



London
Stock Exchange Group

Revealing the full picture

Your guide to ESG reporting

Guidance for issuers on the
integration of ESG into investor
reporting and communication

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Introduction

Once upon a time, environmental, social and governance (ESG) factors were a niche interest among asset owners, asset managers, banks, brokers and investment consultants. No longer. Investors now routinely analyse information on ESG performance alongside other financial and strategic information in order to gain a better understanding of companies' future prospects.

Issuers' ESG performance on subjects such as resource use, human rights, health and safety, corruption and transparency is increasingly used to draw conclusions about the quality of their management, identify their exposure to business risks and assess their ability to leverage business opportunities. Therefore it is becoming more and more important for companies and other issuers to communicate with investors clearly and accurately on these aspects of their performance.

The intention of this Guidance is to help companies gain a clear understanding of what ESG information they should provide and how they should go about providing it. This is a task for which London Stock Exchange Group, as a leading international markets infrastructure provider connected to issuers, sell side and investors is ideally placed.

About London Stock Exchange Group

Sitting at a critical junction between issuers and investors, London Stock Exchange Group plays an essential role in supporting global sustainable economic growth.

With more than 2,700 companies hosted on our markets, we seek to recognise and encourage dynamic companies that will drive long-term economic prosperity; helping them improve the sustainability of their business and enhance their ability to raise capital for growth and employment creation. At the same time, through FTSE Russell, our benchmarking and analytics business, we seek to support investors in making informed and sustainable decisions; providing them with the information and tools they need to assess issuers' strategy, performance and governance.

60%

of assets managed for EU investors incorporate sustainable investment strategies

“Our Group plays an essential role in supporting sustainable economic development through a number of our businesses around the world. This ESG guide is an important new tool to encourage and assist issuers in providing ESG information that investors can use to inform their engagement with companies and their investment decisions. I hope this report helps improve transparency and disclosure in this increasingly important area.”

Who this Guidance is for

Institutional investors are interested in ESG issues for all of the entities they invest in, irrespective of whether they are large or small, equities or bonds, listed or unlisted, across all industries. And in our view, whatever the entity in question, the characteristics of high quality reporting and effective communication with investors are always broadly the same.

Therefore we believe that you will find this Guidance equally relevant to your organisation whether it is a large publicly listed issuer with a long track record of reporting; a smaller company; a privately held business; or a debt issuer.

How investors use ESG information is changing

In recent years, the views of investors in this area have matured significantly. ESG-related information has moved from a 'peripheral' to a 'core' part of investment analysis, across all asset classes¹.

Signatories to the United Nations-supported Principles for Responsible Investment (PRI) now represent \$60trn² in assets under management, up from \$22trn² in 2010. Almost all leading institutional investors of UK and Italian listed companies are PRI signatories. Recent research from the Global Sustainable Investment Alliance (GSIA)³ suggests that sustainable investing strategies now represent more than 60% of professionally managed assets for EU investors.

The need for issuers to respond to this demand for information is clear. By disclosing the information that investors want, issuers can provide reassurance that they are effectively managing business risks and identifying opportunities. There is growing evidence that issuers that publish high quality information on the longer-term implications of ESG for their business are more likely to attract and retain long-term investors⁴. These issuers can also reduce the cost of capital and increase their ability to raise new capital to finance sustainable projects.

The process of reflecting on, analysing and reporting ESG issues provides important insights into the positive and negative implications for financial and operational performance. This also applies to decisions about strategy and capital expenditure. Further, having a clear view on ESG issues and strategy positions businesses at the forefront of opportunities presented by the unfolding sustainable and green economy.

While there is a compelling case for companies strengthening their reporting on ESG issues, research suggests that Chief Executives tend to overestimate their success in communicating with investors: in a recent study, over a third of companies believed they were able

to quantify the business value of sustainability initiatives accurately, yet only 7% of investors agreed⁵.

This discrepancy can be ascribed to a number of practical challenges, including: investors finding it difficult to access appropriate data and information; issuers failing to understand what information investors need; investors using different ESG information in their investment research and raising different questions with issuers; and issuers' needs and interests differing in terms of the ESG issues that they see as important.

The aims of this Guidance are to:

- make companies more aware of the importance of providing high quality ESG information, and engaging investors on sustainability-related issues;
- stimulate interest in the innovation opportunities opened by this new economic paradigm;
- help issuers and investors to navigate the complex landscape of ESG reporting;
- enable richer data flows and dialogue on ESG between issuers and investors;
- support the consolidation of sound global reporting standards; and
- enable investors to make better informed investment decisions.

\$60trn²

Signatories to the United Nations-supported Principles for Responsible Investment (PRI) now represent \$60trn² in assets under management, up from \$22trn² in 2010.

Towards deeper understanding between issuers and investors

In publishing this ESG Reporting Guidance, our aim is to help enable your company to effectively navigate the reporting landscape of today and tomorrow.

“ESG reporting is not just for larger companies. This is about all issuers, regardless of size, reporting relevant and material information to investors so that they can make better informed investment decisions.”

Mark Zinkula
CEO, Legal & General Investment Management

You don't have to be big to be an ESG reporter

The ESG dimension is not something only larger companies need to concern themselves with. When a small or mid-sized issuer understands the value of ESG data and reporting, investors' ability to see the full picture of its performance and prospects is enhanced just as much.

London Stock Exchange Group (LSEG) is the global market of choice for such smaller companies. Over 1,000 of them are quoted on AIM in the UK and Italy; more than 460 belong to our ELITE programme for dynamic private companies; and we also enable the issuance of corporate bonds by smaller companies.

The Guidance is intended to help both companies that have a long history of ESG reporting and those that are less experienced in it.

ESG data and information can be provided by a company to a wide range of stakeholders. This Guidance is specifically focused on the dialogue and information flows between issuers and investors.

In dealing with good practice in voluntary reporting to investors, the Guidance is in line with the UN-backed Sustainable Stock Exchanges initiative model guidance for exchanges⁶. We believe that it is time to move beyond the debate around mandatory versus voluntary reporting. Issuers should now focus on innovation and relevance in the information they provide to investors – and ESG is part of that picture.



Is 'ESG' the same as 'sustainability' and 'corporate responsibility'?

Many companies use 'sustainability', 'corporate responsibility' or 'corporate social responsibility' to refer to strategies or programmes related to environmental, social or governance (ESG) activities. We make no particular recommendation concerning which term to use.

For the purpose of this Guidance, LSEG has chosen to use the term 'ESG' as it has become a commonly-used investment term. Other terms for this type of ESG reporting can include 'non-financial' and 'extra-financial' reporting.

“We have a fiduciary duty towards our members and we are committed to protecting retirement savings from any potential investment risk within a long-term horizon. The best way to do this is to take not only financial and economic factors but also ESG performance into consideration.”

Maurizio Agazzi
Direttore Generale, Fondo Pensione Cometa

ESG reporting priorities

We have identified eight priorities for ESG reporting.



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01

Strategic relevance

What is the relevance of ESG issues to business strategy and business models?



Investors want to understand how issuers are responding to long-term and macroeconomic trends such as climate, demographic and technological change as well as political developments. A number of the world's largest investors are allocating capital to companies that are well equipped to benefit from the transition to the green economy, and wish to protect their portfolios against downside environmental, social and governance (ESG) risks.

As an issuer, you should explain the relevance of ESG factors to your business model and strategy. You should make clear how your company is positioning itself, either to benefit from these factors or to manage and mitigate the risks associated with them.

Issuers should also explain how they intend to access the new opportunities and revenue streams generated by green and socially beneficial products and services.

“Sustainability factors, such as climate change or demography, impact companies’ operating environments. It is therefore critical that companies provide a clear strategic view on the likely impact of such trends or factors on their business models. This will allow investors to understand how they are positioned, and provide confidence that they are resilient and can where possible exploit opportunities from a changing environment.”

Steve J. Berexa

Global CIO Equity and Global Head of Research,
Allianz Global Investors

It is important for any company to be able to explain how its core business models and strategies may be impacted by ESG trends, and how it is seeking to position itself either to benefit from them or manage and mitigate risks associated with them. This provides the context for ESG reporting and allows investors to assess how well prepared the company is strategically for changes in its operating environment.

A number of the world’s largest investors are allocating additional capital to companies that have higher green revenue exposure or are better equipped to fulfil sustainable goals.

Demonstrating resilience as well as readiness to transition to a sustainable and green economy is relevant for issuers across a number of industries and sectors. This means looking beyond the risks to new opportunities and revenue streams generated by green and socially beneficial products and services. These can drive value for the organisation and provide social and environmental solutions.

Integrating both financial and non-financial performance requires leadership and support from the Board and senior management. They play a central role in integrating sustainability into the business strategy, overseeing implementation across the business and communicating to investors. At a working level in larger companies, investor relations, finance functions and CSR or sustainability divisions will need to align to ensure the quality and consistency of information reported.



GREEN ECONOMY EXPLAINED



Over the last 300 years there have been a number of economic cycles as new industries have emerged and revolutionised economies both nationally and globally. Previous cycles have been linked to the introduction of the steam engine, electricity, mass automation, and recently information technology and computing. A number of economists now suggest that we are rapidly moving into the next cycle of economic change linked to industrial changes to overcome climate change, environmental erosion and resource depletion. The Paris Agreement that entered into force in November 2016, marked an important turning point. It aims to ‘keep a global temperature rise this century well below 2 degrees Celsius above pre-industrial levels and to pursue efforts to limit the temperature increase even further to 1.5 degrees Celsius’. Achieving its goals by meeting the signatories’ nationally determined contributions (‘NDCs’) requires the growth of new products and new ‘green’ industrial sectors in areas including renewable energy, energy efficiency, waste processing and recycling. The green economy encompasses these sectors and services, and companies that demonstrate their contribution to the green economy are attracting investment.

How ESG issues can impact business models and strategies

The ESG issues and trends that can have a powerful impact on business models are varied. Some possible examples include:

- a confectionery company that sources cocoa from West Africa explaining their readiness for increased levels of drought;
- an integrated oil and gas business explaining how carbon costs and changing energy demands linked to carbon intensity would impact their reserve portfolio and how future pricing scenarios link into their exploration and production strategy; and
- a professional services outsourcing firm outlining the increasing international demand for highly skilled staff and explaining their approach to motivating, retaining and developing their workforce in order to reduce high turnover rates of skilled staff.

02

Investor materiality

What do investors mean by materiality?



To understand a company's long-term prospects, investors will focus on those issues that they believe to be most relevant – or 'material' – to any particular business. However, different investors inevitably have different views on what they see as material.

Issuers should explain which ESG issues they see as most relevant or material to their business. They should explain how ESG issues may affect their business, e.g. through legislation, reputational damage, employee turnover, licence to operate, legal action or stakeholder relationships. They should then explain how these impacts may affect business strategy and financial and operational performance.

When presenting this information to investors, it is important to understand what information and data your investors are looking for. This should include ensuring you are informed about what your industry peers globally are reporting on.

How to identify material ESG themes

There is no standard template for a successful materiality assessment and issuers need to find the approach that is appropriate for their organisation. There are a number of considerations that can help companies identify what is relevant to their business and what the critical issues are to report on:

- 1 Align with what international standards recommend and peer companies report.** This facilitates comparability for investors globally.
- 2 Use tools at your disposal.** ESG research and index providers have specific criteria and identified material themes for different companies and industrial sectors. FTSE Russell, a London Stock Exchange Group business, has a well developed model which may be helpful in this regard. See more on pages 50 and 51.
- 3 Explicitly link ESG performance, business strategy and financial and operational performance.**

‘MATERIALITY’ DEFINED



The International Accounting Standards Board defines ‘material’ information as that which could, if omitted or misstated, influence the economic decisions of readers relying on the financial statements. The UK FRC’s ‘Clear & Concise’ guidance to narrative reporting states that ‘information is material if its omission or misrepresentation could influence the economic decisions shareholders take on the basis of the annual report as a whole’.

