



London
Stock Exchange Group

Submission to CDP. Reporting period: 2016.

30 June 2017



Module: Introduction**Page: Introduction**

CC0.1**Introduction**

Please give a general description and introduction to your organization.

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 \$10 trillion benchmarked to its indexes. The Group also provides customers with an extensive range of data services, research and analytics through Mergent, 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 at the end of 2016 employed around 4,000 people.

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

We recognise the importance of addressing environmental, social and governance issues, and our vital role at the centre of international financial markets. Our Corporate Responsibility strategy is aligned with our business strategy, which centres on the development of a diversified and resilient product portfolio that leverages our capital formation, intellectual property, technology and risk management businesses.

Our approach aims to embed sustainability into all of our activities across our Capital Markets, Post Trade, Information Services and Technology Services divisions. Our corporate responsibility approach complements these efforts and identifies four focus areas: our markets, our services, our people and our communities.

CC0.2

Reporting Year

Please state the start and end date of the year for which you are reporting data.

The current reporting year is the latest/most recent 12-month period for which data is reported. Enter the dates of this year first.

We request data for more than one reporting period for some emission accounting questions. Please provide data for the three years prior to the current reporting year if you have not provided this information before, or if this is the first time you have answered a CDP information request. (This does not apply if you have been offered and selected the option of answering the shorter questionnaire). If you are going to provide additional years of data, please give the dates of those reporting periods here. Work backwards from the most recent reporting year.

Please enter dates in following format: day(DD)/month(MM)/year(YYYY) (i.e. 31/01/2001).

Enter Periods that will be disclosed

Fri 01 Jan 2016 - Sat 31 Dec 2016

CC0.3

Country list configuration

Please select the countries for which you will be supplying data. If you are responding to the Electric Utilities module, this selection will be carried forward to assist

you in completing your response.

Select country

CC0.4

Currency selection

Please select the currency in which you would like to submit your response. All financial information contained in the response should be in this currency.

GBP(£)

CC0.6

Modules

As part of the request for information on behalf of investors, companies in the electric utility sector, companies in the automobile and auto component manufacturing sector, companies in the oil and gas sector, companies in the information and communications technology sector (ICT) and companies in the food, beverage and tobacco sector (FBT) should complete supplementary questions in addition to the core questionnaire.

If you are in these sector groupings, the corresponding sector modules will not appear among the options of question CC0.6 but will automatically appear in the ORS navigation bar when you save this page. If you want to query your classification, please email respond@cdp.net.

If you have not been presented with a sector module that you consider would be appropriate for your company to answer, please select the module below in CC0.6.

Further Information

Module: Management

Page: CC1. Governance

CC1.1

Where is the highest level of direct responsibility for climate change within your organization?

Board or individual/sub-set of the Board or other committee appointed by the Board

CC1.1a

Please identify the position of the individual or name of the committee with this responsibility

The most senior leaders with responsibility on climate change are:

- At Board level, the Group CFO (David Warren) has responsibility for the environmental climate change programme of our CR strategy, as stated in the Group CR policy available at www.lseg.com. The Board is responsible for approving and monitoring our CR policy. Within the Board, the Group CEO (Xavier Rolet) is responsible for CR policy execution and compliance, with environmental and climate change issues directly managed by the Group Chief Risk Officer (Diane Cote) and Head of Group Property (James Nunn).

- At Executive Committee (ExCo) level, our Group Chief Risk Officer (Diane Cote), in her capacity as lead of the “Our Communities” pillar of our CSR strategy, is directly responsible for providing strategic guidance for the development and implementation of the environmental action plan.

- At Senior Management level, Head of Group Property (James Nunn), in his capacity as Chair of the Environmental Management Group, reports into the Our Communities lead in respect of environmental management, and is in charge of the development and implementation of LSEG environmental programme in all Group locations.

Each financial year, the Our Communities working group submits an environmental action plan which incorporates environment and climate change to the ExCo. This focuses on our current objectives, annual environmental targets, and other CR opportunities for the Group, including a critical evaluation of our successes and our competitive position.

The Our Communities working group is responsible for defining annual objectives, targets and programmes as well as delivering and reviewing performance across the Group including monitoring GHG emissions, identifying improvement opportunities and reporting.

Day-to-day management of environmental and climate change issues are led by James Nunn who chairs the Environmental Management Group (EMG) which is comprised of key stakeholders across the Group who are responsible for environmental impacts i.e. Property/Facilities Managers, Data Centre Managers, Business Travel and HR and covers all the Group's geographies.

CC1.2

Do you provide incentives for the management of climate change issues, including the attainment of targets?

Yes

CC1.2a

Please provide further details on the incentives provided for the management of climate change issues

Who is entitled to benefit from these incentives?	The type of incentives	Incentivized performance indicator	Comment
Corporate executive team	Monetary reward	Emissions reduction target Energy reduction target Efficiency target Other: Behaviour change related indicator	The Group Head of Property has environmental objectives, which includes climate change and other environmental targets, as part of their annual business objectives, which are linked to the annual bonus programme. These objectives are cascaded to the Group Property team across our global regions. Specifically, we are seeking reduced carbon impact due to energy efficiency and enhanced business continuity capability due to adaptation measures. Group-wide Sustainability Targets include: 20% reduction in our CO2e emissions per FTE and £m Revenue by 2020, with a 2% reduction in 2017 relative to 2016; 20% by 2020 reductions in Data Centre and Office Energy Use, Water Consumption, Waste and Business Travel (Flights), and 2% 2017 reductions in each of these areas. Paper consumption has a 5% reduction target. There is also a 2017 behaviour change related target to increase video conferencing use by 10%.
All employees	Other non-monetary reward	Other: Behaviour change related indicator	All staff in the UK are provided the opportunity to offset their household or travel carbon footprint through a salary related donation to Pure, a carbon-offset charity. All donations are used to buy and cancel carbon credits from renewable energy and efficiency projects such as wind farm construction and forest preservation that meet the UK Government's Quality Assurance Scheme for Carbon Offsetting and the high quality standards of the Kyoto Protocol.
All employees	Other non-monetary reward	Other: Behaviour change related indicator	In the UK, we operate a cycle-to-work scheme as a form of salary sacrifice which allows employees to reduce their gross salary in exchange for hiring a new bike and cycling accessories with savings of over 40%.

Further Information

Page: CC2. Strategy

CC2.1

Please select the option that best describes your risk management procedures with regard to climate change risks and opportunities

Integrated into multi-disciplinary company wide risk management processes

CC2.1a

Please provide further details on your risk management procedures with regard to climate change risks and opportunities

Frequency of monitoring	To whom are results reported?	Geographical areas considered	How far into the future are risks considered?	Comment
Annually	Board or individual/sub-set of the Board or committee appointed by the Board	In the reporting period, LSEG had global offices hosting around 4000 employees, specialist contractors and data centres. We consider the climate change related risks and opportunities to our business in: EMEA (Belgium, France, Italy, Luxembourg, Netherlands, Portugal, United Kingdom, UAE), - Asia Pacific (Australia, China incl Hong Kong, India, Japan, Malaysia, Singapore, Sri Lanka), - North America (Canada and United States).	> 6 years	Our risk management approach considers transition risks (policy and legal, technology, market, reputation) and opportunities (resource efficiency, energy source, products/services, markets, resilience), and physical risks (both acute and chronic) related to climate change.

CC2.1b

Please describe how your risk and opportunity identification processes are applied at both company and asset level

The political, economic, physical and social environment in which we operate is undergoing much change and the need for efficient, transparent and well regulated capital markets has never been greater. Understanding how climate change is, and potentially will, impact the operations of LSEG, our clients and suppliers is crucial to our business. The Executive Committee (ExCo) are accountable at both a company and asset level for risk identification, analysis, evaluation and mitigation which includes climate change risks and opportunities. We achieve this through:

- i) Company Level: Transition risks and opportunities are identified analysing our product portfolio across client segments and asset classes (Product/Services and

markets), whereas the risks and opportunities associated with energy sources and business resilience are assessed taking into account all of our operations. Our Corporate Responsibility strategy is aligned with our business strategy across the Group. The Corporate Responsibility Committee and Environmental Management Group are responsible for ensuring the business annually assesses and mitigates climate change risks where appropriate and that we maximize arising opportunities.

ii) Asset Level: LSEG has offices and data centres located around the world, and we assess risks and opportunities at the facility level to understand climate related risks including flooding, long-term temperature changes and extreme weather events. We assess our facilities ability to operate, staff access, safety and wellbeing and insurance premium impacts on both a short and long-term basis. We recognise that an effective monitoring and assessment programme must consider both the global perspective and specific local needs.

CC2.1c

How do you prioritize the risks and opportunities identified?

Product/services and markets risks and opportunities relating to climate change are prioritised with respect to the magnitude of impact and the Group's ability to operationalise solutions into a business strategy.

LSEG determines materiality and priority of risks through engagement with national policy decisions that could impact our business both in the short and long-term.

LSEG prioritises short term (0-5 years) transition risks and opportunities that may affect our product portfolio and competitiveness with respect to peers, and physical risks that may affect the ability of our facilities to operate, and impact our insurance premiums. For longer-term risks (5+ years), we prioritise those risks that may affect the operations of companies listed on our exchanges, as well as physical risks to our facilities and ability to operate.

As part of the Risk Management Framework businesses are required to assess the risks associated with their activities. This includes risks involved with undertaking new activities or entering new territories; changes in market perception, legislation and regulation; business continuity / recovery strategies, and adapting to regulatory change. The risk framework is governed by a Board approved Enterprise-wide Risk Management Framework policy and Risk Appetite.

Executive management are accountable at a company and asset level for risk identification (including climate change issues), analysis, evaluation, mitigation, monitoring and reporting in their area using a standardized risk library and within the framework established by the Board.

Through this understanding of both internal and wider impact, we have identified the risks and opportunities arising from climate change, and where applicable are in the process of creating improvement programs to increase operational efficiency, reduce costs, and reduce our carbon impact, as well as create products and services which meet the needs of this changing business context.

CC2.1d

Please explain why you do not have a process in place for assessing and managing risks and opportunities from climate change, and whether you plan to introduce such a process in future

Main reason for not having a process	Do you plan to introduce a process?	Comment
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CC2.2

Is climate change integrated into your business strategy?

Yes

CC2.2a

Please describe the process of how climate change is integrated into your business strategy and any outcomes of this process

(i) How has the business strategy been influenced?

LSEG recognises that we must use resources in ways that ensure the long-term sustainability and profitability of the business and have a positive impact on the environment. This is significant in ensuring our own operations are efficient, sustainable and responsible, as well as developing products and services that support these aims through companies listed on our markets.

The Group has established Corporate Responsibility policies, with a specific focus on Environmental and Climate Change commitments. Our environmental approach is led by the Group Chief Risk Officer and Head of Group Property as part of the 'Our Communities' strategic CR pillar. This structure ensures a defined process to collect and report climate change information that impacts our strategy. LSEG has set emissions and energy reduction targets to reduce our environmental impacts and we have established robust data collection and reporting tools across our property portfolio. The Environmental Management Group provides leadership and accountability, ensuring data is collated, that we make progress against our goals and that our approach is communicated and reported.

