

## Chapter 3: Capturing the Opportunity



### Overview

Demand for green finance from consumers, investors, and governments is expected to grow substantially over the coming decades. A report from Ricardo Energy & Environment, prepared for the UK Committee on Climate Change, estimated that the potential global market size for low carbon financial services could reach £280 billion per year in 2030 and £460 billion in 2050<sup>78</sup>. With strengths across the full financial services spectrum, deep pools of capital, and a leading track-record on environmental policies, the UK is uniquely placed to capitalise on this opportunity and strengthen its position at the forefront of this market. This chapter sets out how the Government, working in partnership with the newly launched Green Finance Institute (GFI), will look to support the private sector in the delivery of this ambition. Our strategy for doing this has three core elements:

- **Consolidating the UK's position as a global hub for green finance** - the Government is committed to maintaining the UK's leading position as a global financial centre for green finance. We will do this by coordinating UK activities behind a shared strategic direction, in partnership with the GFI, and establishing the global market for green finance;
- **Positioning the UK at the forefront of green financial innovation, and data and analytics** - the Government will create an environment that catalyses UK innovation in green finance products and services, including data and analytics, in collaboration with regulators, industry, and academia; and
- **Building capabilities and skills on green finance** - the Government recognises the need to upskill finance professionals and government officials and promote awareness in civil society to unlock the full potential of green finance.

### The UK as the global hub for green finance

The government is committed to ensuring the UK continues to be at the forefront of the global green finance market, building on its strengths as a global financial centre:

- The UK is the largest centre for asset management and insurance sectors in Europe, with an asset management sector managing £9.1 trillion of assets<sup>79</sup> and an insurance sector generating \$220 billion in premiums in 2017<sup>80</sup>.
- UK banking sector assets are the largest in Europe and the UK is a world-leader in cross-border bank lending, with a global market share of 18% in 2017<sup>81</sup>.
- These sectoral strengths are underpinned by a reliable and longstanding professional services sector. The legal services sector alone is the largest in Europe and second largest globally, while the UK also enjoys a leading accounting sector with net exports of £2.5 billion in 2017<sup>82</sup>.
- The UK benefits from access to global capital pools, a central time zone, and a stock exchange which hosts one of the world's most international capital markets, with roughly 500 international companies listed from more than 70 countries<sup>83</sup>.

As the Chancellor set out in his annual Mansion House speech in June 2018, this enduring strength in financial services has been built on three pillars: innovation, resilience and openness. This combination provides the foundation for long-term success, and ensures the UK has a world-leading position in the markets of the future, including in the green finance market.



## Creating a strategic focus for UK green finance

As consideration of environmental risks and opportunities becomes more deeply embedded into the financial mainstream, the Government is taking action to cement UK leadership in green finance. We recognise the need for a permanent and co-ordinated effort to ensure the UK can continue to capitalise on the opportunities presented by the burgeoning green finance market. That is why, building on the work of the Green Finance Initiative and in collaboration with others, we are:

- **Launching the new Green Finance Institute to strengthen public and private sector collaboration and cement the UK's position as a global hub for green finance.**

### Box 7 - The Green Finance Institute - building partnerships to accelerate green finance

The GFI, launched on 2nd of July 2019 at the Green Finance Summit, is a response to the first recommendation of the Green Finance Taskforce report and is led by Chairman, Sir Roger Gifford, senior banker at SEB and former Lord Mayor of the City of London, and CEO, Dr Rhian-Mari Thomas OBE, former Barclays executive.

Supported by £2 million of seed funding from the UK Government and £2 million from the City of London, the GFI's overarching mission is to accelerate the domestic and global transition to a clean, resilient and environmentally sustainable economy through accelerating UK leadership in green finance.

As the UK's principal forum for public and private collaboration on green finance, the GFI will foster greater alignment of public and private sector initiatives, create commercial opportunities for UK finance providers, and strengthen the competitiveness of the UK financial services sector and the UK's global green finance brand.

