City of London Green Finance Initiative
Working Group on Data, Disclosure and Risk

ESTABLISHING THE WORLD'S BEST FRAMEWORK FOR CLIMATE-RELATED AND SUSTAINABILITY-RELATED FINANCIAL DISCLOSURES

MARCH 2018

City of London Green Finance Initiative
Working Group on Data, Disclosure and Risk

ESTABLISHING THE WORLD'S BEST FRAMEWORK FOR CLIMATE-RELATED AND SUSTAINABILITY-RELATED FINANCIAL DISCLOSURES

MARCH 2018

Contents

About the UK Green Finance Taskforce TCFD Workstream 4
About the City of London Green Finance Initiative Working Group on Data, Disclosure and Risk 5
Acknowledgements 5

Executive Summary **7**
TCFD 8
Voluntary sustainability-related disclosures 10
Support successful adoption and implementation 11

Introduction **12**

Section 1 – Why? **14**
Economic outcomes 15
Trust in capital markets 17
Financial stability 17

Section 2 – Where Do We Want To Get To? **18**
TCFD recommendations 19
- Disclosing material climate-related risk is mandatory 19
- Information should be disclosed on a consistent and transparent basis 20
- Transparent and comparable scenarios should be used to disclose risks and opportunities 20
- Determining the scope and coverage of preparers 20
- Legislation? 20

Voluntary SFD recommendations 21
- A new voluntary framework for measuring and reporting on impacts related to climate change, the environment and the SDGs 21
- Asset-level disclosure 21
- Green revenue disclosure 22
- Committed emissions disclosure 22
- Climate adaptation disclosure 22
- Tagging and back-tagging in bank loan books 23

Support successful adoption and implementation 23
- Knowledge and training 23
- Public disclosure rankings to encourage good disclosure 24
- Supporting the creation of off-the-shelf tools to help support preparers 24
- Create a new Green Fintech Hub to support disclosure and reporting 24
- Auditors 25

Section 3 – How Do We Get There? **27**
Timeline 27
Scope of coverage 28
Government and the regulators 29

Conclusion and Recommendations **32**
TCFD 33
Voluntary sustainability-related disclosures 34
Support successful adoption and implementation 35

Annex I: **36**
Core Elements of TCFD Recommendations 37

About the UK Green Finance Taskforce TCFD Workstream

To build on the UK's global leadership in the sector, the UK Government established the Green Finance Taskforce (GFT) to bring together senior leaders from the financial sector. This Taskforce is working with industry to accelerate the growth of green finance, and to help the UK deliver the investment required to meet its carbon reduction targets.

The Taskforce has created a number of workstreams encompassing a full range of different green finance topics. The Task Force on Climate-related Financial Disclosures (TCFD) Workstream is cross-cutting and involved input from a range of Taskforce members. For its duration the TCFD Workstream harmonised its work with the City of London Green Finance Initiative Working Group on Data, Disclosure and Risk. This was done to minimise duplication, ensure the widest possible range of industry representation, and to ensure there is a vehicle to further develop and help implement its recommendations after the GFT concludes.

Members of the UK Green Finance Taskforce are:

Sir Roger Gifford (Chair), Representing the Green Finance Initiative

Dr Ben Caldecott, Founding Director, Oxford Sustainable Finance Programme, University of Oxford Smith School of Enterprise and the Environment

Bruce Davis, Co-Founder, Abundance

Rowan Douglas, Chair and CEO of Capital Science & Policy Practice, Willis Towers Watson

Dr Paul Fisher, Senior Associate, University of Cambridge Institute for Sustainability Leadership

Emma Howard Boyd, Chair, Environment Agency

Dr Daniel Klier, Group Head of Strategy and Global Head of Sustainable Finance, HSBC

Nick Molho, Executive Director, Aldersgate Group

Charlotte Morgan, Partner, Global Energy and Infrastructure Group, Linklaters

Edward Northam, Head of Green Investment Group, Europe

Nikhil Rathi, CEO, London Stock Exchange

Fiona Reynolds, Managing Director, Principles for Responsible Investment

Dr Rhian-Mari Thomas, Managing Director, Barclays

Robert Trezona, Head, Cleantech, IP Group

Dr Steve Waygood, Chief Responsible Investment Officer, Aviva Investors

Mark Zinkula, CEO, with Meryam Omi, Head of Sustainability and Responsible Investment Strategy, Legal and General Investment Management

About the City of London Green Finance Initiative Working Group on Data, Disclosure and Risk

The City of London has established the Green Finance Initiative (GFI), to leverage the experience and expertise of the City of London to deliver listed and unlisted investment in UK and global green infrastructure, ranging from the successful work in growing the Green Bond market to over $100 billion of annual issuance, to pioneering direct renewable infrastructure investments by UK pension funds.

The GFI Working Group on Data, Disclosure and Risk is concerned with promoting the following issues and topics: 1) appropriate disclosure, particularly implementing and then building on the recommendations from the Task Force on Climate-related Financial Disclosures, 2) utilising developments in data capture (e.g. satellites and sensors) and data processing (e.g. machine learning and natural language processing) to complement and enhance disclosed information, and 3) analytical frameworks, processes, standards, and capabilities that can ensure the comparability and usability of data and related analysis (e.g. scenarios, data standards, tagging/back-tagging, and distributed ledger technologies).

The GFI Working Group is chaired by Ben Caldecott, founding Director of the Oxford Sustainable Finance Programme at the University of Oxford Smith School of Enterprise and the Environment. Members of the Working Group currently include: Aviva Investors, Blackrock, Bloomberg, BNP Paribas, Brunel Pension Partnership, CDP, ClientEarth, E3G, EBRD, HSBC, Impax, London Stock Exchange Group, MSCI, UN PRI, Standard & Poor's, The Prince of Wales's Accounting for Sustainability Project , Thomson Reuters , Trucost, University of Oxford, and Willis Towers Watson. Observers include: the Bank of England, BEIS, City of London Corporation, DEFRA, Financial Conduct Authority, and HMT.

Acknowledgements

The Chair of the GFI Working Group and GFT Workstream would like to thank the following groups and individuals:

- The GFT Secretariat, in particular: Nathan Fabian, Edward Baker, Olivia Mooney, Alyssa Heath, Ingrid Holmes and Jon Dennis;
- The Members of the GFI Working Group and GFT Workstream that joined and contributed to the drafting committee for this report, in particular: Faith Ward, David Cooke, Alice Garton, Simon Oswald, Jane Stevensen, Michael Wilkins, Richard Mattison, Leanne Bouvet, Kate Levick, Tom Coleman, David Harris, Dan Carson and Michael Marshall;
- Regulators and government officials that provided important insight, in particular: Catherine Bremner, Raphaelle Vallet, Lucy Moran, Nathaniel Smith, Rhys Gordon-Jones, Tom Mutton, Cartsen Jung, Edward Denbee, Laura Royle, Josephine Ives and Amanda Latham;
- The City of London Corporation, in particular: Simon Horner, Heather Wilson and Derek Ip;
- Members of the GFT, in particular: Emma Howard Boyd, Steve Waygood and Nick Molho; and
- The Chair of the GFT and GFI, Sir Roger Gifford.

Executive summary

The introduction of a comprehensive and world-leading UK climate-related and sustainability-related financial disclosure framework is a key priority for both the UK Green Finance Taskforce (**GFT**) and the City of London Green Finance Initiative (**GFI**). This report, produced jointly by the GFT Taskforce on Climate-related Financial Disclosures (**TCFD**) Workstream and the GFI Working Group on Data, Disclosure and Risk, sets out how and why the UK can introduce a new climate-related and sustainability-related financial disclosure framework.

There are strong economic and financial arguments for greater disclosure of environment-related risk, opportunity and impact - particularly those related to climate change. There are also compelling reasons for UK leadership on these issues.

These arguments fall into three broad categories: economic outcomes; trust in capital markets; and financial stability. Each on their own would justify the implementation of this report's recommendations. Together they provide an overwhelming case for action.

In this report, we set out how to create the most comprehensive and deeply embedded disclosure framework in the world. It would be inherently flexible, improve over time, and be automatically mainstreamed.

Our recommendations would embed the TCFD recommendations for disclosing climate-related risk in all relevant UK corporate governance and reporting frameworks. With the requisite support from financial regulators this can be achieved without additional legislation. However at an appropriate moment, we believe that revisions to relevant legislation could further integrate the TCFD recommendations into the UK corporate governance and reporting framework. Legislation would however be necessary if financial regulators do not provide their support within the timeframes envisaged in this report.