Example



Index membership: FTSE 100
ICB subsector: Recreational Services

A FTSE 100 company in the travel and leisure sector conducts a materiality assessment every two years. This allows the business to update its understanding of the issues that influence stakeholder (including investor) perceptions and decision-making, and to respond effectively to sustainability-related opportunities and risks.

Its materiality assessment process involves:

- re-evaluating the previous assessment;
- reviewing relevant standards;
- engaging with internal and external stakeholders;
- benchmarking the strategy against industry and broader corporate best-practice; and
- reviewing operational impacts and sustainability trends.

The full list of issues is plotted on a matrix based on significance to the business and relative concern to stakeholders.

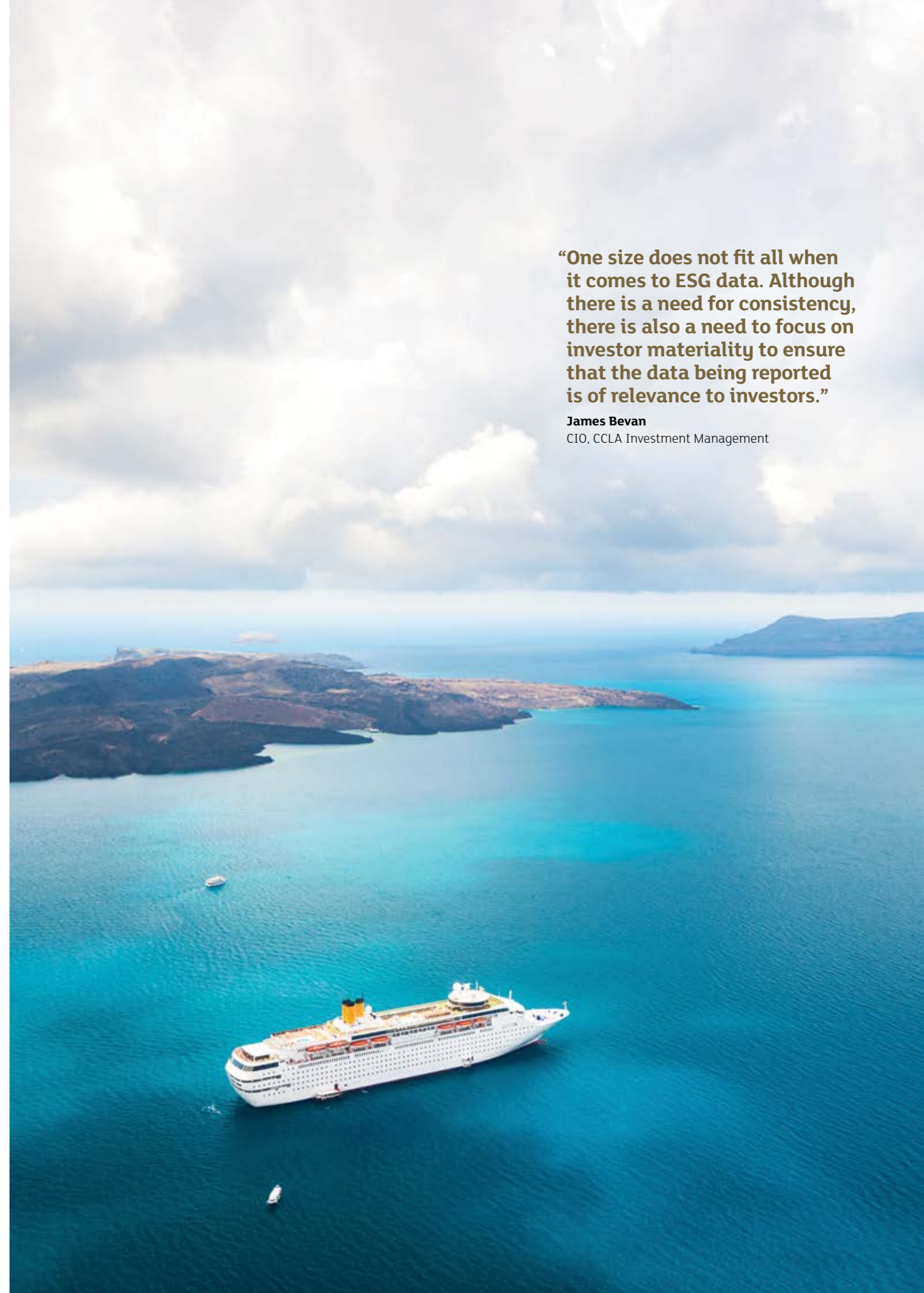
Index membership: FTSE Small Cap
ICB subsector: Software

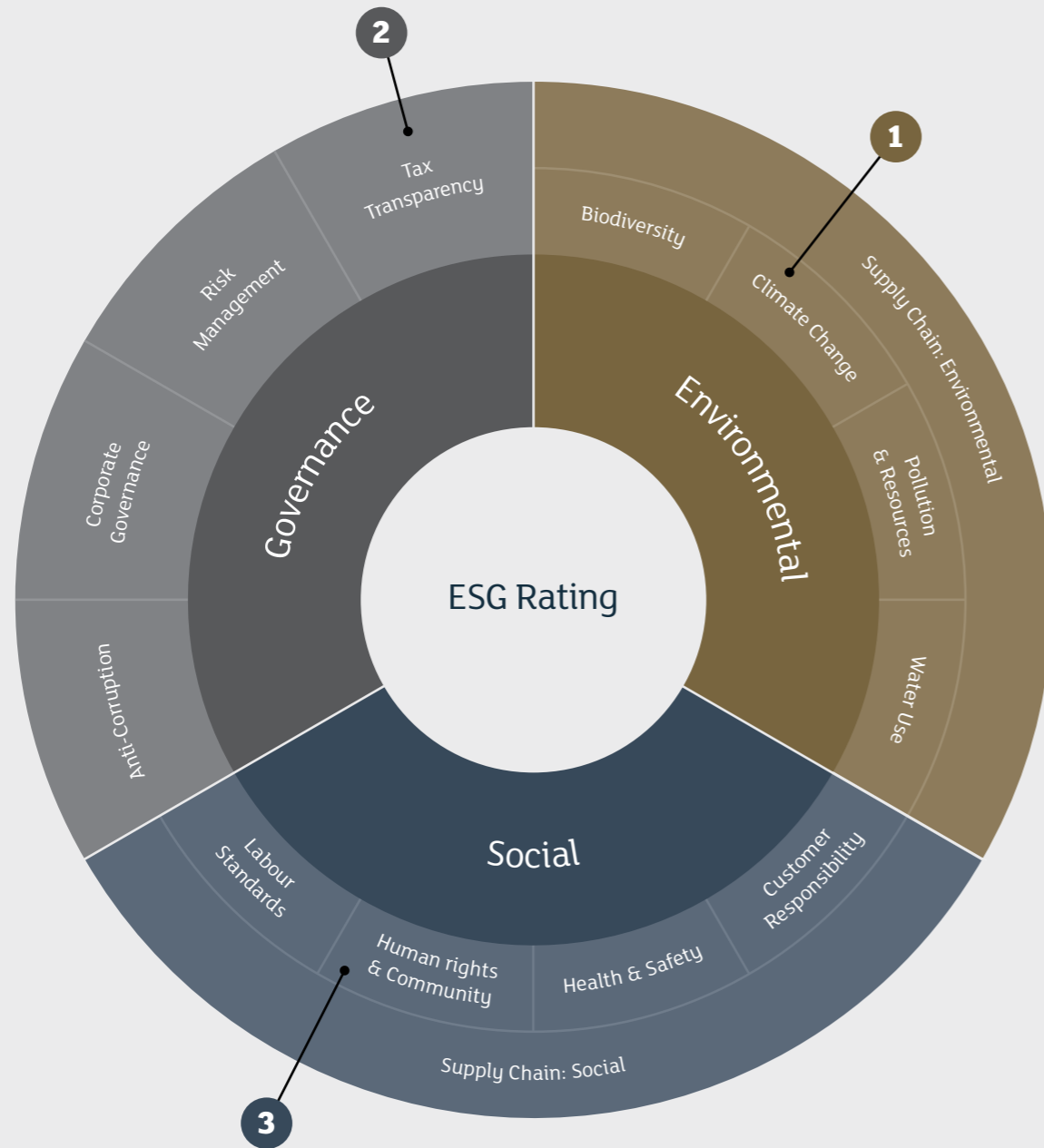
A small-cap software business has a strong reliance on employees, reflected in its vision: ‘To enable outstanding people to create digital solutions that have a positive impact on people’s lives.’ Noting that employee retention is a key risk, the company includes data on its staff attrition rate and its ‘Best Companies to Work For’ rating in its KPIs.

“One size does not fit all when it comes to ESG data. Although there is a need for consistency, there is also a need to focus on investor materiality to ensure that the data being reported is of relevance to investors.”

James Bevan

CIO, CCLA Investment Management





FTSE Russell has drawn from global standards and frameworks in the development of its ESG model. The model involves producing an overall ESG Rating based on the three pillars of Environment, Social and Governance and on 14 Themes adapted to reflect their materiality to each company.

Three of the 14 Themes are shown opposite to outline selected examples of the ESG data – both qualitative and quantitative – that issuers can be expected to disclose against specific, material themes. For more details on the methodology please see www.ftserussell.com/esg

1. CLIMATE CHANGE

The investment case

Investors often want to understand whether businesses can:

- successfully respond to climate change risks;
- demonstrate future viability and resilience; and
- achieve cost savings through efficiencies and identify opportunities through green revenue opportunities.

The sources of investment risks

Key sources of investment risk and opportunity:

- regulatory: standards, taxes, carbon pricing;
- market: reduced demand for high-carbon goods, products and services and decreased capital availability for high carbon products;
- market: increased demand for low-carbon goods, products and services;
- capital: increased capital availability for low-carbon services and technologies; and
- weather: natural disasters and resource risks.

Example indicators of practice and performance

Type	Description	Applicability
Quantitative	Three years of total energy consumption data	All
Quantitative	GHG emissions per megawatt-hr	Conventional Electricity
Qualitative	Board oversight of climate change: <ul style="list-style-type: none"> a. Evidence of board or board committee oversight of the management of climate change risks b. Named position responsible at Board Level 	All

2. TAX TRANSPARENCY

The investment case

Investors often want to understand whether businesses can:

- not only comply with tax arrangements, but also have a strong governance process and transparency around their tax policy and tax arrangements; and
- demonstrate commitment to transparency by engaging with stakeholders and the public to communicate their contribution to local economies.

The sources of investment risks

Key sources of investment risk and opportunity:

- regulatory: risks of increased regulation which could close particular tax arrangements, referred to by some as 'loopholes' which would mean reduced margins and profitability of particular companies. In some cases it may even affect a company's ability to operate in certain markets; and
- reputational: increased scrutiny of corporate tax behaviour.

Example indicators of practice and performance

Type	Description	Applicability
Qualitative	A policy OR commitment to: <ul style="list-style-type: none"> a. Tax transparency or tax responsibility b. Align tax payments with revenue-generating activity, or reduce or refrain from the use of offshore secrecy jurisdictions for the purposes of tax planning 	All
Qualitative	Board has oversight of tax policy: <ul style="list-style-type: none"> a. Evidence of board oversight of the management of tax risks b. Named position responsible at Board level 	All
Quantitative	Disclosure of corporation tax paid globally: <ul style="list-style-type: none"> a. With at least domestic and international breakdown b. With country by country breakdown 	All

3. HUMAN RIGHTS & COMMUNITY

The investment case

Investors want businesses that:

- engage in active discussion around human rights and community issues;
- demonstrate operational robustness and reputational resilience by addressing their impact on the communities in which they operate; and
- Have strong and positive relationships with communities.

The sources of investment risks

Key sources of investment risk and opportunity:

- regulatory: costs associated with regulatory compliance;
- market: increased exposure to human rights risks in supply chain;
- reputation: risks caused by community relations and human rights issues; and
- operations: increased chance of operational shut downs or revocation of licenses, if the local community resists or protests the presence of the business.

