

# Enabling the net zero transition: the role of financial and related professional services



# About TheCityUK

TheCityUK is the industry-led body representing UK-based financial and related professional services. We champion and support the success of the ecosystem, and thereby our members, promoting policies in the UK, across Europe and internationally that drive competitiveness, support job creation and ensure long-term economic growth. The industry contributes 12% of the UK’s total economic output and employs over 2.2 million people, with two thirds of these jobs outside London. It is one of the largest exporters and generates a trade surplus exceeding that of all other net exporting industries combined. It is also the largest taxpayer, and makes a real difference to people in their daily lives, helping them save for the future, buy a home, invest in a business and protect and manage risk.

# About PwC

At PwC, our purpose is to build trust in society and solve important problems. We’re a network of firms in 155 countries with over 327,000 people who are committed to delivering quality in assurance, advisory and tax services.

Our sustainability practice helps organisations plan, source, deliver, finance and measure the wider impact of their products and services. We’re working to build trust, deliver sustained outcomes and help clients solve their most important problems by combining human ingenuity and understanding with the right technology for real results.

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# Foreword

Climate change is already happening. Without collective action, the consequences from climate change on the earth and its inhabitants are only set to worsen. To limit the earth's temperature from increasing by 1.5°C, we need to transform the global economy to reduce and remove emissions – as well as adapt to the changes already in motion. It will take vast amounts of policy leadership and investment to manage this transition for governments, businesses, and individuals.

COP26 was a pivotal moment for financial and related professional services in the UK and beyond. While green finance had already gathered pace since the Paris Agreement in 2015, at COP26 in 2021 our industry declared its collective ambition to mobilise finance through the Glasgow Financial Alliance for Net Zero (GFANZ). The UK government also declared its ambitions at COP26 in November 2021 through its net zero strategy, roadmap for sustainable investment and plans for mandatory transition plan disclosure for listed companies and financial institutions. This report reflects on these key climate policy developments and our industry's experiences in trying to integrate climate-related risks and opportunities within a firm's decision-making process. It also examines their efforts to support the scaling up of the technology and behaviours needed to transition the UK economy to net zero. We have highlighted some of the priority actions needed to ramp up such efforts further.

While progress is being made, businesses continue to face headwinds. Information about greenhouse gas emissions and plans to address them (both in numbers and context) need to be generated through consistent sustainability reporting. Vital information also needs to flow from consumers and businesses to financial institutions. Good data on climate-related financial disclosures is essential, not only to appropriately price climate-related financial risks and opportunities, but to provide robust evidence to necessary green and transitional finance products and services and prevent any attempts at green washing.

Our industry is doing its part by delivering responsible stewardship and proxy voting, insurance, thought leadership, advice on how to unlock the capital needed, and capital allocation. But as pointed out by the firms we interviewed, financial and disclosure regulations alone cannot replace broader climate policies, and individuals' choices alone cannot substitute for public and private investment. The regulatory and policy work on 'greening the financial system' are positive but must be delivered in tandem with the UK government's wider climate policies and regulations. In short, the UK economy's transition needs more direction, detail, incentives and action from policymakers to fully unlock the net zero opportunities for investment.

Many other barriers to scaling up investment and directing behaviour change remain. Overcoming these broader barriers will be pivotal to unlocking the finance needed to transition to net zero – because they represent real risks to the core role of managing capital responsibly as stewards and custodians. We are also acutely sensitive to the current environment of rising inflation and the cost-of-living crisis.

From our interview findings and the deep expertise from TheCityUK membership, we have developed a 10-point plan to unlock access to net zero-aligned finance. We will continue to advocate for collaborative action from the financial and professional services industry, government, and throughout wider society. We encourage others to similarly ramp up their efforts. For one thing is clear: while the risks from climate change are huge, the opportunities can be greater.



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# Executive Summary

To meet the Paris Agreement target of limiting the global temperature rise to 1.5°C, global carbon emissions must be reduced by 45% by 2030. With carbon emissions continuing to rise globally, urgent action is needed.

