

# Certificate in Climate Risk



## Principles and Practice of Climate Risk

Module Specification - Version 1

# Module Version 1

## LEVEL:

- Designed as SCQF Level 8
- RQF Level 5

## CREDITS:

Designed as 13

## QUALIFICATIONS TO WHICH MODULE CONTRIBUTES:

- Certificate in Climate Risk
- Professional Banker Diploma

## AUDIENCE:

All financial services risk professionals (or aspiring risk professionals) with an understanding of risk management principles and practices who wish to develop their knowledge of climate risk and demonstrate their expertise.

Although no prior knowledge of climate risk is required, completing the Chartered Banker Institute's Certificate in *Green and Sustainable Finance* would provide a useful introduction to the subject.

## AIM:

To develop the learner's professional knowledge, understanding and skills relating to climate change, climate risk and sustainable finance, with a view to supporting customers, clients, colleagues, and communities with the transition to a sustainable, low-carbon world.

## LEARNING OUTCOMES:

On completion of this module, the learner will be able to:

1. describe climate change and its impacts on the environment, economy, society, and the financial services sector
2. identify, describe and classify climate-related financial and non-financial risks, and the impacts of these on the economy, society and the financial services sector
3. examine the challenges in measuring, monitoring and reporting climate risks, and the availability and quality of data
4. outline common approaches to modelling climate risks, including the use of scenario analysis
5. examine regulatory approaches and responses to climate risk at global, regional and national levels, and their impacts on the financial services sector
6. explore approaches to defining, developing, articulating and embedding climate risk appetite, governance and culture
7. discuss the opportunities for the financial services sector in supporting the transition to a sustainable, low-carbon world.

## DELIVERY METHODOLOGY:

The learning approach includes:

- reading and self-study
- learning activities
- case studies
- eLearning
- knowledge checks
- personal reflection and application of principles.

## LEARNING RESOURCES:

- an online study guide – for core reading and learning activities
- interactive eLearning modules, including audio and visual resources, and online quizzes and knowledge checks to enhance understanding of key concepts.

## ASSESSMENT:

*Climate Risk* is assessed by one online examination, consisting of 75 multiple choice questions and lasting 1.5 hours.

## Module Version 1

Learning outcomes	Assessment criteria	Indicative content
<p><b>The learner will be able to:</b></p>	<p><b>The learner can:</b></p>	
<p><b>LO1:</b> Describe climate change and its impacts on the environment, economy, society and the financial services sector.</p>	<p><b>1.1</b> Describe the key factors that underpin the science of climate change and global warming.</p> <p><b>1.2</b> Outline current IPCC (Intergovernmental Panel on Climate Change) models and climate change scenarios.</p> <p><b>1.3</b> Describe the impacts of climate change on the environment and society.</p> <p><b>1.4</b> Describe the emergence of climate change, global warming and climate risk as global political, economic and societal priorities.</p> <p><b>1.5</b> Describe the current and future impacts of climate change on economies and the financial services sector.</p> <p><b>1.6</b> Describe the impacts of the financial services sector on climate change.</p> <p><b>1.7</b> Discuss climate change mitigation and adaptation, and their impacts on economies and the financial services sector.</p>	<ul style="list-style-type: none"> <li>• The climate system</li> <li>• The science of climate change and global warming</li> <li>• The Greenhouse Effect</li> <li>• The Intergovernmental Panel on Climate Change (IPCC) –models and scenarios</li> <li>• The United Nations Framework Convention on Climate Change (UNFCCC) – Kyoto Protocol and Paris Agreement</li> <li>• Climate change impacts and responses</li> <li>• Climate change adaptation and mitigation</li> <li>• Climate change and climate risk as political, economic, and societal priorities</li> <li>• The impacts of climate change on economies and financial services</li> <li>• Future economic impacts of climate change – the net-zero transition</li> <li>• Ensuring alignment with net zero.</li> </ul>