Example indicators of practice and performance

Type	Description	Applicability
Qualitative	Stakeholder engagement to verify human rights risks and impacts: <ul style="list-style-type: none"> a. Evidence of consultation taking place b. Documented meetings OR reports of how results have been used 	All
Qualitative	How the issuer addresses freedom of expression through: <ul style="list-style-type: none"> a. Having a statement/policy b. Being a member of a relevant industry initiative such as the Global Network Initiative 	Broadcasting & Entertainment, Media Agencies, Publishing, Fixed Line Telecommunications, Mobile Telecommunications, Computer Services, Internet, Software
Qualitative	Total amount of corporate or group donations/community investments made to registered not-for-profit organisations	All

The 'Exposure' factor in FTSE Russell's ESG Ratings

The ESG Ratings service operated by FTSE Russell identifies 14 Themes spread across the three ESG pillars, most of which include several relevant quantitative indicators. Its methodology includes 'Exposure', which categorises the materiality of the 14 Themes for a particular company as High, Medium, Low or Not Applicable. Based on a matrix, this categorisation considers business involvement across different countries and sectors; utilises a variety of robust, globally-accepted frameworks; and can help issuers discern which ESG Themes they are exposed to, and how to begin reporting on them. This can form a starting point for the potential ESG themes an investor may regard as material for a company.

03

Investment grade data

What are the essential characteristics of ESG data?



When using ESG data to inform capital allocation and investment decision-making, investors want ESG information to be complete, consistent, reliable, comparable and clear.

Issuers should ensure that the data they provide is accurate, timely, aligned with the issuer's fiscal year and business ownership model (i.e. aligned boundaries), and based on consistent global standards to facilitate comparability.

Raw as well as normalised data should be provided, and your company should offer a balanced view that highlights both positives and negatives in its performance.

To provide investors with a greater degree of confidence in their reported data, some issuers choose to have their ESG data assured.

Characteristics of investment grade data

Accuracy: deploy rigorous data collection systems

Boundaries: align to the fiscal year and business ownership model

Comparability and consistency: use consistent global standards to facilitate comparability

Data provision: provide raw as well as normalised data

Timeliness: provide data to coincide with the annual reporting cycle

External assurance: consider strengthening the credibility of data by having it assured

Balance: provide an objective view, including both favourable and unfavourable information

Accuracy

As an issuer, you should have rigorous data collection systems and processes for ESG. When preparing data collection, you should pay particular attention to:

- **Internal systems:** assess the ability of existing systems (for example internal audit and risk and data control verification systems) to support data collection;
- **Internal assurance:** establish strong internal assurance processes, including having these overseen by or under the governance of the board audit committee;
- **Data quality:** ensure that the quality of the data collected and reported is understood and documented. Issuers should collate information on how the data was compiled, what assumptions were made, and whether any uncertainties or limitations apply to the data. Data sources must be appropriate, reliable and evidenced. Any data challenges should be identified and the implications assessed;
- **Data reliability:** this should be tested through internal reviews and conducted by internal audit. Issuers can also consider engaging third-party assurance providers; and
- **Assumptions:** report key assumptions that underpin reporting.

Boundaries

Issuers need to take account of two distinct sets of boundaries: timeframes and operations.

- **Timeframes:** ESG data should match your fiscal year and hence match the time period for the annual report. This allows investors to cross-use the two different data sets, for example normalising certain ESG data by revenues or staff numbers.

- **Operations:** ESG data should cover 100% of the issuing entity and employ the same principles as financial data. If your company has partial ownership of certain subsidiaries (perhaps without operational control), the data should be reported on a percentage ownership basis in order to accurately reflect the proportional exposure the company has to these businesses, unless national reporting rules have different requirements. In situations where parts of the business were acquired or sold during the reporting period, data should be provided on both a consolidated and separate basis.

Comparability and consistency

In order to allow comparability between peers, it is important to use consistent global standards when reporting. Issuers should use indicators and metrics that are widely used within their sector, aiming to gather data in line with common practice and to report in a similar manner to sector peers. Issuers should consider using standard denominators when normalising data.

The methods used to collect and calculate data should remain consistent year-on-year. If data compilation methodologies or underlying assumptions change, issuers need to explain the changes that have been made. Where these changes have had a significant effect on results, data for previous years should be recalculated using the new methodology or assumptions to enable comparison.

Data provision

Generally, investors will prefer to normalise ESG data themselves so that they can apply their models consistently across companies. They therefore expect issuers to provide raw as well as normalised data. However, issuers should be aware of ways they can support investors in using and interpreting the results:

- **Contextual data:** investors are interested in putting data into context. Companies can help by providing, in a readily accessible manner, measures of financial activity such as turnover, the countries and markets in which they operate, the number of staff and contractors and, where relevant, the quantity, weight or volume of product outputs;
- **Normalised data:** interpretation of progress around targets that are set on a normalised basis can be useful for investors. This should be provided alongside – not instead of – raw data; and
- **Explanation:** issuers should supplement quantitative data with narrative explaining the factors that have influenced performance, whether positively or negatively. Further, where there are core business differences or client segments that explain performance relative to peers, these should also be explained.

Timeliness

It is best practice to provide ESG data at the same time as the annual report and accounts are published, or as soon as possible afterwards.

A company may need to communicate sooner when a significant incident or controversy has taken place, or has been alleged. In these situations, investors do not expect to wait for the next annual reporting cycle.

External assurance

As an issuer you may seek to strengthen the credibility of your ESG data through external assurance. This can be conducted through the same processes as financial reporting, using qualified auditors. We recommend that the levels, scope and process adopted for external assurance are clearly described in the report.

Balance

Issuers should provide an objective picture of their performance, presenting both favourable and unfavourable information clearly and in full to aid the reader's understanding. Efforts to avoid or obscure certain information or aspects of performance will inevitably lead to questions from investors and may create an environment of mistrust.

Data on more difficult subjects should be set out alongside explanations and commentary. Where influenced by unfavourable occurrences or market conditions, a full explanation detailing organisational learning and changes resulting from the experience will reassure investors.

“We are active users of ESG data in our investment process. The quality of data provided by issuers has improved and we would like to see momentum continue and build. ESG data influences how we invest. We therefore need companies to report on ESG with the same level of diligence, controls and precision as they do for the data provided in their annual report and accounts.”

Trevor Green

Head of UK Equities, Aviva Investors

INVESTMENT GRADE DATA FOR SMALLER ISSUERS



The importance of providing investors with investment grade data applies to smaller issuers too, as the quality of this information informs investment decision-making.

Smaller issuers should aim to follow the seven criteria described in this chapter, taking a pragmatic approach where necessary. For example, ESG data collection systems and processes may be inadequate at first; however, it is better to start reporting and to improve systems over time than not to report at all.

Example



Index membership: FTSE 100
ICB subsector: Industrial & Office REITs

A FTSE 100 Real Estate Investment Trust (REIT) reports its ESG performance data online, and through its annual reporting. The business' sustainability strategy prioritises job creation, efficient use of natural resources and sustainable design, and its data disclosure aligns with these focus areas, offering highlights, raw numbers and discussion around performance.

As environment and energy data is considered to be of particular importance, the business reports against frameworks published by the Climate Disclosure Standards Board (CDSB) and the European Public Real Estate Association (EPRA). These standards commit them to reporting emissions both in absolute terms and in a format that enables investors to compare their data with others in the sector.

The company also provides a dedicated PDF presenting its environmental and energy data on an absolute and like-for-like portfolio basis for its properties, with comparisons to previous years. They also offer an energy reporting methodology document that explains their approach, boundaries, scope, reporting period, targets and measures. This data is also included in the 'Business Analysis' section of their annual report, with accompanying discussion and trend data.

04

Global frameworks

What are the most important ESG reporting standards?



To anyone unfamiliar with ESG reporting, the volume of standards, frameworks and data requirements can seem overwhelming. Even for more experienced issuers, it can be a challenge to identify the indicators and standards which are most relevant to their investors.

While we are some way from a global consensus on reporting standards, the frameworks developed by the following organisations (in no specified order) are the ones most widely cited by investors: the Global Reporting Initiative (GRI), the International Integrated Reporting Council (IIRC), the Sustainability Accounting Standards Board (SASB), the UN Global Compact, the CDP (formerly the Carbon Disclosure Project), the Climate Disclosure Standards Board, and the FSB Task Force on Climate-Related Financial Disclosures.

FTSE Russell has consolidated indicators from different global standards and developed an Exposure framework. This identifies indicator applicability for different types of company based on industrial and geographic presence.



Despite the improvements in the quality and quantity of ESG data being provided by companies, this data continues to be regarded as difficult to compare. We are in the middle stage of global standardisation, with many organisations – standard setters, issuers, investors – defining what it is they need from ESG data, how this data is to be used, how its quality is to be assured, and how it is to be presented or reported.

Progress on standardisation will help to move sustainability into the mainstream dialogue between issuers and investors. Increasing use of global standards and frameworks by companies has a key role to play in making information more available, consistent and reliable. For example, according to KPMG's 2015 Survey of Corporate Responsibility Reporting, 61% of European corporate responsibility reporters used the GRI framework⁷. Furthermore, 93% of FTSE 100, 64% of the FTSE 350 and 45% of the top 100 on Borsa Italiana reported to CDP on climate change⁸.

61%

of European sustainability reporters use GRI

The leading global ESG frameworks



CDP (formerly the Carbon Disclosure Project)

CDP collects standardised information from companies on climate change and the use of natural resources such as water and soft commodities.
www.cdp.net

Climate Disclosure Standards Board (CDSB)

The CDSB Framework helps companies explain how environmental matters affect their performance and show how they are addressing associated risks and opportunities to investors in annual or integrated reports.
www.cdsb.net

Global Reporting Initiative (GRI)

GRI Sustainability Reporting Standards are the most widely used standards for reporting on ESG impacts globally, and have been developed over many years through multi-stakeholder contributions. GRI Standards aim to meet the information needs of all stakeholders, and the modular structure supports both comprehensive reports and selected disclosures.
www.globalreporting.org

Integrated reporting

The Integrated Reporting Framework helps companies to produce a concise, investor-focused report that looks at an issuer's performance and prospects through the lens of six 'capitals' (financial, manufactured, human, natural, intellectual, social and relationship).
www.integratedreporting.org

Sustainability Accounting Standards Board (SASB)

SASB issues sustainability accounting standards that help public corporations disclose material and decision-useful information to investors in their mandatory filings, based on their industry, in line with the notion that under existing regulation material information should be disclosed in the Forms 10-K or 20-F.
www.sasb.org

UN Global Compact (UNGC)

The Global Compact requires companies to commit to a set of ten universal principles concerning human rights, labour, environment and anti-corruption.
www.unglobalcompact.org

“Consistent global frameworks provide an essential tool to allow investors to analyse and compare ESG risks across companies and sectors.”

Rod Paris
CIO, Standard Life Investments

Example



Index membership: FTSE MIB
ICB subsector: Utilities

A utility group operating in Europe and Latin America has significant exposure to stakeholders whose support is critical to its license to operate. The company addresses this challenge by clearly identifying and disclosing both the most significant ESG issues and its stakeholder engagement process, and by rigorously organising its sustainability report around the ESG issues thus identified. The company's progress on its sustainability plan is mapped against the Sustainable Development Goals throughout the report. The report is prepared in compliance with GRI G4 guidelines (“in accordance – core option”), with references to this standard clearly guiding the reader through the various sections. ESG information is externally verified through limited assurance by independent auditors.





New contributions to global standards

Among the frameworks which are likely to define the next decades of global reporting and disclosure are:

- the Sustainable Development Goals (SDGs) specified in the UN's '2030 Agenda for Sustainable Development'; and
- the recommendations of the Financial Stability Board's Task Force on Climate-Related Financial Disclosures.

Although coming from very different directions and starting points, both initiatives could play a significant role in the global harmonisation of ESG measurement to the benefit of both issuers and investors.

The UN Sustainable Development Goals

The 17 Sustainable Development Goals – and 169 associated targets – were adopted by the General Assembly of the United Nations in September 2015 to inform a global action plan on 'people, planet and prosperity' through to 2030. The value of the framework that the SDGs set out lies in its universality and bottom-up nature, reflecting the fact that it stems from an agreement reached after a long process of international negotiations and consultations involving governments, businesses and civil society.

