CERTIFICATE IN CLIMATE AND INVESTING

V.2 TESTED FROM 1 April 2023 to 30 June 2024

UNIT AIMS

By the end of this unit, learners should be able to demonstrate:

- An understanding of climate change as it relates to investing and climate considerations of asset owners,

- An understanding of climate science and the systemic impact of climate risks on the financial system, climate-related opportunities, the social factors arising from climate change, and societal efforts to address it.

- An understanding of the evolving climate-related policy response, regulation and the reporting landscape for companies and investors.

- An understanding of climate change mitigation and adaptation and resilience.

- An understanding of climate risk measurement through metrics, targets and scenario analysis, including temperature tools and stress testing.

- An understanding of stewardship and engagement on climate topics.

- An understanding of key approaches to managing listed equities and bonds in relation to climate, integrating climate considerations into investment strategy, risk and opportunity assessment, decision-making and valuation.

- An understanding of insurance products related to climate change and risk sharing.

- An understanding of the key approaches to managing private equity and private debt investment in relation to climate, integrating climate considerations into investment strategy, risk and opportunity assessment, decision-making and valuation.

- An understanding of carbon pricing and carbon markets.

- An understanding of the key approaches to managing real estate and infrastructure (real assets) investment in relation to climate, integrating climate considerations into investment strategy, risk and opportunity assessment, decision-making and valuation.

- An understanding of key approaches for integrating climate change into investment mandates, portfolio construction and management, including the role of green and climate indices and an ability to analyse climate related risks and opportunities.

Question allocation across the syllabus is balanced on the guidance of psychometric and industry specialists. The following question allocation for Version 2 of the Certificate in Climate and Investing is provided as a broad indication of the relative 'weighting' of different parts of the syllabus in examinations from 1 April 2023.

Topic	Topic Name	Question Allocation
1	Introduction to Climate and Investing	2-4
2	Climate Science and Climate Risks, Impacts and Opportunities	5-9
3	Policy Response, Regulation and the Reporting Landscape	8-11
4	Climate Change Mitigation and Adaptation	4-7
5	Climate Risk Measurement: Data, Metrics, Targets and Scenario Analysis	8-12
6	Stewardship and Engagement on Climate	3-6
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8	Private Equity and Debt. Carbon Markets	10-14
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OTHER INFORMATION REGARDING THIS UNIT:

Exam format:	100 questions Online testing using standard multiple choice, drag and drop, gap-fill and item set questions
Time allowed for exam:	2 hours and 20 minutes
Grades:	Pass or Fail
Study Materials:	Official Training Manual Edition 2
Recommended study hours:	140 hours

TOPIC 1 INTRODUCTION TO CLIMATE AND INVESTING

1.1 INTRODUCTION TO CLIMATE AND INVESTING

1.1.1 Define what is meant by climate change

1.1.2 Explain the concepts of:

- climate change mitigation
- greenhouse gas emission scopes, carbon neutrality and net zero
- climate change adaptation and resilience

1.1.3 Identify the asset classes and investment instruments that can be impacted by climate considerations

1.1.4 Explain how climate considerations can impact investment strategy and how investments can impact climate change, including the relevance of time horizons and the use of various investment approaches

1.2 CLIMATE CONSIDERATIONS OF ASSET OWNERS

1.2.1 Explain why there are various climate considerations for different types of asset owners given their different investment drivers and aims

1.2.2 Explain the role of investment advisers (including independent financial advisers and similar) with respect to incorporating climate considerations into investment decisions and product suitability assessment

TOPIC 2 CLIMATE SCIENCE AND CLIMATE RISKS, IMPACTS AND OPPORTUNITIES

2.1 CLIMATE SCIENCE

2.1.1 Explain the science of climate change:

- the greenhouse effect, greenhouse gases, emissions and atmospheric concentrations
- carbon sinks – e.g. land, ocean and biosphere
- carbon budgets
- global impacts, including planetary boundaries

2.1.2 Assess the impacts of climate change and their feedback loops:

- global warming
- melting ice caps and sea level rises
- extreme weather events and natural hazards

2.1.3 Explain the challenges of accounting for climate change related impacts:

- challenges in climate change modelling
- attributing impacts to climate change
- feedback processes and tipping points
- human choices

2.2 CLIMATE CHANGE RISKS, IMPACTS AND OPPORTUNITIES

2.2.1 Explain the potential systemic impact of climate risks on the financial system:

- macroeconomic impact
- financial system risk
- universal ownership

2.2.2 Explain the financial risks and impacts of climate change:

- physical risks (acute / chronic)
- transition risks (policy / legal / technology / markets / reputation)

