Climate Financial Risk Forum: Session 2 Guides

A second round of guides to help financial firms manage climate-related financial risk has been published by the Climate Financial Risk Forum (CFRF). The ten guides published build on those published in June 2020 and will help firms respond effectively to climate-related financial risks. The five CFRF working groups are:

1. Risk Management
2. Scenario Analysis
3. Disclosure
4. Innovation
5. Climate Data and Metrics

The guides are discussed in more detail below.

1. RISK MANAGEMENT

The outputs from the Risk Management Working Group (RMWG) are designed to help retail banks, corporate banks, insurers and asset managers produce and implement risk appetite statements that integrate climate-related financial risks. The RMWG published a total of three guides:

- Climate Risk Appetite Statements
- Use cases
- Climate risk training

I. Climate Risk Appetite Statements

This document builds on the information in the CFRF 2020 guide. The aim is to offer practical advice on writing, implementing and maintaining an effective risk appetite statement (RAS), factoring in different aspects of climate risk.

The content in the document comprises a range of example practices from firms, leading thinking and industry papers. It is not intended to signify a benchmark for best practice. The document is structured by industry grouping, covering Insurance, Asset management, Corporate Banking and Retail Banking. Our summary will focus on insurers.

Ownership could be a designated individual, or a full team and this will depend on the complexity and materiality of the risks to the organisation. Incorporating climate risks within the firm's existing

governance structures rather than by creating new ones is likely to achieve more sustainable embedding.

The first step in developing a climate risk appetite is to assess the firm's exposure to the risks from climate change and these can be bucketed into two categories:

1) Traditional business risks - risks typically captured in existing categories. Some examples:
   a) Underwriting catastrophe risk - Climate change is increasing the uncertainty of catastrophe risk such as flood and windstorm or even mortality underwriting, although the time horizons are long
   b) Reinsurance default - Climate change is exacerbating the extremes more than the average, and is also believed to make clustered or prolonged losses more likely.
   c) Reserving - There may be an increase in litigation against companies viewed as contributing to climate change.
   d) Legal - In addition to litigation against companies, there is the potential that insurers could be sued directly for contributing to climate change
   e) Operational - Offices or other physical locations near the coast or rivers may be at increasing risk of flooding or physical disruption.
   f) Asset-side market/Investment
   g) Credit risk may also be impacted, both through movements in credit spreads and moreover, it is possible that an enterprise's net-zero ambitions may impact any of the above risk categories.

2) New risks and opportunities - transitional risks that are proportionate to the carbon intensity of the underlying activity. These risks may be related to an insurer's own emissions footprint or those associated with their assets or liabilities. Some examples:
   a) Regulatory conduct risk and own litigation risk - risks related to compliance failures and/or the emergence of new regulations
   b) Reputational risk - failure to meet stakeholder expectations or deliver on own net-zero targets, leading to loss of market share and company value
   c) Strategic risk - failure to adapt product offerings to changes in the environment, technology, risk profiles and demand. These risks could materialise through acting too soon or too late, or via a failure to take the right actions.

The next step is to consider the best approach to defining a RAS for those exposures. There are four general considerations that apply to insurers' RASs.

i. RAS should be used to articulate the types of risks to pursue and to avoid.
ii. Definition of risk appetite may be qualitative or quantitative, supported by limits for the most material risks, including certain underwriting and financial market risks.
iii. Firms may apply a strategic approach to climate risks.
iv. Risk appetite for climate change might be defined hierarchically, with more general principles at the top level and more concrete measures at the level of risk takers. The highest level should be owned by the firm's board.

When existing RAS do not adequately cover climate risks, additional RAS may need to be developed.

When determining whether additional RASs are needed, insurers should consider time horizon, if the risk features will be captured as they materialise, carbon intensity, if the risk appetite capture the new requirements, and new risks, so that the existing risk control framework capture all aspects of the risks from climate change.