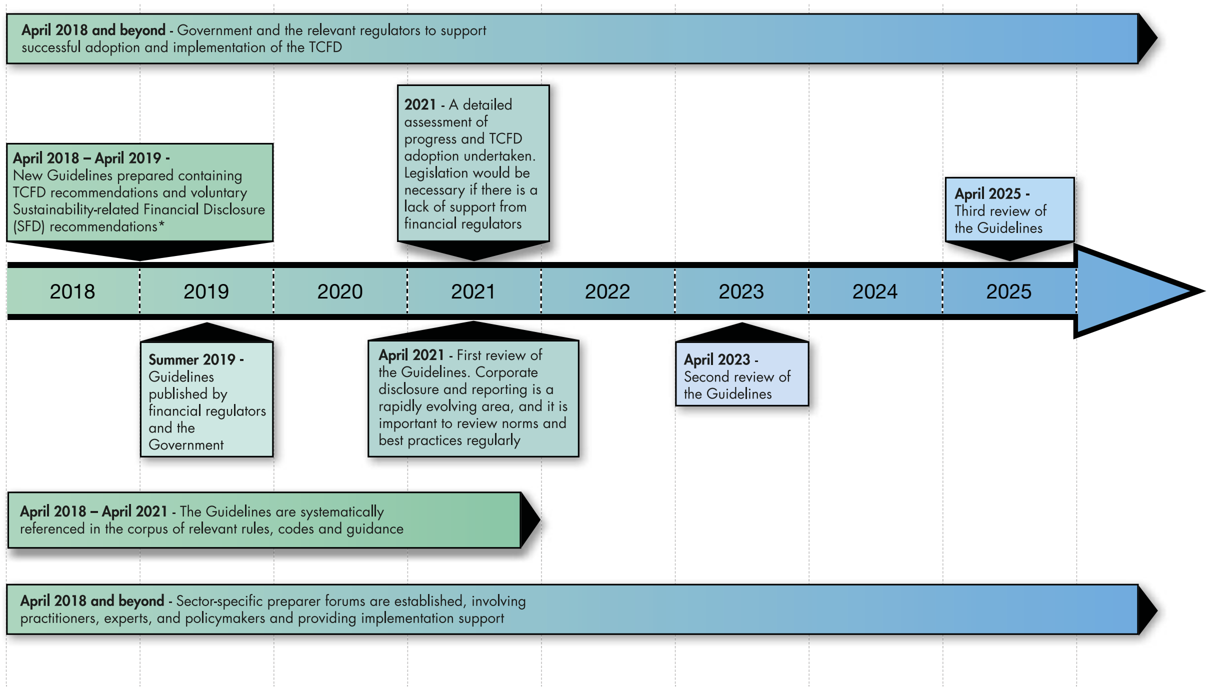
Our approach is inherently adaptable and can be reviewed and updated at regular intervals.
We make three core sets of recommendation:

First, that the TCFD recommendations should be integrated throughout the existing UK corporate governance and reporting framework. The recommendations made by the TCFD should also be clarified to support their integration into the UK corporate governance framework and be reviewed on a regular basis as the norms of climate-related risk disclosure change over time. The Government and relevant regulators should also clarify that disclosing material climate-related risks is already mandatory under existing law and practice.

Second, that new and voluntary UK Sustainability-related Financial Disclosure (SFD) recommendations introducing additional elements not fully covered by the TCFD recommendations or beyond the scope of the TCFD process should be created. These could include: a new framework for measuring and reporting on impacts related to climate change, the environment and the Sustainable Development Goals (SDGs); clarifying reporting processes and standards for disclosing green revenues, asset-level data and committed emissions; and requirements for knowledge and training, among other things.

Third, that there must be a comprehensive effort by the Government and relevant regulators to support successful adoption, implementation and enforcement of the TCFD recommendations and the voluntary SFD recommendations, including through public rankings, off-the-shelf tools and scenarios, and publicly available datasets.

Implementation timeline



To successfully embed recommendations 1) and 2) above into the UK corporate governance and reporting framework, we propose new guidelines are prepared and published which provide all the information required for preparers to comply with the TCFD recommendations and have a section on how to implement the voluntary SFD recommendations.[1]

The guidelines should be prepared and published in 2018/19. The GFI, together with relevant regulators and Government departments, can begin an inclusive process involving key private sector stakeholders, to generate the guidelines. This could significantly reduce the burden on financial regulators and the Government associated with preparing new guidance in a short period of time.

Development of the guidelines should take account of how different jurisdictions are responding to new disclosure needs. For example: the recent final report from the EC High-Level Expert Group on Sustainable Finance recognises that the review of the Non-Financial Reporting Directive (due in 2018) is a key opportunity to align the requirements of the Directive with the TCFD recommendations.

1 There is precedent for guidelines of this type in the Environmental Reporting Guidelines published by Defra in 2013. These set out information on how preparers can comply with the newly introduced requirement for mandatory greenhouse gas reporting, as well as other information on how to report other environmental metrics on a voluntary basis.

The guidelines should also be reviewed after two years. Corporate disclosure and reporting is a rapidly evolving area, and it is important to review the norms and best practices for climate-related and sustainability-related financial disclosures regularly so that the UK ensures it continues to have a world leading framework that is responsive to such changes.

To ensure that the TCFD recommendations and the voluntary SFD recommendations are properly integrated into the UK corporate governance and reporting framework, the guidelines would need to be appropriately referenced in the corpus of relevant rules, codes and guidance such as the FCA Handbook (including listing rules, prospectus rules etc.), corporate governance code, stewardship code etc.

Financial regulators and the Government should advise when existing rules, codes and guidance can be updated to include references to the guidelines. This should be based on existing plans for updates and revisions, but expedited if and where necessary. The aim should be to complete any updates and associated consultations and other procedural formalities by the end of 2020/21.

Our full list of recommendations are:

TCFD

1. The TCFD recommendations should be integrated into the UK corporate governance and reporting framework through a two-step process, where the Government and financial regulators: (1) create and publish guidelines and (2) appropriately reference these guidelines in the corpus of relevant UK rules, codes and guidance.

2. In these guidelines, the Government and relevant financial regulators must clarify that disclosing material environmental risks, including physical and transition climate-related risks, is already mandatory under existing law and practice. The guidelines should also clarify that the TCFD recommendations, given that they reflect key international norms for disclosing material climate-related risks, allow preparers to fulfil these legal obligations and duties.

3. The guidelines should be prepared and published in 2018/19 and then reviewed after two years (and on a regular basis thereafter). Corporate disclosure and reporting is a rapidly evolving area. It is important to review the norms and best practices for climate-related and sustainability-related financial disclosures regularly so that the UK continues to have a world leading framework that is responsive to such changes, and that it helps to set and reinforce the global harmonisation of standards.

4. Financial regulators and the Government should advise when existing rules, codes and guidance can be updated to include references to the guidelines. This should be based on existing plans for updates and revisions, but expedited if and where necessary. The aim should be to complete any updates and associated consultations and other procedural formalities by the end of 2020/21.

5. The guidelines should define which preparers are covered by disclosure requirements. This will be in large part determined by the scope of existing rules and codes.

6. The guidelines should ensure that information is disclosed on a consistent and transparent basis. The guidelines should make clear that assumptions used for calculations, estimates or projections should also be disclosed by preparers.

7. The guidelines should ensure that preparers provide scenario-based disclosures of how their business strategies and financial planning may be affected by climate-related risks and opportunities and the associated time horizons considered.

8. At an appropriate moment, revisions to relevant legislation could further integrate the TCFD recommendations into the corporate governance and reporting framework. This would also provide an opportunity to: (1) harmonise requirements across different entities (where existing rules, codes and guidance take different approaches); and (2) make provisions for further accountability in relation to the information (e.g. specify location, make provision for shareholder approval similar to the directors' remuneration report etc.).

9. The development of the guidelines should take account of how different jurisdictions are responding to new disclosure needs. In particular, the recent final report from the EC High-Level Expert Group on Sustainable Finance recognises that the review of the Non-Financial Reporting Directive (due in 2018) is a key opportunity to align the requirements of the Directive with the TCFD recommendations.

10. Relevant expert bodies such as the Committee on Climate Change (particularly the Adaptation Sub-Committee) and the Natural Capital Committee should be consulted in the formulation of the guidelines.

Voluntary sustainability-related disclosures

11. The guidelines should include a separate section on new and voluntary UK Sustainability-related Financial Disclosure (SFD) recommendations. The SFD recommendations should introduce additional elements not fully covered by the TCFD recommendations or beyond the scope of the TCFD process.

12. The voluntary SFD recommendations would include a new framework for measuring and reporting on both positive and negative impacts related to climate change, the environment and the Sustainable Development Goals (SDGs).

13. The voluntary SFD recommendations should help preparers, particularly those with significant physical assets contributing to revenues, disclose basic information about these assets to enable bottom-up spatial analysis.

14. The voluntary SFD recommendations should help preparers disclose their green revenues by product and/or service to enable users to see how business models have changed or are changing.

15. The voluntary SFD recommendations should help preparers disclose their aggregate committed emissions (or in the case of financial institutions their financed committed emissions). Committed emissions are the cumulative carbon emissions an asset is expected to emit over its remaining lifetime. This will allow users to see what contribution a preparer is making to anthropogenic climate change and how its contribution is changing over time.

16. The voluntary SFD recommendations should help preparers publish adaptation plans that set out how they intend to manage physical climate-related risks.

17. The voluntary SFD recommendations should help banks adopt and deploy methodologies to tag new and outstanding loans with relevant sustainability-related risk, opportunity and impact information. This process of 'tagging' and 'back-tagging' will enable banks to better understand the exposure of their loan books to different risks, opportunities and impacts. This information may also be of relevance to financial regulators.