(ii and iii) What aspects of climate change have influenced the strategy (and examples)?

The Group's strategy is formed around both environmental impacts/risks and opportunities that present themselves as a result of climate change.

The operational efficiency benefits of reducing and mitigating these physical climate change impacts through clear short and long-term targets have shaped our strategy. Regulatory and legislative reporting requirements have also influenced our approach i.e. UK mandatory GHG emissions reporting.

We must also ensure that we are adapting and mitigating our operations against more significant, longer-term impacts of climate change such as extreme weather changes and events which we monitor. LSEG is a committed supporter of green financing and we see the transition to a low carbon economy as a major industrial trend. In addition to attracting and profiling green bond and equity listings through FTSE Russell we support institutional investors in defining climate factors and integrating them into benchmarks and portfolio analytics.

(iv) How has the short term strategy (0-5 years) been influenced by climate change?

The physical and regulatory impacts of climate change have influenced our short term strategy. As a result, we have set emissions and energy reduction targets (2% in 2017, vs 2016 and 20% by 2020, vs 2013) and report our GHG emissions and performance annually. We invested in data centre and office space consolidation and energy efficiency projects during the reporting period.

As part of our strategy to create a sustainable investment environment and be recognised as a global sustainability leader, during 2016 LSEG developed guidance for listed companies on the voluntary disclosure of ESG information to investors, based on UN Sustainable Stock Exchanges initiative framework.

In the short term, the Group will keep developing market leading products and services like FTSE4Good, which has made a significant impact on the behaviour of companies (i.e., requiring GHG emission and other climate change targets as part of the inclusion criteria).

(v) The most important components of our long term (more than 5 years) strategy that have been influenced by climate change

Our role means the core influence we bring to long term climate change impacts is through products and services that help drive the market transition to a low-carbon economy.

The Group will keep developing products and services to provide investors with tools for benchmarking and tracking ESG-driven funds as well as continuing to develop a range of low carbon economy (LCE) services. For example in 2016 FTSE Russell launched its LCE data model, designed to measure the revenue exposure of public companies engaged in the transition to the green economy.

LSEG is ideally placed to help promote good practice across the industry. We joined the Sustainable Stock Exchanges initiative, backed by the United Nations. LSEG was the first global exchange group to become an official partner of the Climate Bonds initiative. In addition we are compliant with the ICMA's Green Bonds Principles and we also signatories of the Paris Pledge for Action.

Longer term climate change risks ensure we will actively monitor climate changes that could affect our operations, including direct impacts such as flooding and extreme weather, and indirect impacts such as increased average temperatures which could increase in cap and trade schemes, resulting in additional operating costs for our business and that of quoted companies.

(vi) How is this gaining us strategic advantage over our competitors?

Engaging with ESG issues, investor-led principles such as the UN PRI and other initiatives i.e. the UN Sustainable Stock Exchange initiative have enabled the Group to gain early-mover strategic advantage over our competitors. LSE ranked first among large exchanges and eighth globally in a 2016 study by Aviva and Corporate Knights for the quality of ESG reporting disclosure (including carbon disclosure).

FTSE Russell has pioneered the concept of ESG Indices globally with the FTSE4Good Index Series and has continually evolved its offering. The achievements of the Group are reflected in the top quartile ratings LSEG attains in the most high profile ESG assessments including FTSE ESG, MSCI ESG, Sustainalytics and the DJSI.

(vii) What are the most substantial business decisions made during the reporting year that have been influenced by climate change driven aspects of the strategy?

The LSEG Global Sustainable Investment Centre was launched in 2016, and aims to integrate sustainable solutions deep into capital raising and investment - including the transition to a low-carbon economy driven by short and long-term physical and regulatory climate change impacts, .

Hosted by London Stock Exchange, the GIIC forums for India and Brazil were held in 2016. Launched at COP21 Paris, GIIC's aim is to bridge the climate finance gap. By hosting these forums, we are taking positive steps to boost green finance as these countries look to access new sources of funding.

We are proud to have been one of the founding members of the Green Finance Initiative of the City of London in 2016. The GFI's goals are to promote London's status as a leading global centre for the provision of green and sustainable financial and professional services, to advocate for specific regulatory and policy developments and to provide public and market leadership on issues relating to market impediments and opportunities.

A key decision based on physical impacts of climate change i.e. changes in long-term temperature extremes, was to set targets for in the areas of carbon emissions, energy efficiency, water, and waste (see section iv above).

CC2.2b

Please explain why climate change is not integrated into your business strategy

CC2.2c

Does your company use an internal price on carbon?

No, and we currently don't anticipate doing so in the next 2 years

CC2.2d

Please provide details and examples of how your company uses an internal price on carbon

CC2.3

Do you engage in activities that could either directly or indirectly influence public policy on climate change through any of the following? (tick all that apply)

Direct engagement with policy makers
Trade associations

CC2.3a

On what issues have you been engaging directly with policy makers?

Focus of legislation	Corporate Position	Details of engagement	Proposed legislative solution
Mandatory carbon reporting	Support with minor exceptions	EU's Non-Financial Reporting Directive mandates large public-interest entities (listed companies, banks, insurance undertakings and other companies that are so designated by Member States) with more than 500 employees to disclose in their management report relevant and useful information on their policies, main risks and outcomes relating to various ESG factors. LSEG supported this EU Directive and its transposition into EU member states' law (particularly in the UK and Italy). We have responded to the public consultation, participated in workshop organised by the policymakers and engaged with the European Commission.	During this engagement, we stressed the importance of investor materiality, importance of investment grade data and compatibility with the global frameworks, the FSB TCFD in particular.
Climate finance	Support	David Harris was appointed a member of the European Commission High-Level Expert Group on Sustainable Finance, and contributes to developing recommendations for a comprehensive EU strategy on sustainable finance as part of the Capital Markets Union. The Commission will draw on these recommendations to determine how to integrate sustainability considerations into the EU's rules for the financial sector. This marks an important step in the follow-up to the EU's 2030 Agenda for sustainable development as well as the Paris Agreement on climate change.	Investors need better access to quality ESG data, tools and sustainable investment opportunities: Companies should be encouraged to provide more detailed sub-segment revenue breakdown; particularly for environmentally or socially positive products. The EU can support global standard formation of reporting and standards, building on the work of the FSB TCFD, and preventing regional fragmentation including encouraging IOSCO to play a role. Mechanisms to support greater green bond issuance, including from the corporate sector, and investable opportunities for green infrastructure are also needed. Catalysing sustainable investments by European Asset Owners. More asset owners, particularly corporate pension schemes, should be encouraged to follow the leadership of peers in integrating ESG considerations and in increasing asset allocation to green and socially beneficial

Focus of legislation	Corporate Position	Details of engagement	Proposed legislative solution
			<p>investments. This could be through further clarifying and strengthening the understanding of consultants, trustees and investment boards around fiduciary duty (building on, but going further than IORP2) and through a European equivalent of Article 173 to spur investors to report on ESG integration and portfolio climate exposures, and hence to create an enabling environment. Incorporation of within the prospectus is important and should be reflected in prospectus regulation. Retail investors also need support and the PRIPs directive could be further built on, as could the modernised Prospectus Directive so that relevant ESG considerations are fully reflected. Reduce regulatory barriers to long term sustainable investments by life insurance. This could include reducing the capital buffer requirements where assets relate to long term green or sustainable assets. Note that Solvency II also encourages investment in debt over equity due to the vastly differing capital charges. Where investments are in long term green infrastructure investments they could be treated preferentially.</p>

CC2.3b

Are you on the Board of any trade associations or provide funding beyond membership?

Yes

CC2.3c

Please enter the details of those trade associations that are likely to take a position on climate change legislation

Trade association	Is your position on climate change consistent with theirs?	Please explain the trade association's position	How have you, or are you attempting to, influence the position?
UKSIF (UK Sustainable Investment & Finance Association)	Consistent	UKSIF advances its mission and delivers value for its members by: Acting as a voice for the sustainable and responsible finance industry in the UK, convening its members to understand, educate and influence governments, nongovernmental organisations, regulators, companies, professional advisers, the general public and other stakeholders. As the industry matures and access to and information about companies becomes easier to obtain, UKSIF's role in support of dialogue with governments and regulators in the UK and potentially elsewhere has become a more significant part of its role. Their support for UK leadership in advancing sustainable development through investment and finance includes: Accelerating green finance and impact investing. In partnership with others, we support the creation of the UK Green Investment Bank and influencing corporate sustainability reporting requirements such as carbon emissions and regulatory approaches to social impact investment. Assisting members to develop their practices. Their analyst seminar programme catalyses debate on emerging environmental (including climate change), social and governance issues and assists our members to develop their practices. Other activities include the annual Extel SRI & Sustainability Survey, the UKSIF Annual Lecture and their support for the City of London's Sustainable City Awards.	David Harris is LSEG's Group Head of Sustainability Business and is responsible for FTSE Russell's ESG services, including FTSE4Good, ESG Ratings and FTSE Environmental Markets. David was elected to the UKSIF Board in 2009 and until September 2015 served as Vice Chair. At the September 2015 AGM David had completed his two terms and stood down. John Jarrett, Associate ESG Director, FTSE Russell was successfully elected in a contested election to replace David on the board. Beata Sivak, Senior Regulatory Strategy Manager, has been appointed a member of the Leadership committee, giving organisation a policy steer. LSEG influences the UKSIF position through these roles, as well as our role as members of a number of regional and global ESG/responsible investment trade bodies including US SIF, ASRIA, Japan SIF and EuroSIF. We are also members of the UN PRI.
UN Sustainable Stock Exchanges Initiative	Consistent	The SSE Initiative aims to explore how exchanges can work together with investors, regulators and companies to enhance corporate transparency and ultimately performance on ESG issues and to encourage responsible long-term approaches to investment. Currently over 40 exchanges from around the world are partner exchanges to the SSE Initiative.	David Harris is a member of the UN SSE Consultative Group and chaired the Working Group that in 2015 developed the Model Guidance for Exchange on ESG disclosure. LSEG launched in 2017 an own Guidance for issuers on the integration of ESG into investor reporting and communication, based on the model guidance.
Climate Bonds Partnership	Consistent	Climate Bonds Initiative is the only organisation in the world working solely to mobilize the largest capital market of all,	London Stock Exchange Group (LSEG) become the first global exchange to join the Climate Bonds Partnership

Trade association	Is your position on climate change consistent with theirs?	Please explain the trade association's position	How have you, or are you attempting to, influence the position?
Programme		the \$100 trillion bond market, for climate change solutions.	Program.
Green Bond Principles	Consistent	The Green Bond Principles are coordinated by the ICMA.	LSEG is an official observer.
TCFD - Financial Stability Board Task Force on Climate-Related Financial Disclosures	Consistent	The Task Force on Climate-related Financial Disclosures (TCFD) will develop voluntary, consistent climate-related financial risk disclosures for use by companies in providing information to investors, lenders, insurers, and other stakeholders. The Task Force will consider the physical, liability and transition risks associated with climate change and what constitutes effective financial disclosures across industries. The work and recommendations of the Task Force will help firms understand what financial markets want from disclosure in order to measure and respond to climate change risks, and encourage firms to align their disclosures with investors' needs.	LSEG took part in the Phase I consultation, responded to the subsequent "Recommendations" report, participated in various events serving to raise awareness and engaged in discussions with members of the Task Force. Mary Shapiro, Non-Executive Director to LSEG Board has been a secretary to the Task Force.