The table below shows some potential Gaps and better integration options:

POTENTIAL GAPS:	BETTER INTEGRATION OPTIONS:
Impacts on existing business risks are not captured.	Review modelling of risk factors, Companies may use existing risk factors and limits or introduce new ones, Define forward-looking risk limits.
No explicit risk appetite statement related to carbon-intensive activities Exposure to carbon-intensive activities is not clearly identified Difficult to steer portfolios under carbon intensity targets	Firms might define a separate risk appetite statement Task Force on Climate-Related Financial Disclosures (TCFD) framework may be leveraged for metrics and supporting steering, Targets may be defined over a certain time horizon, Risk appetite may be defined as a tolerance range around the target for each year.
RAS does not capture well the potential trade-offs between risk appetite for traditional business risks and risk appetite for carbon-intensive risks	Qualitatively define the firm's sustainability/climate strategy in a way that provides the objective for all risk taking Introduce steering: • exclusions for risks that should not be tolerated on an individual basis • use capacity limits for carbon Allocation of capacities left to risk takers

The document then gives specific examples of metrics that can be used to manage climate risk, thresholds and how risk appetite can be cascaded. Examples of metric are shown below for assets and liabilities.

Assets:

- Carbon intensity of the asset;
- Carbon footprint of underlying counterparty;
- Benchmarking carbon footprint against sectorial averages;
- Scenario Value at Risk (VaR);
- Credit impacts from scenario analysis; and
- Temperature alignment metrics.

Liabilities:

- Average loss, shortfall, 1-in-200 year, return period, aggregate exceedance probability (AEP);
- P&C: severity and frequency of weather events; and
- L&H: increase in excess mortality, monitoring early warning indicators (EWIs) for longevity/ future mortality assumptions.

Regarding thresholds, to create proper risk tolerances, insurers can also take the following steps:

- Prioritise mitigating risks where there is a higher loss potential due to materialisation of climate risks for certain carbon-intensive assets;
- Allocate carbon intensity capacities to first line - i.e., decentralise optimisation of risk vs. return; and
- Define triggers, that will require expert oversight and input, to build experience and inform future setting of thresholds.

When the threshold is triggered, the firm can review the limits, de-risk, and mitigate the risk.

The operational and non-financial risk aspects of the RAS will be considered for development in future sessions of the CFRF given the ongoing development of FCA guidance in this area.

II. Risk management Insurance Use Cases

This document builds on the principles outlined in the Climate Risk Appetite Statements document mentioned above and is also grouped into Insurance, Asset management, Corporate Banking and Retail Banking sections. Again, our summary will focus on insurers.

The insurers section looks at traditional business risks ('Property and Casualty' and 'Life and health'), new risks related to carbon intensive business activities and strategic risks.

For Property and Casualty insurers, the process of re-underwriting risks each year is an important risk management action. A higher number of extreme events may be expected exceeding the cover limits that are currently deemed sufficient or acute physical impacts arising where they haven't been found material before and which are not adequately covered. When carrying out scenario analysis, the impact of climate change is typically assessed using the current portfolio as at a specific date. Many practitioners will have noted that while losses may be large, they are also unrealistic as that will not be the same portfolio that insurers will be on risk for when the losses occur. Actions to reduce future exposures are important steps to manage the future risk profile, and should be logged as 'agreed future management actions'. It would be reasonable to expect their exposure to climate related underwriting losses to reduce over time. Running the scenario analysis periodically, risk managers should expect to see the reduction in exposures compared to the previous exercise, as opposed to remaining static or even increasing. The monitoring of this exposure trend could be included within the suite of risk appetite metrics.

Life and health insurance contracts are generally of a longer duration and this longer-term risk increases the need for a forward-looking assessment. For example, there is a future uncertainty if a transition to a low carbon economy results in improved health and life expectancies through reduced levels of pollution and changes to lifestyles or how the severe weather events would reduce health and life expectancies. These may be incorporated into existing emerging risk processes or as part of the own risk and solvency assessment (ORSA) of longer-term strategy. Alongside carrying out asset liability assessments insurers should consider the timing and likelihood of investment values being impacted by climate related risks over the expected investment period. Policyholders may want greater control over defining the investments strategy. This may be achieved through offering a range of different options around sustainable investments strategies for the underlying assets.

