is the Founder and Chairman of GreenPoint Global - a risk advisory, education, and technology services firm headquartered in New York. Founded in 2006, GreenPoint has grown to over 380 employees with a global footprint and production and management teams located here in the U.S, India and Israel.

During 2007-16 Sanjay was the Chief Risk Officer of Global Arbitrage and Trading Group and Managing Director in Fixed Income and Currencies Risk Management at RBC Capital Markets in New York. His career in the financial services industry spans over two decades during which he has held investment banking and risk management positions at Goldman Sachs, Merrill Lynch, Citigroup, Moody's and Natixis. Sanjay is the author of "Risk Transparency" (Risk Books, 2013), Data Privacy and GDPR Handbook (Wiley, 2019) and co-author of "The Fundamental Review of Trading Book (or FRTB)- Impact and Implementation" (RiskBooks, 2018).

Sanjay was the Founding Director of the RBC/Hass Fellowship Program at the University of California at Berkeley and is an Adjunct Professor at EDHEC, Nice in France. Sanjay is also Adjunct Professor at Fordham University where he teaches a similar master's capstone course and at Columbia University. He has served as an advisor and a member of the Board of Directors of UPS Capital (a Division of UPS) and is a frequent speaker at industry conferences and at universities. He served on the Global Board of Directors for Professional Risk International Association (PRMIA).

He holds a PhD in Finance and International Business from New York University and an MBA from the Wharton School of Business and has undergraduate degrees in Physics and Marine Engineering. Sanjay acquired his appreciation for risk firsthand as a merchant marine officer at sea where he served for seven years and received the Chief Engineer's certificate of competency for ocean-going merchant ships. Sanjay lives in Rye, NY with his wife and two teenage sons.