CC2.3d

Do you publicly disclose a list of all the research organizations that you fund?

CC2.3e

Please provide details of the other engagement activities that you undertake

CC2.3f

What processes do you have in place to ensure that all of your direct and indirect activities that influence policy are consistent with your overall climate change strategy?

LSEG has a transparent approach to lobbying. All our consultation papers are published on our website. We are also registered in the EU's Transparency Register.

The 'Our Communities' strategic CR pillar coordinates activities across the Group, partnering with all business areas to ensure consistency of engagement and approach with both internal and external stakeholders.

All Government Relations and policy initiatives involve the development of position papers which are submitted to the Corporate Responsibility Committee. CR Committee members provide their input whenever they see the topic has possible areas of overlap with sustainability and climate change issues to ensure these are consistent with the Group's overall climate change strategy.

In 2017, LSEG Group Head of Sustainable Business, David Harris, was appointed a member of the European Commission High-Level Expert Group on Sustainable Finance, aiming to deliver a long term EU strategy by Q1 2018. LSEG and specifically FTSE Russell plays a leading role in the most important ESG and sustainable investment initiatives globally and is a board or advisory council member for a number of them. These include UKSIF, US SIF, City of London Green Finance Initiative, US SIF, ASRIA, EuroSIF, RIIA, the UN backed PRI, and Luxflag. To increase awareness, FTSE Russell representatives regularly speak at conferences and in the media. FTSE Russell also works with a range of leading ESG partners and providers in delivering and supporting ESG services, including Impax Asset Management, CDP and Trucost.

CC2.3g

Please explain why you do not engage with policy makers

Further Information

Page: CC3. Targets and Initiatives

CC3.1

Did you have an emissions reduction or renewable energy consumption or production target that was active (ongoing or reached completion) in the reporting year?

Absolute target
Intensity target

CC3.1a

Please provide details of your absolute target

ID	Scope	% of emissions in scope	% reduction from base year	Base year	Base year emissions covered by target (metric tonnes CO2e)	Target year	Is this a science-based target?	Comment
Abs1	Scope 1+2 (market-based)	100%	40%	2016	22712	2030	Yes, but this target has not been approved as science-based by the Science Based Targets initiative	This target is currently under submission for approval by the Science Based Targets Initiative in 2017. LSEG has signed the commitment to set a Science Based Target.

CC3.1b

Please provide details of your intensity target

ID	Scope	% of emissions in scope	% reduction from base year	Metric	Base year	Normalized base year emissions covered by target	Target year	Is this a science-based target?	Comment
Int1	Scope 1+2 (market-based)+3 (upstream)	100%	20%	Metric tonnes CO2e per unit revenue	2013	0.000030	2020	No, but we anticipate setting one in the next 2 years	Total Group Emissions from Scope 1, 2 and 3 (including Air Travel, Rail Travel, Water and Waste).
Int2	Scope 1+2 (market-based)+3 (upstream)	100%	20%	Metric tonnes CO2e per unit FTE employee	2013	9.70	2020	No, but we anticipate setting one in the next 2	Total Group Emissions from Scope 1, 2 and 3 (including Air Travel, Rail Travel, Water

ID	Scope	% of emissions in scope	% reduction from base year	Metric	Base year	Normalized base year emissions covered by target	Target year	Is this a science-based target?	Comment
								years	and Waste).
Int3	Scope 1+2 (market-based)+3 (upstream)	100%	2%	Metric tonnes CO2e per unit revenue	2015	0.0000220	2016	No, but we anticipate setting one in the next 2 years	Total Group Emissions from Scope 1, 2 and 3 (including Air Travel, Rail Travel, Water and Waste).
Int4	Scope 1+2 (market-based)+3 (upstream)	100%	2%	Metric tonnes CO2e per unit FTE employee	2015	7.26	2016	No, but we anticipate setting one in the next 2 years	Total Group Emissions from Scope 1, 2 and 3 (including Air Travel, Rail Travel, Water and Waste).
Int5	Other: Office Space Energy (Scope 1 & 2) Emissions	100%	2%	Metric tonnes CO2e per unit FTE employee	2015	1.67	2016	No, but we anticipate setting one in the next 2 years	Office Space Emissions from Fuel and Electricity consumption.
Int6	Other: Data Centre Energy (Scope 1 & 2) Emissions	100%	2%	Other: Metric tonnes CO2e per unit Occupied Cabinet	2015	13.14	2016	No, but we anticipate setting one in the next 2 years	Data Centre Emissions from Fuel and Electricity consumption.

CC3.1c

Please also indicate what change in absolute emissions this intensity target reflects

ID	Direction of change anticipated in absolute Scope 1+2 emissions at target completion?	% change anticipated in absolute Scope 1+2 emissions	Direction of change anticipated in absolute Scope 3 emissions at target completion?	% change anticipated in absolute Scope 3 emissions	Comment
Int1	Decrease	1	Decrease	1	As the business continues to grow in terms of Revenue (50% vs 2013), our targets and related activities have seen absolute emissions relative to our 2013 baseline increase by only 1.4%. As such, we still anticipate a small reduction in absolute emissions by 2020.
Int2	Decrease	1	Decrease	1	As the business continues to grow in terms of Full Time Employees (39% vs 2013), our targets and related activities have seen absolute emissions relative to our 2013 baseline increase by only 1.4%. As such, we still anticipate a small reduction in absolute emissions by 2020.
Int3	Decrease	2.61	Increase	3.91	The target completed at 31 December 2016, and has resulted in a decrease in absolute scope 1&2 emissions of 2.61% due in part to office consolidations and efficiency activities. Absolute scope 3 emissions have increased by 3.91% due to increased air travel as the business continues to grow. We are targeting a reduction in air travel emissions in 2017.
Int4	Decrease	2.61	Increase	3.91	The target completed at 31 December 2016, and has resulted in a decrease in absolute scope 1&2 emissions of 2.61% due in part to office consolidations and efficiency activities. Absolute scope 3 emissions have increased by 3.91% due to increased air travel as the business continues to grow. We are targeting a reduction in air travel emissions in 2017.
Int5	Increase	1.74	No change		The target completed at 31 December 2016, and has resulted in an increase of absolute scope 1&2 office space energy emissions of 1.74% due to FTE growth of 8.6%.
Int6	Decrease	3.78	No change		The target completed at 31 December 2016, and has resulted in a decrease in absolute data centre energy scope 1&2 emissions of 3.78% due in part to building energy efficiency projects such as cold aisle containment.

CC3.1d

Please provide details of your renewable energy consumption and/or production target

ID	Energy types covered by target	Base year	Base year energy for energy type covered (MWh)	% renewable energy in base year	Target year	% renewable energy in target year	Comment
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CC3.1e

For all of your targets, please provide details on the progress made in the reporting year

ID	% complete (time)	% complete (emissions or renewable energy)	Comment
Int1	43%	100%	During the reporting period, we achieved our 2020 target 5 years ahead of schedule with a 33% reduction in our overall Carbon Emissions per £m Revenue relative to a 2013 baseline.
Int2	43%	100%	During the reporting period, we achieved our 2020 target 5 years ahead of schedule with a 27% reduction in our overall Carbon Emissions per FTE relative to a 2013 baseline.
Int3	100%	100%	During the reporting period, we achieved a 15.4% reduction in our overall Carbon Emissions per £m Revenue relative to 2015.
Int4	100%	100%	During the reporting period, we achieved a 9% reduction in our overall Carbon Emissions per FTE relative to 2015.
Int5	100%	100%	During the reporting period, we achieved a 6.34% reduction in our office space Scope 1&2 energy emissions per FTE relative to 2015.
Int6	100%	100%	During the reporting period, we achieved a 15% reduction in our data centre Scope 1&2 energy emissions per occupied cabinet relative to 2015.
Abs1	1%	0%	This is the first year of this target, so progress is only just beginning.

CC3.1f

Please explain (i) why you do not have a target; and (ii) forecast how your emissions will change over the next five years

CC3.2

Do you classify any of your existing goods and/or services as low carbon products or do they enable a third party to avoid GHG emissions?

Yes

CC3.2a

Please provide details of your products and/or services that you classify as low carbon products or that enable a third party to avoid GHG emissions

Level of aggregation	Description of product/Group of products	Are you reporting low carbon product/s or avoided emissions?	Taxonomy, project or methodology used to classify product/s as low carbon or to calculate avoided emissions	% revenue from low carbon product/s in the reporting year	% R&D in low carbon product/s in the reporting year	Comment
Group of products	FTSE Russell has a range of products/services that enable investors to manage portfolio climate change risks including embedded GHG emissions. The indices, through applying ESG thresholds that ratchet up over time, have also catalysed changes in companies practices including on climate change. A. Since 2001, FTSE has pioneered ESG investing through FTSE4Good, a world leading index of companies demonstrating strong ESG performance. Overseen by an independent, expert Advisory Committee and supported by an evolving	Low carbon product				

Level of aggregation	Description of product/Group of products	Are you reporting low carbon product/s or avoided emissions?	Taxonomy, project or methodology used to classify product/s as low carbon or to calculate avoided emissions	% revenue from low carbon product/s in the reporting year	% R&D in low carbon product/s in the reporting year	Comment
	<p>criteria platform and direct company engagement programme, FTSE4Good has, according to academic research, made a significant and measurable impact on the behaviour of companies (for example, requiring GHG emission and other climate change targets as part of the inclusion criteria) worldwide while providing investors with a tool for benchmarking and tracking ESG-driven funds. B. The FTSE Ex-Fossil Fuel Series was developed to support clients that wish to exclude companies with fossil fuel reserves from their investments due to concern over climate change risks. FTSE Russell also calculate carbon tilted indices that reduce carbon embedded emissions while closely tracking the benchmark. C. The FTSE Environmental Markets Series provides a classification system and indices identifying companies generating revenues from environmental products and services. This supports and enables capital flows into low carbon technologies which is essential in reducing global GHG emissions. D. FTSE Russell launched its LCE (Low Carbon Economy) data model in June 2016. This data model is designed to measure the revenue exposure of public companies engaged in the transition to the green economy and allows companies to design, build and analyse their portfolios, baskets or indexes with this measure in mind. The data model captures a new measure of green revenue exposure – the shifts in the revenue mix of companies from green goods, products and services. Capturing these shifts allows investors to quantify the pace and scale of a company’s transition to the green economy.</p>					

CC3.3

Did you have emissions reduction initiatives that were active within the reporting year (this can include those in the planning and/or implementation phases)

Yes

CC3.3a

Please identify the total number of projects at each stage of development, and for those in the implementation stages, the estimated CO2e savings