Strategic risks, more specifically risk profile of long-term objectives, could be changed by climate risks. (Re)insurers setting specific targets for greenhouse gas (GHG) exposures will ultimately result in a reduction in capacity for covering carbon intensive business activities. Either these covers will no longer be offered or the cost of cover will increase, for example, to including charges for carbon offsetting or carbon reduction activities. This impact on the market is intended and driven by regulatory initiatives under the Paris Agreement, with a defined time horizon for net GHG neutrality by 2050 in Europe.

The document explores a possible framework for developing an understanding of how the additional time horizon elements can be incorporated into risk appetite statements and tolerances:

1. Establish the assessment framework:
   The risk management approach should be aligned to both short-term and long-term strategy and corporate plans. To enable practical and effective implementation it will need to be embedded into the business decision making processes. The firm's business and operating model will influence the approach to setting the risk appetites and the following aspects should be considered:

- Time horizon
  The risk categories and how they change over time will be influenced by both the time periods that are being considered and the range of climate outcomes that are being assessed.
- Climate impact
  It explains how the choices that are made today may impact on the longer-term risks from climate change.
- Scenario analysis
  A mature climate related risk appetite should be informed by the outcomes from scenario analysis, as scenario analysis is used to capture the range of potential outcomes, extended time horizons and high levels of uncertainty associated with climate change. Under each scenario the way the risks may emerge will vary, exchanging future physical risks for more immediate transitional risks. There is benefit from considering alternative pathways that the transitional risks may follow, for example, either an immediate and smooth transition, or one that is delayed and has a sudden disruption.
- Opportunities
  As firms explore opportunities presented by climate change these may introduce additional risks that lead to changes to the approach to risk management.

2. Risk identification:
   Identify the different types of climate related risks that the (re)insurer is exposed to from their business model and underlying risk profile. This assessment should include consideration of the traditional business risks, new risks and strategic risks.

3. Materiality assessment:
   For each scenario and duration assess relative changes to risk exposure assuming no change to the current portfolio, to inform the materiality assessment of the identified risks. The outputs from this assessment can be used to identify which traditional metrics may be impacted at different time horizons, and where gaps in either the framework or metrics may exist.

4. Measurement:
   Review whether existing metrics can be used to capture exposure. Where gaps have been identified alternative metrics will need to be developed. For example, regularly review the level of confidence on the likelihood of the risk, availability of data and pre-defined exposure tolerances.

5. Management actions:
   It is important to understand the range of actions that may be taken to manage exposures over time, including the timing of when these actions would be most effective.

6. Monitoring:
   Regular monitoring should be put in place to capture changes to the risk landscape. These may be from changing stakeholder or regulatory expectations, the firm's development of their strategy, or data availability.

III. Climate risk training

This document aims to offer practical advice on developing and implementing an effective climate risk training programme.

A successful climate risk training programme should cover a number of key topics, which can be incorporated into existing training structures or delivered as a standalone programme. These key topics are listed as:

- Environmental, Social & Governance and Climate - Provide an introduction to climate change, and how it fits within ESG
- Climate Strategy - Provide an overview of the firm's climate strategy
- Introduction to Climate Risk - Introduce and raise awareness of climate risk across the firm
- First Line of Defence & Climate Risk - Explore how climate risk will impact the firm's customers and the role of the first line of defence in managing it in line with the firm's risk management structure and supporting policies and processes
- Second Line and Third Line of Defence & Climate Risk - Explain how climate risk is likely to manifest across the firm's risk taxonomy and how it should be managed in line with the firms risk management framework
- Climate Risk Reporting and Regulatory Landscape - Explore stakeholders' expectations on climate risk management, including regulators, investors and customers and provide an overview of the evolving reporting and regulatory landscape and how this is likely to impact the firm
- Climate Risk Data - Introduce different climate risk data types, sources, key methodologies and analytical tools that can help the firm collect the data it needs to manage climate risk and achieve the firm's climate strategy
- Climate Risk Scenario Analysis - Explore how scenario analysis can be used to explore the potential future impacts climate change may have on the firm's operations and customers.
- Climate Risk Models - Explore how models can be used for climate risk management.

