CFA UK LEVEL 4 CERTIFICATE IN ESG INVESTING

SPECIMEN PAPER

Version 2: Tested from 1 October 2020

Key Information	
Number of questions	100
Time allowed	2 hours 20 minutes
Target pass mark	The pass mark of the exam is between 60% and 70% We therefore recommend that candidates should aim to achieve 75% - 80% when using this specimen paper.
Types of questions used	Standard multiple choice – candidates select 1 option of 4. Short item set – Candidates are given a short scenario with 4 questions associated with it. The material in the case study does not change with the questions Long item set – Candidates are given a long scenario with 5 questions associated with it. The material in the case study does not change with the questions.
Note to candidates	The specimen exam paper should **NOT** be viewed as a primary source of learning. By its nature, a specimen exam paper will only cover proportion of the learning outcomes. Candidates are strongly advised to develop a fundamental understanding of the curriculum in order to demonstrate the competence required to pass the examination.

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 ESG Investing is provided as a broad indication of the relative 'weighting' of different parts of the syllabus in examinations from 1 October 2020.

Topic	Topic Name	Question Allocation
1	Introduction to ESG	4-8
2	The ESG Market	4-8
3	Environmental Factors	6-12
4	Social Factors	6-12
5	Governance Factors	6-12
6	Engagement and Stewardship	6-10
7	ESG Analysis, Valuation & Integration	20-32
8	ESG Integrated Portfolio Construction & Management	8-14
9	Investment Mandates, Portfolio Analytics & Client Reporting	4-8

1. Research shows that companies with long standing good practice in terms of sustainability

☐ A. Outperform their peers in both accounting performance and stock markets returns.

☐ B. Underperform their peers in accounting performance and stock markets returns.

☐ C. Outperform their peers in accounting performance but underperform in stock market returns.

☐ D. Underperform their peers in accounting performance and outperforms in stock markets returns.

2. Justin runs an equity fund for a large insurance company which has signed on to the UN Global Compact Principles and the Principles for Responsible Investment. His investment strategy will need to:

i. avoid companies which do not adhere to Task Force on Climate-related Financial Disclosures guidelines

ii. screen the portfolio on environmental issues

iii. incorporate ESG issues into the investment process

iv. invest in companies which adhere to human rights principles

☐ A. iii.

☐ B. i and ii.

☐ C. ii and iii.

☐ D. iii and iv.

3. Which UK body is responsible for issuing the Stewardship Code?

☐ A. The Financial Conduct Authority (FCA).

☐ B. The Financial Policy Committee (FPC).

☐ C. The Financial Ombudsman Service (FOS).

☐ D. The Financial Reporting Council (FRC).

4. A Sovereign Wealth Fund selecting an investment manager with an ESG strategy is likely to focus more on the manager's approach to:

☐ A. ESG engagement and stewardship.

☐ B. Integrating MSCI data while ESG scoring the portfolio.

☐ C. Liquidity of the portfolio and short-term performance.

☐ D. Quantitative analysis of portfolio attribution vs. the benchmark.

5. Which of these **least** reflects how qualitative ESG data is used in company analysis?

☐ A. By adjusting a valuation.

☐ B. By adding an opinion to an investment thesis.

☐ C. By modifying a financial model.

☐ D. By determining the value at risk for the company.

6. Adjusting the Discounted Cash Flow when integrating ESG into traditional financial analysis is:

☐ A. Not valid at country level.

☐ B. Valid at the level of company, sector or country.

☐ C. Valid only at the level of specific company.

☐ D. Not valid at sector level.

7. Which action would be undertaken first by an investor wanting to follow an engagement strategy with a company in a cost-effective way?

☐ A. Defining the scope of engagement and prioritising engagement activities.

☐ B. Developing a clear process which articulates realistic goals.

☐ C. Adapting the engagement process to the local context.

☐ D. Framing the engagement topic into a broader strategy discussion.

8. Which comment **best** reflects the inclusion of 'bad actor' companies which have poor ESG scores in ESG mutual funds?

☐ A. Bad actors are never included.

☐ B. Bad actors are rarely included.

☐ C. Bad actors are often included.

☐ D. Bad actors will always be included.

9. A private wealth manager uses a data provider to screen out companies involved with tobacco and finds that the process eliminates nearly all consumer companies. As consumer companies are a large percentage of the benchmark index, the manager would prefer not to eliminate the whole sector.

What method would be the **most** precise to reduce the number of companies which are screened out?

☐ A. GICS 15 Screening regarding tobacco.

☐ B. ESG rating agency data regarding the financial materiality of tobacco.

☐ C. Percentage of company revenue related to tobacco as agreed with the client.

☐ D. Standard industry classification for tobacco companies.

10. What is an indirect environmental impact of a paper company cutting trees and transporting them to its production plant?

☐ A. Carbon emissions from the haulage lorries.

☐ B. A natural regulator of carbon dioxide is destroyed,

☐ C. Deforestation.

☐ D. Local species are disturbed.

11. Which approach is **most** likely to result in an analyst aggregating data into an ESG score?

☐ A. Company specific research.

☐ B. Fundamental analysis.

☐ C. Stock picking.

☐ D. Quantitative modelling.

12. What impact will a positive ESG rating have on a company's cost of capital?

☐ A. A lower cost of capital.

☐ B. No change to the cost of capital.

☐ C. A higher cost of capital.

☐ D. A more volatile cost of capital.

13. Which of the following sectors have the greatest risk of increased insurance costs due to physical climate change?

☐ A. Construction and materials.

☐ B. Food and beverage.

☐ C. Media and technology.

☐ D. Travel and leisure.

14. ABC Investment Management owns a 2% stake in a large telecom company, which is in the media due to a surge in employee suicides attributed to pressures in the workplace. Mary, a senior analyst at ABC Investment Management, would like to engage with the company on the issue and sees that a quarterly earnings conference call is coming up.

What should Mary do **before** the quarterly conference call?

☐ A. Arrange a pre-meeting call with the company's investor relations representative.

☐ B. Contact the Investor Forum.

☐ C. Establish clear objectives.

☐ D. Request a meeting with the chairman of the Board.

15. Which of the following is **not** generally expected for companies which score well on ESG metrics relative to companies scoring less well?

☐ A. They are better able to anticipate environmental change risks and opportunities.

☐ B. They enjoy valuation premiums due to changing investor concerns and preferences.

☐ C. They are more disposed to longer term strategic thinking and planning.

☐ D. They are more likely to grow rapidly and offer higher short term returns.

16. What is the result of an analyst failing to correctly model the risks and opportunities associated with ESG?

- ☐ A. Systematic underestimation of high ESG performers and overestimation of ESG under performers.
- ☐ B. Systematic overestimation of both high ESG performers and ESG under performers.
- ☐ C. Systematic underestimation of both high ESG performers and ESG under performers.
- ☐ D. Systematic overestimation of high ESG performers and underestimation of ESG under performers.

17. *Several questions are associated with the following case study. The material given in the case study will not change.*

CBT's Annual General Meeting (AGM) is two months away. Patrick Weeze is a portfolio manager who owns a significant number of stocks of CBT in his portfolio. His fund is a concentrated portfolio with high idiosyncratic risk and, as a result, he believes that a detailed analysis of the governance of each of his stocks is paramount to its long-term performance. He reviews the relevant documentation regarding CBT's AGM and notes the following:

- CBT provides information on the total amount of CEO remuneration, but no detail on the Key Performance Indicators (KPIs) that influence variable compensation. The CEO's total compensation last year was GBP 1.2 million, 30% of which was fixed salary.

- CBT currently has 10 individuals sitting on its board, 3 of whom are independent. The Chairman is the former CEO who stepped down last year.

- One of the resolutions to be voted at the AGM was put forward by a minority shareholder. The investor asks the company to produce a report on how climate change may affect the company's strategy and financial stability in the long-term.

Patrick is discussing CBT's financial model with his financial analyst. He asks the analyst to consider how the model may take into account the KPIs for the CEO's variable remuneration which are not disclosed. He is presented with 4 options.

Which one is he **most** likely to select to implement?

☐ A. Increase the company's estimated costs for next year by an additional GBP 1.2 million to account for the lack of transparency regarding the KPIs.

☐ B. Reduce the company's current total costs by GBP 360,000, as there are no concerns regarding the fixed salary portion of the compensation.

☐ C. Increase the cost of capital from 4.6% to 4.8% to reflect the increased risk stemmed from uncertainty around alignment of interest.