The 17 SDGs can provide a useful and internationally recognised framework to shape and prioritise business plans and associated reporting. They are consistent with a number of the leading global ESG reporting frameworks⁹ and are reflected in a growing number of ESG assessment frameworks including FTSE Russell's ESG Ratings Model. Measuring progress against relevant sustainable development goals and targets enables the harmonisation and comparability of sustainability investments and actions on a global scale.

A summary of the SDG framework is presented graphically. For more information, please visit the UN Sustainable Development Knowledge Platform at <https://sustainabledevelopment.un.org>

The Financial Stability Board Task Force on Climate-related Financial Disclosures

Background

In December 2016 the Financial Stability Board Task Force on Climate-related Financial Disclosures (TCFD) published its recommendations. This initiative was set up following a request from the G20 in order to avoid potential negative impacts on the stability of financial markets.

The rationale for this was that appropriate disclosures were needed for financial firms to manage and price climate risks and to take lending, investment or insurance underwriting decisions based on their view of low carbon economy transition scenarios. Effective disclosure of climate-related financial risks will help avoid an abrupt repricing of risk and impacts on market stability.

The task force has developed a set of recommendations for consultation that aim to support consistent, comparable, reliable, clear and efficient climate-related disclosures by financial and non-financial companies.

TCFD recommendations and supporting recommended disclosures

Governance	Strategy	Risk management	Metrics and targets
Disclose the organisation's governance around climate-related risks and opportunities	Disclose the actual and potential impacts of climate-related risks and opportunities on the organisation's businesses, strategy and financial planning	Disclose how the organisation identifies, assesses and manages climate-related risks	Disclose the metrics and targets used to assess and manage relevant climate-related risks and opportunities
Recommended disclosures a. Describe the board's oversight of climate-related risks and opportunities b. Describe the management's role in assessing and managing climate-related risks and opportunities	Recommended disclosures a. Describe the climate-related risks and opportunities the organisation has identified over the short, medium and long term b. Describe the impact of climate-related risks and opportunities on the organisation's businesses, strategy and financial planning c. Describe the potential impact of different scenarios, including a 2°C scenario, on the organisation's businesses, strategy and financial planning	Recommended disclosures a. Describe the organisation's processes for identifying and assessing climate-related risks b. Describe the organisation's processes for managing climate-related risks c. Describe how processes for identifying, assessing and managing climate-related risks are integrated into the organisation's overall risk management	Recommended disclosures a. Disclose the metrics used by the organisation to assess climate-related risks and opportunities in line with its strategy and risk management process b. Disclose Scope 1, Scope 2, and if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks c. Describe the targets used by the organisation to manage climate-related risks and opportunities and performance against targets

The task force's recommendations very closely align with our Guidance for ESG Reporting although the scope of our guidance is more broadly applicable across all ESG Themes. Whilst the TCFD is focused on material risks and opportunities from climate change and the transition to a green economy many of its principles are applicable to other sustainability themes too.

Recommendations

The task force recommends that climate-related financial disclosures should be made in public financial filings such as annual reports. They believe that since climate change often poses material risks their framework provides a useful basis for complying with legal obligations in many jurisdictions, for listed companies to disclose material risks. To ensure robust information the task force recommends governance controls such as review by Chief Financial Officers and audit committees. The task force recommendations set out 'Principles for Effective Disclosures' which closely align with those set out here in Chapter 03, Investment Grade Data.

The more specific disclosures that are recommended fall into four categories; Governance, Strategy, Risk Management and Metrics & Targets. The task force high level specific disclosure recommendations are summarised in the table above across all four of these categories.

These disclosures above are relevant across all industrial sectors. The task force has also developed much more sector-specific guidance set out for the following industries and groups:

- **Financials:** Banks, Insurance Companies, Asset Owners, Asset Managers; and

- **Non-Financials:** Energy, Transportation, Materials and Buildings, and Agriculture, Food and Forest Products.

The task force also places some importance on scenario analysis and has published a technical supplement setting out the use of scenario analysis, related considerations, analytical choices, climate-related scenarios and use of leading public climate scenarios.

LSEG welcomes the TCFD recommendations

London Stock Exchange Group welcomes these recommendations and sees them as an important step in driving improved global consistency in voluntary global reporting standards. Please review the full guidance on www.fsb-tcdf.org

The recommendations have many implications for our business: for our own reporting as a listed company, for our work with issuers including this Guidance, and for our information services to investors, including benchmarks. LSEG and FTSE Russell, in particular, intend to play a critical role enabling the flow of information envisioned by the TCFD. FTSE Russell's Climate Change Criteria (which form part of the ESG Model) in many cases map to the recommended disclosures, and as an immediate step, FTSE Russell is reviewing them closely to identify new indicators and to align existing ones. The TCFD also cover disclosure of opportunities related to green products. This supports FTSE Green Revenues data model and aligns with Chapter 07 of this Guidance. LSEG is also well positioned to support and facilitate the further refinement of metrics through collaboration with issuers and investors, and looks forward to exploring with the TCFD how to support this important work.

This information is based on the TCFD recommendations for consultation that were published in December 2016. The final recommendations are expected to be published in June 2017.

05

Reporting formats

How should ESG data be reported?



Companies can report ESG information in their annual report, in a standalone sustainability report or in an integrated report. The choice of reporting formats may involve trade-offs between breadth and depth, between focusing on material issues and covering a wider horizon that addresses the relationship between ESG and business strategy. It is often unclear which of these is most useful to investors.

Issuers can take practical steps to ensure that their ESG disclosures are relevant to their investors. You can ensure that your reported data is of investment-grade quality, set out your views on materiality, and explain the strategic relevance of these ESG issues to your business.

There are different advantages to each type of reporting, and each issuer should consider which approach will best suit their own needs and those of their investors.

Remember that reporting is just one part of the wider dialogue you have with your investors. You should see ESG reporting, irrespective of the specific format, as providing a basis for dialogue with your investors, not as a replacement for this dialogue.

Annual report, standalone sustainability report, or integrated report?

Annual report

It is increasingly common for larger listed companies to include explicit references to ESG themes within their annual reports.

The integration of ESG issues into annual reports allows the process of gathering and verifying this data to be integrated into the processes and information controls that are already in place. It also means that ESG data is readily available to investors at the same time as wider information about the company.

In practice, due to concerns about length and complexity, companies tend to discuss relatively few ESG issues in their annual reports. In addition, ESG-related content may not fit the flow and structure of the annual report. These issues can be addressed by publishing methodologies, policies and historical data online, leaving just the key information pertaining to the previous year and to future strategies, plans and targets in the annual report.

Standalone sustainability report

Introducing a standalone sustainability or CSR report is an approach favoured by many issuers. In 2015, 726 non-financial reports were published in the UK and 309 in Italy¹⁰.

These reports provide a clear 'home' for ESG content, consolidating the information in a single location. In addition, a standalone sustainability report does not necessarily need to align with the style of the annual report; issuers can adopt a style of presentation for raw data, tables and charts best suited to ESG information.

The separation can imply that sustainability information is considered separate from the core business of the company. This can be addressed by aligning key areas of the annual report and sustainability report. For example, if a performance trend or external driver is highlighted in the annual report, it should also be addressed in the standalone sustainability report.

Integrated report

The concept of an integrated report is that ESG information and data are presented in an integrated manner within the annual report. This model has been promoted by the International Integrated Reporting Council (IIRC) and aims to offer investors a more rounded, concise and holistic insight into business performance and impact over the short, medium and long term.

Integrated reporters should beware of the implications of reducing the information made available to investors. Although brevity is welcomed by many investors and enables a focus on the most business critical ESG areas, it may mean that investors do not get the breadth of information they need. Investors are diverse and have different ESG needs. Some of them review published reports directly, whereas others access company information (including within analytics, research tools and indexes) through third party data and research providers and index providers. This means that data needs to be easily collectable by these intermediaries – and as a result, integrated reporting should be supplemented by additional, more detailed ESG information delivered via the company's website or through associated published data appendices.

THE DIFFERENT FORMS OF 'CAPITAL'



Capitals (also referred to as 'resources and relationships') are stocks of value or assets that can be enhanced, or diminished, by the activities of a business. The International Integrated Reporting Council lists six capitals in its framework:

- **Financial:** internal and external funds available to a business;
- **Manufactured:** for example, buildings, equipment and infrastructure;
- **Intellectual:** knowledge-based intangibles, for example brands and patents;
- **Human:** people and their capabilities and experience;
- **Social and relationship:** stakeholder and network relationships; and
- **Natural:** environmental resources, such as air, water and land.



Reporting as a complement to dialogue

Reports enable public distribution of ESG information concurrently to all existing and prospective investors. This can complement direct dialogue with investors and also provide a basis for such dialogue – something which can in turn help shape and determine the content of future reports. In other words, high quality reporting should support deeper and more effective direct dialogue with the investor community, not replace it.

Example



Index membership: FTSE Italia Small Cap
ICB subsector: Industrial Goods & Services

A mid-cap manufacturer of components for household appliances listed on Borsa Italiana's premium segment STAR has adopted the IIRC's reporting format for its annual report, published both in Italian and English. The business strategy is broken down into the forms of capital suggested by the Integrated Reporting Framework. It also adopts GRI standards for materiality analysis and KPI disclosure with three year data series provided for each KPI. The intellectual capital section includes detailed research and development indicators, in line with the emphasis placed on innovation and intangible assets described in the company's business model. The governance section is also well developed to meet STAR investors' expectations of a strong sustainability dimension.

An end to survey fatigue

Publishing well considered reports that provide high quality ESG information and data, and placing other relevant information such as policies online, will make it increasingly feasible for you to point those requesting responses to ESG surveys towards your published materials instead.

Optimising communication

There are a number of steps that you can take to ensure your report is of the greatest possible value to investors:

- 1 Separate out policies, processes and methodologies**
 - Annual or sustainability reports featuring large amounts of detail around policies and methodologies can obscure new information and key messages; and
 - Incorporate standing information ('boilerplate') repeated every year in an appendix or separate document, and signpost it from the report.
- 2 Make it easy to find and access**
 - Ensure that the report is prominent. Promote it on the corporate website, including the investor relations section, include a link within news releases to the markets and summarise findings in investor presentations; and
 - Provide data in spreadsheet format, hyperlink to corresponding financial statements, or further ESG information if producing a report online. Data can also be tagged in XBRL, so that it can more easily be pulled out and aggregated by specialist applications. XBRL is a type of extensible markup language used for organising and defining financial data in a standardised way, applying tags to unify and compare different accounting standards.
- 3 Consider language**
 - Ensure the language used, and its accessibility, meet the needs of your investor base.
- 4 Combine data tables and include historical information**
 - Retain three to five years' worth of historical information and data. Where there are significant corporate changes such as acquisitions and de-mergers, the reports and information pertaining to the previous entities should also be retained wherever possible.

06

Regulation and investor communication

**How can companies navigate
regulations and communicate
effectively?**



The volume of regulation concerning ESG reporting has increased substantially in recent years. If regulators in different countries and regions set different reporting requirements and standards, this can be problematic for both issuers and investors.

As a result of this level of activity in ESG reporting, over 80% of the world's top economies by GDP in 2016 mandated ESG reporting in some form¹⁰. Well-crafted disclosure regulation can aid issuers and investors by improving data consistency, availability and reliability, and by helping focus attention on key ESG issues.

Issuers should see regulation as a starting point for reporting. However, rather than taking a minimum compliance approach, you should use regulatory requirements as an opportunity to develop an investor-focused approach to reporting. It is important that, as an integral part of the reporting you're required to produce, you identify and report on what you see as your most material issues.

100+
mandatory
reporting
instruments have
been introduced
across 64
countries¹⁰

Governments around the world, responding chiefly to broader societal awareness around sustainability, have introduced a number of mandatory reporting instruments. In just three years, over 100 new mandatory instruments have been introduced across 64 countries¹¹.