A learning needs analysis should be completed to identify the climate risk training required across the different levels of the firm. Recommendations for specific audiences is given in the table below.

AREA	KEY TOPICS
Board of Directors & Executive Management	Climate Strategy Introduction to Climate Risk Second Line of Defence & Climate Risk Regulatory and Reporting Landscape Scenario Analysis

Area	Key topics
First Line of Defence	ESG & Climate Climate Strategy Introduction to Climate Risk First Line of Defence & Climate Risk
Second Line of Defence	ESG & Climate Climate Strategy Introduction to Climate Risk Three lines of Defence and drill down into 2LOD
Third Line of Defence	Introduction to Climate Risk Second Line of Defence and Third Line of Defence & Climate Risk
Finance & Reporting	Introduction to Climate risk Climate Scenario Analysis Climate Data Climate Regulatory & Reporting Landscape
Operations	Introduction to Climate Risk

Consideration should be given to the following factors to ensure the success of a climate risk training programme:

- Connect with the firm's strategy, purpose and values;
- Set the tone from the top;
- Engage stakeholders across the organisation in the development of the training;
- Identify the learning needs across your organisation on an ongoing basis;
- Tailor your training approach to your audiences and;
- Continual engagement and communication on climate risk.

2. SCENARIO ANALYSIS

The Scenario Analysis Working Group (SAWG) has produced practical examples on how firms can incorporate sector specific points when developing an effective approach to scenario analysis. The SAWG published a total of two guides:

- Scenario analysis Implementation guide
- Data and tools providers spreadsheet

The SAWG intended to publish an online scenario analysis tool in Q1 2022, which would be designed for use by smaller firms who may not have the experience or resources to attempt independently.

IV. Scenario analysis Implementation guide

The document aims to promote understanding, consistency, and comparability by providing guidance on how to use scenario analysis to assess climate-related financial risks. It builds on the previous Climate Financial Risk Forum (CFRF) Scenario Analysis in the 2020 Guide and in particular, the iterative end-to-end climate scenario analysis process. The document is made up of six main sections.

The first section explores the Global Association of Risk Professional's (GARP) Climate Risk Management Survey undertaken in Q2 2021. Some takeaways from the survey:

- Most firms use Climate scenario analysis on an ad hoc basis and have used it within the last two years.
- The most popular reasons were risk identification and to assess the financial impacts of climate change.
- Most of the firms (52 out of 55) reported that they were assessing transition risk, with forty-seven firms noting that they assess physical risk. Greenhouse gas (GHG) emissions were assessed by only twenty-eight firms.
- The most popular scenario for assessing physical risk was the IPCC's Representative Concentration Pathways, and for transition risk was the Network for Greening the Financial System (NGFS) orderly and disorderly scenario. (See Annex 2 of the CFRF's 2020 Scenario Analysis Chapter).
- the most popular time horizon for the scenarios used was 10 to 30 years.
- Many firms are using external parties to help them develop and build scenario analysis capability. Nearly 80% of firms in the survey intend to use third party technology and/or data.

The second section explores key elements to consider when conducting climate scenario analysis and provides an overview of the NGFS scenarios published in June 2021.

When establishing a scenario analysis framework, firms should first consider choosing a selection of scenarios covering the following components:

- Baseline scenario. Firms could choose different types of baseline depending upon the purpose of the analysis being performed.
    - Hypothetical pathway that assumes no climate-related risks: no incremental transition and physical risks beyond those already observed to date
    - Probability-weighted central scenario: represents the firm's view of the most likely scenario at the time of preparing the forecast.