☐ D. Decrease the cost of capital from 4.6% to 4.4% to reflect the reduced level of certainty around alignment of interest.

18. *Several questions are associated with the following case study. The material given in the case study will not change.*

CBT's Annual General Meeting (AGM) is two months away. Patrick Weeze is a portfolio manager who owns a significant number of stocks in CBT in his portfolio. His fund is a concentrated portfolio with high idiosyncratic risk and, as a result, he believes that a detailed analysis of the governance of each of his stocks is paramount to its long-term performance. He reviews the relevant documentation regarding CBT's AGM and notes the following:

- CBT provides information on the total amount of CEO remuneration, but no detail on the Key Performance Indicators (KPIs) that influence variable compensation. The CEO's total compensation last year was GBP 1.2 million, 30% of which was fixed salary.

- CBT currently has 10 individuals sitting on its board, 3 of whom are independent. The Chairman is the former CEO who stepped down last year.

- One of the resolutions to be voted at the AGM was put forward by a minority shareholder. The investor asks the company to produce a report on how climate change may affect the company's strategy and financial stability in the long-term.

Patrick believes that the Chair cannot be considered as an independent member of the board. He schedules an engagement meeting with the Chair to discuss the matter.

What could be the **most** favourable outcome from a governance perspective?

☐ A. The Chair steps down and the CEO assumes the chairmanship, and one of the independent directors becomes the lead independent director.

☐ B. The Chair steps down and remains on the board, and one of the existing independent directors is elected Chair.

☐ C. An additional independent director is added to the board to increase the level of independence.

☐ D. The Chair steps down from the Board and the Chair role, and a newly-elected independent director is appointed Chair.

19. *Several questions are associated with the following case study. The material given in the case study will not change.*

CBT's Annual General Meeting (AGM) is two months away. Patrick Weeze is a portfolio manager who owns a significant number of stocks in CBT in his portfolio. His fund is a concentrated portfolio with high idiosyncratic risk and, as a result, he believes that a detailed analysis of the governance of each of his stocks is paramount to its long-term performance. He reviews the relevant documentation regarding CBT's AGM and notes the following:

- CBT provides information on the total amount of CEO remuneration, but no detail on the Key Performance Indicators (KPIs) that influence variable compensation. The CEO's total compensation last year was GBP 1.2 million, 30% of which was fixed salary.

- CBT currently has 10 individuals sitting on its board, 3 of whom are independent. The Chairman is the former CEO who stepped down last year.

- One of the resolutions to be voted at the AGM was put forward by a minority shareholder. The investor asks the company to produce a report on how climate change may affect the company's strategy and financial stability in the long-term.

When Patrick attempts to set up a call with CBT's Investor Relations to discuss governance matters, they push back suggesting that these have no relevance to the company.

Which argument can Patrick use to best highlight the importance of appropriate governance to enterprises?

- ☐ A. A meta study by Friede, Busch and Bassen has shown that the majority of studies showed a positive correlation between governance and corporate financial performance.
- ☐ B. The CFA Institute's 2017 ESG survey showed that governance has the strongest correlation with company margin growth.
- ☐ C. Enron's case provides evidence that governance is simple and failures usually link to one single factor.
- ☐ D. Bernile, Bhagwat and Yonker's 2017 study concludes that board diversity adds to governance complexity, thus destroying company value.

20. *Several questions are associated with the following case study. The material given in the case study will not change.*

CBT's Annual General Meeting (AGM) is two months away. Patrick Weeze is a portfolio manager who owns a significant number of stocks in CBT in his portfolio. His fund is a concentrated portfolio with high idiosyncratic risk and, as a result, he believes that a detailed analysis of the governance of each of his stocks is paramount to its long-term performance. He reviews the relevant documentation regarding CBT's AGM and notes the following:

- CBT provides information on the total amount of CEO remuneration, but no detail on the Key Performance Indicators (KPIs) that influence variable compensation. The CEO's total compensation last year was GBP 1.2 million, 30% of which was fixed salary.

- CBT currently has 10 individuals sitting at its board, 3 of whom are independent. The Chairman is the former CEO who stepped down last year.

- One of the resolutions to be voted at the AGM was put forward by a minority shareholder. The investor asks the company to produce a report on how climate change may affect the company's strategy and financial stability in the long-term.

What is Patrick **least** likely to take into consideration when making a decision regarding his vote on the shareholder resolution?

☐ A. The extent to which the company and its business model is exposed to climate change risks.

☐ B. Whether, and to what extent, the company already provides information on the topic of climate change risk.

☐ C. The company's response on whether it supports the resolution and why.

☐ D. Whether this resolution falls under the category of governance.

21. What do corporate governance structures in France and the US have in common?

☐ A. Chief Executive and Chairman of the Board are typically one person.

☐ B. National corporate governance codes.

☐ C. Statutory auditors in addition to independent auditors.

☐ D. Two-tier boards.

22. Which of the following is an example of climate change mitigation?

☐ A. Building a flood defence.

☐ B. Developing drought resistant crop.

☐ C. Retrofitting a building.

☐ D. Desalinating water.

23. Sienna reviews a large retailer faced with a sex equality law suit with a potential £4 billion in pay out claims. How should she adjust her financial model?

☐ A. Adjust the employee expense line to reflect £4 billion in pay out over 10 years.

☐ B. Do nothing as the company has a good case and may not have to pay.

☐ C. Lower the discount rate to reflect the risk of pay outs.

☐ D. Raise the cost of capital to reflect the risk of pay outs.

24. Which of these statements **best** describes responsible investing?

☐ A. Targeted investment returns with certain investments being negatively screened.

☐ B. ESG factors taken into account to mitigate risk with a focus on financial return.

☐ C. Investments made in a way that captures returns while achieving an intentional effect.

☐ D. ESG factors taking into account to mitigate risk with a focus on capturing ESG opportunities.

25. Bill is a philanthropist who is approached by four charitable organisations that each claim to have a solution that reduces mortality by 15% in their specific area of focus if they receive $300 million. Bill's aim is to reduce mortality rates as much as possible. Which one of the following charities should he choose?

☐ A. A charity focussing on drought.

☐ B. A charity focussing on malaria.

☐ C. A charity focussing on pollution.

☐ D. A charity focussing on violence.

26. How can climate-related scenario analysis be used as an effective tool in portfolio management?

i. By pricing climate risk.

ii. By assessing the portfolio's alignment with the Paris Agreement temperature target.

iii. By bottom-up analysis of individual companies in the portfolio.

iv. By producing standardised data for performance measurement.

☐ A. i

☐ B. i and ii

☐ C. i, ii and iii

☐ D. i, ii, iii and iv

27. *Several questions are associated with the following case study. The material given in the case study will not change.*

Daniel Stinner was asked by the head of Research at Lopse Ratings to propose a methodology to rate sovereigns. Lopse Ratings is a well regarded rating agency, but it has been falling behind its peers because, whilst it has integrated ESG within corporate issuers, it has not yet integrated ESG within sovereign issuers.

After a few months of research in the industry and within Lopse, Daniel proposed the following to the Head of Research:

E, S and G weights to a final ESG score reflect the extent that the individual factor is a driver from a credit perspective.

Scores range from factors that individually are adequately managed or contributing to the sovereign's financial capacity (5) to those which may impose a significant strain on financial streams (1). They do not make value judgments on whether a sovereign engages in 'good' or 'bad' ESG practices. Instead, they draw out how E, S and G factors are influencing the credit rating decision.

Political risk, rule of law and corruption have been key drivers of rating actions in the past, indicating that governance was already playing a role in the rating model. It should be made explicit that these are governance-related matters, and thus considered as the 'G' within ESG. No other governance issue was deemed material across all types of sovereigns. Data could be gathered from the World Bank's Governance Indicators (WBGI) and Transparency International.

Social factors also have an important influence on sovereign ratings. Certain factors are related to government's accountability, while others impact the longer-term productivity, and thus growth (plus indirectly, taxing capability) of the country. These factors are considered as the 'S' within ESG. Environmental risks, the 'E' within ESG, were identified as more idiosyncratic to each country based on their location and dependency.

The weighted average of the factors within each of the E, S and G pillars provide the score for that pillar, and the weighted average of the pillars provide the final ESG score for the sovereign issuer.

Daniel provided examples of the rating system applied to two different sovereigns, as detailed below.