The Green Finance Institute will focus on four specific areas:

- Catalysing finance to accelerate the economic transition through convening both sector-focused and place-based mission-led coalitions to unlock the barriers to the deployment of capital;
- Supporting the greening of the financial system through close collaboration with financial regulators and policy-makers;
- Building UK capacity on green finance, including providing an accessible, digital platform to collate resources and share and showcase developments across all aspects of UK green finance; and
- Driving the global green finance agenda through international dialogue, partnerships and trade.



## Establishing the global market for green finance

Climate change is a global issue that requires a global response. The world's greatest emissions reductions potential is in emerging markets while the greatest need for adaptation finance is in some of the least developed countries.

The Government is committed to establishing green finance markets worldwide. Working closely with the GFI, we will take a coordinated approach that captures and aligns the diplomatic routes through which the UK engages with key markets on green finance, drawing upon the Government's networks of financial services attaches in the Foreign and Commonwealth Office and the Department for International Trade.

Local green finance markets around the world will play a significant contribution to tackling climate change and there is a need for them to be developed in order to provide local currency finance and investments. The Government recognises this and is committed to supporting the development of local green finance, as outlined in Chapter 2. The UK government is, for instance, promoting low carbon development and affordable, clean energy through the Prosperity Fund and UK Partnering for Accelerated Climate Transitions (UK PACT) (see Annex A).

In building green finance markets, there is a growing demand for expertise from the private sector, governments and regulators, and a need for cross-sector collaboration. The UK will maintain strong commercial and diplomatic partnerships with key green finance markets, with the aim of sharing best practice and increasing cross border flows of green capital.

The private sector has already been instrumental in driving forward this agenda through the City of London's Green Finance Initiative, which has already hosted three successful international Green Finance Summits to galvanise action. The Initiative is helping the UK build formal business-to-business partnerships with Brazil, China, India, and Mexico (see Figure 4) - key partners for UK exports of financial services. These private sector partnerships aim to deepen ties with the UK on green finance, driving innovation and scaling-up green cross-border capital flows (e.g. UK-China Green Finance taskforce; see Chapter 1). Going forward the GFI will play a central role in strengthening these partnerships and encouraging UK financial and professional services to engage with other financial centres on green finance.