Support successful adoption and implementation

18. The City of London Green Finance Initiative should be formally tasked by the Government and regulators to implement an inclusive process involving key private sector stakeholders to generate the guidelines. This could significantly reduce the burden on the Government and regulators associated with preparing new guidance in a short period of time.

19. Sector-specific preparer forums should be created to support guideline adoption and implementation. Each preparer forum would involve practitioners, experts and policymakers and would provide implementation support to preparers across a sector. They would highlight best-practices and identify gaps, as well as input into the regular review of guidelines.

20. The Government, together with regulators, should make available matched datasets from the Land Registry, Environment Agency, DCLG, BEIS and other relevant public bodies, such as the Met Office, to support banks accurately measure the exposure of loans, particularly mortgages, to changing physical climate-related risks. The assessment that can be created with these datasets might then inform future supervisory work.

21. Knowledge and training should be provided by all preparers to ensure sufficient organisational competence in relation to environmental risk, impact and opportunity.

22. The Government and regulators should publish and/or endorse public disclosure rankings and benchmarks to encourage good disclosure.

23. There should be support from the Government and regulators to publish and/or endorse off-the-shelf tools to help preparers.

24. To support and complement disclosure, the UK should create a Green Fintech Hub which would provide capabilities and testbeds to support green fintech development by public and private sector actors.

Introduction

The Government set up the Green Finance Taskforce (**GFT**) in September 2017 to: help deliver the investment needed to meet the UK's Industrial Strategy and Clean Growth Strategy; further consolidate the UK's leadership in financing international clean investment; and maximise the opportunities to be had for UK businesses in this rapidly growing area.[2] The GFT has been tasked with generating ambitious and practical policy recommendations within six months for how Government can best support the finance sector in achieving the above objectives.

In January 2016, the City of London Corporation launched its Green Finance Initiative (**GFI**) to: provide public and market leadership on green finance; advocate for specific regulatory and policy proposals that might enhance the green finance sector worldwide; and promote London and the UK as a leading global centre for the provision of green financial and professional services.[3] Unlike the GFT, the GFI is not time-bound.

Both initiatives involve senior leaders from across the financial sector and each is chaired by Sir Roger Gifford to ensure that their work is complementary. The intention is that once GFT recommendations are made, the GFI will continue developing these and other related strands of work after the GFT comes to an end in 2018.

The introduction of a comprehensive and world-leading UK climate-related and sustainability related financial disclosure framework is a key priority for both the GFT and the GFI. The GFT and the GFI have each established committees to formulate detailed recommendations on the successful implementation of such a disclosure framework. A significant part of the work undertaken by these committees has focused on how to implement the Task Force on Climate-related Financial Disclosures (**TCFD**) recommendations in the UK.

This report, produced jointly by the GFT TCFD Workstream and the GFI Working Group on Data, Disclosure and Risk, sets out how and why the UK can introduce a new UK climate-related and sustainability related financial disclosure framework.

The report is structured as follows:

Section 1 highlights the strong economic and financial arguments for greater disclosure of environment-related risk, opportunity and impact in the UK (particularly for climate-related physical and transition risks).

Section 2 sets out where we should get to in relation to the TCFD recommendations and also outlines additional voluntary recommendations for a future UK sustainability disclosure framework (that would complement the TCFD recommendations).

Section 3 sets out suggestions for the timeline and procedures for preparing and implementing the climate-related and sustainability related financial disclosure framework.

2 See GFT membership and terms of reference here: https://www.gov.uk/guidance/green-finance

3 See: http://greenfinanceinitiative.org

Section 1.
Why?

There are strong economic and financial arguments for greater disclosure of environment-related risk, opportunity and impact (particularly those related to climate change). There are also compelling reasons for UK leadership on these issues.

These arguments are briefly summarised here. They fall into three broad categories: economic outcomes; trust in capital markets; and financial stability. Each on their own would justify the implementation of this report's recommendations. Together they provide an overwhelming case for action.

The relationship between these three categories is shown in Figure 1 below. They are mutually reinforcing and this dynamic is a further reason for greater climate-related and sustainability-related disclosure and UK leadership.

FIGURE 1.
Virtuous circle

Economic outcomes

Paris Agreement, Sustainable Development Goals and UK Clean Growth Strategy

- Comprehensive climate-related and sustainability-related disclosures will help investors differentiate between companies and assets that are aligned (or misaligned) with the implementation of the Paris Agreement, the Sustainable Development Goals (SDGs) and the UK's Clean Growth Strategy. This is an important pre-requisite for ensuring that companies are making a positive contribution to these policy objectives, which are each central to achieving major UK foreign, development, environment and industrial policy objectives.

London

- The UK, and the City of London in particular, is the leading centre for green finance internationally. The depth of innovation, products and capital focused on sustainable finance and investment, combined with legal expertise and capabilities in emerging markets are unmatched. However, the competitive landscape is changing rapidly. A growing number of financial centres, together with proactive policymakers, have started to challenge London.
- Information is the lifeblood of financial markets. Financial centres agglomerate and attract financial institutions and related service providers to be close to one another for many reasons. One of these reasons is to reduce information asymmetries and the transaction costs associated with gathering, assuring and using information. The systems that collect, collate and disseminate financial market information are therefore a key component of a well-functioning financial centre.

- Ensuring London has the best and most reliable information on sustainability-related risks, opportunities and impacts will be fundamental to its continued success and its ability to act as the leading green financial centre. Leadership in the availability of climate-related and sustainability-related information for financial decision-making, in large part enabled by effective disclosure and reporting frameworks, is a critical competitive advantage.
- The introduction of a comprehensive and world-leading UK climate-related and sustainability-related disclosure framework would help ensure that this is a competitive advantage for the UK. This new framework could also rationalise existing requirements and guidance across the existing UK disclosure and reporting landscape, helping to provide clarity to preparers and users of disclosed information.

Productivity and growth

- In addition to the benefits for UK financial services associated with the availability of climate-related and sustainability-related information, there are further potential economic benefits for the UK economy as whole.
- Companies that implement sustainability practices exhibit a lower cost of capital, higher productivity and better stock market performance.[4] A 2014 meta-study by the University of Oxford found that: 90% of cost of capital studies show that sound sustainability standards lower the cost of capital; 88% of studies show that such practices result in better operational performance; and 80% of studies show that stock price performance is positively influenced by good sustainability practices.[5]
- The implementation of climate and sustainability practices at the organisation-level can therefore help UK companies become more competitive. The introduction of a comprehensive and world-leading UK climate-related and sustainability-related disclosure framework is a key mechanism to encourage the adoption of such sustainability practices.
- Moreover, organisation-level improvements in performance and resilience due to the adoption of sustainability practices can have macro-economic benefits, helping to improve the productivity of the UK economy as whole and putting UK industries at the leading edge of a global economic transformation.

4 G L Clark Feiner, A., Viehs, M., 'From the Stockholder to the Stakeholder: How Sustainability Can Drive Financial Outperformance' (Smith School of Enterprise and the Environment, University of Oxford, 2014).

5 Ibid.

Trust in capital markets

- Disclosure and transparency helps to encourage trust in capital markets. This is important for London's international reputation and its attractiveness to issuers on the London Stock Exchange.
- Companies (and directors) may face legal liability exposure by failing to assess and manage environmental risk in accordance with their duties or failing to report risks. A new climate-related and sustainability-related disclosure framework, by clarifying what is required and making the direction of travel clear, will help companies and directors reduce any potential future litigation.

Financial stability

- The Bank of England and other financial regulators have argued that climate change and policies to mitigate it could affect the ability of central banks and regulators to meet monetary and financial stability objectives. Two types of risks – physical and transition risk – have been identified as particularly relevant. First, physical risks from climate change are those which arise from climate and weather-related events, such as droughts, floods and storms, and sea-level rise. They comprise impacts directly resulting from such events, such as damage to property, and also those that may arise indirectly through subsequent events, such as the disruption of global supply chains. Global and regional changes in climate can also lead to lower productivity of agriculture, human labour and physical assets. Second, transition risk is the financial risk which can result from the process of adjustment towards a lower-carbon economy. Changes in climate policy, technology or market sentiment could prompt a reassessment of the value of a large range of assets as changing costs and opportunities become apparent. The speed at which such re-pricing occurs is uncertain but could be important for financial stability and the safety and soundness of financial firms.
- Access to appropriate information and data enables financial institutions to fully assess climate-related and sustainability-related risks, opportunities and impacts. Comprehensive disclosures will support investors and other actors to differentiate between companies and assets that are more or less at risk of becoming stranded due to a wide range of risks, such as physical climate change impacts and transition risks. This is essential for investors to identify, price and manage such risks, and for financial regulators to be able to identify and respond to areas of concern.

Section 2.
Where do we want to get to?

In the previous section, we discussed the economic and financial arguments for greater disclosure of environment-related risk, opportunity and impact (particularly those related to climate-related physical and transition risks).

This section sets out where we should get to in relation to the TCFD recommendations and also outlines additional voluntary recommendations for a future UK sustainability disclosure framework (that would complement the TCFD recommendations). For reference, a summary of the core TCFD recommendations are included in Annex I.