2.2.3 Assess supply, operational and resource management issues as they relate to climate change, including:

- natural capital and resource scarcity,
- biodiversity and natural habitat loss
- supply chain vulnerability, transparency and traceability
- stakeholder relationships

2.2.4 Explain the financial manifestation of climate change:

- major financial categories: revenues; expenditure; assets and liabilities; capital and financing
- stranded assets
- financial risks at the corporate level
- financial risks at the public level
- investment materiality: asset, project and business activity assessment

2.2.5 Explain the following climate-related opportunities:

- energy sources
- resource efficiency
- circular economy
- products and services
- markets and diversification
- adaptation and resilience

2.2.6 Assess the social factors arising from climate change, including:

- health and labour productivity
- food security
- security and migration
- cities and urbanisation
- disaster preparedness and resilience
- 'just' transition

TOPIC 3 POLICY RESPONSE, REGULATION AND THE REPORTING LANDSCAPE

3.1 POLICY RESPONSE AND REGULATION

3.1.1 Explain the key elements of, and stakeholders in, international climate agreements and conventions:

- the emergence of climate in international policy discourse: the role of the UN Framework Convention on Climate Change (UNFCCC) and the Kyoto Protocol
- COP21 and the Paris Agreement
- the role of the UN Intergovernmental Panel on Climate Change (IPCC)

3.1.2 Explain the key drivers and stakeholders in regional and national climate policies:

- nationally determined contributions (NDCs) and progress to date
- regional (e.g. EU) and national policy response (e.g. UK, USA, China)
- addressing climate vulnerabilities through adaptation

3.1.3 Assess the strengths and limitations of climate change mitigation policy response, including:

- carbon pricing
- subsidies and green finance tax incentives
- research and development programmes
- regulation, standards and awareness campaigns
- public private partnerships and blended finance
- integrating multiple policies

3.1.4 Assess the role of green and sustainable finance taxonomies in driving climate action and implementing policy, including:

- evolution and key components of taxonomies
- key taxonomies: Climate Bonds Taxonomy, the EU Sustainable Finance Taxonomy, China's Green Bond Catalogue
- the key challenge – interoperability

3.1.5 Explain the role and aims of key international initiatives related to climate change:

- investment-related initiatives
- central banks and financial regulators
- intergovernmental / multilateral institutions

3.2 THE CORPORATE REPORTING LANDSCAPE

3.2.1 Explain key elements of corporate reporting and financial disclosures for companies and issuers, including:

- the relationship between financial and sustainability reporting
- voluntary frameworks and mandatory reporting
- range of reporting channels

3.2.2 Assess the concept of materiality as it relates to climate-related risk management, disclosures and financial reporting, including:

- financial and non-financial materiality
- dual / double and dynamic materiality

3.2.3 Assess the key frameworks and standards that are driving climate-related corporate disclosure, and how they interact with one another and with financial reporting, including

- Climate disclosure frameworks
- Sustainability disclosure frameworks and standards

3.2.4 Assess the key regulations that are driving climate-related and sustainability corporate disclosure, covering the EU, UK, USA and China.

3.2.5 Explain the role of other key stakeholders in the reporting landscape including:

- financial institutions
- stock exchanges
- indices
- rating agencies
- groups and non-governmental organisations
- supranational stakeholders

3.3 INVESTOR DISCLOSURE

3.3.1 Explain key drivers and elements of investor climate-related disclosures, including:

- investor climate reporting
- product disclosures and labels
- stewardship reporting

- voluntary and industry reporting initiatives

3.3.2 Explain greenhouse gas emissions accounting for asset owners and asset managers

TOPIC 4 CLIMATE CHANGE MITIGATION AND ADAPTATION

4.1 CLIMATE CHANGE MITIGATION

4.1.1 Describe mitigation costs at a global level:

- range and cost of mitigation (abatement curve)
- fitting mitigation options into comprehensive transition scenarios

4.1.2 Assess the range of climate change mitigation analysis and solutions by sector and cross-sectoral themes, including:

- energy sector
- industry with a focus on high-emissions sectors such as steel, cement and chemicals
- transport
- property and buildings
- forestry, agriculture and food production
- cross-sectoral themes, such as energy efficiency, waste management, equipment and IT, carbon capture and storage

4.2 CLIMATE CHANGE ADAPTATION AND RESILIENCE

4.2.1 Explain the context for climate change adaptation

4.2.2 Assess the range of adaptation and resilience solutions, including:

- protecting coastlines and infrastructure; adapting to sea level rise
- managing agriculture and land use practices to improve carbon sequestration
- planning for scarce water resources
- resilient built environments and protecting public infrastructure from extreme weather events