As a result of this level of activity in ESG reporting, over 80% of the world's top economies by GDP in 2016 mandated ESG reporting in some form¹¹.

However, this can often mean that companies will face differing requirements, while investors will be unable to compare data on companies globally.

Reporting standards are still evolving and whilst issuers need to report in a way that is consistent with regulatory reporting requirements, they can also innovate and should aim to report in a manner that is most useful to investors. This can sometimes mean going above and beyond regulation.

UK and Italian regulation

The 2015 update of the Italian Corporate Governance Code, which is applied on a comply-or-explain basis, recommends that the boards of listed companies should take into account any risk that may affect the sustainability of the business in the medium-long term when assessing the company's risk profile. In addition, the Code recommends that the largest companies, namely the constituents of the FTSE-Mib index, should consider whether or not to set up a board committee tasked with supervising sustainability issues related to the company's business.

The UK governance and reporting framework¹² encourages reporting of ESG and non-financial matters through the Guidance on the Strategic Report and Corporate Governance Code requirements for disclosure of principal risks and uncertainties and a viability statement. The 2013 updates to the UK Companies Act 2006 included a number of ESG reporting provisions. UK incorporated quoted companies i.e. those with equity shares listed on London Stock Exchange Main Market, EEA regulated, NYSE or NASDAQ, are expected to explain how they are managing issues such as environmental performance, human rights, social and community involvement and diversity. They are also expected to report on certain statistics, for example Scope¹³ 1 and 2 CO₂ emissions and gender diversity at Board, senior management and whole-company levels.

Requirements differ for companies of different sizes and listed status. For example while all companies are expected to disclose principal business risks, medium-sized companies are not expected to include an analysis of non-financial KPIs. Furthermore, only listed companies are required to contain an overview of the business strategy and model as well as environment, employee, social, community, human rights and diversity information in the strategic report.

EU regulation: the Non-Financial Reporting Directive

The aim of the EU non-Financial Reporting Directive (NFRD) is to establish a minimum standard for ESG reporting across the EU. The Directive requires the largest companies to report on environmental matters, social and employee affairs, human rights and anti-corruption and bribery issues. National governments transposed the Directive into national law in 2016.

The UK's implementation of the EU Non-Financial Reporting Directive builds on earlier provisions to require companies and groups with over 500 employees that are classed as public interest entities (i.e. entities whose activities are of significant interest to the public, and include banks, insurers and quoted companies) to disclose a fuller range of non-financial information in their strategic reports. This requires eligible companies to disclose information on environmental, employee, social and human rights. The framework also requires disclosures on anti-corruption and anti-bribery matters. There is a further requirement for quoted companies to include a description of their diversity policy and how it has been implemented or to explain why one is not relevant.

If the company does not have a policy in relation to any of these matters the company should provide a clear and reasoned explanation as to why it would not be relevant. The first reports under the new requirements should be published in 2018, for financial years commencing in 2017. There is flexibility on how to report and companies can draw on relevant international, European or national guidelines.

The Italian transposition of the Directive in addition requires issuers to adopt global standards wherever possible, or to explain why the company decided to develop its own disclosure approach. Disclosure has also to cover a minimum set of parameters, including energy use from renewable and non-renewable sources, impact on health and safety, and measures aimed at implementing international gender diversity frameworks. The non-financial statement can be part of the annual report, or be a separate document, and it has to be externally verified either by the company's legal auditors or by an auditing firm specially appointed. The statement has to be submitted to the Italian capital markets authority Consob, who is also in charge of monitoring compliance.

Key ESG reporting regulations: Italy, the UK and the EU¹⁴

Country	Institution	Year	Title	Type	Status	Commentary
Italy	Market Participants Associations & Borsa Italiana	2015	Italian Corporate Governance Code	Non-Government Suggested Corporate Governance Disclosure, Voluntary	Issued	The Italian Corporate Governance Committee included ESG risks and governance considerations in its review of the Code issued in July 2015.
	Italian Government	2007	Legislative decree No.32/2007 transposing directive 2003/51/CE and Article 2428 of the Italian Civil Code	Government Imposed Corporate Environmental Disclosure, Mandatory	Issued	States that directors' reports should include financial and non-financial key performance indicators relevant to the specific business of the company, including information relating to environmental matters.
UK	FRC	1992, most recently updated in 2016	UK Corporate Governance Code	Industry Body Led Corporate Governance Disclosure, 'comply or explain'	Issued	For Premium companies listed on the Main Market, the code sets out standards of good practice in relation to board leadership and effectiveness, remuneration, accountability and relations with shareholders, on a comply-or-explain basis.
	UK Government	2015	Modern Slavery Act	Government Imposed Corporate Environmental Disclosure, Mandatory	Issued	Section 54 of the Modern Slavery Act 2015 requires certain organisations to develop a slavery and human trafficking statement each year.
	UK Government	2006, revised 2013	Changes to the Companies Act 2006 (Strategic Report and Director's Report) 2013	Government Imposed Corporate Environmental Disclosure, Mandatory	Issued	Carbon emissions, human rights and diversity reporting required by all listed companies in the Director's Report.
All EU member states	National governments	2016	Transposition of the EU Non-Financial Reporting Directive 95/14	Government Imposed Corporate Environmental Disclosure, Mandatory	Issued	Applies from January 2017 to all listed companies with more than 500 employees, and mandates disclosure of environmental, social (including diversity and human rights) and anti-corruption issues. — Transposed in the UK through the Companies, Partnerships and Groups (Accounts and Non-Financial Reporting) Regulations 2016 n. 1245 — Transposed in Italy through Legislative Decree 30 December 2016 n. 245

Getting value from regulation

Rather than taking a minimum-compliance approach, issuers should use the regulatory requirements as an opportunity to enhance their reporting to investors.

It is critical to move beyond the areas covered in regulation and towards identifying your business's most material ESG themes and the underlying indicators based on global standards. Only then will you be able to produce ESG reporting that aligns closely with your own material issues, and that enables a richer data flow and dialogue with investors to take place.

Going forward, we may see the financial community sharing the responsibility of disclosing alignment with ESG considerations. Article 173 of France's Energy Transition for Green Growth Law which came into effect in early 2016 requires investors to outline how they factor ESG criteria into their investment decisions. As this effectively forces ESG engagement and integration from both sides, it adds still more momentum to the drive for consistency, standardisation and recognition of the global context influencing reporting.

07

Green Revenue reporting

How can issuers get recognition for green products and services?



Around the world, investors want to understand issuers' exposure to green products and services. However, there is limited consistent information available on how issuers are deriving revenue and growth from providing environmental solutions.

As an issuer you should proactively communicate your exposure to the green products and services that enable the transition to the green economy. To do this, you need to identify the parts of your business that manufacture or provide goods, products and services delivering environmental solutions, quantify the associated revenues, and talk about how your investments in innovation and R&D will drive your business's future growth.

Climate risk and rewards

Investors need to understand how companies in their portfolios are changing their exposure to green revenues subsectors and therefore need issuers to provide more detailed revenue breakdown, at a green sub-segment level, to measure this. Some of the world's largest investors are actively allocating additional capital to companies with higher green revenue exposure; so better reporting can directly lead to greater investment flows. This requires you as an issuer to:

- 1 Understand opportunities in the transition to a green economy**
Identify parts of the business that manufacture or provide goods, products and services driving value for the business and delivering environmental solutions.
- 2 Identify green revenues**
Provide details of the revenues resulting from 'green' goods, products and services.
- 3 Connect to your own climate impacts**
Ensure that reporting on green revenues is integrated with both wider financial reporting and with carbon strategy, emissions data and performance reporting.
- 4 Talk about where the future lies**
Discuss how investment in innovation and R&D will support the transition to a green economy.

FTSE Green Revenues data model

FTSE Green Revenues data model measures the green revenues of over 13,000 public companies globally across 60 subsectors; from advanced battery and solar panel manufacture to flood defence construction. For the full list of subsectors, see Appendix ii.



Example

Index membership: FTSE 100
ICB subsector: Speciality Chemicals

A UK chemicals company breaks its revenues into specific sub-segments, enabling investors to understand precisely how much of those revenues make a contribution to the green economy.

For example, it has a segment named 'Precious Metal Products', which it breaks down into two sub-segments, 'Recycling' (revenue gained from providing recycling services) and 'Other activities' (revenue gained from refining and developing paint coats and other products). This allows investors to see that the recycling segment contributes to the green economy, whereas the 'Other activities' do not. Each of these sub-segments is furnished with a separate published calculation sheet.

Index membership: FTSE 100
ICB subsector: Fixed Line Telecommunications

A FTSE 100 telecommunications company has reported its aim as being to 'have helped our customers cut their carbon emissions by at least three times our own end-to-end carbon impact' by 2020. This 3:1 ambition is based on the company's products and services having a carbon abatement effect at least three times the impact of its own emissions (Scope 1, 2 and 3¹³).

By quantifying and reporting the abatement affects of products such as video-conferencing and cloud computing services, the business demonstrates how it is not only prepared for the transition to the green economy but will benefit directly as a result.

“Certain segments of global markets will undergo significant change as the world moves towards Green Revenues. Companies that offer comprehensive reports on the environmental solutions they provide, send a strong signal to capital markets that they are aware of the business opportunities that come with long term trends like the transition to Green Revenues. Companies disclosing their ‘green revenues’ can benefit through greater investment from funds such as ours.”

Maurice Versaevel
Investment Strategist, PGGM

RENEWABLE FUNDS

An emerging asset class associated with the transition to a green economy is represented by renewable infrastructure funds. Renewable infrastructure funds listed on London Stock Exchange are worth a combined £3.4bn and have raised £2.7bn since 2013. For investors to be able to report on the impact of these funds on the exposure of their portfolios to the green economy, clarity and details regarding the type of assets these funds are invested in are extremely useful. These could include the renewable energy generation capacity and the equivalent estimated GHG emissions avoided through the infrastructure projects that are financed or in which the funds are invested.

08

Debt finance

What should debt issuers report and what are the emerging standards here?



Investors are increasingly interested in the ESG characteristics of fixed income issuers. They recognise these issues as sources of risk and of opportunity. In addition, with the growth of the green bond market, investors are also interested in financing that is linked to specific activities and projects delivering environmental benefits.

The rest of this Guidance is also applicable at an entity level to issuers of bonds considering their ESG reporting. Issuers may also wish to consider issuing green bonds to access new sources of capital. However, this requires a number of criteria to be satisfied. Issuers need to ensure that proceeds are fully directed towards green projects, that there are clear criteria for project selection and evaluation, that proceeds are only used for green projects, and that information on the use of proceeds is published regularly.

To be included on the London Stock Exchange green bond segment, an issuer also needs to use an external reviewer.

As investors increasingly need ESG information at entity level for all corporate bond issuers, the previous sections of this Guidance are also relevant for fixed income issuers. However, the data needs are likely to be subtly different for bond investors, especially with regard to materiality. The materiality lens for a bond investor is typically tighter than for equities, as only ESG factors that could potentially impact the likelihood of a bond issuer paying interest or capital repayment at the end of the bond's duration would be material, while for equity investors a wider range of factors can impact company value and share price returns.

Standards for information on fixed-income reporting are also developing around green finance through the relatively new concept of green bonds. The standards for green bonds relate to reporting on the use of proceeds with respect to positive green impacts. There is also the early emergence of social bonds which, in a similar manner, consider the use of proceeds with respect to positive social impacts.

Green bonds: bringing green finance to scale

There is significant momentum behind 'green bonds' – fixed-income instruments that are designed to help fund environmentally friendly projects. Major global institutions, industry bodies and policy makers, including the G20, have backed the development of this market. In June 2015, London Stock Exchange (LSE) became the first exchange globally to launch a comprehensive dedicated green bond offering.

G20 Green Finance Study Group (GFSG)



Chaired by China and the UK, the G20's Green Finance Study Group convenes a group of countries and institutions including the United Nations Environment Programme to explore the potential for green finance to contribute to sustainable development, overcome barriers and create an enabling environment for change. China is one country transforming its financial system to facilitate green instruments, including green bonds, green credit, green equity index products and carbon finance.