TCFD recommendations

The TCFD published its final recommendations on 29th June 2017. The TCFD was established on 4th December 2015 by the Financial Stability Board (**FSB**) and its 32 members were chosen to include both users and preparers of disclosures and a broad range of economic sectors and financial markets.

The process was inherently international, multi-jurisdictional, voluntary and time limited. One issue, therefore, is how we take the TCFD recommendations and incorporate them effectively into the UK corporate governance and reporting framework (given that the TCFD recommendations have been published by a temporary and voluntary group of individuals with no legal standing).

Our recommendations would embed the TCFD recommendations for disclosing climate-related risk in all relevant UK corporate governance and reporting frameworks. With the requisite support from financial regulators this can be achieved without additional legislation. However at an appropriate moment, we believe that revisions to relevant legislation could further integrate the TCFD recommendations into the corporate governance and reporting framework.

To successfully embed the TCFD recommendations into the UK corporate governance and reporting framework, we propose new guidelines are prepared and published which provide all the information required for preparers to comply with the TCFD recommendations. The guidelines would clarify certain TCFD recommendations in order to make them more readily implementable (for example, in relation to scenario analysis and the disclosure of assumptions). The guidelines would also have a section on how to implement the voluntary SFD recommendations (see next section).[6]

To ensure that the TCFD recommendations and the voluntary SFD recommendations are properly integrated into the UK corporate governance and reporting framework, the guidelines would need to be appropriately referenced in the corpus of relevant rules, codes and guidance such as the FCA Handbook (including listing rules, prospectus rules etc.), corporate governance code, stewardship code etc.

The guidelines should define which preparers are covered by disclosure requirements. This will be in large part determined by the scope of existing rules and codes.

Disclosing material climate-related risk is mandatory

Where climate risk and other environmental risks are material, these risks must be disclosed in the annual report to shareholders by UK incorporated and UK listed companies.

Given this, the guidelines will make clear that the Government and regulators view accurate disclosure on material environmental risk, including climate risk, to be a legal requirement.

6 There is precedent for guidelines of this type in the Environmental Reporting Guidelines published by Defra in 2013. These set out information on how preparers can comply with the newly introduced requirement for mandatory greenhouse gas reporting, as well as other information on how to report other environmental metrics on a voluntary basis.

As the TCFD recommendations are the best mode by which to disclose climate risk currently available, the guidelines will make clear that the Government and regulators view disclosure in line with the guidelines as providing evidence of good corporate governance and compliance with legal duties of company directors, investors etc. and the best means of avoiding the threat of future litigation and potential regulatory action.

The guidelines will also set out their regulatory agenda and approach to oversight and enforcement of such legal requirements.

Information should be disclosed on a consistent and transparent basis

Non-transparent and incomparable disclosures would be entirely pointless. The guidelines should make clear that any assumptions for calculations, estimates or projections should be disclosed by preparers.

Where a third-party framework, system or methodology has been used when preparing disclosures, the type of framework, system or methodology used should be disclosed.

Organisations developing frameworks, systems or methodologies used by preparers should also disclose their assumptions. Where they fail to do so, the guidelines should make clear that such frameworks or systems should not be used by preparers.

Together these three principles applied throughout the guidelines will ensure that users of disclosure can compare like with like. This is fundamental to the guidelines being useful to all stakeholders.

Transparent and comparable scenarios should be used to disclose risks and opportunities

Preparers should provide forward-looking scenario-based disclosures of how their business strategies and financial planning may be affected by climate-related risks and opportunities over the short-, medium- and long-term. One of these scenarios should be a "2°C scenario" consistent with limiting the global average temperature increase to well below 2°C above the pre-industrial average.

Preparers should disclose which climate scenarios and time horizons they have used, and where they have chosen to use their own climate scenarios, disclose the parameters, assumptions, considerations and analytical choices they have made.

Determining the scope and coverage of preparers

The guidelines would define which preparers are covered by disclosure requirements. This will be in large part determined by the scope of existing rules and codes.

Where coverage is unclear, the guidelines would clarify which preparers are in scope. It would also outline any relevant exemptions (for example, for smaller preparers) and outline specific considerations for different groups of preparers to aid the process of effective disclosure.

Legislation?

Our recommendations would embed the TCFD recommendations for disclosing climate-related risk in all relevant UK corporate governance and reporting frameworks. With the requisite support from financial regulators this can be achieved without additional legislation. However at an appropriate moment, we believe that revisions to relevant legislation could further integrate the TCFD recommendations into the corporate governance and reporting framework. This would also provide an opportunity to harmonise requirements across different entities (where existing rules, codes and guidance take different approaches).

Voluntary SFD recommendations

The TCFD recommendations focus on climate risk. This is incredibly important and should be at the centre of the guidelines. However, there are other risks related to environmental change and associated societal responses that are just as material (and arguably more so in some circumstances).

The guidelines, by combining the complete integration of TCFD recommendations into UK governance and reporting frameworks with the additional elements outlined below, would create the most comprehensive and deeply embedded reporting and disclosure system in the world. It would be inherently flexible, improve over time, and be automatically mainstreamed. Voluntary disclosures could become mandatory and new types of disclosure or refinements to existing disclosures could be captured as they develop. This is important for creating a robust framework that can respond to a rapidly changing corporative governance and disclosure landscape internationally.

We envisage the following voluntary SFD recommendations being made in the guidelines.

A new voluntary framework for measuring and reporting on impacts related to climate change, the environment and the SDGs

Significantly, the positive and negative impacts that activity can have on climate change and environmental sustainability do not feature in the TCFD recommendations. The SFD recommendations would seek to plug this gap as there is merit in creating a disclosure framework that includes all environmental risk (including climate change) as well as related impacts, both positive and negative. While measures of risk can be a proxy for impact (e.g. carbon intensity or water use), this is not always the case.

The SFD recommendations would set out how *risks*, *opportunities* and *impacts* should be disclosed. This integrated approach would be world-leading and would reflect the growing interest and concern in the UK and internationally in how companies, investors and Governments are exposed to environmental risks and how they contribute to sustainability challenges.

The *impact* part of the SFD recommendations would use measures related to the implementation of the SDGs.

Asset-level disclosure

Preparers with significant physical assets contributing to revenues should consider disclosing basic information about these assets to enable bottom-up spatial analysis.

The type of information we envisage being disclosed is not commercially sensitive, and in many cases, is already publicly available (but not provided on a consistent or comparable basis by sector). Information disclosed at an asset-level [7] might include the coordinates of facilities, when a facility was constructed, what type of technology is employed at the facility, the type of fuel used at the facility, and the pollution abatement technologies installed at the facility. Production numbers or cost numbers would not be required in order to protect commercial confidentiality.

For each sector, a list of asset-level data fields that are appropriate and proportionate should be identified for disclosure by preparers on a voluntary basis. The SFD recommendations would provide a technical annex with details of these asset-level data fields by sector. The number of fields in scope would be determined after consultation with preparers and industry associations.

7 See the Asset-level Data Initiative (ADI) for more information: https://assetleveldata.org

Green revenue disclosure

In addition to the climate-related opportunity metrics outlined by the TCFD, preparers should consider disclosing their wider green revenues by product and/or service to enable users to see how business models have changed or are changing.

'Green' revenue is generally considered to be revenue (as defined by the applicable accounting standard and the organisation's accounting policy) from products and/or services which have a positive environmental utility: that help prevent, restore and adapt to issues deriving from climate change, natural resource limitations or environmental degradation.[8]

Total green revenue should be disclosed and also broken out into product and/or service categories. The aim should be to foster innovation and companies should be encouraged to think broadly about which products or services provide environmental solutions.

The organisation's definition of green products and services and any principles used to construct that definition should be disclosed. Where relevant, an indication of their interpretation of market norms as a comparator should be given. Any material changes to the definition of green revenue or interpretation of market norms over time should also be disclosed.

The SFD recommendations would provide a technical annex with details of different approaches for calculating green revenues, for example, the London Stock Exchange Group's well-established issuer disclosure guidance.[9]

Committed emissions disclosure

Preparers should consider disclosing their aggregate committed emissions (or in the case of financial institutions their financed committed emissions). Committed emissions are the cumulative carbon emissions an asset is expected to emit over its remaining lifetime (without substituting inputs or upgrading, retrofitting, refurbishing, or replacing the asset).[10], [11] The concept and its application are significant as they allow the estimation of future carbon 'lock-in'. The disclosure of this information, aggregated by preparer, will allow users to see what contribution a preparer is making to anthropogenic climate change and how its contribution is changing over time.

The SFD recommendations would provide a technical annex with methodologies for the calculation of committed emissions.

Climate adaptation disclosure

Preparers should consider the publication of adaptation plans that set out how they intend to manage physical climate-related risks. These could be linked to the scenario analysis proposed above.

The SFD recommendations would provide further information on the scope of these disclosures and which types of preparer are particularly at risk.