## Driving innovation in green finance

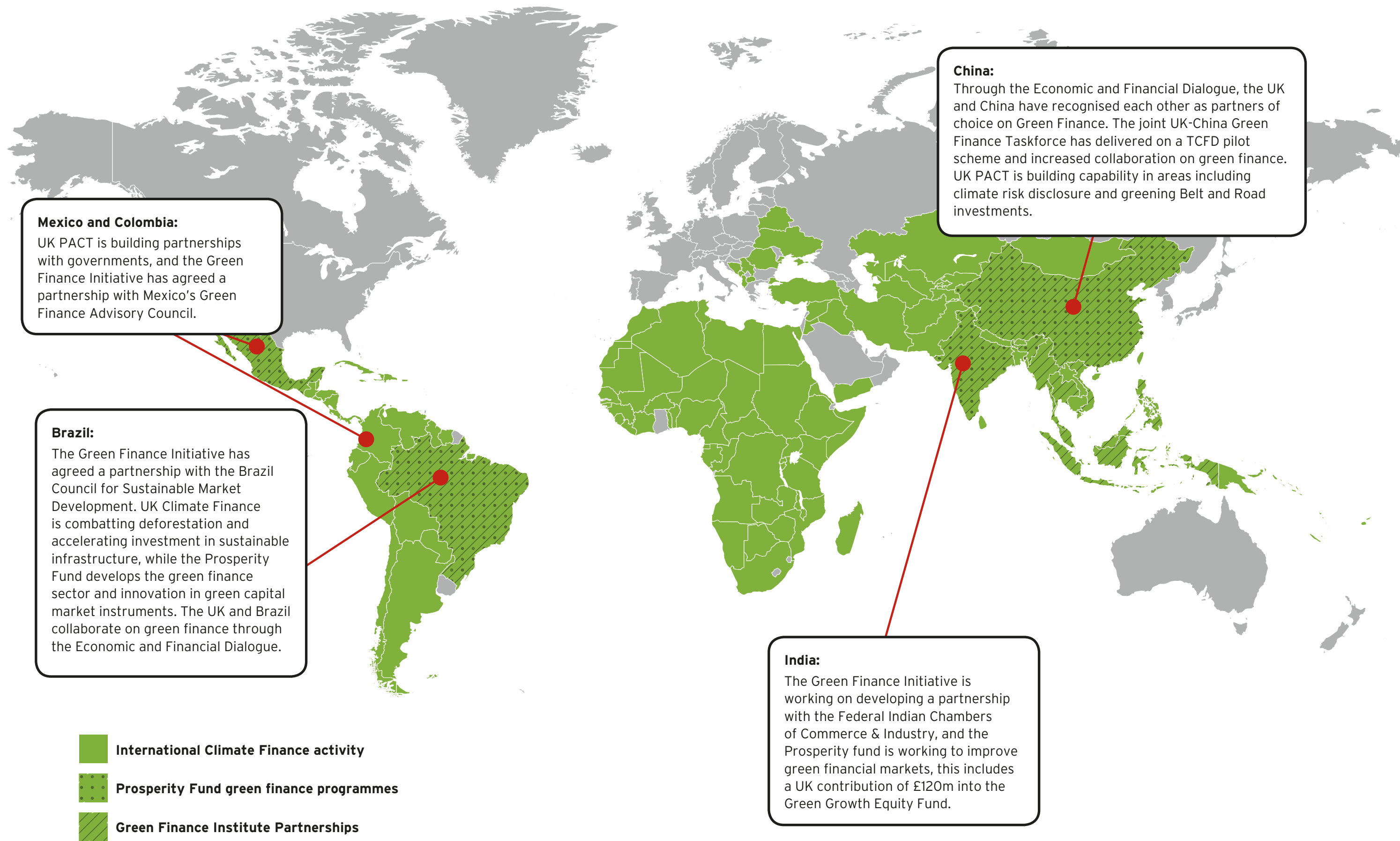
The challenges posed by climate change and environmental concerns affect all areas of the UK economy and offer important opportunities. Increased demand for green and climate-resilient investments will drive the supply of new innovative products. The UK's reputation for financial innovation and its ability to create and

develop new ideas, including in areas such as fintech, alternative finance, and big data, provides a key opportunity for UK firms to first innovate and then mainstream green products and services.

There have already been important advances in UK green finance activity across sectors of the industry, often supported by public sector policy. For example:

- Asset managers are increasingly taking an interest in investing in companies that take environmental, social and governance (ESG) factors into account, while green venture capital funds are growing;
- The London Stock Exchange Group (LSEG) has taken a leading role in driving innovation, both in providing a platform for products and delivering on new financial products, from ESG Exchange Traded Funds, Yieldcos and green bonds, to sustainability and ESG indexes for passive investors to track (e.g. FTSE Russell), as shown in below Case Study;
- Insurers and pension trustees are increasingly seeking to understand the financial risks and opportunities arising from climate change, with government supporting this through pensions regulations (see Chapter 1) and initiatives to strengthen resilience to climate change and natural disasters (e.g. Flood Re<sup>84</sup>; Centre for Global Disaster Protection<sup>85</sup>);
- Banks are launching green mortgage products and expanding the corporate green loan market;
- In the retail space, consumers are increasingly driving the need for innovative financial products that allow them to invest in line with ESG principles through crowdfunding and retail investment platforms; and
- Finally, all of the above is creating opportunities for the wider professional services ecosystem, whether legal services for Corporate Power Purchase Agreements, or accountants, actuaries and sustainability consultants supporting the implementation of the TCFD recommendations.