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<p><b>The learner will be able to:</b></p>	<p><b>The learner can:</b></p>	
<p><b>LO2:</b> Identify, describe and classify climate-related financial and non-financial risks, and the impacts of these on the economy, society and the financial services sector.</p>	<p><b>2.1</b> Explain the cross-cutting nature and importance of climate risks.</p> <p><b>2.2</b> Describe how physical, transition and liability risks may impact financial institutions, and financial services overall, and explore their wider impacts on individuals, businesses, and communities.</p> <p><b>2.3</b> Describe the impact of climate and environmental factors on credit, operational, market, underwriting, reputational and other risks faced by financial institutions.</p> <p><b>2.4</b> Explain what is meant by stranded asset risks, their impacts on financial institutions and implications for financial stability.</p> <p><b>2.5</b> Explore wider environmental and emerging sustainability risks and their impacts on the environment, economy, society and the financial services sector.</p>	<ul style="list-style-type: none"> <li>• An introduction to climate risks</li> <li>• Physical and transition risks</li> <li>• Liability risks</li> <li>• Stranded asset risk</li> <li>• Climate risks as cross-cutting risks</li> <li>• Climate risks impact on financial and non-financial risks faced by financial institutions</li> <li>• Greenwashing</li> <li>• Climate risk impacts on governments, financial and non-financial firms, individual households, and consumers</li> <li>• Wider environmental risks to the financial services sector.</li> </ul>

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<p><b>The learner will be able to:</b></p>	<p><b>The learner can:</b></p>	
<p><b>LO3:</b> Examine the challenges in measuring, monitoring and reporting climate risks, and the availability and quality of data.</p>	<p><b>3.1</b> Describe the role of the EU Taxonomy in climate risk measurement and disclosure.</p> <p><b>3.2</b> Describe the Task Force on Climate-related Financial Disclosures' (TCFD's) approach to identifying and disclosing climate risks and how it can be used by organisations, including financial institutions.</p> <p><b>3.3</b> Outline the challenges in assessing the materiality and pricing of climate risks.</p> <p><b>3.4</b> Consider how short- and long-term perspectives impact the measurement and reporting of climate risks.</p> <p><b>3.5</b> Describe the challenges of measuring and monitoring climate risk through portfolios and supply chains.</p> <p><b>3.6</b> Explore the availability, management and quality of data for measuring and monitoring climate risk exposures, and consider how to address gaps in data.</p> <p><b>3.7</b> Compare approaches to carbon accounting and sustainability reporting and how the comparability and standardisation of these can be enhanced.</p> <p><b>3.8</b> Compare and contrast the use of qualitative versus quantitative information in reporting climate risks, and how these can be used to complement each other.</p>	<ul style="list-style-type: none"> <li>• The EU Taxonomy for sustainable activities</li> <li>• The Taskforce on Climate-related Financial Disclosures (TCFD)</li> <li>• Principles for effective disclosures</li> <li>• Materiality of climate risks</li> <li>• Approaches to monitoring and measuring climate risk</li> <li>• Identifying exposures</li> <li>• The challenges of measuring, monitoring and disclosing climate risk</li> <li>• Climate risk – the knowns and unknowns</li> <li>• Data management and quality</li> <li>• Expanding the range of data sets</li> <li>• Delivering quality disclosures</li> <li>• Carbon accounting and sustainability reporting</li> <li>• Qualitative and quantitative risk assessment.</li> </ul>

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<p><b>The learner will be able to:</b></p>	<p><b>The learner can:</b></p>	
<p><b>LO4:</b> Outline common approaches to modelling climate risks, including the use of scenario analysis.</p>	<p><b>4.1</b> Explain the use of scenario analysis to support risk management and business decision-making.</p> <p><b>4.2</b> Describe approaches to the modelling of climate change and its impacts.</p> <p><b>4.3</b> Explore how financial models can be developed to understand the potential impacts of climate change on financial institutions, including banks, insurers and fund managers.</p> <p><b>4.4</b> Explore the TCFD approach to modelling climate risks, and the use of scenario analysis.</p> <p><b>4.5</b> Review physical and transition transmission channels, how these may impact risk profiles, and financial institutions overall.</p> <p><b>4.6</b> Describe common scenario and impact assessment tools, and how these may be interpreted and applied.</p> <p><b>4.7</b> Explain limitations of modelling and scenario analysis.</p>	<ul style="list-style-type: none"> <li>• An Introduction scenario analysis</li> <li>• Shock risks and trend risks</li> <li>• Trend risk scenarios – the Intergovernmental Panel on Climate Change (IPCC) and the Network for Greening the Financial System (NGFS)</li> <li>• Stress testing scenarios</li> <li>• Financial modelling of climate risk</li> <li>• Modelling framework – Physical risk</li> <li>• Managing climate risk through modelling</li> <li>• Using scenario analysis in Taskforce on Climate-related Financial Disclosures (TCFD) reports</li> <li>• The Science-Based Targets initiative (SBTi)</li> <li>• The Paris Agreement Capital Transition Assessment (PACTA) toolkit.</li> </ul>