In addition, the Government, together with regulators, should make available matched datasets from the Land Registry, Environment Agency, DCLG, BEIS and other relevant public bodies, such as the Met Office, to support banks accurately measure the exposure of loans, particularly mortgages,

8 http://www.ftse.com/products/downloads/FTSE_Green_Revenues_Classification_System.pdf?820

9 For assistance as to how this may be done please refer to Chapter 7 in the following guidance document published by the London Stock Exchange: https://www.lseg.com/sites/default/files/content/images/Green_Finance/ESG_Guidance_Report_LSEG.pdf

10 Davis, S. J. and Socolow, R. H. (2014) 'Commitment accounting of CO2 emissions', Environmental Research Letters, 9(8), p. 84018. doi: 10.1088/1748-9326/9/8/084018.

11 Davis, S. J., Caldeira, K. and Matthews, H. D. (2010) 'Future CO2 emissions and climate change from existing energy infrastructure', Science, 329(5997), pp. 1330–1333. doi: 10.1126/science.1188566.

to changing physical climate-related risks. The assessments that can be created with these datasets might then inform future supervisory work.

Tagging and back-tagging in bank loan books

Banks should adopt and deploy methodologies to tag new and outstanding loans with relevant sustainability-related risk, opportunity and impact information. This process of 'tagging' and 'back-tagging' will enable banks to better understand the exposure of their loan books to different risks, opportunities and impacts. This information may also be of relevance to financial regulators.

Tagging and back-tagging using consistent methodologies will also aid 'use of proceeds' type financing and securitisation, as well as simplify the sale or transfer of assets between banks in the UK and internationally.

Tagging and back-tagging can also help banks differentiate between loans, helping to tailor credit risk and create portfolios better aligned with sustainability preferences. It would also support the creation of new green mortgages.

Tagging and back-tagging would allow banks to fit loans into different sustainability-related taxonomies that are being proposed or developed, such as the mooted EU green taxonomy [12] or a new international shared taxonomy[13].

Where appropriate, banks could disclose aggregated information about their loan book based on tagged and back-tagged information. The SFD recommendations would provide further information on tagging and back-tagging and identify appropriate methodologies that banks could adopt or support.

12 See: https://ec.europa.eu/info/sites/info/files/170713-sustainable-finance-report_en.pdf

13 See: http://www.eib.org/attachments/press/white-paper-green-finance-common-language-eib-and-green-finance-committee.pdf

Support successful adoption and implementation

To ensure the TCFD recommendations and voluntary SFD recommendations are integrated into the UK corporate governance and reporting framework, there must be a comprehensive package of support from the Government and the relevant regulators. This support should aim to break-down barriers to effective disclosure and to ensure that all stakeholders have visibility on the quality of disclosures from preparers.

Knowledge and training

One core part of good governance is the extent and retention of skills, knowledge and training among key decision-makers at the firm. This is recognised, for example, in the UK Corporate Governance Code (Principle B), Myners Principles (Principle 1) and the FCA's Principles for Business (Principle 2; also the Approved Persons Regime and the Senior Managers Regime). This consideration applies equally to the management of environmental risk, opportunity and impact and the guidelines would make this clear.

In line with other codes and guidance in the UK, the guidelines would not prescribe what training should be provided, which skills should be sought, how regularly competence should be assessed or which individuals should be within scope. It would make clear that the appropriate answer to each of these decision-points is likely to vary with sector, strategy, size geographical exposure and so on. The senior decision-maker at the firm ought to make context-appropriate arrangements for climate-related knowledge and training for relevant personnel, including regular review and disclosure.

For example, within a listed company, the Chair of the Board of Directors ought to ensure sufficient competence among board members and hold the Chief Executive Officer to account for ensuring sufficient competence among executive management. This could include, as appropriate to the company's circumstances, appointing climate experts to non-executive positions on the board, arranging for internal or external training of the directors, receiving training and competence plans from executive management that ensure on-the-ground employees (for example field consultants) possess the required level of climate-related expertise. The company's arrangements should be disclosed in the annual report, and this should include a description of why the arrangements are appropriate for the company's particular circumstances.

Responsibility for climate-related skills, knowledge and training varies with the type of organisation. For a pension fund, responsibility rests in most cases with individual trustees; for an FCA (or dual) regulated investment firm, responsibility rests with the Chief Executive (as part of FCA's Senior Management Arrangements, Systems and Controls (SYSC), which gives the Chief Executive responsibility for apportioning duties and monitoring performance); for firms performing external auditing functions, responsibility is likely to rest with the CEO or COO at a firm-wide level, but with the Lead Audit Partner at the project level (see below on auditors).

Public disclosure rankings to encourage good disclosure

The Government and regulators can encourage better disclosure and support the availability of information to the market by publishing annual benchmarks or rankings, potentially drawing on or developing existing benchmarking frameworks rather than creating new ones. This could rank organisations on three elements of their reporting: the quality of their disclosures; the level of transparency; and the underlying actions they are taking across governance, strategy, risk management, and metrics and targets.

Public rankings should encourage preparers to provide high quality disclosures and, as media coverage is likely, will expose a brand to reputational risk if disclosures are inadequate.

Benchmarking could potentially be done by sector, size, country or geographic area, highlighting both leaders and laggards in relation to their peers. The guidelines would set out exactly what rankings and benchmarks would be used and how they would be prepared and by whom.

Supporting the creation of off-the-shelf tools to help support preparers

The Government and regulators can support high-quality disclosures by commissioning or endorsing off-the-shelf tools for reporting in line with the guidelines. These would provide a technical step-by-step guide on disclosure and thereby reduce information barriers and compliance costs for preparers.

These tools could be consistent with existing reporting frameworks, such as provided by CDP , CDSB , TPI or the PRI , so that companies and investors have their reporting requirements streamlined and the administrative burden minimised.

The guidelines would set out which initiatives and third party tools the Government and regulators support or intend to support.

Create a new Green Fintech Hub to support disclosure and reporting

The proliferation of satellites and sensors allow us to see what is going on around the world in more details than ever before. These capabilities are complementary to disclosure and reporting, as they generate new data on companies and help verify disclosed information.

We can now see what risks and impacts face companies and assets at incredibly high degrees of granularity. When combined with machine learning to rapidly process and interpret the huge amounts of data generated from new data capture methods, this can unlock significant analytical capabilities for investors and other stakeholders. Developments in distributed databases and block chain also open up novel applications that are relevant to the adoption of these capabilities.

The UK is a world leader in some of these areas. These now need to be brought together in a comprehensive way to accelerate innovation in this field. The creation of a new Green Fintech Hub (GFH) to sit alongside existing UK Catapult Centres would provide an intuitive, proven, and effective locus to scale up work in the UK in this area.

The GFH would provide capabilities and testbeds to support green fintech development by public and private sector actors. It would do the following: i) provide access to satellite and remote sensing data that would support the development of new green fintech products and services; ii) provide computing power to support big data analysis and machine learning applications relevant to green fintech; iii) support the creation of algorithms and processes to match datasets, particularly in terms of linking asset-level data with ownership information (a key pre-requisite for many green fintech developments), iv) develop methodologies to measure environmental risks and impacts currently and in the future, v) develop a global MRV system for remotely measuring the point source of emissions of individual facilities and land use change globally, vi) develop distributed databases and blockchain technology that can support the creation and development of asset-level databases and information sharing between public and private sectors relevant to green fintech, vii) establish the rules, principles, and technologies required to create a global database of asset ownership based on observational data (providing unparalleled levels of transparency for global governance, including in terms of climate change), viii) pioneer applications of green fintech for policymakers and regulators in the UK and internationally, and ix) develop approaches using novel datasets and methodologies to tag all publicly traded securities with a 'shade of green'. This should closely involve key UK industry partners and institutions to ensure the long-term application and adoption of this work.

Auditors

Auditors have a critical role in the operation of effective corporate governance by providing assurance to investors that internal financial and risk management functions are robust and the annual report and accounts provides a 'true and fair view' of the state of affairs, including assets, liabilities and financial position and profit and loss of the company.

To fulfil their professional duties auditors will increasingly be expected to understand the implications of climate-related and sustainability-related risks, opportunities and impacts and integrate these into their own work and advice. The guidelines will also help auditors in identifying a wide range of financially material risks related to environmental change and societal responses to environmental change.

The guidelines would clarify the scope of current auditor duties, in line with current regulations, and provide a technical annex to provide illustrations on the application of current standards in relation to climate-related and sustainability-related risks, opportunities and impacts.

Section 3.
How do we get there?

In this Section 3, we set out suggestions for the timeline and procedures for preparing the guidelines and integrating these into the UK's existing corporate governance and reporting framework.

Our proposals acknowledge both the devolution arrangements of each administration of Scotland, Northern Ireland and Wales, as well as the operational of regional professional bodies such as the Institute of Chartered Accountants of Scotland (ICAS) for whom the guidelines would equally apply. For brevity, the report uses the provisions applicable for England, but requests that, where appropriate recommendations are extended to all corresponding regional regulations, codes and guidance.