4.2.3 Assess approaches to the design, operations and monitoring of solutions for climate change adaptation and resilience:

- physical climate risk exposure assessment
- impact definition, targets and assessment, including resilience assessment at asset and national level, cost benefit analysis of resilience options, and trade-off analysis
- the role of insurance

4.2.4 Assess the strengths and limitations of climate change adaptation and resilience policy

response, including:

- multilateral development finance institutions
- adaptation and resilience frameworks and disclosure

TOPIC 5 CLIMATE RISK MEASUREMENT: DATA, METRICS, TARGETS AND SCENARIO ANALYSIS

5.1 DATA, METRICS AND TARGETS

5.1.1 Explain the strengths, limitations and challenges of climate data, including the use of forward looking data and benchmarking, data gaps, and company reported data versus third-party data and assessment

5.1.2 Assess greenhouse gas emissions (scopes 1, 2 and 3)

- organisational boundary for reporting emissions
- operational boundary for reporting emissions
- strengths, limitations and challenges of emissions data

5.1.3 Calculate total emissions, carbon intensity and weighted average carbon intensity

5.1.4 Assess metrics for carbon intensive assets and low-carbon technologies:

- metrics for carbon intensive assets: fossil fuel exposure, emissions, carbon intensity, carbon momentum
- metrics for low-carbon technologies: revenue-based metrics, saved emissions, avoided emissions

5.1.5 Assess the scope and limitations of carbon footprinting versus decarbonisation trajectories and temperature alignment

5.1.6 Explain key metrics and indicators related to:

- energy usage
- waste management
- weather and natural hazards
- water usage and risks
- air pollution
- carbon sinks and sequestration

5.1.7 Explain the range of targets set due to regulatory requirements and / or market constraints:

- target setting and science-based targets
- target setting and reporting for asset owners and asset managers, including Science

Based Targets Initiative (SBTi) and Net-Zero Asset Owner Alliance (NZAOA)
- greenhouse gas emissions targets and net zero

5.2 ANALYTICAL TOOLS AND SCENARIO ANALYSIS

5.2.1 Explain the distinctions between climate models, integrated assessment models (IAMs), and climate scenario pathways

5.2.2 Compare key climate-economy scenario models and commonly used analytical scenarios:

- Integrated assessment models (IAMs)
- Representative Concentration Pathways (RCPs) and Shared Socioeconomic Pathways (SSPs) use in IAMs
- Commonly used scenarios, covering scenarios produced by the International Energy Agency (IEA), International Renewable Energy Agency (IRENA) and Principles for Responsible Investment (PRI) Inevitable Policy Response

5.2.3 Identify the limitations and pitfalls of scenario analysis and the drivers behind the choice of model(s) and scenarios.

5.2.4 Assess relevant assessment tools and models, distinguishing between:

- transition risk and decarbonisation pathways
- physical risk to assets

5.2.5 Evaluate climate value-at-risk and carbon value-at-risk, including stress testing for given carbon prices at asset level and portfolio level

5.2.6 Assess stress testing, including a focus on scenarios for financial system analysis, e.g. Network for Greening the Financial System

5.2.7 Evaluate scenario temperature tools, including portfolio warming potential, implied temperature rise, temperature rating and temperature alignment

TOPIC 6 STEWARDSHIP AND ENGAGEMENT ON CLIMATE

6.1 CORPORATE STEWARDSHIP AND ENGAGEMENT ON CLIMATE

6.1.1 Explain the purpose and regulation of stewardship and engagement:

- fiduciary duty
- stewardship codes, e.g. UK, EU, the USA, Japan, Brazil and India
- industry practices

6.1.2 Explain the following key concepts in the context of climate change:

- challenges to engagement including inertia, policy and behavioural economics
- evolution and distinction between corporate social responsibility (CSR) and stewardship
- corporate governance of climate risks and opportunities
- incorporating climate change in corporate strategy
- climate governance engagements

6.1.3 Apply appropriate methods to establish an engagement approach and set engagement topics:

- using climate disclosures to inform engagement strategy
- using taxonomies to inform engagement strategy
- addressing climate lobbying
- establishing an engagement approach: goal setting and tactics
- escalation techniques
- divestment versus engagement
- voting
- conflicts of interest for the stewardship role

6.2 SYSTEM ENGAGEMENT ON CLIMATE

6.2.1 Explain how climate change can be incorporated into investor engagement strategy and planning:

- investment firm corporate responsibility
- challenges to climate engagement and action