    - Current or pledged policies: the level of global temperature warming implied by a country's current policies or policy commitments pledged under the Paris Agreement.
- Strategic scenario. This scenario should reflect a firm's strategic ambition. A firm could consider defaulting to a baseline scenario if they have not yet or do not intend to define an alignment/transition strategy.
- Tail scenario. Firms should also consider at least two tail scenarios that are plausible but more severe and less likely than the baseline. For example:
    - Higher transition risk
    - Higher physical risk
- Comparing the scenarios. Firms can test its resiliency by comparing risk metrics under tail scenarios to risk metrics under the baseline scenario. Although, firms should be aware of the impact of their assumptions on the results.

This section also highlights some of the key challenges facing the user of scenario analysis, such as breadth of risk, uncertain time horizons, weakness of models, data gaps and cognitive bias.

The learnings from Case Study 1 have been broad based and included the following insights:

- An orderly and early transition is strongly preferable to a disorderly one. Delaying action will cause not only more physical risk to the environment but also damage the economy.

- The physical effects are very uncertain. Because there is no agreement among economists on how global warming will influence the economy.

- Government policy matters. Use carbon tax revenues into government investment has a short-term positive impact through higher demand and a longer-term positive impact through improved productive capacity.

- Investment financing also matters. Assumptions about the source of this investment significantly influences assessment of economic results.

- Climate affects the economy in a complex way, and individual impact channels interact with each other. On one hand, higher carbon prices and the physical effects of climate change may both depress GDP growth. On other hand, spending of carbon tax revenues and lower energy intensity both stimulate GDP growth. Thus, it is not easy to predict the direction of changes due to the combination of multiple shocks.

- Global interactions can lead to surprising results. Because, for example, higher risk of flooding affects some countries more than others could originate competitive advantage to less affected countries and consequently result in a positive overall effect.

- But perhaps the most important learning is the potential for future insight such exercises present. Many of the potentially largest societal effects are technically challenging to build into models, because they are very hard to predict.

The third and fourth sections consider how to evaluate transition and physical risks' impacts for banks, insurance companies and asset managers using scenario analysis. There are 8 case studies:

- Evaluating climate transition risk for sovereigns
- A transition risk assessment for an Oil & Gas company
- Asset-level physical risk assessment for an oil & gas company
- Practical use case of application at a firmImpact on Reinsurance StrategyOverseas insurance market product development
- Enriching flood risk analyticsAn external flood model example

The fifth section focuses on the use of scenario analysis to explore alignment of financing portfolio(s) with the objectives of the Paris Agreement. It also provides guidance on how utilising scenario analysis can aid portfolio construction.

The final section sets out potential areas for future developments, such as:

- Assessment of the advantages and disadvantages of using different reference scenarios and how they compare and relate to each other, for example, the differences between Climate Biennial Exploratory Scenario (CBES), the NGFS and the International Energy Agency (IEA).
- Consider how to build on CBES exercise and the lessons learned from it
- Provide guidance on how to conduct sensitivity analysis for key variables and assumptions underpinning scenarios.
- Identification of other potential risk transmission channels that have not been covered in this report e.g. reputational and litigation risk
- Consider how to take into account adaptation in climate assessment and what alignment means with respect to climate adaptation.

V. Data and tools providers spreadsheet

This is an Excel database that has been created to serve as an illustrative list of current climate risk offerings, highlighting the variety and scope of what is currently available in the marketplace. This database has been designed to provide practitioners with relevant information in a digestible and searchable format. This is to ultimately support research and decision making around climate risk product procurement.

The spreadsheet consists of eighty rows of data and columns titled:

- Firm Name
- Product Name
- Product Type
- Product Format
- Overview
- Physical Risk
- Transition Risk
- Geography covered

- Scenario used
- Macro-economic Impact Assessment
- Assets or Company Level Output
- Outputs
- Distribution Channel
- Data Source(s)
- Product Cost
- Data Source Cost
- Website

If, for example, you wanted to see a list of global acute physical risk datasets, you could do this by combining multiple filters. First, navigate to the column labelled 'Product Type' and select options including 'Dataset'. Then select 'Acute' from the 'Physical Risk Type' filter options. You could then review the available geographies in the column labelled 'Geography Covered'.