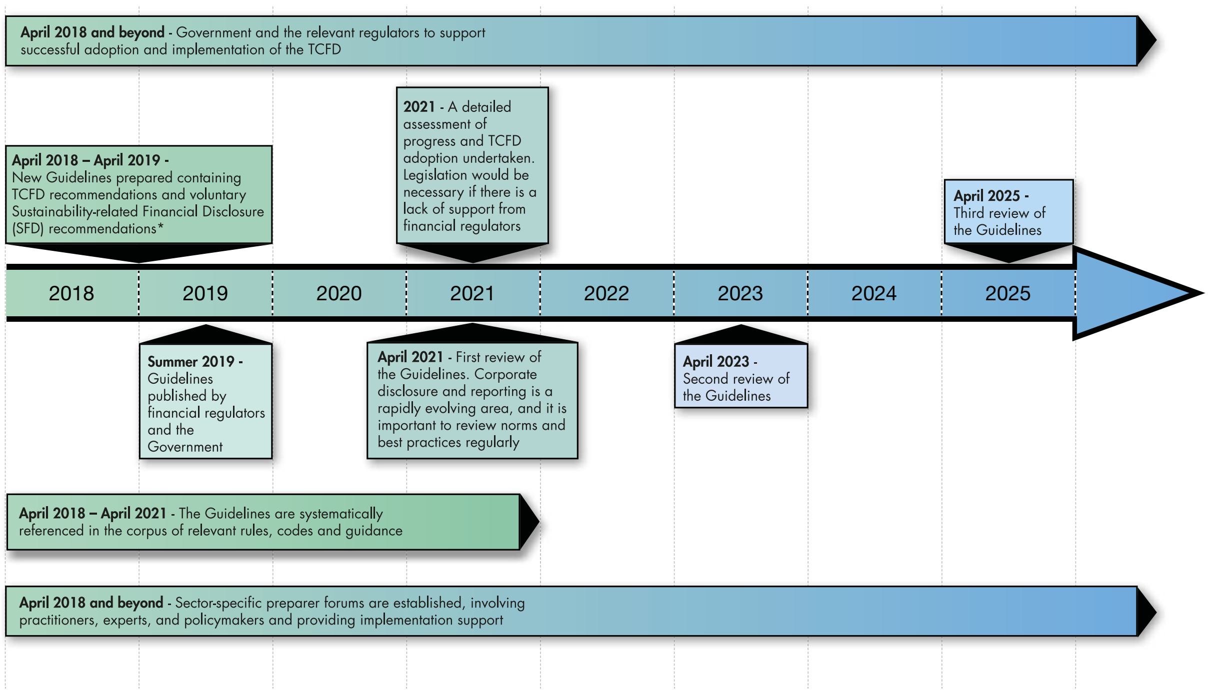
It is important that the UK leads the world in innovation and setting standards, but that this is not done in isolation and this work should refer to existing initiatives and standards and contribute to global harmonisation.

Timeline

The proposed implementation timeline is shown in Figure 2 below. The guidelines should be prepared and published in 2018/19. The GFI, together with relevant regulators and Government departments, can begin an inclusive process involving key private sector stakeholders, to generate the guidelines. This could significantly reduce the burden on financial regulators and the Government associated with preparing new guidance in a short period of time.

The guidelines should also be reviewed after two years. Corporate disclosure and reporting is a rapidly evolving area, and it is important to review the norms and best practices for climate-related and sustainability-related financial disclosures regularly so that the UK continues to have a world leading framework that is responsive to such changes.

FIGURE 1
Implementation timeline



Financial regulators and the Government should advise when existing rules, codes and guidance can be updated to include references to the guidelines. This should be based on existing plans for updates and revisions, but expedited if and where necessary. The aim should be to complete any updates and associated consultations and other procedural formalities by the end of 2020/21. The timeframes should ensure that preparers have ample time to familiarise themselves with what is required.

To support guideline adoption and implementation sector-specific preparer forums should be established. Each preparer forum would involve practitioners, experts, and policymakers and would provide implementation support to preparers across a sector. They would highlight best-practices and identify gaps, as well as input into the regular review of guidelines.

Scope of coverage

Our recommendations would embed the TCFD recommendations for disclosing climate-related risk in all relevant UK corporate governance and reporting frameworks. With the requisite support from financial regulators this can be achieved without additional legislation. However at an appropriate moment, we believe that revisions to relevant legislation could further integrate the TCFD recommendations into the corporate governance and reporting framework.

A requirement to report material risks (which may include climate-related risk) already permeates the UK's existing reporting framework. For example, companies' annual reports must comply with reporting requirements stemming from a variety of sources including the Companies Act 2006, Listing Rules and The UK Corporate Governance Code.

Trust-based, contract-based and public-sector pension funds must comply with disclosure obligations under various legislation and rules including the Occupational and Personal Pension Scheme (Disclosure of Information) Regulations 2013, the FCA Handbook and the Local Government Pension Scheme Regulation 2013. These require trust-based pension funds to prepare an annual report and Statements of Investment Principles (which are disclosed to members on request), and for the pension provider's Independent Governance Committee (in relation to contract-based pension funds) and the relevant authority (in relation to the LGPS) to disclose an annual report, among other documents.

The current approach, whereby different types of entities are subject to different reporting requirements, rules and codes is clear and takes account of the type of organisation, and its size, jurisdiction etc. We would suggest that the application of the guidelines should map onto this existing framework. This would mean that preparers may use existing safeguards that apply to similar environmental and risk disclosures (for example, the 'safe harbour' provisions which operate in relation to a company's strategic report).

Government and the regulators

The update of relevant rules, codes and guidance to reference the guidelines should occur in accordance with the usual procedural formalities followed by each regulator. **Key to this process will be for each regulator to identify the most effective mode by which the guidelines can be accommodated within its regulatory remit.**

Relevant regulators and a brief description of their regulatory remit are set out below:

Financial Reporting Council (FRC)

The FRC's regulatory remit derives from a number of sources. It is the financial regulator responsible for promoting high quality corporate governance and reporting to foster investment. The FRC's roles and responsibilities include:

- monitoring and taking action to promote the quality of corporate reporting;
- acting as a relevant authority for setting auditing and ethical standards and monitoring and enforcing audit quality; and
- setting *The UK Corporate Governance Code* and *The UK Stewardship Code* and UK standards for accounting and actuarial work.

Financial Conduct Authority (FCA)

The FCA's strategic objective is to ensure that relevant markets function well. In addition, when exercising its general functions it must, so far as is reasonably possible, act in a way which is compatible with one or more of its operational objectives which include securing an appropriate degree of consumer protection, enhancing the integrity of the UK financial system and promoting effective competition. The FCA regulates contract-based pensions as well as the asset management industry.

Prudential Regulation Authority (PRA)

The PRA is part of the Bank of England and has a general objective of seeking to ensure the business of PRA-authorised persons is carried out in a way which avoids any adverse effect on the stability of the UK financial system. The PRA also has the objective of seeking to minimise the adverse effect that the failure of a PRA authorised person could be expected to have on the UK financial system.

The Pensions Regulator (TPR)

The statutory regulator of trust-based pensions. Its objectives include to protect the benefits of members of occupational pension schemes (and, in relation to payment of contributions, members of contract-based workplace pensions) and to promote and improve understanding of the good administration of trust-based pensions.
In relation to local government pension funds, the Department of Communities and Local Government (DCLG) shares oversight with TPR.

Each regulator is subject to different constraints and each undertakes different activities and processes in exercising its oversight functions. Each regulator also has its own specific methods of operating – for example, publishing guidance, codes of conduct, supervisory statements etc.

Having identified how the guidelines can be accommodated within its regulatory remit, each regulator must determine the most effective mode by which the guidelines can be implemented in its sphere of responsibility.

UK rules, codes and guidance which could be updated with references to the guidelines are set out below together with the regulator responsible. These rules, codes and guidance have differing status in terms of enforceability. For example rules in the FCA Handbook may be regarded as mandatory, whereas the UK Corporate Governance Code is regarded as 'comply or explain.'

Regulators would need to assess the suitability of the existing rules, codes and guidance for enhanced disclosures envisaged by the guidelines. Where the existing rules, codes and guidance are not suitable, then publishing separate or new guidance to assimilate the guidelines should be considered where it is within a regulator's powers to do so, and where any procedural formalities are complied with.

FRC

The FRC sets *The UK Corporate Governance Code* which in the latest revision now includes a requirement to provide a viability statement in the company's annual report. Related to the Code is the FRC's *Guidance on Risk Management, Internal Control and Related Financial and Business Reporting* which aims to bring together elements of best practice for risk management and prompt boards to consider how to discharge their responsibilities in relation to the existing and emerging principal risks faced by the company.

The FRC has also published its *Guidance on the Strategic Report* which serves as best practice for all entities preparing strategic report. The FRC has recently consulted on proposed amendments to its *Guidance on the Strategic Report*, which are intended to bring it in line with new UK legislation implementing the EU Non-Financial Reporting Directive.

In addition, the FRC is also responsible for *The UK Stewardship Code* which sets out principles and guidance for asset owners and asset managers (and by extension, service providers such as proxy advisors and investment consultants).

The FRC also publishes the accounting, actuarial, auditing and ethical standards and guidance for the UK, and has a monitoring and enforcement role to promote quality across these areas. These include *FRS 102 The Financial Reporting Standard applicable in the UK and Republic of Ireland, TAS 100 Principles for Technical Actuarial Work* and specific standards for insurance *(TAS 200)*, pensions *(TAS 300)* and funeral plan trusts *(TAS 400)*, the *Audit Firm Governance Code, 2016 Auditing Standards and 2016 Ethical Standard*.