Stage of development	Number of projects	Total estimated annual CO2e savings in metric tonnes CO2e (only for rows marked *)
Under investigation	14	708
To be implemented*	1	18264
Implementation commenced*	1	13
Implemented*	3	1470
Not to be implemented		

CC3.3b

For those initiatives implemented in the reporting year, please provide details in the table below

Activity type	Description of activity	Estimated annual CO2e savings (metric tonnes CO2e)	Scope	Voluntary/Mandatory	Annual monetary savings (unit currency - as specified in CC0.4)	Investment required (unit currency - as specified in CC0.4)	Payback period	Estimated lifetime of the initiative	Comment
Energy efficiency: Processes	Data centre cold aisle containment and equipment efficiency consolidation projects are resulting in greater utilisation of available space and reductions in energy and water consumption.	106	Scope 1 Scope 2 (market-based) Scope 3	Voluntary	21500	160000	4-10 years	Ongoing	Reductions were achieved in Scope 1 & 2 (energy, cooling and heating) and Scope 3 (water).
Energy efficiency: Building services	Swap out lighting for LED equivalents in office spaces.	24	Scope 2 (market-based)	Voluntary	4000	15000	1-3 years	Ongoing	Reductions were achieved in Scope 2 energy.
Energy efficiency: Processes	Emissions reduction activities in 2016 included cold-aisle containment and LED lighting, as above, but also included server efficiency replacements in data centres, and office consolidation projects in our UK offices particularly. Changes to food waste management processes in Italy resulted in further Scope 3 reductions.	1340	Scope 1 Scope 2 (market-based) Scope 3	Voluntary	201000	0	1-3 years	Ongoing	Reductions were achieved in Scope 1 & 2 (energy, cooling and heating) and Scope 3 (water and waste). Investment in these reduction activities is now considered BAU, so no further investment is required.

CC3.3c

What methods do you use to drive investment in emissions reduction activities?

Method	Comment
Compliance with regulatory requirements/standards	LSEG are deriving further energy efficiency and GHG emissions reduction through participation in the UK CRC Energy Efficiency Scheme and the ESOS scheme, as well as the UK mandatory emissions reporting regulations.
Employee engagement	The small decisions we each make help us become more aware of our strategic role in building a sustainable economy and business, through investment and engagement. Because of this, we believe that the investment with the highest return for the environment is behavioural change. This year, we continued to engage staff through sustainability communications, regular reporting of performance against targets on our intranet and other initiatives.
Financial optimization calculations	LSEG have employed the services of energy efficiency specialists where appropriate to quantify, analyse and prioritise financial investment in building fabric, services and process efficiencies, including as part of the ESOS process. These projects will simultaneously reduce LSEG's GHG emissions and energy costs.

CC3.3d

If you do not have any emissions reduction initiatives, please explain why not

Further Information

Page: CC4. Communication

CC4.1

Have you published information about your organization's response to climate change and GHG emissions performance for this reporting year in places other than in your CDP response? If so, please attach the publication(s)

Publication	Status	Page/Section reference	Attach the document	Comment
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Publication	Status	Page/Section reference	Attach the document	Comment
In mainstream reports (including an integrated report) but have not used the CDSB Framework	Complete	Pages 36,37.	https://www.cdp.net/sites/2017/71/10871/Climate Change 2017/Shared Documents/Attachments/CC4.1/LSEG Annual Report - 31Dec2016.pdf	Carbon emissions are reported in our mainstream and CR reports using GHG Protocol Corporate Accounting and Reporting Standard (revised edition) and UK Government Environmental Reporting Guidelines, including mandatory greenhouse gas emissions reporting guidance.
In voluntary communications	Complete	Pages 4, 31-37, 47.	https://www.cdp.net/sites/2017/71/10871/Climate Change 2017/Shared Documents/Attachments/CC4.1/LSEG_Corporate_Responsibility_Report_31_December_2016.pdf	Carbon emissions are reported in our mainstream and CR reports using GHG Protocol Corporate Accounting and Reporting Standard

Publication	Status	Page/Section reference	Attach the document	Comment
				(revised edition) and UK Government Environmental Reporting Guidelines, including mandatory greenhouse gas emissions reporting guidance.

Further Information

Module: Risks and Opportunities

Page: CC5. Climate Change Risks

CC5.1

Have you identified any inherent climate change risks that have the potential to generate a substantive change in your business operations, revenue or expenditure? Tick all that apply

- Risks driven by changes in regulation
- Risks driven by changes in physical climate parameters
- Risks driven by changes in other climate-related developments

CC5.1a

Please describe your inherent risks that are driven by changes in regulation

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Uncertainty surrounding new regulation	LSEG does not generate significant amounts of direct GHG emissions, therefore any potential regulations imposing limits or taxes on GHG production do not pose a significant financial risk to the Group. There may be marginal financial impact on LSEG's direct operating costs via increased energy efficiency standards or GHG reduction regulations. LSEG's direct GHG emissions come from our data centres (over 50%) and offices globally and these will continue to expand as our business grows.	Increased operational cost	3 to 6 years	Direct	About as likely as not	Low	Increased energy efficiency standards, requiring reduced GHG emissions, could result in increased operating costs for LSEG. A potential 10-15% increase in energy costs caused by climate change regulation would have a £825k increase on LSEG operational expenses. A 10-15% increase in UK carbon taxes i.e. CRC would have a £42k increase on operational expenses. These have a small potential impact (less than 5%) on operational expenditure, and	- LSEG engages with potential policy creation in these areas i.e. UK Mandatory Carbon Reporting Regulations and the UK government consultation on energy efficiency to enable early action and mitigate potential arising costs. - LSEG is a signatory of the Paris Pledge for Climate Action, the CDSB Statement on fiduciary duty and climate change disclosure. In 2016 we engaged with the European Commission and the UK and Italian governments regarding the Non-Financial Reporting Directive and related Guidelines. In our consultation response, we acknowledge that	In the last three years, LSEG has invested over £9m in energy efficiency and carbon reduction initiatives in our data centres and offices. There are also direct costs from engaging with policy decisions, specialist advice on regulations, compliance, and management tools to gather data and measure progress against targets (less than 0.5% of total operational spend). We expect these costs to be consistent (or significantly reduce) for the next 1-3 years.

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	<p>Uncertainty around regulations such as the UK CRC mean potential increases in operational costs as capital projects now may not adequately prepare our physical building specs (i.e. BREEAM) to meet future regulatory requirements. Any uncertainty surrounding new regulations, whether taxes or GHG limits, may also have indirect impact both through our supply chain energy partners and also indirectly through financial and operational impacts for companies listed on LSEG exchanges and indices.</p>						are expected to be consistent for the next 3-6 years.	so called 'non-financial' risks can turn into financial risks. We participated in the Commission-run industry workshops, organised bilateral meetings and joined the European Commission High Level Expert Group on sustainable finance. - In the last three years, LSEG has invested over £9m in energy efficiency and carbon reduction initiatives. During 2016 we continued to implement cold-aisle containment in our data centres, as well as IT efficiency, lighting and other building process efficiencies in our offices. In 2016, 4 projects were either implemented, or had implementation commenced, with	

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
								potential for 144 tCO2e reduction. - We have also established and are achieving emissions reduction targets (2% reduction in carbon emissions in 2016 and 2017) to reduce our direct exposure to increased efficiency regulations and/or building standards.	

CC5.1b

Please describe your inherent risks that are driven by changes in physical climate parameters

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Change in mean (average) temperature	Data centres are critical to LSEG's business, with instant transactions, data and	Increased operational cost	>6 years	Direct	Likely	Low	Due to the long-term nature of changes in average temperatures, the financial impact of	The LSEG Corporate Responsibility Committee and Environmental Management	There is no current or expected incremental cost (£0) for applying LSEG's Business

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	information core to operations. Increases in the average temperature will result in higher cooling requirements and costs. Likewise, decreases in average temperature will result in higher heating costs. Planning and analysis of future temperature impacts will enable stronger long-term design and investment, particularly ensuring the health, safety and wellbeing of staff and visitors at each of our locations. Other impacts could include dissatisfied occupants of buildings that are not fit for purpose, e.g. building occupiers						this risk to LSEG is estimated to be £0 as all costs and changes would be assumed within BAU practices. We expect this implication to remain static for the long-term i.e. >6 years.	Group are responsible for ensuring the Group monitors the latest news, research and reports regarding the physical impacts of climate change, and for assessing the materiality for LSEG's operations and ensuring all operations are meeting the business needs of this changing environmental context. Where appropriate, this advice is adapted into our BAU Business Continuity Program. The Our Communities Group and EMG meet at least Quarterly, with specialist external advice also sought where appropriate. Actions that are helping mitigate this risk include over £9m in energy efficiency and	Continuity Program to risks associated with climate change as this is already managed in BAU operations. There may be some direct costs from specialist advice on long term physical climate impacts, (less than 0.5% of operational spend). We expect these cost trends to remain static for the foreseeable future (>6 years).

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	<p>experiencing flooding, inadequate drainage, lack of heating control and cooling, problems with air tightness, driving rain and winds. Existing buildings may not be well-adapted to the new climate, especially in hot summer conditions, leading to reduced value of existing buildings if they are not future climate-proofed. However, due to the long-term nature of the risk (>6 years), there will be adequate time to adapt our operations to take advantage of emerging technologies and mitigate this risk.</p>							<p>carbon reduction initiatives in our data centres and offices - which are helping reduce water and energy consumption. During 2016 we continued to implement cold-aisle containment in our data centres, as well as IT efficiency, lighting and other building process efficiencies in our offices. In 2016, 4 projects were either implemented, or had implementation commenced, with potential for 144 tCO₂e reduction. These methods will help us ensure we achieving a reduction in our carbon emissions now, reducing the business' energy requirements and impact of long-term weather changes.</p>	
Change in precipitation	Physical risks from climate	Inability to do	Up to 1 year	Direct	Very likely	High	Due to the unknown nature	LSEG recognises the potential of	There is no current or

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
extremes and droughts	change that could affect the availability and reliability of electricity, water, and also availability of travel networks and access to buildings include extreme weather events such as flooding, blizzards and droughts. Data centres are critical to LSEG's business, with instant transactions, data and information core to our operations. While there are well-secured backup systems in place, any long-term power delays that could disrupt our trading platforms could lead to significant revenue loss and logistical challenges. The energy grid, is of	business					of timing and impact of these extreme weather events, the financial impact to LSEG is difficult to calculate, though could be as much as a 100% operational budget increase (£954m) to respond to an extreme weather event. Any physical impacts on the energy grid would directly affect our energy costs (potential £825k increase for a 10-15% increase in energy costs). We expect these implications to remain static for the long-term (>6 years).	extreme weather events to significantly disrupt and impact our business. To respond to these potential threats, we have implemented a comprehensive Business Continuity Program which incorporates threat assessments and the development of contingency plans which would take effect in case of weather-related risks such as floods, blizzards, tsunamis or droughts. For example, executive management are accountable at a company and asset level for risk identification (including flood, tsunami and other climate change related risks), analysis, evaluation, mitigation,	expected incremental cost (£0) for applying LSEG's Business Continuity Program to risks associated with climate change as this is already managed in BAU operations. There may be some direct costs from specialist advice on long term physical climate impacts, (less than 0.5% of operational spend). We expect these cost trends to remain static for the foreseeable future (>6 years).