6.2.2 Explain key corporate focused investor initiatives for engagement

6.2.3 Describe the drivers and scope of engagement with governments, regulators and policymakers

TOPIC 7 LISTED EQUITIES AND BONDS. INSURANCE PRODUCTS

7.1 EQUITIES

7.1.1 Assess the strengths and limitations of key approaches to managing equities in relation to climate

7.1.2 Explain key approaches to integrating climate considerations into business strategy:

- decarbonisation
- tracking the level of transition to low-carbon business activities (e.g. green revenues)
- pure-play companies
- financial institutions

7.1.3 Apply key tools and metrics to equities

7.1.4 Explain how corporate reporting and financial disclosures for companies and issuers support equity analysis

7.1.5 Analyse how climate considerations may affect valuation for equities

7.2 FIXED INCOME

7.2.1 Assess the strengths and limitations of key approaches to managing fixed income and structured finance in relation to climate:

- decarbonisation approach
- climate solutions approach

7.2.2 Explain the growth and appeal of sustainable and labelled debt, including:

- unlabelled bonds (climate aligned bonds)
- use of proceeds bonds funding climate solutions
- sustainability-linked bonds
- transition bonds
- funding mitigation solutions versus adaptation and resilience solutions

7.2.3 Explain key elements of sustainable debt analysis and reporting, including:

- guidance and standards
- post-issuance allocation and impact reporting
- external review and verification

7.2.4 Apply key metrics to fixed income and securitisations

7.2.5 Apply key analytical tools to fixed income and securitisations

7.2.6 Analyse how climate considerations may affect valuation of fixed income and securitisations

7.2.7 Analyse how climate considerations may affect the credit risk rating of fixed income and structured finance securities, including the difference between ESG / climate-related assessments and ESG / climate integration in credit risk ratings

7.3 INSURANCE PRODUCTS

7.3.1 Explain the evolution and history of the insurance-linked securities (ILS) industry and the catastrophe bond market

7.3.2 Assess risk transfer mechanisms between reinsurance industry and capital markets through various products such as catastrophe bond, collateralised Re, industry loss

warranty (ILW) and quota share

7.3.3 Explain factors influencing valuation of risk transfer over the short, medium and long term and how climate risk may be reflected

TOPIC 8 PRIVATE EQUITY AND DEBT. CARBON MARKETS

8.1 PRIVATE EQUITY AND VENTURE CAPITAL

8.1.1 Assess the strengths and limitations of key approaches to managing private equity / unlisted equities and venture capital in relation to climate change

8.1.2 Apply key climate-related tools and metrics to lifecycle investment management of private equity / unlisted equities and venture capital, including integration in:

- deal sourcing and new investments
- post investment monitoring and engagement
- exit

8.1.3 Explain key elements of corporate reporting and financial disclosures for companies and issuers as they relate to private equity / unlisted equities and venture capital

- reporting frameworks and regulations
- data quality, benchmarking and estimation

8.1.4 Analyse how climate considerations may affect valuation for private equity / unlisted equities and venture capital

8.2 PRIVATE DEBT AND LENDING

8.2.1 Assess the strengths and limitations of key approaches to managing private debt: engagement, divestment / disinvestment, and exclusions

8.2.2 Explain the growth and appeal of labelled private placements and loans, including:

- use of proceeds private placements and loans (green, sustainability)
- transition instruments such as sustainability-linked loans (SLL)

8.2.3 Apply key tools and metrics to private debt such as analysing reported emissions and use of estimator tools

8.2.4 Explain key elements of reporting as they relate to private debt, including:

- disclosure frameworks
- reporting for green loans and SLL, including use of taxonomies, LMA / APLMA / LSTA Green Loan Principles, SLL principles and standards

8.2.5 Analyse the relevance of climate-related risks and opportunities to credit risk analysis and how climate considerations may affect valuation for private debt

8.3 CARBON PRICING AND CARBON MARKETS

8.3.1 Explain the concept of carbon pricing and key carbon pricing instruments:

- emissions trading systems
- carbon tax
- social cost of carbon
- internal carbon pricing (shadow price)

8.3.2 Calculate an internal carbon price

8.3.3 Assess the benefits and challenges of the regulated ETS market and its implications for corporates

8.3.4 Assess the benefits and challenges of voluntary carbon markets, including:

- supply and demand for offsets
- challenges of the offset market: quantification, permanence, additionality, transparency and market integrity
- issuance of offsets and trading
- key trends and the role of the Paris Agreement, Article 6