Figure 4 - UK's climate investments and green finance partnerships



The Government's ambition is for the UK to remain a leader in developing innovative green finance products and services and climate-related data and analytics. Our approach to doing this has four elements:



Creating effective regulatory and policy frameworks and encouraging common standards to correct market failures and promote consistency, clarity, and best practice;



Promoting dialogue between government, regulators, academia, and the financial sector to understand and identify challenges and opportunities;



Enhancing climate and environmental data and analytics to reduce information asymmetries and foster transparency; and



Developing policies to promote the adoption and mainstreaming of green finance products and services.

### Creating effective frameworks and encouraging common standards

Building on the UK's reputation for quality regulation in financial services and thought leadership in climate policy, the Government recognises the importance of fostering a policy and regulatory environment that stimulates innovation and encourages investment in the real economy. As set out in the first two chapters, the Government is committed to enacting forward-looking and transparent real economy policies and building robust green financial market frameworks and common standards.

### Promoting dialogue to support innovation

The bulk of expertise in green finance sits within the private sector and over the past few years we have consistently worked in collaboration with industry in developing policy. Fostering a dialogue between the public and private sector is important to enable the sharing of expertise, building momentum around new innovations, and

to understand, identify, and respond to challenges and opportunities.

At the request of the Government, the City of London's Green Finance Initiative was established in 2016, bringing together financial sector leaders, academics, and the civil society into a market development group. Subsequently, HM Treasury and the Department for Business, Energy and Industrial Strategy (BEIS) jointly convened the Green Finance Taskforce, composed of leading experts on green finance to work with their industry peers to provide a series of recommendations on how to accelerate the growth of green finance. The GFI will build on these examples of public-private collaboration, as shown above.

There is also a constant dialogue between the UK regulators and industry. For example, as referred to in Chapter 1, the Financial Conduct Authority and the Prudential Regulation Authority have established a Climate Financial Risk Forum to build capacity and share best practice across financial regulators and the private sector on green finance. The forum brings together senior representatives from banking, insurance, and asset management. One of the forum's four working groups is specifically focused on innovation<sup>86</sup>.

The Government has also supported dialogues with regulators, other governments and the private sector on topics of innovation in financial services. For instance, the Sustainable Finance Study Group, co-chaired by the Bank of England and People's Bank of China on behalf of the UK and China, fostered discussion on the potential of green securitisation, venture capital, and digital technologies leading to ways to mobilise capital for the transition to a greener economy. HM Treasury officials, regulators, financial institutions, and academics also took part in roundtables in Beijing and Hong Kong in Spring 2019 to discuss ways to operationalise green asset-backed securities as well as the benefits and risks associated with transferring green securitised loans to institutional investors in the debt capital markets.

### Enhancing climate and environmental data and analytics

Governments, regulators, academia, civil society and the private sector all have a key role to play in developing and promoting access to environmental and climate-related financial data and analytics. This should help investors make better informed decisions and stimulate the development of new financial products, including green Fintech, unlocked from enhanced data availability, analytics and understanding of potential applications.

The UK Government already provides a wealth of publicly available environmental and climate-related data, building on its reputation for publishing and using open data for accountability, innovation, and social impact<sup>87</sup>. For example, the Government and publicly funded entities are already showing leadership in the collection, management, and analysis on physical climate-related data, energy and greenhouse gas emission-related data. For further detail on the UK's public data sources and relevant institutions pertaining to climate-related risk analysis please see Annex B.

The Government is also committed to enhancing the quality, coverage and use of geospatial data across all sectors of the economy, including the financial sector - which is also in the remit of the Geospatial Commission formed in April 2018. Earth observation, combined with artificial intelligence (AI), has the potential to transform the availability of data in our financial system and change how risks, opportunities and impacts are measured and managed by financial institutions. The UK already has world-leading capabilities in both.