Pilar	Factor	Country A Score	Country A Trend	Country B Score	Country B Trend
Social	Human Rights & Public Safety	5	→	2	↓
Social	Demographics	2	↓	4	↑
Social	Education & Employment	5	↑	3	↑
Environmental	Emissions & Energy	3	↑	3	→
Environmental	Water	4	→	3	↓
Environmental	Biodiversity	3	→	2	↓
Environmental	Climate Resilience	1	↓	4	→
Governance	Political Stability	4	→	3	↑
Governance	Rule of Law & Corruption	4	↓	2	→

In order to provide his boss with greater context of the ESG rating for each of the countries, Daniel briefly describes a few characteristics of each.

Which of the below are **most** likely part of the description for each company?

	Country A	Country B
1	A developed country which is a relatively small island with an aging population	An emerging economy with increasing labour force and rising deforestation
2	A dictatorship with significant investments in basic needs but not environmental matters	A developed country with poor governance contributing to deteriorating living wage.
3	A developing country with significant expenditure in public service jobs and military	A BRIC country in line with the Paris Agreement but lagging on social matters
4	A tiger economy, undergoing rapid economic growth accompanied by an increase in the standard of living	A parliamentary democracy with decentralized government and inefficient social and environmental policies

- ☐ A. 1
- ☐ B. 2
- ☐ C. 3
- ☐ D. 4

28. *Several questions are associated with the following case study. The material given in the case study will not change.*

Daniel Stinner was asked by the head of Research at Lopse Ratings to propose a methodology to rate sovereigns. Lopse Ratings is a well regarded rating agency, but it has been falling behind its peers because, whilst it has integrated ESG within corporate issuers, it has not yet integrated ESG within sovereign issuers.

After a few months of research in the industry and within Lopse, Daniel proposed the following to the Head of Research:

E, S and G weights assigned to a final ESG score reflect the extent that the individual factor is a driver from a credit perspective.

Scores range from factors that are individually adequately managed or contribute to the sovereign's financial capacity (highest, 5) to those, which may impose a significant strain on financial streams (lowest, 1). They do not make value judgments on whether a sovereign engages in 'good' or 'bad' ESG practices. Instead, they draw out how E, S and G factors are influencing the credit rating decision.

Political risk, rule of law and corruption have been key drivers of rating actions in the past, indicating that governance already played a role in the rating model. It should be made explicit that these are governance-related matters, and thus considered as the 'G' within ESG. No other governance issue was deemed material across all types of sovereigns. Data could be gathered from the World Bank's Governance Indicators (WBGI) and Transparency International.

Social factors also have an important influence on sovereign ratings. Certain factors are related to government's accountability, while others impact the longer-term productivity, and thus growth (plus indirectly, taxing capability) of the country. These factors are considered as the 'S' within ESG. Environmental risks, the 'E' within ESG, were identified as more idiosyncratic to each country based on their location and dependency.

Weighted average of the factors within each of the E, S and G pillars provide the score for that pillar, and the weighted average of the pillars provide the final ESG score for the sovereign issuer.

Daniel provided examples of the rating system applied to two different sovereigns, as detailed below.

Pilar	Factor	Country A Score	Country A Trend	Country B Score	Country B Trend
Social	Human Rights & Public Safety	5	→	2	↓
Social	Demographics	2	↓	4	↑
Social	Education & Employment	5	↑	3	↑
Environmental	Emissions & Energy	3	↑	3	→
Environmental	Water	4	→	3	↓
Environmental	Biodiversity	3	→	2	↓
Environmental	Climate Resilience	1	↓	4	→
Governance	Political Stability	4	→	3	↑
Governance	Rule of Law & Corruption	4	↓	2	→

What might be a reasonable distribution of weight among each of the E, S and G pillars?

- ☐ A. E = 33.3%, S= 33.3%, G= 33.3%
- ☐ B. E = 33.3%, S= 44.4%, G= 22.2%
- ☐ C. E = 40%, S= 40%, G= 20%
- ☐ D. E = 20%, S= 30%, G= 50%

29. *Several questions are associated with the following case study. The material given in the case study will not change.*

Daniel Stinner was asked by the head of Research at Lopse Ratings to propose a methodology to rate sovereigns. Lopse Ratings is a well regarded rating agency, but it has been falling behind its peers because, whilst it has integrated ESG within corporate issuers, it has not yet integrated ESG within sovereign issuers.

After a few months of research in the industry and within Lopse, Daniel proposed the following to the Head of Research:

E, S and G weights to a final ESG score reflect the extent that the individual factor is a driver from a credit perspective. Scores range from factors that individually are adequately managed or contributing to the sovereign's financial capacity (5) to those which may impose a significant strain on financial streams (1). They do not make value judgments on whether a sovereign engages in 'good' or 'bad' ESG practices. Instead, they draw out how E, S and G factors are influencing the credit rating decision.

Political risk, rule of law and corruption have been key drivers of rating actions in the past, indicating that governance was already playing a role in the rating model. It should be made explicit that these are governance-related matters, and thus considered as the 'G' within ESG. No other governance issue was deemed material across all types of sovereigns. Data could be gathered from the World Bank's Governance Indicators (WBGI) and Transparency International.

Social factors also have an important influence on sovereign ratings. Certain factors are related to government's accountability, while others impact the longer-term productivity, and thus growth (plus indirectly, taxing capability) of the country. These factors are considered as the 'S' within ESG. Environmental risks, the 'E' within ESG, were identified as more idiosyncratic to each country based on their location and dependency.

Weighted average of the factors within each of the E, S and G pillars provide the score for that pillar, and the weighted average of the pillars provide the final ESG score for the sovereign issuer.

Daniel provided examples of the rating system applied to two different sovereigns, as detailed below.

Pilar	Factor	Country A Score	Country A Trend	Country B Score	Country B Trend
Social	Human Rights & Public Safety	5	→	2	↓
Social	Demographics	2	↓	4	↑
Social	Education & Employment	5	↑	3	↑
Environmental	Emissions & Energy	3	↑	3	→
Environmental	Water	4	→	3	↓
Environmental	Biodiversity	3	→	2	↓
Environmental	Climate Resilience	1	↓	4	→
Governance	Political Stability	4	→	3	↑
Governance	Rule of Law & Corruption	4	↓	2	→

What might explain a downward trend in Country B's water score?

☐ A. Rising sea levels close to industrial zones.

☐ B. Increased drought in agricultural areas.

☐ C. Reduced access of low-income populations to water and sanitation.

☐ D. Increased river discharge due to longer rainy season.

30. *Several questions are associated with the following case study. The material given in the case study will not change.*

Daniel Stinner was asked by the head of Research at Lopse Ratings to propose a methodology to rate sovereigns. Lopse Ratings is a well regarded rating agency, but it has been falling behind its peers because, whilst it has integrated ESG within corporate issuers, it has not yet integrated ESG within sovereign issuers.

After a few months of research in the industry and within Lopse, Daniel proposed the following to the Head of Research:

E, S and G weights to a final ESG score reflect the extent that the individual factor is a driver from a credit perspective. Scores range from factors that individually are adequately managed or contributing to the sovereign's financial capacity (5) to those which may impose a significant strain on financial streams (1). They do not make value judgments on whether a sovereign engages in 'good' or 'bad' ESG practices. Instead, they draw out how E, S and G factors are influencing the credit rating decision.

Political risk, rule of law and corruption have been key drivers of rating actions in the past, indicating that governance was already playing a role in the rating model. It should be made explicit that these are governance-related matters, and thus considered as the 'G' within ESG. No other governance issue was deemed material across all types of sovereigns. Data could be gathered from the World Bank's Governance Indicators (WBGI) and Transparency International.

Social factors also have an important influence on sovereign ratings. Certain factors are related to government's accountability, while others impact the longer-term productivity, and thus growth (plus indirectly, taxing capability) of the country. These factors are considered as the 'S' within ESG. Environmental risks, the 'E' within ESG, were identified as more idiosyncratic to each country based on their location and dependency.

Weighted average of the factors within each of the E, S and G pillars provide the score for that pillar, and the weighted average of the pillars provide the final ESG score for the sovereign issuer.

Daniel provided examples of the rating system applied to two different sovereigns, as detailed below.

Pilar	Factor	Country A Score	Country A Trend	Country B Score	Country B Trend
Social	Human Rights & Public Safety	5	→	2	↓
Social	Demographics	2	↓	4	↑
Social	Education & Employment	5	↑	3	↑
Environmental	Emissions & Energy	3	↑	3	→
Environmental	Water	4	→	3	↓
Environmental	Biodiversity	3	→	2	↓
Environmental	Climate Resilience	1	↓	4	→
Governance	Political Stability	4	→	3	↑
Governance	Rule of Law & Corruption	4	↓	2	→

How might Country A improve its score for Climate Resilience in the short to medium-term?