To be admitted on these segments, issuers are required to submit an external review document verifying the 'green' nature of the bonds. Ongoing disclosure and impact reporting are also encouraged to enable investors to make their own investment assessments regarding these instruments.

The UK already has some of the highest standards of disclosure and regulatory oversight. Not only does this benefit issuers by associating them with a strong reputation for quality, but it benefits investors too – ensuring greater transparency. The additional certification on the green bond segments is vital to attracting more investors who can then have confidence in the integrity of the bond and its green proceeds.

The first green bond in London was listed in 2012 by the Nordic Investment Bank. As of January 2017, there were 40 green bonds listed across LSE's Main Market and Professional Securities Market (PSM). Issued by 15 different institutions, including supnationals, local governments and municipalities as well as corporates, they have raised over \$10.5bn in seven currencies through a range of transactions, many of which are world firsts in terms of currency, geography or structure.

According to the Climate Bonds Initiative's State of the Market 2016 report¹⁵, over \$42bn of green bonds were listed in 2015. Furthermore, 82% of the green bond market is investment grade (BBB rated or higher) and more than half of that is AAA rated.

In parallel to this sharp growth, concerns have arisen about definitions and transparency. Which projects meet sufficiently 'green' standards? How can investors be sure that their funds will achieve impact?

There are emerging approaches to meeting this need for clarity in the market. The biggest step came with the publication of the Green Bond Principles in 2014.

Focusing on transparency and disclosure, these aim to provide issuers with the key components required for listing on the green bond market.

82%

of the green bond market is investment grade (BBB rated or higher)

Example



Index membership: FTSE Small Cap
ICB subsector: Waste & Disposal Services

A FTSE Small Cap company active in the waste management sector publishes a corporate responsibility report that analyses the environmental and social performance of its business by operating divisions, based on GRI standards. A very clear summary table of performance indicators and five-year targets is followed by deep-dive sections dedicated to environmental performance (30 KPIs), Health & Safety (8 KPIs) and people (17 KPIs). All narrative sections clearly identify the link between specific sustainability themes and the company's business model. More detailed KPIs are provided in a separate document available online, which also reports on the use of the proceeds raised through a green bond issuance. The report describes the initial proposed allocation of funds to the sustainable projects specified in the green bond issuance documents, and the actual allocation of funds. For every project an overview of the associated environmental benefits is provided.

“We see ESG factors as very important investment considerations in all asset classes: green bonds is a way for issuers to show investors that they hardwire ESG into the capital structure. As such, we look not only into expanding green bond exposure per se, but also to issuers that issue green bonds.”

Ulf Erlandsson
Senior Portfolio Manager, AP4

Green Bond Principles – what investors need to know



The Green Bond Principles (GBP) define green bonds as ‘any type of bond instrument where the proceeds will be exclusively applied to finance or re-finance in part or in full new and/or existing Green Projects... and which are aligned with the four core components of the GBP’.

GBP core components can be summarised as:

1. Use of proceeds – measuring green impact

Proceeds should be fully directed towards ‘Green Projects’. That is, they will address key areas of environmental concern such as climate change, evolution of natural resource depletion, biodiversity loss and/or pollution.

These categories are purposefully broad and non-exhaustive. The GBP’s website provides examples on what projects qualify, but acknowledges that definitions can vary.

2. Process for project evaluation and selection

Issuers should be transparent in how they determine the eligibility of their projects, outlining how they will meet critical environmental sustainability objectives.

In practice, this means articulating targets for the environmental benefits that the projects will achieve, for example reductions in CO₂ and water emissions.

3. Management of proceeds

Issuers should transparently track net proceeds, allocating them in a segregated sub-account, sub-portfolio or otherwise. The Principles recommend auditing as an additional level of robustness.

Alignment with this Component requires confirmation that the proceeds from the green bond are used only for the nominated projects.

4. Reporting

Information on the use of proceeds, including the amounts allocated at project level and the impacts achieved and expected, should be published annually until full allocation and processing thereafter.

Overall, issuers are recommended to use an external reviewer. The external review can take the form of a consultant review, verification, certification, and/or rating.

Transparency and access to information are central to mobilising private sector money and mainstreaming environmental risks. One of the great challenges for green bonds is the further development of impact reporting standards as there are no universally agreed metrics or formulas for quantifying or calculating the environmental impact of the underlying projects.

Climate Bonds Initiative



Climate Bonds Initiative is an investor-focused, not-for-profit organisation whose purpose is to mobilise capital markets for climate change solutions. Its Climate Bonds Taxonomy has been one of the first attempts to provide broad guidance for prospective green bond and climate bond issuers and investors by encouraging common definitions across global markets, in a way that supports the growth of a cohesive thematic bond market. Eight specific ‘climate bond’ sectors have been identified for which detailed eligibility criteria have been developed. Sector specific standards currently exist for solar, wind, low carbon economy buildings, geothermal and low carbon economy transport whilst standards for water, bioenergy and agriculture and forestry are also under development. The Climate Bonds Standard (v2.0), which fully integrates the Green Bond Principles,

consists of a certification process, pre- and post-issuance requirements and a set of sector-specific eligibility and guidance documents. Bonds are accorded the status of Certified Climate Bonds when they are verified as adhering to the Climate Bonds Standard, providing investors with assurance about their contribution to the delivery of a green economy.

The certification process is summarised as:

1. Identify qualifying projects and assets, based on the Climate Bond Standards criteria;
2. Arrange an independent review; and
3. Track and report; the value of the assets must stay equal to, or greater than, the value of the bond, and reporting to investors must take place each year.



‘Climate-aligned’ bonds

According to the Climate Bonds Initiative’s State of the Market 2016 report, ‘climate-aligned’ bonds have reached a total value of \$694bn. These bonds include not just labelled green bonds but those that are financing low-carbon and climate adaptation infrastructure, and are issued by companies with over 95% of revenue derived from climate-aligned assets.

Social bonds

ICMA and the Green Bond Principles have published guidance for issuers aiming to finance projects with social objectives. Focused on populations that are living under the poverty line, excluded, and/or vulnerable, social projects can include providing development infrastructure and services such as sanitation, clean drinking water, affordable transport, education and healthcare as well as affordable housing, employment projects, food security and socioeconomic advancement.

As with green bonds, social bond issuers should apply the four core components of the GBP (use of proceeds, process for project evaluation and selection, management of proceeds, and reporting), and external reviews.

Charity bonds

In July 2014, London Stock Exchange launched a dedicated ‘retail charity bond’ segment on the Order book for Retail Bonds (ORB) in response to increased investor demand for instruments with an ethical impact. ORB is London Stock Exchange’s flagship electronic retail bond market, offering issuers a primary market for the issuance and distribution of retail-eligible bonds as well as a liquid, transparent secondary market for investors. A total of 56 dedicated issues raised approximately £6bn between 2010 and 2016.

In June 2015, in order to support future issuances, London Stock Exchange waived admission fees for charity bonds issued on ORB. Since the launch of the retail charity bond segment, London Stock Exchange has welcomed three Retail Charity Bonds raising a total of £68m. Issuers include Golden Lane Housing, Hightown Housing Association and Charities Aid Foundation.

Summary

With data on ESG data now frequently being used alongside other financial and strategic information in investment analysis and decision making, there is a compelling case for companies strengthening their reporting and communication by incorporating ESG issues.

Investors want to understand how well companies are managing the risks associated with ESG issues, seeing this as a key test of management quality. They are also interested in the opportunities presented by the green economy – and increasingly, they are allocating capital to companies that are well equipped to benefit from this.

To respond to the growing interest, issuers should provide investment-grade data and information. Specifically, they should:

- 1** Explain the relevance of environmental, social and governance factors to their business models and strategy. These factors should not be 'bolt-on' but an integrated component of business drivers and considerations.
- 2** Explain how ESG issues may affect their business, e.g. through legislation, reputational damage, employee turnover, licence to operate, legal action or stakeholder relationships, and how these impacts may affect business strategy and financial and operational performance.
- 3** Explain how they intend to access the new opportunities and revenue streams generated by green and socially beneficial products and services. In this context they should explain how their investments in innovation and R&D will drive future growth for the business.

- 4** As the most important part of the above, identify the parts of the business that manufacture or provide goods, products and services delivering environmental solutions and supporting the transition to a green economy; and break down and quantify the associated revenues.
- 5** Provide data that is accurate, timely, aligned with their fiscal year and business ownership model, and based on consistent global standards to facilitate comparability.
- 6** Recognise that reporting is just one part of the wider dialogue they have with their investors. ESG reporting, irrespective of the specific format, provides a basis for dialogue with investors but is not a replacement for it.

How LSEG supports ESG reporting and communication

Beyond its contribution to public policy discussions on driving global standardisation of ESG reporting, LSEG supports issuers and investors in making ESG communication effective.

1 Capacity building and supporting issuers in reporting:

- We provide training, including through our Academy, and host events that clarify good practice in corporate reporting;
- Through our unique open access technology platform ELITE Connect, we allow listed companies to manage their local and global investor relations efforts and to improve their communications with their shareholders and intermediaries. This platform enables issuers to showcase their company story and ESG activities through digital meetings and webcasting;
- In 2000 Borsa Italiana established the STAR segment which includes mid-cap companies with high corporate governance standards; and
- Borsa Italiana regularly organises thematic road shows to facilitate dialogue between listed companies and investors. Sustainability topics are increasingly part of these initiatives.

2 Profiling issuers on our markets with green or other sustainability attributes:

- London Stock Exchange has developed one of the world's first green bond segments based on strict admission criteria to support the growth of this market segment; and
- On Borsa Italiana, listed companies can include information on sustainability strategies, targets and performance as an integral part of their company profiles.

3 Providing investors with ESG data, analytics and indexes:

- FTSE Russell has pioneered ESG indexes for over 15 years since the launch of the FTSE4Good Index Series and now provides a comprehensive range of ESG ratings and data;

- We collect ESG data from public sources and contact over 4,000 companies to check that information with them directly;
- We track the proportion of companies' revenues that derives from products and services serving the transition to a green economy through FTSE Green Revenues data model; and
- We support stock exchanges including Madrid, Johannesburg and Malaysia in creating dedicated ESG indexes for their markets.

4 Contributing to global policy development and dialogue

- We contribute to consultations on ESG reporting. Recent responses have included those regarding the EU Non-Financial Reporting Guidance, the FSB Task Force on Climate-Related Financial Disclosures, the United States Securities and Exchange Commission's consultation on material disclosures, and the UK Government consultation on the amendments to the Companies Act;
- We play an active role in a number of global associations including the UN-backed PRI and Sustainable Stock Exchanges initiative, bringing together a wide range of sustainable investment association;
- We promote good standards in the UK and set the Italian corporate governance code. In 2016, we published 'Creative Tension? 25 Years On', a collection of essays on corporate governance by leading industry figures; and
- We convene market participants, issuers and investors to improve data, dialogue, and, ultimately, capital flows.

Appendices

Appendix i – Materiality by sector

Quantitative indicators to consider reporting against: These are drawn from the FTSE Russell ESG Ratings Model and their materiality for different ICB¹⁶ Industries is highlighted as either 'likely' or 'possible'. Note that these indicators themselves draw from a wide variety of pre-existing established standards such as GRI and CDP.