We welcome recent developments including:

- The Alan Turing Institute (the UK's national institute for data science and AI) which, in support of the AI and Data Grand Challenge, has established a Sustainable Finance Interest Group to bring together

researchers to support financial institutions and regulators to integrate AI and geospatial data into financial services, and analyse the performance of sustainable investments;

- The Spatial Finance Initiative (SFI) which was established in 2019 by The Alan Turing Institute, Satellite Applications Catapult, the GFI, and the University of Oxford Sustainable Finance Programme to mainstream the use of geospatial data and analysis in financial decision-making globally<sup>88</sup>; and
- The work of the public-private partnership Space for Climate - aimed at creating a seamless supply chain of reliable and quality assured data ready to translate into climate services including those needed by the finance sector.

In line with the Green Finance Taskforce recommendations, the Government recognises there is a need for further innovation and coordination in data availability, comparability and aggregation, as well as a better understanding of existing datasets and potential applications within the financial sector. That is why:

- **The Government is working with UK Research and Innovation (UKRI) to explore options for future research funding to reduce information asymmetries and promote transparency in the availability and application of climate risk information.** The Natural Environment Research Council (NERC) and Innovate UK, which are part of UKRI, are working together to deliver a research and innovation programme. This will develop improved information and analytics on climate and environmental hazards, as well as vulnerability and exposures to support the financial sector and other corporates. Further details will be announced later this year.
- **The Government will work with the GFI to**



**explore the use of climate analytics and data to support mission-led coalitions (see Chapter 2), and to mobilise green investment.**

- **The Geospatial Commission, together with other Government backed organisations (e.g. UK Research & Innovation, NERC, the UK Space Agency, The Satellite Applications Catapult, The Alan Turing Institute), and the Spatial Finance Initiative, will explore how to accelerate UK efforts to secure and support the adoption of geospatial datasets required to green the global financial system.**

These actions will help promote the mainstreaming of green finance products and services, and support green fintech.

### Promoting the adoption and mainstreaming of green finance products and services

The UK Government recognises the importance of enacting policies that foster innovation in green finance and the mainstreaming of new products and services. This includes creating an environment that allows innovation to flourish and promotes best practice – building on the LSEG’s leadership in mainstreaming new green products, as shown in the Case Study below – as well as through direct incentives to stimulate innovation across asset classes and industry sectors.

### Case Study - the London Stock Exchange Group: Innovation in Capital Markets

London Stock Exchange Group (LSEG) has taken a range of steps to support investors and issuers in the transition to a low-carbon and sustainable economy. It has developed a comprehensive sustainable finance and investment offering and continues to innovate in support of market needs.

LSEG was the first major exchange in the world to launch a dedicated green bond segment back in 2015. It now has over 100 active Green and sustainable bonds listed on its markets by issuers including corporates, municipalities, sovereigns and multilateral development banks from 16 countries, which have raised more than \$29 billion in 12 currencies.

Renewable energy funds are another important structure to drive capital to the green economy. Listed green funds have been a success story at the LSEG, with 11 renewable funds, in addition to others focused on energy storage, energy efficiency and environmental technologies, collectively worth over \$9 billion. The market for Yieldcos is also gaining traction with 12 renewable Yieldcos currently on the LSEG with a market capitalisation of £7.6 billion.

LSEG’s index and analytics business, FTSE Russell has been active in the global index space since 2001 when the FTSE4Good Index Series was launched and currently has approximately \$16 trillion benchmarked to its indexes. Its data and analytics tools support many of the world’s largest asset owners as they look to integrate ESG into their investment strategies.

There has also been a significant uptake in Exchange Traded Funds (ETFs), with 64 ESG ETFs with a total value of \$5.1 billion (as of Nov 2018) – up 45% compared to the previous year. 80% of professional investors expect investment into ESG ETFs to grow over the next five years, with 20% expecting a dramatic rise in interest.