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	critical importance to LSEG's business, and any threats to the energy grid and access to our buildings are taken very seriously. There is immediate flooding risk to people, property and critical business systems, particularly in Sri Lanka.							monitoring and reporting in their area within the framework established by the Board. This is a business-wide risk assessment, and includes considering of the above climate change or carbon related issues. A combined bottom up and top down risk management approach is adopted, with risks identified at a business unit, divisional and group level. Our BAU Business Continuity Program processes ensure we have plans in place should any of these eventualities arise. Actions that are helping mitigate this risk include our robust data centre backup systems to mitigate climate impacts to the energy grid and ensure business	

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
								continuity. We also purchase insurance cover for business interruption and loss which helps mitigate the financial impacts of extreme weather disruptions.	

CC5.1c

Please describe your inherent risks that are driven by changes in other climate-related developments

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Uncertainty in market signals	As a diverse global company, LSEG conducts business with companies from many different industries that have headquarters, offices, factories, and warehouses located all over the world. Any risks to our	Reduced demand for goods/services	>6 years	Direct	Unlikely	High	Potential impacts related to climate change that affects availability of resources such as food, timber, and energy could substantially increase business expenses and	For the last five years, the Group has pursued a far-reaching diversification strategy that limits the impact of equity trading on the Group's revenues, thus reducing exposure to uncertainty in market signals. As many of these risks	There is no current or expected incremental cost (£0) for actively managing these climate change risks as any increased investment or resources required are offset by

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	company, our clients or our suppliers could potentially create a chain reaction of varying consequences. Price increases of fundamental goods such as food, timber, drinking water, and energy-resources (all potential impacts of climate change) also pose threats as higher costs can negatively affect a company's financial structure. The financial health of companies listed on our exchange is critical to our business. These risks may be magnified due to impacts on listed companies operations and our supply chain.						affect the core operations of several companies listed on our exchanges and create significant market sentiment changes that may reduce the number of companies listed on our exchange. A 10% decrease in the number of IPOs and secondary market trading volumes could have a negative financial impact (circa £20m) on LSEG's Capital Markets revenue and is expected to be consistent for >6 years though the risk is felt to be very long term (over 10 years at least) and as such is likely to be	are long-term, it is expected they will be identified, managed and mitigated as part of BAU risk management processes. Engaging with ESG issues and investor-led principles such as the UN Principles for Responsible Investment (PRI) have enabled the Group to gain early-mover strategic advantage over our competitors. FTSE was an early mover in developing ESG products and services, pioneering the concept of ESG Indices globally. By supporting issuers in navigating the array of non-financial reporting requests we can enable improved supply of corporate data to the investment community, enabling the integration of this information into investment decision	increased revenues. We expect these cost trends to remain static for the foreseeable future (>6 years).

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
							managed as part of BAU risk management.	making and stewardship. In 2016, we launched our Global Sustainable Investment Centre, which is part of our strategy to create the most sustainable and climate-aligned investment environment in the world. In 2016, LSEG developed guidance through the Global Sustainable Investment Centre, setting out recommendations for good practice in ESG reporting. The Guidance is available on-line to both issuers and investors globally, and has been sent to more than 2,700 companies that have securities listed on LSEG's UK and Italian markets with a combined market capitalisation of more than £5 trillion.	

CC5.1d

Please explain why you do not consider your company to be exposed to inherent risks driven by changes in regulation that have the potential to generate a substantive change in your business operations, revenue or expenditure

CC5.1e

Please explain why you do not consider your company to be exposed to inherent risks driven by changes in physical climate parameters that have the potential to generate a substantive change in your business operations, revenue or expenditure

CC5.1f

Please explain why you do not consider your company to be exposed to inherent risks driven by changes in other climate-related developments that have the potential to generate a substantive change in your business operations, revenue or expenditure

Further Information

Page: CC6. Climate Change Opportunities

CC6.1

Have you identified any inherent climate change opportunities that have the potential to generate a substantive change in your business operations, revenue or expenditure? Tick all that apply

- Opportunities driven by changes in regulation
- Opportunities driven by changes in physical climate parameters
- Opportunities driven by changes in other climate-related developments

CC6.1a

Please describe your inherent opportunities that are driven by changes in regulation

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
General environmental regulations, including planning	While governments and private investment play a major role in the renewable energy sector's early development, the public market for renewable companies has witnessed impressive growth and presents a significant opportunity for LSEG, boosted by mounting	New products/business services	1 to 3 years	Direct	Very likely	Low	FTSE Russell sees a need for all asset owners and asset managers and banks to understand the impact of a transition to a low carbon economy on their portfolios and risk models. There is therefore a significant opportunity in providing services to enable market	FTSE Russell indices are used extensively by market participants worldwide for investment analysis and performance measurement. This gives LSEG a unique opportunity to help our clients integrate ESG factors into their decision making. There are currently 4100+ stocks	The Group continues to invest in services that enable investors to model and understand the transition to a low carbon economy. We expect to launch new services and tools in this area during 2017 which reflects substantial investment in growing our capabilities in

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	<p>investor interest and confidence in the sector. Both LSEG's AIM (Alternative Investments Market) and the Main Market are well placed to support the sector's financing needs, underpinned by the critical mass of investors, advisers and analysts who have sector expertise. There are currently 14 renewable funds listed on our markets, 3 green ETFs listed on the London Stock Exchange and 5 green ETFs listed on Borsa Italiana. Engaging with</p>						<p>participants in achieving this. In 2016 alone, 14 new green bonds in five different currencies were listed on London Stock Exchange, including the first Chinese green covered bond issued by Bank of China. Altogether, there are 42 green bonds listed on London Stock Exchange with a total of US\$11.2 billion. Renewable infrastructure funds listed on London Stock Exchange are worth a combined £3.7 billion</p>	<p>covered worldwide by FTSE's ESG ratings We engage with investor, market, government and other stakeholders in understanding issues in disclosing ESG factors for decision making which in turn helps us make better decisions for our products and services to take advantage of these climate change related opportunities. - LSEG is proud to have been one of the founding members of the Green Finance Initiative of the City of London in 2016. The</p>	<p>this area. There is no incremental cost (£0) to LSEG to manage these opportunities, as additional resources and costs are offset by increasing revenues and we expect this to remain static for the foreseeable future (>6 years).</p>

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	<p>ESG issues and investor-led principles such as the UN Principles for Responsible Investment (PRI) and the UN Sustainable Stock Exchange Initiative have enabled the Group to gain early-mover strategic advantage over our competitors. Since 2001, FTSE4Good has been the world's leading index of companies demonstrating strong ESG performance. Overseen by an independent, expert Policy Committee and supported by an evolving</p>						<p>and have raised £3.3 billion since 2013. Further, in the Capital Markets businesses there are opportunities too - for example in 2016, Green ETFs on the London Stock Exchange had a total turnover of £660 million. LSEG expects the positive financial impact of these opportunities to grow in the next 1-3 years and beyond.</p>	<p>GFI's goals are to promote London's status as a leading global centre for the provision of green and sustainable financial and professional services, to advocate for specific regulatory and policy developments and to provide public and market leadership on issues relating to market impediments and opportunities. Throughout 2016, FTSE Russell initiated and participated in a number of events as part of our initiative to share knowledge across</p>	

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	criteria platform and direct company engagement programme, FTSE4Good has made a significant and measurable impact on the behaviour of companies worldwide while providing investors with a tool for benchmarking and tracking ESG-driven funds.							developed and emerging markets. We spoke at over 50 conferences and seminars on sustainability all around the world, including in Australia, France, Italy, Japan, Malaysia, Singapore, Sweden, the Netherlands, the UK and the US. Our involvement in these events was as technical experts to support cross-learning including on ESG integration.	

CC6.1b

Please describe your inherent opportunities that are driven by changes in physical climate parameters

Opportunity driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Change in temperature extremes	It is significant for the Group that we ensure our operations and property estate are equipped to adapt to changes in climate and take advantage of the efficiency and savings that can be achieved through targeting our GHG emissions. This includes issues such as energy efficiency and pricing through to the efficiency and physical security of our property estate. LSEG have prioritised issues like energy efficiency as well as virtualisation and consolidation of our data centre environments, which are building sustainability and strength into our business. Changes in	Reduced operational costs	3 to 6 years	Direct	More likely than not	Low	The Group spends over £9m on annual energy consumption and business travel - a cost we have opportunity to reduce as we target energy reduction, and invest in the future of our property estate. A potential 5-10% reduction in energy and business travel costs through adapting our operations in preparation for climate change extremes would mean an £825k reduction in operational expenses - a small impact on operational expenditure, and is expected to further reduce costs in the next 3-6 years.	The LSEG Corporate Responsibility Committee and Environmental Management Group are responsible for ensuring the Group monitors the latest news, research and reports regarding the physical impacts of climate change and for assessing the materiality for LSEG's operations. The CR Committee and EMG meet at least Quarterly, with specialist external advice also sought as appropriate. Examples of how we are managing the opportunities arising from long-term changes in temperature extremes include: - In the last three years, LSEG has invested over £9m	In the last three years, LSEG has invested over £9m in energy efficiency and carbon reduction initiatives in our data centres and offices. There are also direct costs from engaging with policy decisions, specialist advice on regulations, compliance, and management tools to gather data and measure progress against targets (less than 0.5% of total operational spend). We expect these costs to be consistent (or significantly reduce) for the next 1-3 years.

Opportunity driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	<p>temperature extremes may impact energy prices, as well as make it difficult for employees to travel between our global offices. However the internet and video conferencing are both powerful tools which are enabling many aspects of our business to be done virtually, allowing for reductions in employee travel. We are targeting a 2% reduction in travel during 2017.</p>							<p>in energy efficiency and carbon reduction initiatives. During 2016 we continued to implement cold-aisle containment in our data centres, as well as IT efficiency, lighting and other building process efficiencies in our offices. In 2016, 4 projects were either implemented, or had implementation commenced, with potential for 144 tCO2e reduction. - We have also established and are achieving emissions reduction targets (2% reduction in carbon emissions in 2016 and 2017). - LSEG reports progress against these targets and impacts of reduction initiatives to CDP, DJSI, FTSE4Good,</p>	

Opportunity driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
								Annual Reports and on our website.	