FCA

The FCA has various rule-making powers under the Financial Services and Markets Act 2000 which can be used to further its strategic and operational objectives. Most relevantly the FCA is responsible for the FCA Handbook and for listed companies, the FCA can make instruments to create listing rules and prospectus rules.

In relation to its regulatory role for pensions, the FCA can issue guidance for contract-based pension providers.

TPR

TPR is responsible for producing codes of practice to set the standards of conduct and practice expected from trustee boards in complying with their statutory duties along with guidance for trustees on how to meet the standards in practice. TPR has issued guidance and codes on investment and governance (including *Investment guidance for defined benefit pension schemes and Guide to investment governance* (for defined contribution schemes)). TPR also requires scheme returns to be submitted to it annually by trust-based schemes and public service schemes.

In relation to public sector pensions, the DCLG has released the Guidance on Preparing and Maintaining an Investment Strategy Statement.

PRA

The PRA is responsible for the prudential regulation and supervision of banks, building societies, credit unions, insurers and major investment firms. Its rules require financial firms to hold sufficient capital and have adequate risk controls in place.

The PRA publishes the *PRA Rule Book* which contains its *statements of policy* that detail PRA policy on a particular matter and set out the

approach to exercising powers conferred by the Financial Services and Markets Act 2000.
The PRA also issues *Supervisory statements* that focus on the PRAs expectations and aim to facilitate firm and supervisory judgement in determining whether they meet those expectations. Supervisory statements do not set absolute requirements – which are contained in rules.

SORP-making bodies

Statements of Recommended Practice (SORPs) are sector-driven recommendations on financial reporting, auditing practices and actuarial practices for specialised industries, sectors or areas of work, or which supplement FRC standards and other legal and regulatory requirements in the light of special factors prevailing or transactions undertaken in that industry, sector or area of work that are not addressed in FRC standards. SORPs also address matters that are addressed in FRC standards, but about which additional guidance is considered necessary.
SORPs exist for pension funds, charities (including endowments), education, social housing, authorised funds, investment trust companies and venture capital trusts, and limited liability partnerships and public sector accounting.

Pensions Research and Accounting Group (PRAG) is an independent research and discussion group which develops the pension SORP.

The Charity Commission and Office of the Scottish Charity Regulator are the joint SORP-making body for the Charity SORP. The Chartered Institute of Public Finance and Accountancy (CIPFA) produce an accompanying Charities SORP disclosure checklist. The Consultative Committee of Accountancy Bodies (CCAB) is the collective industry organisation representing five UK accountancy bodies (ICAEW, ACCAm CIPFA, ICAS and Chartered Accountants Ireland). It publishes the SORP for limited liability partnerships (covering the accountancy profession). CIPFA LASAAC Local Authority Code Board issue the Code of Practice on Local Authority Accounting for the UK. This annual publication is for finance practitioners in local authorities and external audit agencies and firms in England, Scotland and Wales.

The Investment Association (IA) publish a SORP applicable to UK authorised funds and the Association of Investment Companies (AIC) publishes the SORP for investment trust companies and venture capital trusts.
Universities UK and BUFDG is the authorised SORP-making body for further and higher education, while the housing SORP is published jointly by National Housing Federation, Community Housing Cymru, Scottish Federation of Housing and Northern Ireland Federation of Housing Associations.

At an appropriate moment, we believe that revisions to relevant legislation could further integrate the TCFD recommendations into the corporate governance and reporting framework.

The City of London Green Finance Initiative should be formally tasked by the Government and regulators to implement an inclusive process involving key private sector stakeholders to generate the guidelines. This could significantly reduce the burden on the Government and regulators associated with preparing new guidance in a short period of time.

Development of the guidelines should take account of how different jurisdictions are responding to new disclosure needs. In particular, the recent final report from the EC High-Level Expert Group on Sustainable Finance recognises that the review of the Non-Financial Reporting Directive (due in 2018) is a key opportunity to align the requirements of the Directive with the TCFD recommendations. Expert bodies such as the Committee on Climate Change (particularly the Adaptation Sub-Committee) and the Natural Capital Committee should be consulted in the formulation of the guidelines.

Conclusions and recommendations

There are strong economic and financial arguments for greater disclosure of environment-related risk, opportunity and impact (particularly those related to climate change).

In this report, we have set out how to create the most comprehensive and deeply embedded disclosure framework in the world. It would be inherently flexible, improve over time, and be automatically mainstreamed.

Our recommendations would embed the TCFD recommendations for disclosing climate-related risk in all relevant UK corporate governance and reporting frameworks. With the requisite support from financial regulators this can be achieved without additional legislation. However at an appropriate moment, we believe that revisions to relevant legislation could further integrate the TCFD recommendations into the corporate governance and reporting framework. Legislation would however be necessary if financial regulators do not provide their support within the timeframes envisaged in this report.

TCFD

1. The TCFD recommendations should be integrated into the UK corporate governance and reporting framework through a two-step process, where the Government and financial regulators: (1) create and publish guidelines and (2) appropriately reference these guidelines in the corpus of relevant UK rules, codes and guidance.

2. In these guidelines, the Government and relevant financial regulators must clarify that disclosing material environmental risks, including physical and transition climate-related risks, is already mandatory under existing law and practice. The guidelines should also clarify that the TCFD recommendations, given that they reflect key international norms for disclosing material climate-related risks, allow preparers to fulfil these legal obligations and duties.

3. The guidelines should be prepared and published in 2018/19 and then reviewed after two years (and on a regular basis thereafter). Corporate disclosure and reporting is a rapidly evolving area. It is important to review the norms and best practices for climate-related and sustainability-related financial disclosures regularly so that the UK continues to have a world leading framework that is responsive to such changes, and that it helps to set and reinforce the global harmonisation of standards.

4. Financial regulators and the Government should advise when existing rules, codes and guidance can be updated to include references to the guidelines. This should be based on existing plans for updates and revisions, but expedited if and where necessary. The aim should be to complete any updates and associated consultations and other procedural formalities by the end of 2020/21.

5. The guidelines should define which preparers are covered by disclosure requirements. This will be in large part determined by the scope of existing rules and codes.

6. The guidelines should ensure that information is disclosed on a consistent and transparent basis. The guidelines should make clear that assumptions used for calculations, estimates or projections should also be disclosed by preparers.

7. The guidelines should ensure that preparers provide scenario-based disclosures of how their business strategies and financial planning may be affected by climate-related risks and opportunities and the associated time horizons considered.

8. At an appropriate moment, revisions to relevant legislation could further integrate the TCFD recommendations into the corporate governance and reporting framework. This would also provide an opportunity to: (1) harmonise requirements across different entities (where existing rules, codes and guidance take different approaches); and (2) make provisions for further accountability in relation to the information (e.g. specify location, make provision for shareholder approval similar to the directors' remuneration report etc.).

9. The development of the guidelines should take account of how different jurisdictions are responding to new disclosure needs. In particular, the recent final report from the EC High-Level Expert Group on Sustainable Finance recognises that the review of the Non-Financial Reporting Directive (due in 2018) is a key opportunity to align the requirements of the Directive with the TCFD recommendations.

10. Relevant expert bodies such as the Committee on Climate Change (particularly the Adaptation Sub-Committee) and the Natural Capital Committee should be consulted in the formulation of the guidelines.

Voluntary sustainability-related disclosures

11. The guidelines should include a separate section on new and voluntary UK Sustainability-related Financial Disclosure (**SFD**) recommendations. The SFD recommendations should introduce additional elements not fully covered by the TCFD recommendations or beyond the scope of the TCFD process.

12. The voluntary SFD recommendations would include a new framework for measuring and reporting on both positive and negative impacts related to climate change, the environment and the Sustainable Development Goals (SDGs).

13. The voluntary SFD recommendations should help preparers, particularly those with significant physical assets contributing to revenues, disclose basic information about these assets to enable bottom-up spatial analysis.

14. The voluntary SFD recommendations should help preparers disclose their green revenues by product and/or service to enable users to see how business models have changed or are changing.

15. The voluntary SFD recommendations should help preparers disclose their aggregate committed emissions (or in the case of financial institutions their financed committed emissions). Committed emissions are the cumulative carbon emissions an asset is expected to emit over its remaining lifetime. This will allow users to see what contribution a preparer is making to anthropogenic climate change and how its contribution is changing over time.

16. The voluntary SFD recommendations should help preparers publish adaptation plans that set out how they intend to manage physical climate-related risks.

17. The voluntary SFD recommendations should help banks adopt and deploy methodologies to tag new and outstanding loans with relevant sustainability-related risk, opportunity and impact information. This process of 'tagging' and 'back-tagging' will enable banks to better understand the exposure of their loan books to different risks, opportunities and impacts. This information may also be of relevance to financial regulators.

Support successful adoption and implementation

18. The City of London Green Finance Initiative should be formally tasked by the Government and regulators to implement an inclusive process involving key private sector stakeholders to generate the guidelines. This could significantly reduce the burden on the Government and regulators associated with preparing new guidance in a short period of time.