We welcome the launch of the FCA’s Green Fintech Challenge in October 2018, building on its pioneering regulatory Sandbox service and Innovation hub, to help businesses test innovative propositions in the market with real consumers. The Green Fintech Challenge aims to support firms that require specific regulatory support in developing innovative green solutions to assist the UK’s transition to a greener economy. The initiative offers a range of support services for the successful applicant depending on the individual needs and maturity of the firm, including a dedicated Innovate Adviser, authorisation support, live market resting in the sandbox, and formal and informal guidance. Applications closed in January and the first nine successful applicants were announced in April this year<sup>89</sup>.

The UK Government is also committed to supporting financial innovation that can encourage the decarbonisation of the UK housing sector – a key contributor to UK carbon emissions. That is why:

- **We are launching a £5 million Green Home Finance Innovation Fund** to pilot over 18 months green home finance products that have sustainable business models, will incentivise energy efficiency retrofit, and are supported and promoted effectively by the lender. The pilots will test the extent to which green finance products are attractive to consumers, drive energy efficiency works and can be self-sustaining.

Government policies in this area need to be focused on securing additionality by addressing existing barriers to the adoption and mainstreaming of green finance products and services. In this context, the Government has been carefully considering the call to issue a sovereign green bond.

Green bonds have demonstrated significant growth in recent years, and the Government recognises the importance for this broader growth to continue. At present the Government does not plan to issue a sovereign green bond, given the absence of significant barriers to market for corporate issuances in the UK. In addition, the Government does not consider a sovereign

green bond to be value for money compared to the core gilt programme, which remains the most stable and cost-effective way of raising finance to fund day-to-day government activities (including existing and new green expenditure). This owes to the strength of investor demand for gilts, the well-established nature and size of the market, as well as the fact that gilts can be built up to benchmark sizes across a range of maturities, resulting in a highly liquid market and diverse investor base.

The Government remains open to the introduction of new debt financing instruments but would need to be satisfied that any new instrument would meet value for money criteria, enjoy strong and sustained demand in the long-term and be consistent with the wider fiscal objectives of government. The Government continues to monitor the case for a sovereign green bond and will keep this under review. Meanwhile, the Government has already set out plans for significant investments in clean and resilient growth as outlined in Chapter 2.

## Building Capabilities and Skills

As green finance continues to establish itself in the mainstream, there will be an increasing need for the UK and global financial services industries and related sectors to develop the capabilities of their workforce with relevant education and training in green finance principles and practice. As a leading global financial centre and with a world-renowned network of universities and Chartered professional bodies, the UK is strategically placed to establish and promote global professional and educational standards for green finance. Our aim is for the UK to consolidate its reputation as the home of the green finance professional and to capture the commercial opportunities arising from the global demand for training and qualifications in green finance.

### Working with professional bodies

UK-based professional bodies are already leading the world in embedding green finance into programmes of initial and continuing professional development, as the examples below demonstrate. Such programmes are designed to ensure that

finance practitioners have the necessary skills and expertise needed to understand climate science, integrate environmental factors into financial risk analysis and investment decision-making, seize opportunities in green finance and help align private sector finance with the transition to a clean and resilient economy.

For example, in 2018, the Chartered Banking Institute launched the new Green Finance Certificate – subsequently adopted by the Chartered Institute for Securities and Investment – and CFA UK has recently launched an ESG Investing certificate. In a similar vein, work is underway in a wide range of UK-based professional bodies to raise awareness of the financial risks from climate change and embed green and sustainable finance principles and practice.

**Building on this work, the Government in collaboration with a working group of professional bodies and the GFI has developed a Green Finance Education Charter.**

Global initiatives such as the Global Research Alliance for Sustainable Finance and Investment – created in 2017 by a network of global research universities to promote multi-disciplinary academic research on sustainable finance, are also advancing the agenda.