CC6.1c

Please describe your inherent opportunities that are driven by changes in other climate-related developments

Opportunity driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Reputation	The political, economic, physical and social environment in which we operate is undergoing much change and the need for efficient, transparent and well regulated capital markets has perhaps never been greater. This macro-economic background highlights the importance of the	Increased demand for existing products/services	1 to 3 years	Direct	Very likely	Low-medium	FTSE Russell sees a need for all asset owners and asset managers and banks to understand the impact of a transition to a low carbon economy on their portfolios and risk models. There is therefore a significant opportunity in providing services to enable market	LSEG manages this opportunity through engagement in our markets, and developing our own operational responses to climate change so that both current and potential employees can clearly see the link between our market commitments in renewable energy, ESG	There are limited direct costs required for us to manage this reputation opportunity. Primary costs are BAU costs of achieving our carbon reduction targets i.e. less than 0.5% of operational spend on specialist advice, systems and management processes to

Opportunity driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	<p>role played by LSEG. This role includes the Group's environmental, social and governance (ESG) responsibilities and how the organisation conducts itself as a 'good' corporate citizen. CR is an integral part of the Group's strategy and there are both risks and opportunities arising as a direct result of our engagement in this area. There are reputational opportunities for LSEG to attract and retain talent, as well as gain competitive advantage in the marketplace through integrating climate change factors into our business and risk</p>						<p>participants in achieving this. Renewable infrastructure funds listed on London Stock Exchange are worth a combined £3.4 billion and have raised £3.3 billion since 2013. Further, in the Capital Markets businesses there are opportunities too - for example in 2016, Green ETFs on the London Stock Exchange had a total turnover of £660 million. By enabling investors to measure and model these markets, LSEG provides critical services. Demand for these services is expected to grow over time,</p>	<p>management, and our business strategy. Examples of managing our response include: - Over the last two years, LSEG has launched its new Green Bond segment of its fixed income markets which provides issuers with a full suite of solutions to support green bond issuance, offering the choice of a range of listed markets and trading models for both retail and wholesale investors. In 2016 alone, 14 new green bonds in five different currencies were listed on London Stock Exchange,</p>	<p>enable an effective response. There are also marketing and cost of sales for our climate change products and services – estimated at less than 5% of our marketing budget. These costs are expected to remain static for the next 1-3 years.</p>

Opportunity driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	<p>management strategy. We also understand that a number of our clients are increasingly becoming invested in climate change initiatives and seek to work with companies like LSEG, who have similar goals and perspectives regarding climate change and the environment.</p>						<p>with minor positive impact on revenue. Positive engagement with climate change could result in minor staff recruitment and retention cost reductions (<10%). These positive impacts are expected to be consistent for 1-3 years.</p>	<p>including the first Chinese green covered bond issued by Bank of China. Altogether, there are 42 green bonds listed on London Stock Exchange with a total of US\$11.2 billion. - London Stock Exchange Group is a committed supporter of green financing and we see the transition to a low carbon economy as a major industrial trend. In addition to attracting and profiling green bond and equity listings through FTSE Russell we support institutional investors in defining climate factors and integrating them into benchmarks</p>	

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
								and portfolio analytics.	

CC6.1d

Please explain why you do not consider your company to be exposed to inherent opportunities driven by changes in regulation that have the potential to generate a substantive change in your business operations, revenue or expenditure

CC6.1e

Please explain why you do not consider your company to be exposed to inherent opportunities driven by changes in physical climate parameters that have the potential to generate a substantive change in your business operations, revenue or expenditure

CC6.1f

Please explain why you do not consider your company to be exposed to inherent opportunities driven by changes in other climate-related developments that have the potential to generate a substantive change in your business operations, revenue or expenditure

Further Information

Module: GHG Emissions Accounting, Energy and Fuel Use, and Trading

Page: CC7. Emissions Methodology

CC7.1

Please provide your base year and base year emissions (Scopes 1 and 2)

Scope	Base year	Base year emissions (metric tonnes CO2e)
Scope 1	Tue 01 Jan 2013 - Tue 31 Dec 2013	1332
Scope 2 (location-based)	Tue 01 Jan 2013 - Tue 31 Dec 2013	23211
Scope 2 (market-based)	Tue 01 Jan 2013 - Tue 31 Dec 2013	21844

CC7.2

Please give the name of the standard, protocol or methodology you have used to collect activity data and calculate Scope 1 and Scope 2 emissions

Please select the published methodologies that you use

Defra Voluntary Reporting Guidelines

Please select the published methodologies that you use

The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)
Bilan Carbone

CC7.2a

If you have selected "Other" in CC7.2 please provide details of the standard, protocol or methodology you have used to collect activity data and calculate Scope 1 and Scope 2 emissions

CC7.3

Please give the source for the global warming potentials you have used

Gas	Reference
CO2	IPCC Second Assessment Report (SAR - 100 year)
CH4	IPCC Second Assessment Report (SAR - 100 year)
N2O	IPCC Second Assessment Report (SAR - 100 year)
HFCs	IPCC Fourth Assessment Report (AR4 - 100 year)
CO2	IPCC Fourth Assessment Report (AR4 - 100 year)
CH4	IPCC Fourth Assessment Report (AR4 - 100 year)
N2O	IPCC Fourth Assessment Report (AR4 - 100 year)

CC7.4

Please give the emissions factors you have applied and their origin; alternatively, please attach an Excel spreadsheet with this data at the bottom of this page

Fuel/Material/Energy	Emission Factor	Unit	Reference
Other: Please refer to spreadsheets attached.		Other: Please refer to spreadsheets attached.	We used the most relevant and up to date emission factors provided by Defra (see attached), the GHG Protocol (see attached) and Bilan Carbone (http://www.ghgprotocol.org/Third-Party-Databases/Bilan-Carbone).

Further Information

Attachments

[https://www.cdp.net/sites/2017/71/10871/Climate Change 2017/Shared Documents/Attachments/ClimateChange2017/CC7.EmissionsMethodology/ghg-conversion-factors-2016update_MASTER__links_removed__v2.xls](https://www.cdp.net/sites/2017/71/10871/Climate%20Change%202017/Shared%20Documents/Attachments/ClimateChange2017/CC7.EmissionsMethodology/ghg-conversion-factors-2016update_MASTER__links_removed__v2.xls)
[https://www.cdp.net/sites/2017/71/10871/Climate Change 2017/Shared Documents/Attachments/ClimateChange2017/CC7.EmissionsMethodology/Emission_Factors_from_Cross_Sector_Tools_April_2014.xlsx](https://www.cdp.net/sites/2017/71/10871/Climate%20Change%202017/Shared%20Documents/Attachments/ClimateChange2017/CC7.EmissionsMethodology/Emission_Factors_from_Cross_Sector_Tools_April_2014.xlsx)

Page: CC8. Emissions Data - (1 Jan 2016 - 31 Dec 2016)

CC8.1

Please select the boundary you are using for your Scope 1 and 2 greenhouse gas inventory

Operational control

CC8.2

Please provide your gross global Scope 1 emissions figures in metric tonnes CO2e

1583

CC8.3

Please describe your approach to reporting Scope 2 emissions

Scope 2, location-based	Scope 2, market-based	Comment
We are reporting a Scope 2, location-based figure	We are reporting a Scope 2, market-based figure	LSEG's externally reported figures in the Annual Report and CR Report use market-based Scope 2 emissions figures.

CC8.3a

Please provide your gross global Scope 2 emissions figures in metric tonnes CO2e

Scope 2, location-based	Scope 2, market-based (if applicable)	Comment
22492	21129	LSEG's externally reported figures in the Annual Report and CR Report use market-based Scope 2 emissions figures.

CC8.4

Are there any sources (e.g. facilities, specific GHGs, activities, geographies, etc.) of Scope 1 and Scope 2 emissions that are within your selected reporting boundary which are not included in your disclosure?

No

CC8.4a

Please provide details of the sources of Scope 1 and Scope 2 emissions that are within your selected reporting boundary which are not included in your disclosure

Source	Relevance of Scope 1 emissions from this source	Relevance of location-based Scope 2 emissions from this source	Relevance of market-based Scope 2 emissions from this source (if applicable)	Explain why the source is excluded

CC8.5

Please estimate the level of uncertainty of the total gross global Scope 1 and 2 emissions figures that you have supplied and specify the sources of uncertainty in your data gathering, handling and calculations

Scope	Uncertainty range	Main sources of uncertainty	Please expand on the uncertainty in your data
Scope 1	Less than or equal to 2%	Extrapolation Metering/ Measurement Constraints	Extrapolation has been used where limited data available due to landlord data restrictions or slow availability of landlord data in serviced office space. Natural Gas is 1% extrapolated.
Scope 2 (location-based)	More than 2% but less than or equal to 5%	Extrapolation Metering/ Measurement	Extrapolation has been used where limited data available due to landlord data restrictions or slow availability of landlord data in serviced office space. Electricity is 5% extrapolated.

Scope	Uncertainty range	Main sources of uncertainty	Please expand on the uncertainty in your data
		Constraints	
Scope 2 (market-based)	More than 2% but less than or equal to 5%	Extrapolation Metering/ Measurement Constraints	Extrapolation has been used where limited data available due to landlord data restrictions or slow availability of landlord data in serviced office space. Electricity is 5% extrapolated.

CC8.6

Please indicate the verification/assurance status that applies to your reported Scope 1 emissions

Third party verification or assurance process in place

CC8.6a

Please provide further details of the verification/assurance undertaken for your Scope 1 emissions, and attach the relevant statements

Verification or assurance cycle in place	Status in the current reporting year	Type of verification or assurance	Attach the statement	Page/section reference	Relevant standard	Proportion of reported Scope 1 emissions verified (%)
Annual	Complete	Limited	https://www.cdp.net/sites/2017/71/10871/Climate Change	Pages 1-4.	ISO14064-	100

Verification or assurance cycle in place	Status in the current reporting year	Type of verification or assurance	Attach the statement	Page/section reference	Relevant standard	Proportion of reported Scope 1 emissions verified (%)
process		assurance	2017/Shared Documents/Attachments/CC8.6a/ISO 14064-1 Verification Statement LSEG rev 12016.pdf		3	

CC8.6b

Please provide further details of the regulatory regime to which you are complying that specifies the use of Continuous Emission Monitoring Systems (CEMS)

Regulation	% of emissions covered by the system	Compliance period	Evidence of submission

CC8.7

Please indicate the verification/assurance status that applies to at least one of your reported Scope 2 emissions figures

Third party verification or assurance process in place

CC8.7a

Please provide further details of the verification/assurance undertaken for your location-based and/or market-based Scope 2 emissions, and attach the relevant statements

Location-based or market-based figure?	Verification or assurance cycle in place	Status in the current reporting year	Type of verification or assurance	Attach the statement	Page/Section reference	Relevant standard	Proportion of reported Scope 2 emissions verified (%)
Market-based	Annual process	Complete	Limited assurance	https://www.cdp.net/sites/2017/71/10871/Climate Change 2017/Shared Documents/Attachments/CC8.7a/ISO 14064-1 Verification Statement LSEG rev 12016.pdf	Pages 1-4.	ISO14064-3	100
Location-based	Annual process	Complete	Limited assurance	https://www.cdp.net/sites/2017/71/10871/Climate Change 2017/Shared Documents/Attachments/CC8.7a/ISO 14064-1 Verification Statement LSEG rev 12016.pdf	Pages 1-4.	ISO14064-3	100

CC8.8

Please identify if any data points have been verified as part of the third party verification work undertaken, other than the verification of emissions figures reported in CC8.6, CC8.7 and CC14.2

Additional data points verified	Comment
Year on year emissions intensity figure	Each year total global emissions intensity per m2 and per FTE employee are verified.