- ☐ A. Improve adaptation methods.
- ☐ B. Improve mitigation methods.
- ☐ C. Reduce the number of stranded assets.
- ☐ D. Align itself with the Paris Agreement.

31. *Several questions are associated with the following case study. The material given in the case study will not change.*

Daniel Stinner was asked by the head of Research at Lopse Ratings to propose a methodology to rate sovereigns. Lopse Ratings is a well regarded rating agency, but it has been falling behind its peers because, whilst it has integrated ESG within corporate issuers, it has not yet integrated ESG within sovereign issuers.

After a few months of research in the industry and within Lopse, Daniel proposed the following to the Head of Research:

E, S and G weights to a final ESG score reflect the extent that the individual factor is a driver from a credit perspective. Scores range from factors that individually are adequately managed or contributing to the sovereign's financial capacity (5) to those which may impose a significant strain on financial streams (1). They do not make value judgments on whether a sovereign engages in 'good' or 'bad' ESG practices. Instead, they draw out how E, S and G factors are influencing the credit rating decision.

Political risk, rule of law and corruption have been key drivers of rating actions in the past, indicating that governance was already playing a role in the rating model. It should be made explicit that these are governance-related matters, and thus considered as the 'G' within ESG. No other governance issue was deemed material across all types of sovereigns. Data could be gathered from the World Bank's Governance Indicators (WBGI) and Transparency International.

Social factors also have an important influence on sovereign ratings. Certain factors are related to government's accountability, while others impact the longer-term productivity, and thus growth (plus indirectly, taxing capability) of the country. These factors are considered as the 'S' within ESG. Environmental risks, the 'E' within ESG, were identified as more idiosyncratic to each country based on their location and dependency.

Weighted average of the factors within each of the E, S and G pillars provide the score for that pillar, and the weighted average of the pillars provide the final ESG score for the sovereign issuer.

Daniel provided examples of the rating system applied to two different sovereigns, as detailed below.

Pilar	Factor	Country A Score	Country A Trend	Country B Score	Country B Trend
Social	Human Rights & Public Safety	5	→	2	↓
Social	Demographics	2	↓	4	↑
Social	Education & Employment	5	↑	3	↑
Environmental	Emissions & Energy	3	↑	3	→
Environmental	Water	4	→	3	↓
Environmental	Biodiversity	3	→	2	↓
Environmental	Climate Resilience	1	↓	4	→
Governance	Political Stability	4	→	3	↑
Governance	Rule of Law & Corruption	4	↓	2	→

What might explain the different trends Country A and Country B are experiencing with regards to demographics?

☐ A. In developed markets, such as Country A, the ratio between active and inactive part of the workforce drops.

☐ B. In developed markets, such as Country B, the ratio between active and inactive part of the workforce rises.

☐ C. In developing markets, such as Country B, the ratio between active and inactive part of the workforce drops.

☐ D. In developing markets, such as Country A, the ratio between active and inactive part of the workforce drops.

32. A company which produces bottled water and pledges to use 50% recycled plastics is using:

☐ A. A circular economy approach.

☐ B. A natural capital approach.

☐ C. A supply chain disruption approach.

☐ D. A use, make, dispose economy approach.

33. Which comment on the data included in ESG integration databases is most accurate?

☐ A. ESG data must be audited to be valid.

☐ B. Input data across similar asset classes is consistent.

☐ C. Data outputs will correlate with data from other ESG databases.

☐ D. Incomplete ESG data used can be material.

34. Alex is a corporate bond analyst at AVX Investment Management and is responsible for a £4 billion portfolio of utility bonds with a range of credit ratings and ESG scores. He has been directed to engage with all the utility companies, whose bonds TBD holds, on their plans to reduce carbon emissions.

Using the PRI's guide for ESG engagement, Alex should start with the

☐ A. Largest holdings with high ESG scores.

☐ B. Largest holdings with low ESG scores.

☐ C. Smallest holdings with low credit ratings.

☐ D. Smallest holdings with high ESG scores.

35. *Several questions are associated with the following case study. The material given in the case study will not change.*

Lemon is a Japanese telecommunications company which recently acquired a local company that manufactures smart phones, TTN, in an effort to integrate vertically and provide clients with a better offer. A significant part of Lemon's clientele acquisition strategy is a focus on older individuals, and it wants to provide them with phones that better address their needs.

TTN, unlike most of its peers, owns the manufacturing plants which supply parts for its phones. 80% of TTN's manufacturing personnel are contractors, while the industry average is 40%. Two years ago, TTN was subject to a non-governmental organisation (NGO) campaign requesting that it offered contractors working conditions and pay similar to that of employees. TTN agreed to most of the NGO's requests.

Which social mega trend is **most** likely to affect Lemon's revenues?

- ☐ A. TTN is most likely to benefit from increased demand from offshoring as globalisation increases.
- ☐ B. Costs will decrease as manufacturing jobs are cut due to increased automation.
- ☐ C. The alignment of TTN's business model to provide a number of new revenue generating services to support an older clientele that lives longer.
- ☐ D. Increase in social media will naturally lead to increased advertisement sale by TTN.

36. *Several questions are associated with the following case study. The material given in the case study will not change.*

Lemon is a Japanese telecommunications company which recently acquired a local company that manufactures smart phones, TTN, in an effort to integrate vertically and provide clients with a better offer. A significant part of Lemon's clientele acquisition strategy is a focus on older individuals, and it wants to provide them with phones that better address their needs.

TTN, unlike most of its peers, owns the manufacturing plants which supply parts for its phones. 80% of TTN's manufacturing personnel are contractors, while the industry average is 40%. Two years ago, TTN was subject to a non-governmental organisation (NGO) campaign requesting that it offers contractors working conditions and pay similar to that of employees. TTN agreed to most of the NGO's requests.

How is Lemon's labour rights risk impacted by characteristics that are company-specific?

☐ A. Its risk is lower than industry average because a lower percentage of its work force is direct employees.

☐ B. Its risk is fully mitigated by addressing the NGO's concerns.

☐ C. Lemon's labour rights risk is reduced by the fact that older individuals have less concerns about company's social corporate responsibility than the younger generation.

☐ D. By not outsourcing its manufacturing, Lemon retains greater control of its supply chain and thus labour-related risks.

37. *Several questions are associated with the following case study. The material given in the case study will not change.*

Lemon is a Japanese telecommunications company which recently acquired a local company that manufactures smart phones, TTN, in an effort to integrate vertically and provide clients with a better offer. A significant part of Lemon's clientele acquisition strategy is a focus on older individuals, and it wants to provide them with phones that better address their needs.

TTN, unlike most of its peers, owns the manufacturing plants which supply parts for its phones. 80% of TTN's manufacturing personnel are contractors, while the industry average is 40%. Two years ago, TTN was subject to a non-governmental organisation (NGO) campaign requesting that it offers contractors working conditions and pay similar to that of employees. TTN agreed to most of the NGO's requests.

How might a portfolio manager interpret the financial implications of TTN agreeing to offer contractors the same working conditions as employees?

☐ A. The change may increase cost in the short and long-term but may reduce risk of price volatility due to reduced labour disruption.

☐ B. Potential financial implications cannot be estimated without the company disclosing the change to contractors' salary.

☐ C. Costs and risks remain the same as only employees' salary and working conditions impact the company.

☐ D. The cost of capital is increased as a result of providing greater rights to contractors.

38. *Several questions are associated with the following case study. The material given in the case study will not change.*

Lemon is a Japanese telecommunications company which recently acquired a local company that manufactures smart phones, TTN, in an effort to integrate vertically and provide clients with a better offer. A significant part of Lemon's clientele acquisition strategy is a focus on older individuals, and it wants to provide them with phones that better address their needs.

TTN, unlike most of its peers, owns the manufacturing plants which supply parts for its phones. 80% of TTN's manufacturing personnel are contractors, while the industry average is 40%. Two years ago, TTN was subject to a non-governmental (NGO) campaign requesting that it offers contractors working conditions and pay similar to that of employees. TTN agreed to most of the NGO's requests.

Lemon publicises on its website and in its annual report that it regularly performs audits across its operations to ensure compliance with the International Labour Organisation (ILO)'s International Labour Standards.