8.3.5 Describe carbon investment products, including range of products and their regulation, including carbon allowance based investment products and offset investment products

8.4 OTHER PRIVATE MARKET INSTRUMENTS

8.4.1 Assess the key approaches to integrating climate considerations in other private market instruments, including:

- derivatives including commodity derivatives
- retail products (e.g. savings products) and funding platforms

TOPIC 9 REAL ASSETS

9.1 INVESTMENT IN REAL ESTATE

9.1.1 Assess the strengths and limitations of key approaches to managing investment in real estate

9.1.2 Apply key tools and metrics to investment in real estate and real estate financing:

- measuring carbon emissions

- transition risk assessment and decarbonisation trajectories
- physical risk assessment

9.1.3 Explain key elements of disclosures as they relate to investment in real estate equity and / or debt, including:

- building certification
- benchmarking – GRESB Real Estate
- disclosure frameworks (e.g. EU Taxonomy, Sustainable Finance Disclosure Regulation (SFDR), green and sustainability bond reporting)

9.1.4 Analyse how climate considerations may affect valuation for investment in real estate

9.1.5 Explain key elements of climate-related disclosures and analysis, including valuation considerations, as they relate to investment in listed real estate securities, including REITs and property companies

9.2 INVESTMENT IN INFRASTRUCTURE

9.2.1 Explain the key features of green and resilient infrastructure, including the distinction from climate mitigation and adaptation of existing infrastructure

9.2.2 Assess the strengths and limitations of key approaches to managing investment in infrastructure

- natural capital, biodiversity and nature-based solutions
- financing public infrastructure, including the US municipal bond market and public-private partnerships

9.2.3 Apply key tools and metrics to investment in infrastructure and infrastructure financing

- measuring carbon emissions
- transition risk assessment
- physical risk assessment

9.2.4 Explain key elements of disclosures as they relate to investment in infrastructure equity and / or debt, including:

- benchmarking – GRESB Infrastructure
- disclosure frameworks (e.g. EU Taxonomy, SFDR)
- use of green taxonomies in financing infrastructure and KPI reporting under sustainability-linked debt

9.2.5 Analyse how climate considerations may affect valuation for investment in infrastructure assets

9.2.6 Explain key elements of climate-related disclosures and analysis, including valuation considerations, as they relate to investment in listed infrastructure securities such as

REITs and YieldCos

TOPIC 10 PORTFOLIO MANAGEMENT

10.1 PORTFOLIO STRATEGY

10.1.1 Explain the challenge of designing investment products versus direct financing of real economy climate solutions

10.1.2 Explain how climate considerations can impact investment mandates, including:

- investment strategy and aims
- integrating climate considerations in client guidelines, requests for proposal (RFPs) and setting mandates

10.1.3 Evaluate approaches for integrating climate change factors into portfolio construction and management:

- overview of investment frameworks
- strategic asset allocation decisions
- portfolio exposure
- risk management

10.1.4 Evaluate the range of investment strategies that can be used to incorporate climate-related factors into portfolio construction:

- exclusion
- climate improvers
- best-in-class
- tilting portfolio exposure
- thematic
- impact investing
- active ownership
- active versus passive

10.2 THE ROLE OF GREEN AND CLIMATE INDICES

10.2.1 Explain the EU benchmarking regulations by reference to the Paris Agreement and climate change:

- EU ESG disclosure requirements for benchmarks
- the EU climate benchmarks

10.2.2 Explain the growth of green indices and climate-related index products, including the evolution of climate-related exclusion / inclusion rules for ESG indices

10.2.3 Evaluate opportunities presented by climate and sustainability indices and index

exchange-traded funds (ETFs):

- climate index construction
- climate index approaches
- equity indices
- fixed income indices
- sovereign debt indices
- property indices

10.3 PORTFOLIO CLIMATE-RELATED ANALYSIS

10.3.1 Assess climate-related portfolio management considerations at asset class, sector and market (emerging versus developed) level, including:

- decarbonisation pathway alignment
- choice of index and tracking error
- challenges and impact of including Scope 3 investee company emissions
- multi-asset portfolio calculations, including approaches to incorporating listed and unlisted instruments, sovereign debt, and real assets exposures

10.3.2 Assess a portfolio's exposure to carbon-intensive assets or exposure to low carbon technologies (backward looking climate-related analysis)

- exposure to carbon intensive assets
- exposure to low-carbon technologies and calculating EU Taxonomy alignment at portfolio level

10.3.3 Apply portfolio modelling and management techniques single- and multi-asset portfolios, using forward looking indicators and climate analysis.