CC8.9

Are carbon dioxide emissions from biologically sequestered carbon relevant to your organization?

No

CC8.9a

Please provide the emissions from biologically sequestered carbon relevant to your organization in metric tonnes CO2

Further Information

Page: CC9. Scope 1 Emissions Breakdown - (1 Jan 2016 - 31 Dec 2016)

CC9.1

Do you have Scope 1 emissions sources in more than one country?

Yes

CC9.1a

Please break down your total gross global Scope 1 emissions by country/region

Country/Region	Scope 1 metric tonnes CO2e
United Kingdom	535
Italy	812
Sri Lanka	202
United States of America	0
Rest of world	35

CC9.2

Please indicate which other Scope 1 emissions breakdowns you are able to provide (tick all that apply)

By activity

CC9.2a

Please break down your total gross global Scope 1 emissions by business division

Business division	Scope 1 emissions (metric tonnes CO2e)

CC9.2b

Please break down your total gross global Scope 1 emissions by facility

Facility	Scope 1 emissions (metric tonnes CO2e)	Latitude	Longitude

CC9.2c

Please break down your total gross global Scope 1 emissions by GHG type

GHG type	Scope 1 emissions (metric tonnes CO2e)
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CC9.2d

Please break down your total gross global Scope 1 emissions by activity

Activity	Scope 1 emissions (metric tonnes CO2e)
Natural Gas	1077
LPG	37
Diesel (Generators)	275
Fleet Vehicles (Diesel)	79
Fugitive Emissions	114

Further Information

Page: CC10. Scope 2 Emissions Breakdown - (1 Jan 2016 - 31 Dec 2016)

CC10.1

Do you have Scope 2 emissions sources in more than one country?

Yes

CC10.1a

Please break down your total gross global Scope 2 emissions and energy consumption by country/region

Country/Region	Scope 2, location-based (metric tonnes CO2e)	Scope 2, market-based (metric tonnes CO2e)	Purchased and consumed electricity, heat, steam or cooling (MWh)	Purchased and consumed low carbon electricity, heat, steam or cooling accounted in market-based approach (MWh)
United Kingdom	16482	16482	40001	
Italy	3326	1963	9700	3977
Sri Lanka	1226	1226	3649	
United States of America	54	54	204	
Rest of world	1405	1405	4327	

CC10.2

Please indicate which other Scope 2 emissions breakdowns you are able to provide (tick all that apply)

By activity

CC10.2a

Please break down your total gross global Scope 2 emissions by business division

Business division	Scope 2, location-based (metric tonnes CO2e)	Scope 2, market-based (metric tonnes CO2e)

CC10.2b

Please break down your total gross global Scope 2 emissions by facility

Facility	Scope 2, location-based (metric tonnes CO2e)	Scope 2, market-based (metric tonnes CO2e)
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CC10.2c

Please break down your total gross global Scope 2 emissions by activity

Activity	Scope 2, location-based (metric tonnes CO2e)	Scope 2, market-based (metric tonnes CO2e)
Data Centre Purchased Electricity	13909	13909
Office Space Purchased Electricity	8583	7220

Further Information

Page: CC11. Energy

CC11.1

What percentage of your total operational spend in the reporting year was on energy?

More than 0% but less than or equal to 5%

CC11.2

Please state how much heat, steam, and cooling in MWh your organization has purchased and consumed during the reporting year

Energy type	MWh
Heat	0
Steam	0
Cooling	0

CC11.3

Please state how much fuel in MWh your organization has consumed (for energy purposes) during the reporting year

6723

CC11.3a

Please complete the table by breaking down the total "Fuel" figure entered above by fuel type

Fuels	MWh
Natural gas	5502
Diesel/Gas oil	1061

Fuels	MWh
Liquefied petroleum gas (LPG)	160

CC11.4

Please provide details of the electricity, heat, steam or cooling amounts that were accounted at a low carbon emission factor in the market-based Scope 2 figure reported in CC8.3a

Basis for applying a low carbon emission factor	MWh consumed associated with low carbon electricity, heat, steam or cooling	Emissions factor (in units of metric tonnes CO2e per MWh)	Comment
Direct procurement contract with a grid-connected generator or Power Purchase Agreement (PPA), supported by energy attribute certificates	3977	0.00	Italy (Palazzo Mezzanotte) electricity is provided by 100% hydro renewable energy, confirmed by supplier energy certificate.

CC11.5

Please report how much electricity you produce in MWh, and how much electricity you consume in MWh

Total electricity consumed (MWh)	Consumed electricity that is purchased (MWh)	Total electricity produced (MWh)	Total renewable electricity produced (MWh)	Consumed renewable electricity that is produced by company (MWh)	Comment
57881	57881	0	0	0	

Further Information

Page: CC12. Emissions Performance

CC12.1

How do your gross global emissions (Scope 1 and 2 combined) for the reporting year compare to the previous year?

Decreased

CC12.1a

Please identify the reasons for any change in your gross global emissions (Scope 1 and 2 combined) and for each of them specify how your emissions compare to the previous year

Reason	Emissions value (percentage)	Direction of change	Please explain and include calculation
Emissions reduction activities	6.3	Decrease	Emissions reduction activities in 2016 included cold-aisle containment and server efficiency replacements in data centres, and office consolidation and LED lighting replacement in offices. If these activities had not been carried out, then Scope 1 & 2 emissions would likely have increased in line with FTE of 8.6% or 972 tCO ₂ e at office locations, and data centre cabinets of 13% or 1968 tCO ₂ e at data centre locations. A total potential increase of 2,940 tCO ₂ e. It is estimated that emissions reduction activities carried out avoided 50% of this potential increase, or 1470 tCO ₂ e. 2015 gross Scope 1 & 2 emissions were 23320 tCO ₂ e. The calculation for the emissions value % is therefore $(1470/23320)*100 = 6.3\%$
Divestment	0	No change	There have been no material divestments during the reporting period.
Acquisitions	0	No change	There have been no material acquisitions during the reporting period.
Mergers	0	No change	There have been no material mergers during the reporting period.
Change in output	4.59	Increase	During the reporting period, our Primary Markets saw 134 new companies listed. In Secondary Markets, UK cash equity average daily value traded increased by 4%, average daily number of equity trades in Italy increased by 5% and average daily value traded on Turquoise increased 26%. Volumes on IDEM (the Group's Italian derivatives market) increased by 10%, and clearing of equity and derivatives volumes increased by 8%.

Reason	Emissions value (percentage)	Direction of change	Please explain and include calculation
			To support this growth, our data centre occupancy increased by 13%, and FTE employees increased by 8.6%. Scope 2 electricity consumption increased by 4.5% against 2015, or 1070 tCO ₂ e if using 2015 emissions factors. Scope 1 emissions increases are outlined in the section "Other", below. 2015 gross Scope 1 & 2 emissions were 23320 tCO ₂ e. The calculation for the emissions value % is $(1071/23320)*100 = 4.59\%$.
Change in methodology	9.36	Decrease	The Defra electricity emissions factor, which is used primarily across our UK sites, decreased by 10.2% in 2016 vs 2015. The difference between 2016 emissions with no emissions factor change, and with the 10.2% emissions factor reduction, is 2183 tCO ₂ e. 2015 gross Scope 1 & 2 emissions were 23320 tCO ₂ e. The calculation for the emissions value % is $(2183/23320)*100 = 9.36\%$.
Change in boundary	0	No change	There have been no boundary changes during the reporting period.
Change in physical operating conditions	0	No change	There have been no material changes in physical operating conditions during the reporting period.
Unidentified	0	No change	
Other	1.89	Increase	Scope 1 emissions have increased due to a change in landlord usage procedures for Natural Gas in Italy. While the reporting boundary has not changed, all building consumption during winter months is now assigned to LSEG. During the reporting period, Scope 1 Natural Gas emissions increasing by 440 tCO ₂ e, or 115% against 2015. 2015 gross Scope 1 & 2 emissions were 23320 tCO ₂ e. The calculation for the emissions value % is $(440/23320)*100 = 1.89\%$.

CC12.1b

Is your emissions performance calculations in CC12.1 and CC12.1a based on a location-based Scope 2 emissions figure or a market-based Scope 2 emissions figure?

Market-based

CC12.2

Please describe your gross global combined Scope 1 and 2 emissions for the reporting year in metric tonnes CO2e per unit currency total revenue

Intensity figure =	Metric numerator (Gross global combined Scope 1 and 2 emissions)	Metric denominator: Unit total revenue	Scope 2 figure used	% change from previous year	Direction of change from previous year	Reason for change
0.000013706	metric tonnes CO2e	1657100000	Market-based	16.62	Decrease	Revenue increased by 16% during the reporting period, while gross Scope 1 & 2 emissions decreased by 2.6% due to a combination of emissions reduction activities (such as cold-aisle containment and other energy efficiency projects) and emissions factor changes. Therefore emissions per unit total revenue have decreased by 16.62%.

CC12.3

Please provide any additional intensity (normalized) metrics that are appropriate to your business operations

Intensity figure =	Metric numerator (Gross global combined Scope 1 and 2 emissions)	Metric denominator	Metric denominator: Unit total	Scope 2 figure used	% change from previous year	Direction of change from previous year	Reason for change
0.249240055	metric tonnes CO2e	square meter	91125	Market-based	13.12	Decrease	Floorspace increased by 12% during the reporting period, while gross Scope 1 & 2 emissions decreased by 2.6%, in part due to emissions reduction activities relating to building energy performance such as cold-aisle containment in data centres and LED lighting replacement in offices,

Intensity figure =	Metric numerator (Gross global combined Scope 1 and 2 emissions)	Metric denominator	Metric denominator: Unit total	Scope 2 figure used	% change from previous year	Direction of change from previous year	Reason for change
							therefore emissions per square meter have decreased by 13.12%.
4.858181818	metric tonnes CO2e	full time equivalent (FTE) employee	4675	Market-based	10.34	Decrease	FTE employees increased by 9% during the reporting period, while gross Scope 1 & 2 emissions decreased by 2.6%, in part due to emissions reduction activities relating to building energy performance such as cold-aisle containment in data centres and LED lighting replacement in offices, therefore emissions per FTE have decreased by 10.34%.
16.62664714	metric tonnes CO2e	Other: Occupied Cabinet	1366	Market-based	14.01	Decrease	Occupied cabinets increased by 13% due to strong business growth during the reporting period, while gross Scope 1 & 2 emissions decreased by 2.6%, in part due to emissions reduction activities relating to building energy performance such as cold-aisle containment in data centres and LED lighting replacement in offices, therefore emissions per occupied cabinet have reduced by 14.01%.

Further Information

Page: CC13. Emissions Trading

CC13.1

Do you participate in any emissions trading schemes?

No, and we do not currently anticipate doing so in the next 2 years

CC13.1a

Please complete the following table for each of the emission trading schemes in which you participate

Scheme name	Period for which data is supplied	Allowances allocated	Allowances purchased	Verified emissions in metric tonnes CO2e	Details of ownership
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CC13.1b

What is your strategy for complying with the schemes in which you participate or anticipate participating?