Which of the following actions would be a breach of the Standards?

- ☐ A. Taking a pro-union stance while negating the right of employees to negotiate individually.
- ☐ B. Providing equal remuneration for equal work.
- ☐ C. Abolishing child labour even though that would generate jobs.
- ☐ D. Publishing a policy against discrimination in employment or occupation.

39. Exclusionary screening is historically **most** common in which of these regions?

☐ A. Europe.

☐ B. United States.

☐ C. Asia.

☐ D. Canada.

40. The Bangladesh Investor Initiative is intended to address which social factor?

☐ A. Forced labour.

☐ B. Freedom of association.

☐ C. Health and safety.

☐ D. Living wage.

41. What positive effect can the globalisation of economies have on business models?

☐ A. Dependence on one or two efficient countries to supply an industry globally.

☐ B. Increased cross-border movement of goods and services.

☐ C. Increased efficiency and lower costs.

☐ D. Offshoring to developing countries can cause an industry to disappear in a developed country.

42. Which form of risk will not be lowered by the integration of ESG into a firm's investment process?

- ☐ A. Market risk.
- ☐ B. Firm level reputational risk.
- ☐ C. Investment risk.
- ☐ D. Investment level reputational risk.

43. Why do most corporate governance codes require audits?

- ☐ A. To guarantee there is no fraud in a company's financial statements.
- ☐ B. To provide a detailed list of accounting anomalies to shareholders.
- ☐ C. To provide an independent review of financials prepared by management.
- ☐ D. To verify the financials of all subsidiaries of a company.

44. What name is given to a company's failure to manage risk which is manageable?

- ☐ A. Management decomposition.
- ☐ B. Management exposure.
- ☐ C. Management risk.
- ☐ D. Management gap.

45. Which of these ESG service providers does **not** produce company-level ESG ratings?

☐ A. Real Impact Tracker.

☐ B. Inrate.

☐ C. Thomson Reuters.

☐ D. MSCI.

46. What corporate governance practice should be included in the process for directors of a company to be made accountable to shareholders?

☐ A. Automatic rollover of the financial auditor's services each year.

☐ B. Independent directors made accountable to executive directors.

☐ C. Review of the accounts by the Board at the Annual General Meeting (AGM).

☐ D. Setting executive remuneration in line with industry standards.

47. Which of these ESG issues included in a materiality map would be **best** described as a Social issue?

☐ A. Resource management.

☐ B. Business ethics and culture.

☐ C. Executive remuneration.

☐ D. Health and safety.

48. Scores from an ESG factor scorecard will always be:

☐ A. Adjusted by practitioners before use.

☐ B. Determined by the investment analyst.

☐ C. Scaled between zero and ten.

☐ D. Quantitative rather than qualitative.

49. An ongoing situation for a company which has negative ESG implications is called a:

☐ A. Chronic case.

☐ B. Controversy case.

☐ C. Current case.

☐ D. Catastrophic case.

50. Given that an analyst is able to judge the materiality of an ESG factor, which of the following is true?

☐ A. It will then be possible to assess the level of impact of the ESG factor.

☐ B. Other analysts with the same data will make the same materiality judgement.

☐ C. The interaction of the ESG factor with financial performance will still be uncertain.

☐ D. Cultural factors are unlikely to play a part in their judgement of materiality.

51. *Several questions are associated with the following case study. The material given in the case study will not change.*

Justin Deyzak is conducting a review of the food industry and came across two companies which were interesting investment opportunities. As he is aware that agricultural companies can be highly exposed to climate risk, he investigates Company A's and Company B's business models in order to assess those risks. Below is the summary of his findings.

Company A

Company A's main products are premium cookies and cakes, which it sells retail in niche markets across the Middle East. It has a franchise model in which it maintains the design and recipe of its product in-house, while outsourcing raw material and production to partners. Suppliers for the key raw material, flour, are based in Yemen and Libya, which have been plagued with water scarcity in the past few years.

Company B

Company B is based in Mexico and produces chocolate paste. To ensure the standard of quality required by its clients, the company owns all of the farms that supply the cocoa. The company has been growing through acquiring farmland. It identifies locations where water sources and soil are of high quality but poor farming techniques have led to inefficiencies. It purchases the land and then works with the farmers to help them transition to more sustainable and productive farming methods.

Which of the following below **best** describes how Justin should assess the physical risk of the companies under review?

- ☐ A. Company A has a significant physical risk due to its agricultural raw product being harvested in the areas with water scarcity.
- ☐ B. Company B has no physical risk because the soil is of high quality.
- ☐ C. Company B has high physical risk because farming techniques may result in physical harm to workers.
- ☐ D. Company A and B have similar physical risks as a result of being classified as part of the food industry.

52. Several questions are associated with the following case study. The material given in the case study will not change.

Justin Deyzak is conducting a review of the food industry and came across two companies which were interesting investment opportunities. As he is aware that agricultural companies can be highly exposed to climate risk, he investigates Company A's and Company B's business model in order to assess those risks. Below is the summary of his findings.

Company A

Company A's main product is premium cookies and cakes, which it sells retail in niche markets across the Middle East. It has a franchise model in which it maintains the design and recipe of its product in-house, while outsourcing raw material and production to partners. Suppliers for the key raw material, flour, are based in Yemen and Libya, which have been plagued with water scarcity in the past few years.

Company B

Company B is based in the Mexico and produces chocolate paste. To ensure the standard of quality required by its clients, the company owns all of the farms that supply the cocoa. The company has been growing through acquiring farmland. It identifies locations where water sources and soil are of high quality but poor farming techniques have led to inefficiencies. It purchases the land and then works with the farmers to help them transition to more sustainable and productive farming methods.

Which of the following statements is true regarding transition risk?

- ☐ A. Company A has lower transition risk because it is a B2C (business-to-consumer) company which outsources its agricultural production.
- ☐ B. Company B has higher transition risk because it is a B2B (business-to-business) company that needs to educate farmers about other farming methods.
- ☐ C. Transition risk related to changing consumer expectations regarding agricultural methods should be considered for both B2B (business-to-business) and B2C (business-to-consumer) companies.
- ☐ D. Justin does not need to review regulation on deforestation in the three countries as these would not impact transition risk.

53. Several questions are associated with the following case study. The material given in the case study will not change.

Justin Deyzak is conducting a review of the food industry and came across two companies which were interesting investment opportunities. As he is aware that agricultural companies can be highly exposed to climate risk, he investigates Company A's and Company B's business model in order to assess those risks. Below is the summary of his findings.

Company A

Company A's main product is premium cookies and cakes, which is sells retail in niche markets across the Middle East. It has a franchise model in which it maintains the design and recipe of its product in-house, while outsourcing raw material and production to partners. Suppliers for the key raw material, flour, are based in Yemen and Libya, which have been plagued with water scarcity in the past few years.

Company B

Company B is based in the Mexico and produces chocolate paste. To ensure the standard of quality required by its clients, the company owns all of the farms that supply the cocoa. The company has been growing through acquiring farmland. It identifies locations where water sources and soil are of high quality but poor farming techniques have led to inefficiencies. It purchases the land and then works with the farmers to help them transition to more sustainable and productive farming methods.

Justin would like to estimate the carbon footprint of each of the companies. Which of the below should he ignore?

☐ A. Emissions by the agricultural production of the outsourced flour producers in Company A.

☐ B. Emissions by the trucks which deliver purchased chocolate paste to clients of Company B.

☐ C. Emissions by employers of Company A when they fly to Yemen to conduct a supplier audit.

☐ D. Emissions saved by the CEO of Company B flying on a commercial plane rather than on a private jet.

54. *Several questions are associated with the following case study. The material given in the case study will not change.*

Justin Deyzak is conducting a review of the food industry and came across two companies which were interesting investment opportunities. As he is aware that agricultural companies can be highly exposed to climate risk, he investigates Company A's and Company B's business model in order to assess those risks. Below is the summary of his findings.

Company A

Company A's main product is premium cookies and cakes, which it sells in niche retail markets across the Middle East. It has a franchise model in which it maintains the design and recipe of its product in-house, while outsourcing raw material and production to partners. Suppliers for the key raw material, flour, are based in Yemen and Libya, which have been plagued with water scarcity in the past few years.

Company B

Company B is based in the Mexico and produces chocolate paste. To ensure the standard of quality required by its clients, the company owns all of the farms that supply the cocoa. The company has been growing through acquiring farmland. It identifies locations where water sources and soil are of high quality but poor farming techniques have led to inefficiencies. It purchases the land and then works with the farmers to help them transition to more sustainable and productive farming methods.