While much attention has been paid to the need to raise climate finance from public sources, such as nation states and multilateral development banks, there has been less attention on how to raise private finance. It is estimated that \$125trn of investment is required globally to decarbonise the economy, of which \$32trn is required by 2030 with about 70% of such investment needs to come from private finance.<sup>1</sup>

The UK has a world leading financial and related professional services industry. There is a huge opportunity to harness the industry's full potential to support the net zero transition, and help ensure the UK becomes the world's first net zero-aligned financial centre, as envisioned by the UK government. Doing so will be vital – for it is not an exaggeration to say that without sufficient mobilisation of private finance, the Paris Agreement goals cannot be met.

Innovative new technologies need access to low-cost capital and expertise to scale up. High emitting industries need capital and support to decarbonise. Low carbon infrastructure needs financing and insurance to deploy. This will involve technologies at all stages of financial maturity, involving all types of capital, from venture capital, through to private equity, institutional investors and insurers.

The financial and related professional services industry has significantly increased its support for net zero in recent years. Whether it be mobilising capital to scale climate solutions, financing firms to transition to net zero, being active stewards to drive wider economy decarbonisation, accelerating the managed phase out of high emitting assets or developing the data and methodologies required to make informed investment decisions, the industry's contribution is on a scale that would have been deemed unimaginable only a few years ago. But the potential is bigger still.

The question this research attempts to answer is: how can the UK government realise the industry's full potential as a catalyst to enable the transition further and faster?

Based upon interviews with some of the largest and most active financial and professional services firms, the research identifies a number of barriers, risks and challenges that are currently preventing the financial and related professional services industry from scaling up its support. These include:

- Pervasive policy, business and technological risks deterring investment
- A lack of good quality data hindering the ability to assess and price climate-related risks and opportunities
- The need for detailed policies to decarbonise the wider economy
- Developing the power of carbon pricing through both mandatory cap and trade and providing confidence in voluntary carbon markets.

<sup>1</sup> Glasgow Financial Alliance on Net Zero - Net Zero Financing

The research also identifies solutions. In particular, the need for clear and long-term policies to decarbonise the economy, an expansion of carbon pricing and the need to de-risk investments through blended finance. In finding solutions, the emphasis is very much on collaboration between the financial and professional services industry, the wider economy, government, regulators and civil society. Only through such a partnership can the barriers be overcome, the opportunities realised and the investment scaled to support the net zero transition.

Based on the findings, TheCityUK has developed a **10 point action plan** calling on the UK government to:

- 1.** Deliver effective, quantified, detailed and long-term national net zero policies, incentives, and regulations for the wider economy industries.
- 2.** Develop and publish interim national net zero capital raising plans, to set out the UK's investment needs to 2030/2035 and how it intends to raise the capital required.
- 3.** Address and share investment risks through the scaling of blended finance and other incentives.
- 4.** Facilitate deeper collaboration between policymakers, regulators, corporates and SMEs to scale up investment, address greenwashing and support the Just Transition.
- 5.** Continue to engage with other jurisdictions to drive global convergence and interoperability on sustainability disclosure and reporting standards, so that the UK as an international finance centre can build on its strengths to deliver green and sustainable investments in the UK and beyond.
- 6.** Extend the scope of Taskforce on Climate-related Financial Disclosures and net zero transition plans to include smaller and privately owned businesses in a proportionate way, and ensure that the UK's green taxonomy and Sustainability Disclosure Requirements distinguishes between green and transitioning activities.
- 7.** Seek to increase the level of disclosures for direct and indirect GHG emissions, as and when data availability and accuracy improves.
- 8.** Commit to producing an initial assessment of how markets are using climate-related data within its forthcoming update to its Green Finance Strategy.
- 9.** Further develop the role of carbon pricing through carbon and environmental credit markets, widening carbon cap and trade schemes appropriately, and working on an international carbon price floor.
- 10.** Establish a regulatory framework for carbon and environmental credit markets, to achieve transparency, environmental integrity, and standardisation of methodologies for carbon and environmental credit certification.