CC13.2

Has your organization originated any project-based carbon credits or purchased any within the reporting period?

No

CC13.2a

Please provide details on the project-based carbon credits originated or purchased by your organization in the reporting period

Credit origination or credit purchase	Project type	Project identification	Verified to which standard	Number of credits (metric tonnes CO2e)	Number of credits (metric tonnes CO2e): Risk adjusted volume	Credits canceled	Purpose, e.g. compliance
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Further Information

Page: CC14. Scope 3 Emissions

CC14.1

Please account for your organization’s Scope 3 emissions, disclosing and explaining any exclusions

Sources of Scope 3 emissions	Evaluation status	metric tonnes CO2e	Emissions calculation methodology	Percentage of emissions calculated using data obtained from suppliers or value chain partners	Explanation
Purchased goods and services	Relevant, not yet calculated				Purchased goods and services are likely to be relevant, however as an office based financial services firm we are reviewing available data and calculation methodologies to identify the most appropriate and meaningful method to calculate, disclose and manage these emissions.
Capital goods	Relevant, not yet calculated				As an office based financial services firm, capital goods are likely to include IT hardware in our offices and data centres. We are reviewing available data and calculation methodologies to identify the most appropriate and meaningful method to calculate, disclose and manage these

Sources of Scope 3 emissions	Evaluation status	metric tonnes CO2e	Emissions calculation methodology	Percentage of emissions calculated using data obtained from suppliers or value chain partners	Explanation
Fuel-and-energy-related activities (not included in Scope 1 or 2)	Relevant, calculated	1597	Data is calculated using primary data from building metering and is cross-checked against supplier invoices and externally verified. Extrapolation based on FTE headcount has been used where limited data available due to landlord data restrictions or slow availability of landlord data in serviced office space. Electricity is 5% extrapolated. T&D losses from electricity are calculated using 2016 or the latest available conversion factors and associated GWP from each of the following sources: United Kingdom: DEFRA UK Government GHG 2016 Conversion Factors: www.ukconversionfactorscarbonsmart.co.uk Global (non-extrapolated): GHG Protocol: http://www.ghgprotocol.org/calculation-tools/all-tools Extrapolated: DEFRA UK Government GHG 2016 Conversion Factors: www.ukconversionfactorscarbonsmart.co.uk	95.00%	emissions. Emissions calculated are for Transmission and distribution (T&D) losses (generation of electricity).
Upstream transportation and distribution	Not relevant, explanation provided				As an office based financial services firm, our operations do not currently include any upstream transportation or distribution other than that which would be directly included in our purchased goods and services or capital goods and services.
Waste generated in operations	Relevant, calculated	180	Emissions from waste are calculated based on total waste (kg) including waste to energy, waste to landfill and waste recycled (including glass, paper, cardboard, plastics, food and drink, and mixed recycling). Emissions are calculated from primary supplier data in the UK and Italy and extrapolation based on FTE has been used where primary data is not available across the rest of	25.00%	We currently measure and monitor all of our global waste streams and thus are able to calculate the emissions directly arising from this aspect of our operations in the UK and Italy.

Sources of Scope 3 emissions	Evaluation status	metric tonnes CO2e	Emissions calculation methodology	Percentage of emissions calculated using data obtained from suppliers or value chain partners	Explanation
			the world. Waste is 75% extrapolated. Emissions from waste generated in operations are calculated using 2016 or the latest available conversion factors and associated GWP from each of the following sources: United Kingdom: DEFRA UK Government GHG 2016 Conversion Factors: www.ukconversionfactorscarbonsmart.co.uk Global (non-extrapolated): DEFRA UK GHG 2016 Government Conversion Factors (as no GHG protocol factor for waste): www.ukconversionfactorscarbonsmart.co.uk Extrapolated: DEFRA UK Government 2016 GHG Conversion Factors: www.ukconversionfactorscarbonsmart.co.uk		We are constantly working with suppliers to increase the availability of primary data rather than using extrapolation.
Business travel	Relevant, calculated	6378	Emissions are 100% calculated based on air travel and rail travel miles supplied and confirmed by our travel booking partner. Air Travel data calculated from mileage from travel bookings provider except Asia partner bookings which are based on Origin / Destination airport codes and Via Michelin mileage data. Emissions are calculated based on Distance i.e. International, Long Haul, Short Haul, Domestic and class i.e. Economy, Premium Economy, Business Class, First Class using 2016 DEFRA UK Government GHG Conversion Factors. Source: Full Carbon Factors export from www.ukconversionfactorscarbonsmart.co.uk	100.00%	Air travel forms the most significant aspect of our business travel footprint. We are reviewing future potential for data capture and calculation to include Rail, Taxi and claimed business miles (though all are not significant in overall footprint).
Employee commuting	Relevant, not yet calculated				We are reviewing the potential of undertaking a travel plan for our global offices to understand our employee commuting footprint and any potential methods to influence or reduce this footprint. The central city location of most

Sources of Scope 3 emissions	Evaluation status	metric tonnes CO2e	Emissions calculation methodology	Percentage of emissions calculated using data obtained from suppliers or value chain partners	Explanation
					of our offices means the majority of our commuting footprint is likely to be public transport based.
Upstream leased assets	Not relevant, explanation provided				All upstream emissions from leased assets are already included within our reported Scope 1 and Scope 2 emissions.
Downstream transportation and distribution	Not relevant, explanation provided				As an office based financial services firm, our operations do not currently include any downstream transportation or distribution.
Processing of sold products	Not relevant, explanation provided				As an office based financial services firm, our operations do not currently include any sold physical products.
Use of sold products	Not relevant, explanation provided				As an office based financial services firm, our operations do not currently include any sold physical products. All emissions from our services are calculated and included within our Scope 1 and 2 reported emissions.
End of life treatment of sold products	Not relevant, explanation provided				As an office based financial services firm, our operations do not currently include any sold physical products.

Sources of Scope 3 emissions	Evaluation status	metric tonnes CO2e	Emissions calculation methodology	Percentage of emissions calculated using data obtained from suppliers or value chain partners	Explanation
Downstream leased assets	Not relevant, explanation provided				All investments are currently under our operational control. We use the operational control method for our reporting scope, and all investment emissions as lessor of office space have been included in our Scope 1 and 2 reported emissions.
Franchises	Not relevant, explanation provided				We do not currently have any franchise operations.
Investments	Not relevant, explanation provided				All investments are currently under our operational control. We use the operational control method for our reporting scope, and all investment emissions as lessor of office space have been included in our Scope 1 and 2 reported emissions.
Other (upstream)					
Other (downstream)					

CC14.2

Please indicate the verification/assurance status that applies to your reported Scope 3 emissions

Third party verification or assurance process in place

CC14.2a

Please provide further details of the verification/assurance undertaken, and attach the relevant statements

Verification or assurance cycle in place	Status in the current reporting year	Type of verification or assurance	Attach the statement	Page/Section reference	Relevant standard	Proportion of reported Scope 3 emissions verified (%)
Annual process	Complete	Limited assurance	https://www.cdp.net/sites/2017/71/10871/Climate Change 2017/Shared Documents/Attachments/CC14.2a/ISO 14064-1 Verification Statement LSEG rev 12016.pdf	Pages 1-4.	ISO14064-3	100

CC14.3

Are you able to compare your Scope 3 emissions for the reporting year with those for the previous year for any sources?

Yes

CC14.3a

Please identify the reasons for any change in your Scope 3 emissions and for each of them specify how your emissions compare to the previous year

Sources of Scope 3 emissions	Reason for change	Emissions value (percentage)	Direction of change	Comment
Fuel- and energy-related activities (not included in Scopes 1 or 2)	Change in output	1.46	Increase	Total electricity consumed in offices and data centres during the reporting period increased by 4.50%. However, absolute T&D emissions have only increased by 1.46% due to a reduction in the T&D emissions factors between 2015 and 2016.
Waste generated in operations	Emissions reduction activities	40.4	Decrease	LSEG continues to achieve 99% landfill avoidance, and total waste produced per FTE has reduced by 8%, with associated CO2e emissions decreasing 40.4% in absolute terms. This has largely been driven by an innovative food waste solution in Italy, in partnership with a local charity. In addition to this, in our first year of setting a paper reduction target (5% reduction in 2016 vs 2015), we achieved a 29% reduction in A4 sheets used per FTE. This is particularly driven by innovation in our use of technology, for example moving towards paperless recruitment processes and HR inductions and training, however also involves employee engagement activities and communications as well as physical building changes such as the installation of waste points and the removal of individual desk bins on floors at most of our premises.
Business travel	Change in output	6.09	Increase	During the reporting period, our Primary Markets saw 134 new companies listed. In Secondary Markets, UK cash equity average daily value traded increased by 4%, average daily number of equity trades in Italy increased by 5% and average daily value traded on Turquoise increased 26%. Volumes on IDEM (the Group's Italian derivatives market) increased by 10%, and clearing of equity and derivatives volumes increased by 8%. All of this business growth required increased Air Travel. Air Travel reduced by 2% relative to FTE, and 9% relative to Revenue during the reporting period, and we have targeted a further 2% reduction relative to revenue in 2017. We continually review and extend the use and availability of our video conferencing facilities to encourage its use in place of air travel. Train travel is the preferred option between a number of major European hubs. Each division is responsible for its own travel budget, and there is a clear policy for use of different air travel classes to further reduce GHG emissions. In 2016 rail travel in Europe increased 36%, and video conferencing saw a 28% increase in total call hours.

CC14.4

Do you engage with any of the elements of your value chain on GHG emissions and climate change strategies? (Tick all that apply)

Yes, our suppliers

CC14.4a

Please give details of methods of engagement, your strategy for prioritizing engagements and measures of success

CC14.4b

To give a sense of scale of this engagement, please give the number of suppliers with whom you are engaging and the proportion of your total spend that they represent

Type of engagement	Number of suppliers	% of total spend (direct and indirect)	Impact of engagement
Active engagement	148	51%	The Group introduced a new Procurement Policy and Supplier Code of Conduct in October 2014. The figures supplied show our engagement with suppliers regarding the new policy through to April 2017 and specifically, the suppliers who have confirmed commitment to comply with the code and what value of our third party cost base they represent. Climate change and wider environmental considerations were incorporated into the Supplier Due Diligence Framework which was launched alongside the policy. Procurement continues to drive adoption and agreement to the Code. Approximately 5.4% of our total supply base has so far committed to comply with the Code, equivalent to more than 50% of our annual third party spend. We are continuing to target strategic and high value suppliers as our main priority. We engage our suppliers to understand their approach to environmental management including their carbon and climate change practices. We use this information to help inform and prioritise our supply chain selection, and to help understand our wider procurement impacts.

CC14.4c

Please explain why you do not engage with any elements of your value chain on GHG emissions and climate change strategies, and any plans you have to develop an engagement strategy in the future

Further Information

Module: Sign Off

Page: CC15. Sign Off

CC15.1

Please provide the following information for the person that has signed off (approved) your CDP climate change response

Name	Job title	Corresponding job category
David Warren	Chief Financial Officer	Board/Executive board

Further Information