In what way is Justin **least** likely to conduct scenario testing to refine his assessment of the companies' climate risk?

☐ A. Justin could impose a shadow carbon tax in his financial model to quantify any potential impact on the companies' margins.

☐ B. Justin could conduct a scenario analysis and obtain information on how a 4 degree Celsius change would impact agricultural output in the countries to which Company A and Company B are exposed to and include that in the financial model.

☐ C. Justin could quantify the short-term impact of extreme weather events on investor sentiment regarding these industries and agricultural products.

☐ D. Justin could incorporate the impact of climate change and risk purely on the socio-economic conditions of workers in the affected regions.

55. Natasha completes a review of a large UK based oil company and assigns it an improving ESG score because she is impressed by the steps it is taking to meet the Paris Agreement. Nevertheless, she is concerned about the industry's long-term outlook and potential for stranded assets and increased cost of capital.

What action should Natasha reflect in her valuation of the company?

☐ A. Adjust her discounted cash flow (DCF) model to reflect a higher cost of capital.

☐ B. Adjust her discounted cash flow (DCF) model in later years to reflect write offs for stranded assets.

☐ C. None, the oil price is the only real variable that matters.

☐ D. Adjust her discounted cash flow (DCF) model to reflect a higher cost of capital and write offs for stranded assets in later years.

56. A credit portfolio manager is considering buying a Turkish phone company which he believes has strong credit quality as reflected in single-A credit ratings assigned by two credit rating agencies. Simultaneously, the emerging markets team is closely monitoring election results in Turkey which has led to bond market volatility.

Why would the portfolio manager decide not to buy the phone company bonds?

☐ A. High Governance Score for Turkey.

☐ B. Low Governance Score for the management of the phone company.

☐ C. Low Governance score for Turkey.

☐ D. High Governance Score for the management of the phone company.

57. What are the advantages of using mapping techniques when comparing two portfolios for ESG risk?

☐ A. Both portfolios can be shown on the same map.

☐ B. Increased ESG disclosure is making mapping more uniform.

☐ C. The materiality aspect of mapping is standardised.

☐ D. Specific elements of E, S, and G can be compared across sectors.

58. An analyst valuing a company against its peers should make which of the following adjustments to the price-to-earnings ratio (P/E) to integrate strong ESG characteristics?

☐ A. Add a premium versus its peers.

☐ B. Add a discount versus its peers.

☐ C. Make no adjustment versus its peers.

☐ D. Add either a discount or premium.

59. What are the three parts of the Triple Bottom Line?

☐ A. Ecological, Social and Governance.

☐ B. Social, Environmental and Financial.

☐ C. Ecological, Governance and Financial.

☐ D. Social, Financial and Governance.

60. Which of these Investment approaches would be **most** suitable for an investor who wants to ensure that his/her personal, social and moral views direct the investment decisions?

☐ A. Ethical investing.

☐ B. Thematic investing.

☐ C. Impact investing.

☐ D. Responsible investing.

61. Jane is an equity analyst at AVX Asset Management and covers a large public oil company which she needs to assign an environmental score to. The company says it is addressing carbon emissions, but refuses to disclose exactly what measures it is taking.

A logical next step for Jane would be to

☐ A. Look at the company’s financial statements and try to draw conclusions.

☐ B. Recommend that AVX sell the company’s shares.

☐ C. Suggest that AVX join the Investor Forum and use collective action to encourage the company to improve its disclosure.

☐ D. Take the company’s word for it and assign a high environmental score.

62. The physical impacts of climate change are **most** likely to be identified as a key ESG driver for which form of institutional investor?

☐ A. An actively managed mutual fund.

☐ B. A life insurance company.

☐ C. A pension fund.

☐ D. A property and general insurance company.

63. *Several questions are associated with the following case study. The material given in the case study will not change.*

Food service operators are seeing one of the most important and growing trends in the past decade – the "gourmetisation" of fast food into a new category of food service called fast casual. One of the strongest restaurant concepts, fast casual restaurants do not offer a full table service; however, they do advertise higher quality food in comparison to fast food restaurants. As a result, fast casual restaurants are perceived as an intermediate option between fast food and casual dining, and usually priced accordingly. Fast casual is now the fastest growing category in the food service industry.

The industry relies heavily on human capital for food preparation and customer services. These jobs are usually low paid and require long hours. A large percentage of food preparation and customer services jobs are filled by immigrants and young adults, respectively.

Below is information from two German companies in the fast casual restaurant sub-sector, which may or may not be material.

Company	A	B
Number of individuals in the Board of Directors	10	14
Number of independent directors	9	6
Correlation between CEO's variable remuneration and company's	0.78	0.43
Revenue (EUR millions)	20.736	5.923
Number of stores	38	10
Percentage of food procurement:		
Sourced locally	34%	79%
Sourced internationally	66%	21%
Average number of customers per day per store	400	200
Average margin per customer	3%	7%
Number of employees	12,347	4,213
percentage in food preperation	50%	40%
percentage in customer service	40%	45%
percentage in other	10%	15%
Employee turnover	72%	41%
Employee injury rate (per 100,000 workers)	45	30
Food waste (tonnes per year)	15.6	10.8
Number of supply chain audits per year	10	6
Single use plastic (tonnes per year)	0.6	0.5

For which of the two companies would an analyst most probably prioritise further analysis to ensure interests between shareholders and company executives are well aligned?

☐ A. Company A because the risks associated with the CEO's pay are correlated with company profits.

☐ B. Company A because of the high number of independent directors who do not represent shareholders' interests.

☐ C. Company B because a Board with more than 12 members is at risk of being inefficient in decision-making.

☐ D. Company B because low correlation between CEO's variable compensation and company profits may indicate misalignment of interests.

64. Several questions are associated with the following case study. The material given in the case study will not change.

Food service operators are seeing one of the most important and growing trends in the past decade – the "gourmetisation" of fast food into a new category of food service called fast casual. One of the strongest restaurant concepts, fast casual restaurants do not offer a full table service; however, they do advertise higher quality food in comparison to fast food restaurants. As a result, fast casual restaurants are perceived as an intermediate option between fast food and casual dining, and usually priced accordingly. Fast casual is now the fastest growing category in the food service industry.

The industry relies heavily on human capital for food preparation and customer services. These jobs are usually low paid and require long hours. A large percentage of food preparation and customer services jobs are filled by immigrants and young adults, respectively.

Below is information from two German companies in the fast casual restaurant sub-sector, which may or may not be material.

Company	A	B
Number of individuals in the Board of Directors	10	14
Number of independent directors	9	6
Correlation between CEO's variable remuneration and company's	0.78	0.43
Revenue (EUR millions)	20.736	5.923
Number of stores	38	10
Percentage of food procurement:		
Sourced locally	34%	79%
Sourced internationally	66%	21%
Average number of customers per day per store	400	200
Average margin per customer	3%	7%
Number of employees	12,347	4,213
percentage in food preperation	50%	40%
percentage in customer service	40%	45%
percentage in other	10%	15%
Employee turnover	72%	41%
Employee injury rate (per 100,000 workers)	45	30
Food waste (tonnes per year)	15.6	10.8
Number of supply chain audits per year	10	6
Single use plastic (tonnes per year)	0.6	0.5

What conclusions might be made with regards to Company A's working conditions in comparison to Company B's?

- ☐ A. Company A has more employees and thus its risk associated with working conditions is higher.
- ☐ B. Company A has better working conditions as it conducts more supply chain audits per year.
- ☐ C. Company B probably has better working conditions based on its lower employee turnover and injury rate.
- ☐ D. Company A and B have comparable working conditions as a similar percentage of their employees are exposed to food preparation hazards.

65. *Several questions are associated with the following case study. The material given in the case study will not change.*

Food service operators are seeing one of the most important and growing trends in the past decade – the "gourmetisation" of fast food into a new category of food service called fast casual. One of the strongest restaurant concepts, fast casual restaurants do not offer a full table service; however, they do advertise higher quality food in comparison to fast food restaurants. As a result, fast casual restaurants are perceived as an intermediate option between fast food and casual dining, and usually priced accordingly. Fast casual is now the fastest growing category in the food service industry.

The industry relies heavily on human capital for food preparation and customer services. These jobs are usually low paid and require long hours. A large percentage of food preparation and customer services jobs are filled by immigrants and young adults, respectively.