# 1. The net zero opportunity

At the 21st Conference of Parties (COP 21) in December 2015, 196 countries and jurisdictions adopted the Paris Agreement as an international treaty to tackle climate change. To meet the Paris Agreement target of limiting global temperature rise to 1.5°C, global carbon emissions must be reduced by 45% by 2030. With carbon emissions continuing to rise globally, urgent action is needed.

## Net zero definition

One way of limiting the global temperature rise to 1.5°C is for each country to achieve 'net zero' emissions. Net zero requires that:

- all sources of emissions are reduced as close to zero as possible (through scaling up of energy efficiency, clean energy innovation and transformation of the economy); and that
- any emissions that cannot be avoided are compensated for by an equal amount of active removal of emissions from the atmosphere (through nature-based solutions and carbon capture, utilisation and storage (CCUS)).<sup>2</sup>

It is estimated that \$125trn of investment is required globally to decarbonise the economy, of which \$32trn is required by 2030.<sup>3</sup> In the UK alone, the Climate Change Committee estimates that £50bn a year will be required annually by 2030 to achieve net zero.<sup>4</sup>

While much attention has been paid to the need to raise climate finance from public sources, such as nation states and multilateral development banks, there has been less attention on how to mobilise private finance. This is a missed opportunity, since it is not an exaggeration to state that without sufficient private finance, the Paris Agreement goals cannot be met. The Glasgow Financial Alliance for Net Zero (GFANZ) estimates that 70% of global investment needs to come from private finance, of which 30% could be met by capital expenditure from corporates.<sup>5</sup> The UK government itself recognises that a majority of the investment required will need to come from the private sector. It is little wonder, therefore, that Mark Carney described climate change as *'the greatest commercial opportunity of our time'*.<sup>6</sup>

Whole industries need to be transformed and new technologies developed and deployed. Carbon capture and storage, battery and energy storage, hydrogen, EV charging infrastructure, residential heating and energy efficiency all need to be scaled up. High emitting sectors such as agriculture and real estate need investment and support to transition. This will require support for firms at all stages of financial maturity, involving all types of capital, from venture capital, through to private equity, and institutional investors, with government as key enablers.

2 <https://www.theccc.org.uk/wp-content/uploads/2020/10/CCC-Insights-Briefing-3-The-UKs-Net-Zero-target.pdf>

3 Glasgow Financial Alliance on Net Zero - Net Zero Financing - <https://www.gfanzero.com/netzerofinancing>

4 Climate Change Committee - The Sixth Carbon Budget the UK's Path to Net Zero

5 Glasgow Financial Alliance on Net Zero - Net Zero Financing - <https://www.gfanzero.com/netzerofinancing>

6 Climate Change News - Net Zero goal 'greatest commercial opportunity of our time'

Indeed, to deliver such changes at the pace and scale required, the role of the financial and related professional services industry, working in partnership with the government, will be crucial. The UK government has set an ambition to become the world's first net zero-aligned financial centre and has set out some welcome first steps to achieve this. The financial and related professional services industry has itself ramped up its support for net zero to a scale that would have been unimaginable only a few years ago.

But further steps are required to harness the full potential of the financial and related professional services industry to be a catalyst for the net zero transition. While the amount of green finance has increased rapidly over the past decade, it continues to play a small overall role with the market being worth \$540.6bn in 2021.<sup>7</sup> With the right conditions green finance could be scaled up further and faster. TheCityUK has partnered with PwC to undertake this research to better understand how this can be done.

7 <https://www.thecityuk.com/media/10lhcnctn/green-finance-a-quantitative-assessment-of-market-trends-1.pdf>

## 2. The UK's policy response so far

Since the signing of the Paris Agreement in 2015, more than 100 countries have pledged to meet net zero carbon emissions targets, and six—Denmark, France, Hungary, New Zealand, Sweden and the UK— made these targets legally binding.<sup>8</sup>

### Net zero targets

The 2015 Paris Agreement directs each signatory government to lead on developing net zero targets to reduce and/or mitigate emissions for their respective nation's wider economy.