Which tool to use depends on the company's business. In our opinion, the most useful climate risk, tools and methodologies could be:

- Climate Change Consulting, because it produces catastrophe bespoke results, scenarios used are specific to the client, using outcomes based on probabilistic loss estimates. But it only models regional acute physical risks, such as Tropical cyclone, flood, wildfire, convective storms in property assets.
- EY Arena, because it is a ESG data model, ESG data ingestion, ESG data architecture blueprint, ESG dashboard, scoring and rating analytics, covering physical and transition risks globally.
- PACTA (Paris Agreement Capital Transition Assessment), because is a free open-source software, giving outputs regarding exposure metrics, alignment metrics and emission intensity metrics, across equities, corporate bond and corporate lending, but it does not model physical risks.
- Climate Quantified (CQ), because it supports financial institutions to identify, assess, and respond to multiple hazards, such as physical (acute, chronic and liability) and transition risk (Policy or legal, Technology, Market, and Reputational). It can be on a globally, regional, by country or a specific location point, across global equities and real assets. The data costs to clients are determined on an individual needs.
- Model Builder, because it covers any geography location, uses any scenario, and provides flexible Macro-economic Impact Assessment for any transition risks.
- KPMG Climate IQ, because its assets output are across global equity, fixed income, corporate bonds, sovereign bonds, global companies, global oil and gas, corporate loans, project finance and mortgages.

VI. Case Studies in climate action

Regarding the disclosure chapter there are Case Studies on climate action from three firms, Abrdn, Barclays and International Business of Federated Hermes.

There was a need to connect the disclosure process with the work that goes on behind the scenes to develop an understanding of how climate change can impact the organisation, its business, and prospects, as well as the means of measuring and assessing this. Successful disclosure depends on an efficient climate change management policy.

Case studies will certainly need further developments in approaches and practices in just the coming months because they only represent a snapshot in time.

The challenges of crafting a robust approach to climate risk, given the incompleteness and novelty of the data sets and methodologies required, is a common theme. However, all highlight the ways that, despite these difficulties, climate concerns are increasingly being integrated into risk management practices, investment research, stewardship, governance and policies, and new approaches to the construction of investment portfolios and products.

The key challenges identified are listed below:

- there are still data gaps to be able to reflect 'real world impact' through disclosures;
- the tools used can become out of date very fast;
- it is difficult to get key decision makers to agree on a complicated issue that may affect their region or asset class in different ways, consequently, a one-size fits-all approach may not work;
- the tools available were use were not ideal;
- no historic data was available to predict a future subject to theoretically substantial change and doubt, consequently, there is a need to understand new information and types of data, as well as completely new techniques of measurement and analysis;
- the need to ensure the investment and stewardship teams maintain a best practice approach to integrating climate risk and opportunity management into their investment processes;
- accessing reliable investee data, especially for private markets, small companies and emerging markets;
- third-party tools are frequently not clear about the approaches and assumptions used to generate outputs.

The key benefits are as follows:

- Going through the process of preparing a TCFD report helped to develop the governance and to strengthen processes and data around climate change.

- Recognising commercial opportunities related to developing products that can benefit from the energy transition and meet growing client demand for net zero directed solutions.
- Providing a level of information that we may not have been expected to share in the past.
- The nature of the threat from climate change requires the adoption of a new mind set from many in the financial services industry. This offers an opportunity to reset elements of organisational culture and to engage with a broader set of stakeholders.
- Significant value in investment teams being well equipped to integrate consideration of climate risk and opportunity into their decision- making.

There are key aspects that are common to all firms, in particular: the importance of starting somewhere; enhancing the firm's climate approach – including disclosure – is an iterative process that takes time; and the need to involve staff and integrate the approach across the business in order to develop credibility and coherence.

This document allows us to better understand climate risk exposure and the opportunities relating to climate change. These case studies illustrate the change that is underway in the financial sector, as serious engagement with climate financial risk and opportunity is becoming widespread.