## Training for the Public Sector

While green finance capability in Government has grown significantly in recent years, developing green finance skills in the public sector continues to be important. That is why:

- **The Government has been working closely with the University of Oxford to create a short course for UK government policy officials to provide foundational knowledge on green finance.** This has been trialled by UK policy and trade officials across 30 different High Commissions, Embassies, Consulates, and Missions across North America, Latin America, Southeast Asia, and Australasia from December 2018 to June 2019. Financial and Professional services teams in the Department for International Trade have also trained staff

### Box 8 – Green Finance Education Charter

On 14 May, Government together with the Green Finance Initiative hosted a roundtable for CEOs of professional finance and accounting bodies to discuss how they could lead the drive to develop appropriate programmes of initial and continuing professional development to build the capability and capacity of the banking, finance and professional services sectors to mainstream green finance.

Following the roundtable, the Government, a working group of professional bodies, and the GFI have developed a charter that commits professional bodies to taking prompt action to identify and address gaps in the development of green finance knowledge and skills, and engage members on the risks and opportunities climate change and environmental challenges present to their professions. The Charter will be launched at the Green Finance Summit in July 2019, with a wide range of UK-based professional bodies expected to sign up to the Charter by the end of the year.

Going forward the new GFI will work with UK-based professional bodies to help build skills and capabilities in green finance.

in UK embassies and consulates globally on Green Finance; and

- **The Government will be strengthening its training for the public sector by organising a public-sector conference on green finance, to take place on 17 October 2019.**

The conference will aim to co-ordinate efforts on green finance policy across central and local government, showcase work and successes, provide a forum to discuss emerging topics, and provide opportunities for peer learning and exposure to latest practices on green finance.

## Building Consumer Awareness and Demand

As green finance becomes increasingly mainstream, there will be a growing demand for retail products such as green mortgages. Improved consumer awareness and understanding of how their money is invested will give individuals greater agency in choosing these financial products. This will help stimulate demand for green products and create a feedback loop with greater innovation in the UK green finance sector. Crowdfunding options and retail investment platforms are already leading the way and tapping into this nascent market.

While the Government's Green Finance Strategy has mainly sought to address the role of Government, regulators, financial institutions and industry in growing green finance, we fully recognise the vital role of individuals in driving demand for green financial products and services and delivering the UK's environmental objectives. That is why the first Green GB Week in October 2018 was aimed at engaging consumers on Clean Growth issues, including green finance through events, media and campaigns. We also welcome the Mayor of London's Climate Action Week in July this year, and the second Green GB Week in November will provide further opportunities for Government to reach new audiences with its messages<sup>90</sup>.

The UK Government is taking forward a range of broader activities to engage with individuals and make it easier for them to invest in line with their values. The Department for International Development (DFID) and the Department for Digital, Culture, Media and Sport (DCMS) are leading a number of cross-government initiatives to make progress on this agenda. These include

the Taskforce on Growing a Culture of Social Impact Investing in the UK, support for the new independent Impact Investing Institute (see Next Steps below for more details), and the Investing for a Better World project.

The 'Investing in a Better World<sup>91</sup>' project, sometimes called The National Conversation on Investing in the Global Goals, aims to better understand the public's views on ethical, responsible and impactful investment practices. Its research will help industry understand the shape and scope of UK customer demand for responsible and impactful investment, in order to support sustainable investment in the developing world and help deliver the Global Goals, a set of 17 goals agreed by world leaders at the UN to end poverty and protect the environment.

To achieve this, the Government is running a nationally representative survey of 6,000 people on their values, awareness, interest, and barriers to action. This will result in a comprehensive, statistically valid view on how the UK public thinks about responsible investment. Interim results will be available for the UN High Level Political Forum in July, where the UK will also present its Voluntary National Review on its progress against achieving the Sustainable Development Goals domestically.

DFID has also run a series of events to raise awareness and to work with industry to support more product development so that people have more opportunities to invest in line with their values. The findings of this work will be publicly available after the UN General Assembly in September. We will consider the findings as we implement the Green Finance Strategy, working closely with the GFI and the Impact Investing Institute.