As outlined by the Climate Change Committee (the UK's independent adviser on tackling climate change)<sup>9</sup>, net zero targets can cover a range of sources of emissions, with the scope generally differing between different types of organisations and regions:

- **National targets** as 'territorial' emissions within a country, consistent with agreed international accounting rules.
- **Regional targets** as emissions produced within a region or emissions associated with service provision (e.g. electricity) that occur elsewhere.
- **Company, sectoral or institutional targets** can be defined with differing 'scopes'. Scope 1 includes direct emissions produced by a company (e.g. fugitive emissions from refining), scope 2 also includes indirect emissions associated with its operations (e.g. electricity use), and scope 3 covers emissions from the full supply chain.

The UK itself was the first major economy in the world to legislate for net zero emissions by 2050, and has seen a 49.7% cut in emissions since 1990.<sup>10</sup> To reach the 2050 target, the government has set caps on the UK's overall emissions through five year 'carbon budgets'. In 2021, the UK committed to cutting emissions by 78% by 2035 compared to 1990 levels, as recommended by the Climate Change Committee in the UK's 6th Carbon Budget.<sup>11</sup> The government has set out several steps on how it intends to achieve it.

<sup>8</sup> [https://net0.com/blog/net-zero-countries#Countries\\_with\\_legally\\_binding\\_agreements](https://net0.com/blog/net-zero-countries#Countries_with_legally_binding_agreements)

<sup>9</sup> See CCC Insights Briefing 3 The UK's Net Zero Target - <https://www.thecc.org.uk/wp-content/uploads/2020/10/CCC-Insights-Briefing-3-The-UKs-Net-Zero-target.pdf>

<sup>10</sup> [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/1051408/2020-final-greenhouse-gas-emissions-statistical-release.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1051408/2020-final-greenhouse-gas-emissions-statistical-release.pdf)

<sup>11</sup> <https://www.gov.uk/government/news/uk-enshrines-new-target-in-law-to-slash-emissions-by-78-by-2035>

The UK government's **Net Zero Strategy**<sup>12</sup> outlined plans to:

- **Energy:**
  - Fully decarbonise the energy sector by 2035.
  - Mobilise additional investment of £150-270bn by 2037.
- **Fuel supply and hydrogen:**
  - Deliver 5GW of hydrogen capacity by 2030.
  - Mobilise additional investment of £20-30bn by 2037.
- **Industry:**
  - Deliver 4 CCUS clusters capturing 20-30 MtCO<sub>2</sub> across the economy, including 6 MtCO<sub>2</sub> of industrial capture per year by 2030.
  - Mobilise additional investment of £14bn 2037.
- **Heat and Buildings:**
  - All new heating appliances in homes and workplaces from 2035 being low carbon.
  - Mobilise additional public and private investment of approximately £200bn by 2037.
- **Transport:**
  - End the sale of new petrol and diesel cars by 2030.
  - Mobilise additional public and private investment of around £220bn by 2037.
  - Include international aviation and international shipping emissions within the UK's budget.
- **Natural Resources:**
  - Increased afforestation and peat restoration, using bioenergy with carbon capture, use and storage (BECCS) and negative emissions.
  - Agriculture emissions through improved and innovative farming practices.
  - Mobilise additional public and private investment of approximately £30bn by 2037.
- **Greenhouse Gas (GHG) removals:**
  - Bioenergy with Carbon Capture and Storage (BECCS) and Direct Air Carbon Capture and Storage (DACCS)
  - Mobilise additional public and private investment of around £20bn by 2037.

<sup>12</sup> <https://www.gov.uk/government/publications/net-zero-strategy>

The UK government has also taken action to support green finance specifically.

The **2019 Green Finance Strategy** set out plans to cement the UK's position as a global green finance centre. It centred around three core themes of:

- **Greening Finance:** Financial institutions to use climate and environmental data and analysis to inform decisions.
- **Financing Green:** Channelling financing to projects with positive climate and environmental impacts.
- **Capturing the Opportunity:** Consolidate the UK's position as a leader in green finance and foster public-private partnerships through the creation of the Green Finance Institute (GFI).