Below is information from two German companies in the fast casual restaurant sub-sector, which may or may not be material.

Company	A	B
Number of individuals in the Board of Directors	10	14
Number of independent directors	9	6
Correlation between CEO's variable remuneration and company's	0.78	0.43
Revenue (EUR millions)	20.736	5.923
Number of stores	38	10
Percentage of food procurement:		
Sourced locally	34%	79%
Sourced internationally	66%	21%
Average number of customers per day per store	400	200
Average margin per customer	3%	7%
Number of employees	12,347	4,213
percentage in food preperation	50%	40%
percentage in customer service	40%	45%
percentage in other	10%	15%
Employee turnover	72%	41%
Employee injury rate (per 100,000 workers)	45	30
Food waste (tonnes per year)	15.6	10.8
Number of supply chain audits per year	10	6
Single use plastic (tonnes per year)	0.6	0.5

Regulators are discussing a ban on single-use plastic. How might this impact Company A and Company B financially?

☐ A. Company A’s cost of capital would increase more than Company B’s because of its higher use of single-use plastic.

☐ B. Company A’s costs would increase by .6 multiplied by the difference between the price of the single-use plastic and its alternative.

☐ C. Company B’s costs would reduce by .5 multiplied by the average cost of the single-use plastic used in its stores.

☐ D. Company B’s costs would increase by .5 multiplied by the average cost of the alternative to single-use plastic.

66. *Several questions are associated with the following case study. The material given in the case study will not change.*

Food service operators are seeing one of the most important and growing trends in the past decade – the “gourmetisation” of fast food into a new category of food service called fast casual. One of the strongest restaurant concepts, fast casual restaurants do not offer a full table service; however, they do advertise higher quality food in comparison to fast food restaurants. As a result, fast casual restaurants are perceived as an intermediate option between fast food and casual dining, and usually priced accordingly. Fast casual is now the fastest growing category in the food service industry.

The industry relies heavily on human capital for food preparation and customer services. These jobs are usually low paid and require long hours. A large percentage of food preparation and customer services jobs are filled by immigrants and young adults, respectively.

Below is information from two German companies in the fast casual restaurant sub-sector, which may or may not be material.

Company	A	B
Number of individuals in the Board of Directors	10	14
Number of independent directors	9	6
Correlation between CEO's variable remuneration and company's	0.78	0.43
Revenue (EUR millions)	20.736	5.923
Number of stores	38	10
Percentage of food procurement:		
Sourced locally	34%	79%
Sourced internationally	66%	21%
Average number of customers per day per store	400	200
Average margin per customer	3%	7%
Number of employees	12,347	4,213
percentage in food preperation	50%	40%
percentage in customer service	40%	45%
percentage in other	10%	15%
Employee turnover	72%	41%
Employee injury rate (per 100,000 workers)	45	30
Food waste (tonnes per year)	15.6	10.8
Number of supply chain audits per year	10	6
Single use plastic (tonnes per year)	0.6	0.5

Based on known information, which company is expected to have **less** of a challenge in managing its food supply chain risk?

☐ A. Company A because it has more audits in absolute terms and a higher percentage of internationally sourced produce.

☐ B. Company B because it has more audits per unit of revenue and a higher percentage of locally sourced produce.

☐ C. Company B because it has smaller revenue and thus lower reputational risk.

☐ D. Company A and B have similar challenges because of the number of audits per unit of profit are alike.

67. *Several questions are associated with the following case study. The material given in the case study will not change.*

Food service operators are seeing one of the most important and growing trends in the past decade – the "gourmetisation" of fast food into a new category of food service called fast casual. One of the strongest restaurant concepts, fast casual restaurants do not offer a full table service; however, they do advertise higher quality food in comparison to fast food restaurants. As a result, fast casual restaurants are perceived as an intermediate option between fast food and casual dining, and usually priced accordingly. Fast casual is now the fastest growing category in the food service industry.

The industry relies heavily on human capital for food preparation and customer services. These jobs are usually low paid and require long hours. A large percentage of food preparation and customer services jobs are filled by immigrants and young adults, respectively.

Below is information from two German companies in the fast casual restaurant sub-sector, which may or may not be material.

Company	A	B
Number of individuals in the Board of Directors	10	14
Number of independent directors	9	6
Correlation between CEO's variable remuneration and company's	0.78	0.43
Revenue (EUR millions)	20.736	5.923
Number of stores	38	10
Percentage of food procurement:		
Sourced locally	34%	79%
Sourced internationally	66%	21%
Average number of customers per day per store	400	200
Average margin per customer	3%	7%
Number of employees	12,347	4,213
percentage in food preperation	50%	40%
percentage in customer service	40%	45%
percentage in other	10%	15%
Employee turnover	72%	41%
Employee injury rate (per 100,000 workers)	45	30
Food waste (tonnes per year)	15.6	10.8
Number of supply chain audits per year	10	6
Single use plastic (tonnes per year)	0.6	0.5

New restaurant regulation will limit the amount of food that can go to waste (as a percentage of food purchased). Which company is the regulation likely to impact the most?

☐ A. Company A because it wastes 4.8 tonnes of food more than Company B per year.

☐ B. Company B because it produces more food waste in proportion to revenue.

☐ C. Company A and B will be impacted in a similar way as they produce a similar proportion of food waste in proportion to margin.

☐ D. The answer cannot be reached with the information provided.

68. Which **best** describes stewardship of assets over which someone acts as the guardian?

☐ A. The process of intervention to avoid deterioration of the long-term value of the assets.

☐ B. The reconciliation of the assets with records produced by third party holders of the assets.

☐ C. The putting in place of a physical measure to Physically protect the assets from theft.

☐ D. The investor actively participating at the annual general meeting.

69. Which of the following challenges can auditors face in preventing fraud in company accounts?

i. Auditors may be misled by management.

ii. Auditors rely to a great degree on the accuracy of a company's internal accounting system.

iii. Audits are based on samples and not all figures are reviewed.

iv. Only segments of a company's business that are deemed material are reviewed.

☐ A. ii and iii.

☐ B. iii and iv.

☐ C. i, ii and iii.

☐ D. i, ii, iii and iv.

70. The correlation between positive ESG factors and financial performance is **most** commonly observed to be:

- ☐ A. Negative.
- ☐ B. Close to zero.
- ☐ C. Positive.
- ☐ D. Highly variable.

71. Under the fiduciary duty of pension funds in the USA, the Employment Retirement Income Security Act (ERISA) expects that pension funds:

- ☐ A. Engage with companies and vote at general meetings.
- ☐ B. Engage with companies but do not vote at general meetings.
- ☐ C. Are passive investors in companies and vote only on material issues.
- ☐ D. Are passive investors and do not vote at general meetings.

72. Which of the following is **not** an escalation measure that can be used across all asset classes?

- ☐ A. Formally adding the company to an exclusion list.
- ☐ B. Proxy voting at a General Meeting.
- ☐ C. Making a public statement in advance of a General Meeting.
- ☐ D. Seeking governance improvements through legal methods.

73. Sharon is the Chief Investment Officer of BCM, a boutique asset manager that primarily invests in UK equities. BCM has a small stake in RTC media company which has not been efficient in removing terrorist-related content circulated on its social networking website. Since BCM's resources are limited, Sharon decides to join the Investor Forum, which will allow her to:

☐ A. Avoid direct interaction with RTC.

☐ B. Benefit from the Investor Forum's advisory services.

☐ C. Draw investor attention to RTC's terrorist-related content.

☐ D. Initiate a joint resolution to gain control of RTC.

74. A large US tobacco company has resisted engagement attempts by an investor forum to influence it to encourage people to quit smoking. The investor forum has now put an item on the upcoming AGM agenda proposing a new set of board members. The current board has reviewed its position and decides it:

☐ A. May seek a ruling from the Securities and Exchange Commission (SEC) to have the item removed from the agenda.

☐ B. Must leave the item on the agenda.

☐ C. Should make the agenda public before the meeting.

☐ D. Should resign before the AGM.

75. The CFA Institute and CFA UK define ESG integration as the

☐ A. Explicit systematic inclusion of ESG factors in investment analysis and investment decisions.

☐ B. Exclusion of securities from client portfolios, which fall below specified minimum standards.

☐ C. Prioritisation of ESG factors ahead of all other client considerations during the investment process.

☐ D. Requirement to refer to ESG factors at all stages of the investment process.