19. Sector-specific preparer forums should be created to support guideline adoption and implementation. Each preparer forum would involve practitioners, experts, and policymakers and would provide implementation support to preparers across a sector. They would highlight best-practices and identify gaps, as well as input into the regular review of guidelines.

20. The Government, together with regulators, should make available matched datasets from the Land Registry, Environment Agency, DCLG, BEIS, and other relevant public bodies, such as the Met Office, to support banks accurately measure the exposure of loans, particularly mortgages, to changing physical climate-related risks. The assessment that can be created with these datasets might then inform future supervisory work.

21. Knowledge and training should be provided by all preparers to ensure sufficient organisational competence in relation to environmental risk, impact, and opportunity.

22. The Government and regulators should publish and/or endorse public disclosure rankings and benchmarks to encourage good disclosure.

23. There should be support from the Government and regulators to publish and/or endorse off-the-shelf tools to help preparers.

24. To support and complement disclosure, the UK should create a Green Fintech Hub which would provide capabilities and testbeds to support green fintech development by public and private sector actors.

Annex 1

Core Elements of TCFD Recommendations

The TCFD recommendations are structured around four thematic areas that represent core elements of how organisations operate: governance, strategy, risk management, and metrics and targets.

The four core elements are supported by recommended disclosures that build out the framework with information that will help investors and others understand how reporting organisations assess climate-related risks and opportunities.[14] Further details of the four core elements are below.

Governance

Disclose the organizations's governance around climate related risk and opportunities.

Recommend Disclosure a) Describe the board's oversight of climate related risks and opportunities.	**Guidance for all Sectors** In describing the board's oversight of climate-related issues, organizations should consider including discussion of the following: • Process and frequency by which the board and/ or board committees (e.g., audit, risk, or other committees) are informed about climate-related issues, • Whether the board and/ or board committees consider climate-related issues when reviewing and guiding strategy, major plans of action, risk management policies, annual budgets, and business plans as well as setting the organisations performance objectives, monitoring implementation and performance, and overseeing major capital expenditures, acquisitions, and divestitures, and • How the board monitors and oversees progress against goals and targets for addressing climate-related issues.
Recommended Disclosure b) Describe management's role in assessing and managing climate-related risks and opportunities.	**Guidance for all sectors** In describing management's role related to the assessment and management of climate-related issues, organizations should consider including the following information: • Whether the organization has assigned climate-related responsibilities to management-level positions or committees; and, if so, whether such management positions or committees report to the board or committee of the board and whether those responsibilities include assessing and/ or managing climate-related issues, • A description of the associated organizational structure(s), • Processes by which management is informed about climate-related issues, and • How management (through specific positions and/ or management committees) monitors climate-related issues.

14 See page 4 here: https://www.fsb-tcfd.org/wp-content/uploads/2017/06/FINAL-TCFD-Report-062817.pdf

Strategy

Disclose the actual and potential impacts of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning where such information is material.

Recommend Disclosure a) Describe the climate related risks and opportunities the organization has identified over the short, medium, and long-term.	**Guidance for all Sectors** Orgaizations should provide the following information: • a description of what they consider to be the relevant short-, medium-, and long-term time horizons, taking into consideration the useful life of the organization's assets or infrastructure and the fact that climate-related issues often manifest themselves over the medium and longer terms. • a description of the specific climate-related issues for each time horizon (short, medium, and long term) that could have a material financial impact on the organization, and • a description of the process(es) used to determine which risks and opportunities could have material and financial impact on the organization. Orgnaizations should consider providing a description of their risks and opportunities by sector and/ or geography, as appropriate. In describing climate-related issues, organizations should refer to Tables 1 and 2 (pp. 10-11).
Recommended Disclosure b) Describe the impact of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning.	**Guidance for all sectors** Building on recommended disclosure (a), organisations should discuss how identified climate-related issues have affevted their businesses, strategy, and financial planning. Organizations should consider including the impact of their businesses and strategy in the following areas: • Products and services • Supply chain and/ or value chain • Adaptation and mitigation activities • Investment in research and development • Operations (including types of operations and location of facilities) Organizations should describe how climate-related issues serve as an input to their financial planning process, the time period(s) used, and how these risks and opportunities are prioritized. Organizations' disclosures should reflect a holitic picture of the interdependencies among the factors that affect their ability to create value over time. Organizations should also consider including in their disclosures the impact on financial planning in the following areas: • Operating costs and revenues • Capital expenditures and capital allocation • Acquisitions or divestments • Access to capital If climate-related scenarios were used to inform the organization's strategy and financial planning, such scenarios should be described.

Strategy

Disclose the actual and potential impacts of climate-related risks and opportunities on the organizations's businesses, strategy, and financial planning where such information is material.

Recommend Disclosure c)	**Guidance for all Sectors**
Describe the resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2'C or lower scenario	Organizations should describe how resilient their strategies are to climate related risks and opportunities, taking into considerations a transition to a lower-carbon economy consistent with a 2'C or lower scenario and, where relevant to the organization, scenarios consistent with increased physical climate-related risks. Organizations should consider discussing: • where they believe their strategies may be effected by climate-related risks and opportunities; • how their strategies might change to address such potential risks and opportunities; and • the climate-related scenarios and associated time horizon(s) considered. • Refer to section D for information on applying scenarios to forward-looking analysis.

Risk Management

Disclose how the organization identifies, accesses, and manages climate-related risks.

Recommend Disclosure a) Describe the organization's processes for identifying and assessing climate related risks.	**Guidance for all Sectors** Organizations should describe their risk management processes for identifying and assessing climate-related risks. An important aspect of this description is how organizations determine the relative significance of climate0related risks in relation to other risks. Organizations should describe whether they consider existing emerging regulatory requirement related to climate change (e.g., limits on emissions) as well as other relevant factors considered. Organizations should also consider disclosing the following: • processes for assessing the potential size and scope identified climate-related risks and • definitions of risk terminology used or references to existing risk classification frameworks used.
Recommended Disclosure b) Describe the organization's processes for managing climate related risks.	**Guidance for all sectors** Organizations should describe their processes for managing climate-related risks, including how they make decisions to mitigate, transfer, accept, or control those risks. In addition, organizations should describe their processes for prioritizing climate-related risks, including how materiality determinations are made within their organisations. In describing their processes for managing climate-related risks organizations should address the risks included in Tables 1 and 2 (pp. 10-11), as appropriate.
Recommended Disclosure c) Describe how processes for identifying assessing and managing climate-related risks are integrated into the organization's overall risk management.	**Guidance for all Sectors** Organizations should describe how their processes for identifying, assessing, and managing climate-related risks are integrated into their overall risk management.

Metrics and Targets

Disclose the metrics and targets used to assess and manage relevant climate-related risks and opportunities where such information is material.

Recommend Disclosure a) Disclosue the metrics used by the organizations to assess climate-related risks and opportunities in line with its strategy and risk management process. .	**Guidance for all Sectors** Organizations should provide the key metrics used to measure and manage climate-related risks and opportunities, as described in tables 1 and 2 (pp. 10-11). Organizations should consider including metrics on climate-related risks associated with water, energy, land use, and waste management where relevant and applicable. Where climate-related issues are material, organizations should consider describing whether and how related performance metrics are incorporated into remuneration policies. Where relevant, organzations should provide their internal carbon prices as well as climate-related opportunity metrics such as revenue from products and services designed for a lower-carbon economy. Metrics should be provided for historical periods to allow for trend analysis. In addition, where not apparent, organizations should provide a description of the methodologies used to calculate or estimate climate-related metrics.
Recommended Disclosure b) Disclose Scope 1, Scope 2, and if appropriate Scope 3 greenhouse gas (GHG) emissions, and the related	**Guidance for all sectors** Organizations should provide their Scope 1 and Scope 2 GHG emissions and, if appropriate, Scope 3 GHG emissions and the related risks. GHG emissions should be calculated in line with the GHG Protocol methodology to allow for aggregation and comparability across organizations and jurisdictions. As appropriate, organizations should consider providing related, generally accepted industry-specific GHG efficiency ratios. GHG emissions and associated metrics should be provided for historical periods to allow for trend analysis. In addition, where not apparent, organizations should provide a description of the methodologies used to calculate or estimate the metrics.

Metrics and Targets

Disclose the metrics and targets used to assess and manage relevant climate-related risks and opportunities where such information is material.

Recommended Disclosure c)	Guidance for all Sectors
Describe the targets used by organization to manage climate-related risks and opportunities and performance against targets.	Organizations should describe their key climate-related targets such as those related to GHG emissions, water usage, energy usage, etc., in line with anticipated regulatory requirements or market constraints or other goals. Other goals may include efficiency or financial goals, financial loss tolerances, avoided GHG emissions through the entire products and services designed for a lower-carbon economy. In describing their targets, organizations should consider including the following: • whether the target is absolute or intensity based, • time frames over which the target applies, • base year from which progress is measured, and • key performance indicators used to assess progress against targets. Where not apparent, organizations should provide a description of the methodologies used to calculate targets and measures.

ESTABLISHING THE WORLD'S BEST FRAMEWORK FOR CLIMATE-RELATED AND SUSTAINABILITY-RELATED FINANCIAL DISCLOSURES

City of London Green Finance Initiative
Working Group on Data, Disclosure and Risk