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<p><b>The learner will be able to:</b></p>	<p><b>The learner can:</b></p>	
<p><b>LO5:</b> Examine regulatory approaches and responses to climate risk at global, regional and national levels, and their impacts on the financial services sector.</p>	<p><b>5.1</b> Describe key global, regional, national and finance sector bodies involved in climate risk.</p> <p><b>5.2</b> Explain the emergence of climate risk as a priority for central banks and financial regulators.</p> <p><b>5.3</b> Review legal and regulatory frameworks and expectations for climate risk disclosure.</p> <p><b>5.4</b> Compare regulatory approaches to climate risk in different jurisdictions.</p> <p><b>5.5</b> Examine the potential impact of carbon pricing and carbon taxes on the financial services sector.</p> <p><b>5.6</b> Describe emerging issues and trends in regulatory approaches to climate risk.</p>	<ul style="list-style-type: none"> <li>• Climate risk as a priority for central banks and regulators</li> <li>• Responses to climate risk from central banks and financial regulators</li> <li>• Global reviews of regulatory approaches to climate risk</li> <li>• NGFS work programme</li> <li>• The role of central banks and regulators in responding to climate change</li> <li>• How central banks and regulators can best address climate risks and facilitate the net-zero transition</li> <li>• Climate risk disclosures</li> <li>• Global regulatory approaches to climate risk</li> <li>• The Climate Financial Risk Forum (CFRF)</li> <li>• Stress testing</li> <li>• The potential impact of carbon pricing.</li> </ul>

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<p><b>The learner will be able to:</b></p>	<p><b>The learner can:</b></p>	
<p><b>LO6:</b> Explore approaches to defining, developing, articulating and embedding climate risk appetite, governance and culture.</p>	<p><b>6.1</b> Describe approaches to the strategy, governance and management of climate risk, and sustainability more generally, in financial institutions.</p> <p><b>6.2</b> Explore approaches to developing and defining institutions' risk appetite for climate risk.</p> <p><b>6.3</b> Consider appropriate controls for the management of climate risk.</p> <p><b>6.4</b> Explain how accountability and responsibility for climate risk management applies across all three lines of defense.</p> <p><b>6.5</b> Examine how a culture of effective climate risk management may be developed and embedded within organisations.</p> <p><b>6.6</b> Consider the importance of climate risk-related training and education.</p>	<ul style="list-style-type: none"> <li>• Integrating climate risk into decision making</li> <li>• Governance framework in the context of risk management and how this should be extended to accurately capture climate risk</li> <li>• The importance of defining risk appetite and how this links to an institution's governance framework</li> <li>• Key challenges to effective climate governance</li> <li>• Incorporating current best practices</li> <li>• The ICAAP framework</li> <li>• Defining appropriate operational controls</li> <li>• The role of the three lines of defence (3LOD)</li> <li>• Embedding and enhancing risk reporting capabilities</li> <li>• Developing and sustaining cultures that enhance climate risk awareness</li> <li>• Training and education (both internal and external) from board to department level.</li> </ul>



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<p><b>The learner will be able to:</b></p>	<p><b>The learner can:</b></p>	
<p><b>LO7:</b> Discuss the opportunities for the financial services sector in supporting the transition to a sustainable, low-carbon world.</p>	<p><b>7.1</b> Explore the opportunities for the financial services sector from the transition to a sustainable, low-carbon world.</p> <p><b>7.2</b> Compare the effects of a transition to a low-carbon world on different economic and business sectors.</p> <p><b>7.3</b> Explore the commercial and risk mitigation opportunities for the financial services sector from the transition to a sustainable, low-carbon world.</p> <p><b>7.4</b> Describe key global, industry-led initiatives to mainstream green and sustainable finance.</p> <p><b>7.5</b> Explain the challenges of mainstreaming sustainable finance, and how these may be overcome.</p> <p><b>7.6</b> Consider how the financial sector can play a leading role in the broader transition to a sustainable, low-carbon world.</p> <p><b>7.7</b> Consider the role individual financial services professionals can play in promoting and embedding sustainable finance.</p>	<ul style="list-style-type: none"> <li>• Green and sustainable finance</li> <li>• Supporting the transition - the role of corporations and consumers</li> <li>• The growing opportunity for green and transition finance</li> <li>• COP26 Private Finance Strategy – achieving net zero</li> <li>• Supporting the transition – the role of corporations and consumer</li> <li>• The role of banking, investment, and insurance</li> <li>• Growing green and sustainable finance globally</li> <li>• Growth of green, sustainability and transition bond/green loan markets</li> <li>• Challenges to sustainable investing</li> <li>• The role of a finance and risk professional</li> <li>• Green and sustainable finance principles and values – ethical and moral responsibilities.</li> </ul>

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