76. Which approach to ESG investing would require the **most** intensive use of resources by an investment manager?

☐ A. Negative screening.

☐ B. Active ownership.

☐ C. Best-in-class.

☐ D. Thematic investing.

77. An ESG portfolio in government bonds could drive allocation towards

☐ A. High yielding, high volatility bonds.

☐ B. High yielding, low volatility bonds.

☐ C. Low yielding, high volatility bonds.

☐ D. Low yielding, low volatility bonds.

78. Caroline runs a portfolio, which screens out securities with low ESG scores from the benchmark index. She then reweights the portfolio with the remaining securities according to their market capitalisations. To address tracking error, she runs a portfolio optimisation programme.

Has the tracking error issue been resolved?

☐ A. No, she should apply a strong ESG tilt to the portfolio.

☐ B. Yes, but the portfolio is now overweight securities that correlate with omitted securities.

☐ C. Yes, the removal of a small portion of securities from the benchmark will not impact relative performance in the long run.

☐ D. Yes, this strategy generally outperforms its benchmark when the excluded securities underperform.

79. Chang Ying runs an equity portfolio using ESG integration techniques which looks at E, S, and G independently. To reduce the downside tail risk of the portfolio whilst preserving the largest investable universe possible she could avoid:

☐ A. All companies with low E scores.

☐ B. All companies with low G scores.

☐ C. Companies with exposure to coal fired power generation.

☐ D. Companies whose G score reflects insufficient financial oversight.

80. Green bond funds would best be described as which form of investing?

☐ A. Exclusionary investing.

☐ B. Active ownership investing.

☐ C. Best-in-class investing.

☐ D. Thematic investing.

81. Which of the following ESG index providers specifically considers governance?

☐ A. Bloomberg.

☐ B. FTSE Russell.

☐ C. MSCI.

☐ D. Thomson Reuters.

82. Which of these factors will be greater for an investor who is passively exposed to an ESG index than for an investor with actively managed investments?

- ☐ A. Investment costs and expenses.
- ☐ B. Complexity of investment strategies.
- ☐ C. Volume of operational decisions required.
- ☐ D. Risk of incorrectly included index constituents.

83. What should be the **first** stage of a portfolio management process, which employs ESG integration?

- ☐ A. Agreeing the meaning of all ESG terms discussed with clients.
- ☐ B. Determining any external ESG research requirements.
- ☐ C. Development of an investment policy statement.
- ☐ D. Undertaking any internal ESG research required.

84. Which of the following indices would provide a benchmark for an ESG real estate investor?

- ☐ A. FTSE4Good.
- ☐ B. MSCI ESG.
- ☐ C. GRESB.
- ☐ D. S&P ESG.

85. Which of the following types of fund managers are **most** likely to provide active stewardship for investors?

☐ A. Index tracking equity fund managers.

☐ B. Broad bond index tracking fund managers.

☐ C. Long duration corporate bond fund managers.

☐ D. Fundamental active equity fund managers.

86. Which form of portfolio has the most active stewardship by an investment firm?

☐ A. Diversified equity.

☐ B. Fundamental equity.

☐ C. Sovereign bond.

☐ D. Index tracking.

87. Which of the following would be specified in an ESG investment mandate?

☐ A. Stock selections.

☐ B. Reported returns.

☐ C. Investor's beliefs.

☐ D. Excluded companies.

88. Which of the following is correct regarding voting by ESG fund managers?

☐ A. Voting represents a stewardship activity.

☐ B. Voting effectiveness is reported back to investors.

☐ C. Proxy voting is not common in developed markets.

☐ D. Fund manager voting records must be kept confidential.

89. Which of the following statements is **least** true?

☐ A. Environmental costs include higher litigation and insurance costs.

☐ B. Active ownership models give less weight to Intergenerational issues than traditional models.

☐ C. All assets within a portfolio may fall in value due to physical environmental damage.

☐ D. Higher polluting companies generally report lower short-term profits than less polluting companies.

90. Impact investment offerings of small to medium size are generally most appropriate for:

☐ A. High net worth individuals.

☐ B. Large institutional asset managers.

☐ C. Pension funds.

☐ D. Retail investment funds.

91. Norms based screening is **most** popular in which region?

- ☐ A. Canada.
- ☐ B. Europe.
- ☐ C. Japan.
- ☐ D. USA.

92. Reporting attribution of returns resulting from ESG integration is likely to be most accurate when:

- ☐ A. A variety of ESG evaluation techniques are used.
- ☐ B. An asset manager reports stewardship activities in a detailed manner.
- ☐ C. ESG is fully integrated into the investment process.
- ☐ D. The effect of removing one sector from a portfolio is measured.

93. Mario runs an ESG scored portfolio, which has an E score lower than its benchmark.

What can he can expect the client to focus more on, when reviewing the performance of the fund?

- ☐ A. Distractor companies in the benchmark with low E scores.
- ☐ B. Distractor companies in the portfolio with low E scores.
- ☐ C. Outperforming companies in the benchmark with high E scores.
- ☐ D. Outperforming companies in the portfolio with high E scores.

94. What is the best way a company's Board can prevent excessive executive remuneration and keep executives accountable to shareholders?

☐ A. Align executive pay to industry standards.

☐ B. Avoid remuneration which vests over a several year period.

☐ C. Link pay to company Key Performance Indicators.

☐ D. Vote for regular executive pay increases.

95. How are agency, alignment and executive pay interrelated in corporate governance?

☐ A. Corporate governance requires management to be agents when aligning executive pay.

☐ B. Corporate governance requires agents to determine whether executive pay is aligned with the market.

☐ C. Management remuneration package should be aligned to the function or role of management as agents responsible to their Board.

☐ D. Management remuneration package should be aligned to the function or role of management as agents responsible to their shareholders.

96. The transition to a low carbon economy is expected to open up significant investment requirements.

What would likely have the **most** financial risk for investors?

☐ A. Early stage technology for hydro based transportation.

☐ B. Energy efficient automobile factories.

☐ C. Power infrastructure with proven renewable energy technology.

☐ D. Upgrades to buildings to bring them to suitable standards.

97. Which of these is **not** a common use for ESG data sets?

- ☐ A. To input into future scenario models.
- ☐ B. To guide practice at regulator level.
- ☐ C. To inform government decision making.
- ☐ D. To prepare company financial reports.

98. What are the three ESG engagement dynamics highlighted by the PRI as creating value?

- ☐ A. Political dynamics, Financial dynamics and Learning dynamics.
- ☐ B. Learning dynamics, Communicative dynamics and Response dynamics.
- ☐ C. Communicative dynamics, Learning dynamics and Political dynamics.
- ☐ D. Response dynamics, Political dynamics and Financial dynamics.

99. Which of the following factors will be higher for alternative investments than for other financial investments?

- ☐ A. Correlated returns.
- ☐ B. Liquidity premium.
- ☐ C. Reporting obligations.
- ☐ D. Direct investment effect.

100. Which comment about a typical quantitative approach to ESG analysis is correct?

- ☐ A. Factors such as value and growth are integrated alongside ESG factors.
- ☐ B. The data set focuses on an individual company assessment.
- ☐ C. The research stage will only include internal proprietary data.
- ☐ D. The dataset tends to be smaller than that used by a fundamental adviser.

Answers

1	A	**51**	A
2	D	**52**	C
3	D	**53**	D
4	A	**54**	D
5	D	**55**	D
6	B	**56**	C
7	A	**57**	D
8	C	**58**	A
9	C	**59**	B
10	A	**60**	A
11	D	**61**	C
12	A	**62**	D
13	D	**63**	D
14	C	**64**	C
15	D	**65**	B
16	A	**66**	B
17	C	**67**	D
18	D	**68**	A
19	A	**69**	D
20	D	**70**	C
21	A	**71**	A
22	C	**72**	B
23	D	**73**	C
24	B	**74**	A
25	C	**75**	A
26	C	**76**	B
27	A	**77**	D
28	D	**78**	B
29	B	**79**	D
30	A	**80**	D
31	A	**81**	D
32	A	**82**	D
33	D	**83**	C
34	B	**84**	C
35	C	**85**	D
36	D	**86**	B
37	A	**87**	C
38	A	**88**	A
39	A	**89**	A
40	C	**90**	A
41	C	**91**	B
42	A	**92**	D
43	C	**93**	B
44	D	**94**	C
45	A	**95**	D
46	C	**96**	A
47	D	**97**	D
48	D	**98**	C
49	B	**99**	D
50	C	**100**	A