VII. Disclosures – managing legal risk

The Managing Legal risk document sets out that financial institutions will need to include clear disclosure about their own approach and methodology and how data is sourced. They will also need to specify their view as to the limitations of any data and metrics disclosed. The purpose is to manage their own risk of litigation or liability and to make accurate disclosure based on evolving climate data and reporting capability.

Financial institutions face several challenges from climate-related reporting, such as:

- facing a period of rapid change in their regulatory obligations in this area
- require access to reliable, comparable climate-related data from the underlying organisations who are their counterparties or in which they have invested, and is not currently generally available
- data services often do not provide sufficient information on how their data and reports are sourced, curated and verified.
- materiality is both relevant to and challenging to assess as regards climate-related disclosures
- not yet made disclosure in respect of scenario analysis or have only disclosed analysis at a very high level or in respect of part of their business.
- to date, disclosures have been largely narrative/qualitative in voluntary TCFD reporting with less information regarding quantitative metrics.

UK listed companies face the following risks and liabilities, due to a failure to disclose a climate-related risk in its annual report:

- criminal liability for breach of provisions of the UK Companies Act 200611 ("CA2006");

- civil liability of its directors to the company for false or misleading statements (limited by s463 CA2006);
- liability of the company to investors either under general principles of liability for misstatement (for example fraud or tort) or under statutory provisions; and
- sanctions imposed by the FCA for listing rules breaches, transparency rules breaches or for market abuse.

The causes for disclosures failure are complete failure to disclose, disclosure of untrue or misleading information, disclosure with a material omission; and/or delayed disclosure.

Good practices approach when managing risks in reporting climate change:

- institutions are generally proposing to provide their TCFD reporting as a supplement to their annual report when reporting under the Listing Rules
- precise, accurate and verified qualitative and qualitative disclosures
- transparency as to the type of challenges institutions have encountered in obtaining and aggregating climate data
- metrics are clearly an important part of reporting.
- any disclaimer should accurately reflect the area of concern and should be tested to ensure it is neither too narrow nor too wide.
- any assessment of materiality should be made and recorded carefully
- greater clarity as to how governance frameworks in relation to climate change have translated into decisions on strategy; set sustainability targets or goals, it should report on progress towards these goals, and specifically how this will be achieved, monitored and assured; improve financial implication under disclosure.
- accounting and auditing Issues
- there is recognition that assurers are in the process of upskilling and that the lack of an accepted methodology is a barrier as there is nothing detailed to assure against.

Conclusion from managing legal risk guide:

There is eagerness and commitment of firms to provide climate related financial disclosure. However the underlying data to develop precise disclosure is not yet available to meet the expectations and legal consequences of mandatory disclosure. The Disclosures Working Group (DWG) notes that metrics can give the reader a false sense of precision, and that this is a matter that reporting entities will need to address in using them in their reports, so that readers of annual reports do not assign a greater degree of certainty to the information they convey than is intended.

We anticipate that the regulatory and accounting environment will have to adapt somewhat further to the particular properties of climate data as reporting practice develops, and as the complexities and sensitivities of climate data become clearer. During the ramp up of mandatory reporting, issues relating to access to and reliability of data are obvious areas for improvement. In the meantime, reporting entities will wish to manage risk associated with data by explaining the limitations of data they receive, data gaps and use of proxy data, issues with methodologies and areas or product lines for which current methodologies are inappropriate. This paper suggests some of the areas to consider and how they may be addressed in disclosures.

4. INNOVATION

VIII. Commentary report

The key message from the innovation document is that the opportunity and upside potential of moving to a net-zero, resilient economy tends to be underappreciated.

Where firms need to have capital allocation framework as well as a climate risk management framework, innovation needs to be both actionable and scalable, as per the Road to Net-Zero Finance report prepared by the Advisory Group on Finance for the UK's Climate Change Committee recommendations.

This will require regulators to work closely with industry to ensure regulations (e.g., prudential regulation in insurance) take the macro-risks of not addressing climate change as seriously in practice as more traditional financial risk factors.