FTSE Russell quantitative ESG data points

Indicator sub code	Indicator description wording	Basic Materials	Consumer Goods	Consumer Services	Financials (& Real Estate)	Health Care	Industrials	Oil & Gas	Technology	Telecommunications	Utilities
Environmental											
ECC14	Total operational GHG emissions data (Scope 1 & 2) is disclosed	Likely									
ECC15	Total energy consumption data is disclosed	Likely									
ECC19	Disclosure of fleet fuel efficiency data by the following countries/regions: USA; Japan; China; India; Brazil; Russia; Western Europe; CEE (Central and Eastern Europe)		Possible								
ECC22	Disclosure of Oil & Gas Reserves by type (i.e. Proven, Probable and Possible Reserves): Total Oil Reserves; Total Gas Reserves; Ratio of Oil:Gas; Oil & Gas: barrels of oil equivalent of reserves							Likely			
ECC23	GHG emissions per megawatt-hr										Likely
ECC30	Disclosure of coal reserves by type (Proven, Probable and Possible Reserves)	Possible									
EBD11	Disclosure of certified palm oil as a percentage of total palm oil produced/used/processed		Possible								
EBD12	Disclosure of certified forest products (e.g. FSC, RAN) as a percentage of total forest products produced/used/processed	Possible									
EBD13	Disclosure of certified seafood (e.g. MSC, ASC) as a percentage of total seafood produced/used/processed		Possible								
EPR18	Disclosure of NOX emissions (tonnes)	Likely	Likely				Likely	Likely			Likely
EPR19	Disclosure of SOX emissions (tonnes)	Likely	Likely				Likely	Likely			Likely
EPR21	Disclosure of volatile organic compounds (VOC) emissions (kilograms)	Likely	Likely				Likely	Likely			Likely
EPR24	Disclosure of hazardous waste generation (tonnes)	Likely	Likely				Likely	Likely			Likely
EPR25	Disclosure of non-recycled waste generation (tonnes)	Likely	Likely				Likely	Likely			Likely
EPR26	Disclosure of waste recycled (tonnes)	Likely	Likely				Likely	Likely			Likely
EPR27	Total costs of environmental fines and penalties during financial year	Likely	Likely				Likely	Likely			Likely
EPR28	Percentage of sites covered by recognised environmental management systems such as ISO14001 or EMAS	Likely	Likely				Likely	Likely			Likely
ESC30	Total GHG emissions data on properties disclosed				Possible						
ESC31	Total energy usage data on properties disclosed				Possible						
ESC32	Total water usage data from property portfolio disclosed				Possible						
EWT11	Total water use / water extraction data is disclosed	Likely	Likely				Likely	Likely			Likely
EWT12	Percentage of water recycled (non-potable) for use in own operations	Likely	Likely				Likely	Likely			Likely
Governance											
GAC12	Disclosure of total amount of political contributions made	Likely									
GAC13	Disclosure of number of staff disciplined or dismissed due to non-compliance with anti-corruption policy/policies	Likely									
GAC14	Disclosure of cost of fines, penalties or settlements in relation to corruption	Likely									
Social											
SHR17	Total amount of corporate or group donations / community investments made to registered not-for-profit organisations:	Likely									
SHS12	Percentage of sites with OHSAS 18001 certification	Likely					Likely	Likely			Likely
SHS13	Number of staff trained on health and safety standards within the last year	Likely					Likely	Likely			Likely
SHS15	Lost-time incident rate, over last three years	Likely					Likely	Likely			Likely
SHS38	Number of work-related employee fatalities	Likely					Likely	Likely			Likely
SHS40	Number of work-related contractor fatalities	Likely					Likely	Likely			Likely
SLS24	Full-time staff voluntary turnover rates	Likely					Likely	Likely			Likely
SLS25	Percentage of employees that are contractors or temporary staff	Likely					Likely	Likely			Likely
SLS26	Amount of time spent on employee development training to enhance knowledge or individual skills, using: a) Total hours as a company, or b) Average hours per employee	Likely					Likely	Likely			Likely

For more details on the FTSE Russell ESG Methodology and indicators please see www.ftserussell.com/esg

■ Likely relevance
■ Possible relevance

Appendix ii – FTSE Green Revenues Definitions

FTSE Green Revenues Classification System

Overview	Green Revenues subsector	Description
Energy Generation	EG Bio Fuels	Companies generating power through the use of crops, plants and other organic materials as fuels where the reduction of greenhouse gas emissions is a significant function of the power generation process either on a life-cycle analysis basis or at the point of generation.
	EG Clean Fossil Fuels	Companies generating power using fossil fuels such as coal, oil or gas where the reduction of greenhouse gas emissions is a significant function of the power generation process either on a life-cycle analysis basis or at the point of generation through the use of external technologies.
	EG Geothermal	Companies generating power through the utilisation of natural geothermal heat sources created by planetary accretion or radioactive decay either above or below ground where the reduction of greenhouse gas emissions is a significant function of the power generation process either on a life-cycle analysis basis or at the point of generation.
	EG Hydro	Companies generating power through the management of stored or redirected water within a controlled environment where the reduction of greenhouse gas emissions is a significant function of the power generation process either on a life-cycle analysis basis or at the point of generation.
	EG Integrated Energy Generation	Companies whose activities include more than one EG subsector.
	EG Nuclear *	Companies generating power from a process of sustained nuclear fission or fusion within a controlled environment where the reduction of greenhouse gas emissions is a significant function of the power generation process either on a life-cycle analysis basis or at the point of generation.
	EG Ocean & Tidal	Companies generating power from a process of extracting kinetic energies from the motions and currents in ocean waters or near shore and offshore tidal currents where the reduction of greenhouse gas emissions is a significant function of the power generation process either on a life-cycle analysis basis or at the point of generation.
	EG Solar	Companies generating power using radiant light and heat generated by the Sun which is captured either via Thermal, Photovoltaic, Concentrated Array or Thin Film processes where the reduction of greenhouse gas emissions is a significant function of the power generation process either on a life-cycle analysis basis or at the point of generation.
	EG Waste to Energy	Companies generating power through the use of domestic, agricultural and commercial refuse as fuel for both thermal and non-thermal energy creation where the reduction of greenhouse gas emissions is a significant function of the power generation process either on a life-cycle analysis basis or at the point of generation.
	EG Wind	Companies generating power using the kinetic energy of the air in motion which is captured by turbines and other devices where the reduction of greenhouse gas emissions is a significant function of the power generation process either on a life-cycle analysis basis or at the point of generation.
Energy Equipment	EQ Bio Fuels	Companies providing goods, products and services including components, specialist materials, bespoke manufacturing and maintenance processes, design and operational support capabilities that enable the generation of power through the use of crops, plants and other organic materials as fuels where the reduction of greenhouse gas emissions is a significant function of the power generation process either on a life-cycle analysis basis or at the point of generation.
	EQ Clean Fossil Fuels	Companies providing goods, products and services including components, specialist materials, bespoke manufacturing and maintenance processes, design and operational support capabilities that enable the generation of power using fossil fuels such as coal, oil or gas where the reduction of greenhouse gas emissions is a significant function of the power generation process either on a life-cycle analysis basis or at the point of generation through the use of external technologies.
	EQ Geothermal	Companies providing goods, products and services including components, specialist materials, bespoke manufacturing and maintenance processes, design and operational support capabilities that enable the generation of power through the utilisation of natural geothermal heat sources created by planetary accretion or radioactive decay either above or below ground where the reduction of greenhouse gas emissions is a significant function of the power generation process either on a life-cycle analysis basis or at the point of generation.
	EQ Hydro	Companies providing goods, products and services including components, specialist materials, bespoke manufacturing and maintenance processes, design and operational support capabilities that enable the generation of power through the management of stored or redirected water within a controlled environment where the reduction of greenhouse gas emissions is a significant function of the power generation process either on a life-cycle analysis basis or at the point of generation.
	EQ Integrated Energy Equipment	Companies whose activities include more than one EQ subsector.

Overview	Green Revenues subsector	Description
Energy Equipment	EQ Nuclear *	Companies providing goods, products and services including components, specialist materials, bespoke manufacturing and maintenance processes, design and operational support capabilities that enable the generation of power from a process of sustained nuclear fission or fusion within a controlled environment.
	EQ Ocean & Tidal	Companies providing goods, products and services including components, specialist materials, bespoke manufacturing and maintenance processes, design and operational support capabilities that enable the generation of power from a process of extracting kinetic energies from the motions and currents in ocean waters or near shore and offshore tidal currents.
	EQ Solar	Companies providing goods, products and services including components, specialist materials, bespoke manufacturing and maintenance processes, design and operational support capabilities that enable the generation of power using radiant light and heat generated by the Sun which is captured either via Thermal, Photovoltaic, Concentrated Array or Thin Film processes.
	EQ Waste to Energy	Companies providing goods, products and services including components, specialist materials, bespoke manufacturing and maintenance processes, design and operational support capabilities that enable the generation of power through the use of domestic, agricultural and commercial refuse as fuel for both thermal and non-thermal energy creation.
	EQ Wind	Companies providing goods, products and services including components, specialist materials, bespoke manufacturing and maintenance processes, design and operational support capabilities that enable the generation of power using the kinetic energy of the air in motion which is captured by turbines and other devices.
Energy Management	EM Combined Heat & Power	Companies providing goods, products and services including components, specialist materials, bespoke manufacturing and maintenance processes, design and operational support capabilities that enable the control, direction and manipulation of energy during the power generation cycle to ensure its properties are maximised for the benefit of other energy processes and/or energy devices.
	EM Controls	Companies providing goods, products and services including components, specialist materials, bespoke manufacturing and maintenance processes, design and operational support capabilities that enable the control, direction and manipulation of energy control processes and/or devices.
	EM Fuel Cells	Companies providing goods, products and services including components, specialist materials, bespoke manufacturing and maintenance processes, design and operational support capabilities related to electrochemical devices that convert chemical energy from a fuel into usable electric energy.
	EM Integrated Energy Management	Companies whose activities include more than one EM subsector.
	EM Logistics & Support	Companies providing goods, products and services including components, specialist materials, bespoke manufacturing and maintenance processes, design and operational support capabilities that are ancillary to the control, direction and management of energy.
	EM Power Storage	Companies providing goods, products and services including components, specialist materials, bespoke manufacturing and maintenance processes, design and operational support capabilities that enable the efficient storage and delivery of energy.
	EM Smart Grids	Companies providing goods, products and services including components, specialist materials, bespoke manufacturing and maintenance processes, design and operational support capabilities that enable new and existing power delivery networks to deliver a more effective use of energy by increasing transmission capabilities or to integrate user functions in an intelligent basis through monitoring and management of usage and supply.
	Energy Efficiency	EE Advanced Materials
EE Buildings & Property	Companies providing goods, products and services including components, specialist materials, bespoke manufacturing and maintenance processes, design and operational support capabilities that enable new and refurbished properties to be built, refurbished or operated on the basis that they are less resource intensive and also reduce their impact on the environment at all levels of their operation in accordance with internationally recognised standards such as ED, Energy Star and BREEAM where applicable.	
EE Industrial Processes	Companies providing goods, products and services including components, specialist materials, bespoke manufacturing and maintenance processes, design and operational support capabilities that enable industrial processes operated by companies to become substantially more efficient and less resource intensive at all levels of their operation.	
EE Integrated Energy Efficiency	Companies whose activities include more than one EE subsector.	
EE IT Processes	Companies providing goods, products and services including components, specialist materials, bespoke manufacturing and maintenance processes, design and operational support capabilities that enable computers and IT related systems to become substantially more efficient and less resource intensive at all levels of their operation.	