There are case studies in this document about actions to expand financing into the real economy through increasing supply of finance and enabling on the demand side, to finance transition assets – delivering structural changes in sectors, to improve use of data and metrics.

IX. Case study videos

The case study videos about innovation provided are not exhaustive, instead they seek to illustrate examples of leading-edge activities which are emblematic of innovation on levers of change in the financial system which could be scaled and replicated by others.

There are three themes running through the cases study videos. Firstly, how to get more real money, real capital into the real economy and make real difference. Secondly, how do we get capital into the difficult parts of the economy so we can have a whole of economy transition. Thirdly, data and measuring the right things to deliver the right outcomes.

X. Climate Data and Metrics – Guide

The "UK Climate Financial Risk Forum: Climate Data & Metrics Report" highlights the ambition of firms as they engage with how to effectively report on climate related risks to which regulated firms and financial markets are subject. It identifies different metrics for different use cases (financial risk to the reporting entity, systemic risk, and impacts on the climate or environment). In its provision of metrics across three categories (basic, advanced, stretch), by implication it also illustrates the range of reporting capabilities that are developing in the market at present, and the room for further growth.

First step was to identify a common set of core metrics, it found that these metrics were best organised into 4 primary use cases: i) transition risk, ii) physical risk, iii) portfolio decarbonisation and iv) mobilising transition finance with a fifth cross-cutting metric on engagement.

Summary of Climate Metric uses cases and example metrics:

TOPIC	USE CASES	EXAMPLES
Impact of climate change on a firm	Transition Risks	Exposure to carbon-related assets. Exposure by sector/technology/geography. Financial impacts of the climate transition.
	Physical Risks	Proportion of assets exposed. Physical risk heatmap by sector/geography. Financial impacts of physical risk.
Impact of the firm on climate change	Portfolio decarbonisation	Financed emissions (historic & future). Portfolio alignment metrics.
	Mobilising transition finance	Exposure to climate solutions. Carbon returns/avoided emissions, Climate-related capex intensity.
Cross-cutting	Engagement	Proportion of climate-related engagements. Engagements with positive progress Speaking at AGMs, co-filing resolutions.

Whilst the indicators above are not specific to an industry it is important to consider metrics that are relevant to particular firm's risks and opportunities. Therefore different metrics may be appropriate depending on the industry a firm is in.

Furthermore, the document recognises that the need to address climate-related data gaps is commonly recognised. Although, there is no single solution, data gaps need to be addressed at a granular level. Additionally, the effective pricing of climate risks requires metrics that are forward-looking and financial in nature, however carbon related metrics do not necessarily translate into financial impacts.

Finally, to provide practical guidance and support convergence in the direction of a set of coherent climate metrics, the report describes an illustrative climate disclosure dashboard, from the five use cases identified above, exposure to transition risks, exposure to physical risks, portfolio decarbonisation, mobilising transition finance and engagement.

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We help clients succeed

Our purpose is to help our clients succeed. Our mission is to provide cost effective quality actuarial services.

We are an actuarial consultancy that works exclusively for the financial services industry. Our clients include life insurance companies, friendly societies, general insurers and medical expenses insurers of every size from £5 million to £10 billion on the balance sheet. We operate from Epsom but service clients throughout the UK and beyond.

We provide all forms of actuarial support from full actuarial service packages through to specific actuarial input to major projects. Four senior members of our team hold Chief Actuary practising certificates and we carry out Senior Insurance Management Functions for twelve insurers. We are fully supported by a team of six other staff, enabling work to be carried out at an appropriate level, ensuring our clients receive cost effective, quality actuarial services. We are keen to tailor our service to meet your needs.

We are a Limited Liability Partnership which gives us the best platform to achieve longer term growth for a consulting firm.

We are associate members of the Investment and Life Assurance Group (ILAG) and of the Association of Financial Mutuals.

QAS Institute and Faculty of Actuaries Quality Assurance Scheme