* Data captured but not used in index calculations

Overview	Green Revenues subsector	Description
Energy Efficiency	EE Lighting	Companies providing goods, products and services including components, specialist materials, bespoke manufacturing and maintenance processes, design and operational support capabilities that enable lighting equipment and products to become substantially more efficient and less resource intensive at all levels of their operation.
	EE Video Conferencing	Companies providing goods, products and services including components, specialist materials, bespoke manufacturing and maintenance processes, design and operational support capabilities that enable on demand and installed video transmission facilities to provide meeting facilities between companies that reduce the requirement to travel so frequently.
Environmental Infrastructure	EI Carbon Capture & Storage	Companies providing goods, products and services including components, specialist materials, bespoke manufacturing and maintenance processes, design and operational support capabilities that enable the sequestration, capture, cleaning, transport and storage of Carbon Dioxide (CO ₂) either as an industrial by product or from the existing ecosystem.
	EI Desalination	Companies providing goods, products and services including components, specialist materials, bespoke manufacturing and maintenance processes, design and operational support capabilities that enable the conversion of salt water to fresh water so it is suitable for human, agricultural or industrial use through the removal of salt and/or other minerals.
	EI Flood Control & Land Erosion	Companies providing goods, products and services including components, specialist materials, bespoke manufacturing and maintenance processes, design and operational support capabilities that reduce or control the impact of inland or coastal flooding and increasing water levels as well as the impact on terrain of degradation caused by external forces.
	EI Integrated Environmental Infrastructure	Companies whose activities include more than one EI subsector.
	EI Logistics & Support	Companies providing goods, products and services including components, specialist materials, bespoke manufacturing and maintenance processes, design and operational support capabilities that are ancillary to the control, direction and management of human impacts on the environment, the environment's impact on humans as well as the ecosystem's ability to support and sustain the current and future populations.
	EI Pollution Management	Companies providing goods, products and services including components, specialist materials, bespoke manufacturing and maintenance processes, design and operational support capabilities that enable us to manage the negative impact of contaminants in the natural environment that cause instability, disorder, harm or discomfort to the ecosystem in accordance with internationally recognised standards where applicable.
	EI Recyclable Products	Companies providing goods, products and services including components, specialist materials, bespoke manufacturing and maintenance processes, design and operational support capabilities that specifically and consciously reduce the impact of human activity through the use recycled materials as the primary component of another product, or by enabling components to be easily recycled and/or absorbed thus reducing their life-cycle impact on the environment in accordance with internationally recognised standards where applicable.
	EI Recycling Services	Companies providing goods, products and services including components, specialist materials, bespoke manufacturing and maintenance processes, design and operational support services that enable the recovery of natural resources and synthetic materials from waste created by human activity as an alternative and substitute to the use of raw materials in accordance with internationally recognised standards where applicable.
	EI Waste Management	Companies providing goods, products and services including components, specialist materials, bespoke manufacturing and maintenance processes, design and operational support capabilities that enable the effective management of discarded materials produced by human activity to reduce their impact on health and the environment in accordance with internationally recognised standards where applicable.
	EI Water Management	Companies providing goods, products and services including components, specialist materials, bespoke manufacturing and maintenance processes, design and operational support capabilities that help establish, regulate, deliver and reduce losses in the supply of clean water for Human, Agricultural & Industrial consumption.
Environmental Resources	ER Agriculture	Companies providing goods, products and services that are specifically able to enhance the viability, yield, scope and sustainability of agricultural output in accordance with domestic or internationally recognised standards where applicable.
	ER Aquaculture	Companies providing goods, products and services that are specifically able to enhance the viability, yield, scope and sustainability of aquacultural output in accordance with domestic or internationally recognised standards where applicable.
	ER Integrated Environmental Resources	Companies whose activities include more than one ER subsector.

Overview	Green Revenues subsector	Description
Environmental Resources	ER Mining	Companies providing goods, products and services derived from the ownership of mineral and ore extraction rights where the raw materials obtained from such minerals and ores are required as a key resource to enable other processes in the industrial transition to the green economy.
	ER Minerals & Metals	Companies providing goods, products and services derived from the processing and management of mineral and ore based raw materials that are required as a key resource to enable other processes in the industrial transition to the green economy.
	ER Source Water	Companies providing goods, products and services derived from the ownership or control of water extraction rights where such rights specifically apply controls in respect of ecosystem protection and the maintenance of sustainable reserves in accordance with domestic or internationally recognised standards where applicable.
	ER Sustainable Forestry	Companies providing goods, products and services derived from the ownership or control of timber extraction rights where such rights specifically apply controls in respect of ecosystem protection and the maintenance of sustainable reserves in accordance with domestic or internationally recognised standards where applicable.
Modal Shift	MS Aviation	Companies providing goods, products and services including components, specialist materials, bespoke manufacturing and maintenance processes, design and operational support capabilities that are specifically able to help adapt, mitigate or remediate the impact air transportation has through any part of its operation on climate change, resource depletion or environmental erosion.
	MS Integrated Modal Shift	Companies whose activities include more than one TR subsector.
	MS Railways	Companies providing goods, products and services including components, specialist materials, bespoke manufacturing and maintenance processes, design and operational support capabilities that are specifically able to help adapt, mitigate or remediate the impact rail transportation has through any part of its operation on climate change, resource depletion or environmental erosion.
	MS Road Vehicles	Companies providing goods, products and services including components, specialist materials, bespoke manufacturing and maintenance processes, design and operational support capabilities that are specifically able to help adapt, mitigate or remediate the impact road transportation has through any part of its operation on climate change, resource depletion or environmental erosion.
	MS Shipping	Companies providing goods, products and services including components, specialist materials, bespoke manufacturing and maintenance processes, design and operational support capabilities that are specifically able to help adapt, mitigate or remediate the impact ocean and inland waterborne transportation has through any part of its operation on climate change, resource depletion or environmental erosion.
	Operational Shift	OS Finance / Investment
OS Integrated Operational Shift		Companies whose activities include more than one OS subsector.
OS Retail / Wholesale		Companies providing non-financial goods, products and services on a retail or wholesale basis to private and corporate clients that are differentiated from a company or industries existing business model because they are specifically able to help adapt, mitigate or remediate the impact of climate change, resource depletion or environmental erosion.
OS Property		Companies providing new and refurbished commercial, residential, leisure or public buildings that can be operated, sold or rented on the basis that they are less resource intensive and also reduce their impact on the environment at all levels of their operation in accordance with internationally recognised standards such as ED & BREEAM where applicable.

Appendix iii – ESG investors overview

The adoption of ESG approaches in investment is a growing force in global financial flows.

Due to the complexity of this market, there have been various attempts to classify investors into categories according to their strategy. These could be grouped according to their capital focus and motivations, from ESG-risk related issues only to environmental and/or social impact only. In addition, they could be classified depending upon how ESG is implemented. The table below outlines the commonly used categories.

Eurosif	GSIA-equivalent ¹⁷	PRI-equivalent ¹⁸	EFAMA-equivalent ¹⁹
Exclusions	ESG Negative screening	ESG Negative / Exclusionary screening	Negative screening or Exclusion
Norms-based screening	Norms-based screening	Norms-based screening	Norms-based approach
Best-in-Class selection	ESG Positive screening and Best-in-Class	ESG Positive screening and Best-in-Class	Best-in-Class policy
Sustainability-themed	Sustainability-themed	ESG-themed Investments	Thematic investment
ESG integration	ESG Integration	Integration of ESG issues	–
Engagement and voting	Corporate engagement and shareholder action	Engagement (three types)	Engagement (voting)
Impact investing	Impact / Community investing	–	–

Glossary²⁰

Best-in-Class investment selection: Approach where leading or best-performing investments within a universe, category or class are selected or weighted based on ESG criteria.

Engagement and voting on sustainability matters: Engagement activities and active ownership through voting of shares and engagement with companies on ESG matters. This is a long-term process, seeking to influence behaviour or increase disclosure.

Exclusions: An approach that excludes specific investments or classes of investment from the investible universe such as companies, sectors or countries.

Impact Investing: Impact investments are investments made into companies, organisations and funds with the intention to generate social and environmental impact alongside a financial return. Impact investments can be made in both emerging and developed markets, and target a range of returns from below-market to market-rate, depending upon the circumstances.

Integration of ESG issues: The explicit inclusion by asset managers of ESG risks and opportunities in traditional financial analysis and investment decisions based on a systematic process and appropriate research sources Norms-based screening: Screening of investments according to their compliance with international standards and norms.

Sustainability themed investment: Investment in themes or assets linked to the development of sustainability. Thematic funds focus on specific or multiple issues related to ESG.

Appendix iv – References

- 1 UNPRI Annual Report 2016 <http://annualreport.unpri.org> – Over 300 asset owner members and over 1,000 asset manager members all commit to incorporate ESG issues into investment analysis and decision-making across all assets.
- 2 UNPRI Annual Report 2016. Available at <http://annualreport.unpri.org/messages.html>
- 3 The Global Sustainable Investment Review 2014. www.gsi-alliance.org/members-resources/global-sustainable-investment-review-2014 written by the Global Sustainable Investment Alliance and the Japan Social Investment Forum.
- 4 The 2012 'Short-termism, Investor Clientele, and Firm Risk. Harvard Business School Accounting & Management Unit Working Paper No. 12-072' http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1999484. Paper by Brochet, F., Loumioti, M. and Serafeim, G.
- 5 The 2015 'Insights from PRI Signatories' report written by Accenture-UNGC in collaboration with PRI states that 38% of CEOs believe they are able to accurately quantify the business value of sustainability initiatives – yet just 7% of investors agree.
- 6 Model Guidance on Reporting ESG Information to Investors, www.sseinitiative.org/wp-content/uploads/2015/10/SSE-Model-Guidance-on-Reporting-ESG.pdf
- 7 <https://home.kpmg.com/xx/en/home/insights/2015/11/kpmg-international-survey-of-corporate-responsibility-reporting-2015.html>
- 8 'Out of the starting blocks: Tracking progress on corporate climate action', CDP, 2016.
- 9 For example see the SDG compass by the GRI together with the UN Global Compact and WBCSD; http://sdgcompass.org/wp-content/uploads/2016/05/019104_SDG_Compass_Guide_2015_v29.pdf
- 10 Data from Corporate Register, October 2016, www.corporateregister.com
- 11 The 2016 'Carrots & Sticks' report, <https://assets.kpmg.com/content/dam/kpmg/pdf/2016/05/carrots-and-sticks-may-2016.pdf> written by KPMG, GRI, UNEP and the Centre for Corporate Governance in Africa.
- 12 FRC, UK Corporate Governance Code, April 2016. www.frc.org.uk/Our-Work/Publications/Corporate-Governance/Final-Draft-UK-Corporate-Governance-Code-2016.pdf
- 13 Scope 1 and 2 definitions are from the GHG Protocol (www.ghgprotocol.org) and are only for direct emissions and indirect emissions from purchased electricity and gas.
- 14 Source: Global guide to responsible investment regulation, www.unpri.org/about/pri-teams/policy/responsible-investment-regulation
- 15 Bonds and Climate Change: The State of the Market in 2016. Climate Bond Initiative.
- 16 www.icbenchmark.com Industry Classification Benchmark
- 17 Global Sustainable Investment Alliance (GSIA), 2012 Global Sustainable Investment Review.
- 18 PRI Reporting Framework, 2013 Main Definitions.
- 19 EFAMA Guidance on RI information in the KIID & Post Investment Disclosure, 16 February 2012.
- 20 European SRI Study, Eurosif (2014).

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About London Stock Exchange Group

London Stock Exchange Group (LSE.L) is an international markets infrastructure business. Its diversified global business focuses on capital formation, intellectual property and risk and balance sheet management. LSEG operates an open access model, offering choice and partnership to customers across all of its businesses. The Group can trace its history back to 1698.

The Group operates a broad range of international equity, ETF, bond and derivatives markets, including London Stock Exchange; Borsa Italiana; MTS (Europe's leading fixed income market); and Turquoise (a pan-European equities MTF). Through its platforms, LSEG offers market participants, including retail investors, institutions and SMEs unrivalled access to Europe's capital markets. The Group also plays a vital economic and social role, enabling companies to access funds for growth and development.

Through FTSE Russell, the Group is a global leader in financial indexing, benchmarking and analytic services with approximately \$10trn benchmarked to its indexes. The Group also provides customers with an extensive range of real time and reference data products, including SEDOL, UnaVista, XTF and RNS.

Post trade and risk management services are a significant part of the Group's business operations. In addition to majority ownership of LCH, a multi-asset global CCP operator, LSEG owns CC&G, the Italian clearing house; Monte Titoli, a leading European custody and settlement business; and globeSettle, the Group's CSD based in Luxembourg.

LSEG is a leading developer and operator of high performance technology solutions, including trading, market surveillance and post trade systems for over 40 organisations and exchanges, including the Group's own markets. Additional services include network connectivity, hosting and quality assurance testing. MillenniumIT, GATElab and Exactpro are among the Group's technology companies.

Headquartered in the United Kingdom, with significant operations in North America, Italy, France and Sri Lanka, the Group employs approximately 3,500 people.

Further information on London Stock Exchange Group can be found at www.lseg.com



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