Measures included setting an expectation that all listed companies and large asset managers report in line with the TCFD (Taskforce for Climate-related Financial Disclosures) recommendations, introducing a net zero remit for financial regulators and establishing a new clean growth venture capital fund. The GFI was also established to support the UK's burgeoning green finance market.

The **Green Financing Framework**<sup>13</sup> subsequently set out plans to issue the UK's first green bond, issued in September 2021<sup>14</sup>, with a follow-on issuance in October 2021. The proceeds from green gilts and retail green savings bonds are to be allocated to projects in clean transportation, renewable energy, energy efficiency, pollution prevention and control, living and natural resources and climate change adaptation.

The **Greening Finance Roadmap**<sup>15</sup> went further by setting out plans to help companies respond to climate-related risks and opportunities and announcing the aim for the UK to be the world's first Net Zero-aligned Financial Centre.<sup>16</sup> Specific measures focussed on improving the disclosure of climate-related risks and opportunities to investors through Sustainability Disclosure Requirements (SDRs), a Green Taxonomy, mandatory net zero transition plans and responsible investor stewardship.

The **British Business Bank (BBB), UK Export Finance (UKEF), and UK Investment Bank (UKIB)** have also set out plans to crowd in private investment through different stages of commercialisation. The BBB has recently been given a net zero mandate and are supporting SMEs that require finance to transition to net zero. The UKIB is helping crowd in private investment for innovative businesses and technology with higher risk profiles, where institutional investors would not otherwise invest. UKEF is helping businesses focused on climate-related technologies scale and grow.

13 <https://www.gov.uk/government/publications/uk-government-green-financing>

14 <https://www.gov.uk/government/news/uks-first-green-gilt-raises-10-billion-for-green-projects>

15 <https://www.gov.uk/government/publications/greening-finance-a-roadmap-to-sustainable-investing>

16 <https://www.gov.uk/government/publications/fact-sheet-net-zero-aligned-financial-centre/fact-sheet-net-zero-aligned-financial-centre>

**COP26** heralded a scaling up of action at the international level. Notable announcements included the UK government ending direct support for the international unabated fossil fuel sector by 2022<sup>17</sup>; doubling international climate finance to help developing nations with £11.6bn up to 2025/2026; and spending at least £3bn of the UK's international climate finance up to 2026 on nature and nature-based solutions.<sup>18</sup>

17 <https://ukcop26.org/statement-on-international-public-support-for-the-clean-energy-transition/>

18 COP26 Explainer - <https://ukcop26.org/wp-content/uploads/2021/07/COP26-Explained.pdf>

### 3. The enabling role of the financial and related professional services industry: transforming to a net zero-aligned financial centre

#### 3.1. An overview of the UK’s financial and related professional services ecosystem

The UK’s financial and related professional services ecosystem makes a significant contribution to the UK’s economy and reputation. The ecosystem delivers this by:

- Being a leading employer, accounting for 2.2 million jobs, with two thirds of this based outside of London.<sup>19</sup>
- Being a significant contributor to UK economic output (£261bn UK gross added value in 2021).<sup>20</sup>
- Being a large generator of tax receipts (44.2% of total tax receipts for the 100 Group).<sup>21</sup>
- Generating a trade surplus of £90bn in 2020.<sup>22</sup>
- Attracting foreign direct investment (FDI) to the UK (£19.7bn in FDI inflows in 2020).<sup>23</sup>
- Enhancing consumer welfare by embracing digital banking services.
- Safeguarding savings and managing investments for the future, through fund management, pension funds and paying out annuities.
- Providing long-term insurance and general insurance products to mitigate risk.
- Supporting businesses through bank lending, equity and bond financing, alternative finance for SMEs as enhanced by state support schemes, private equity and investing in infrastructure.
- Hosting leading financial market infrastructure, as well as energy and environment market clearing houses.
- Providing professional and supporting services.
- Playing their part in social initiatives and financial education, such as *KickStart Money*.<sup>24, 25</sup>

Through the services and products it provides, the UK financial and professional services industry underpins much of the UK’s economic activity. This also applies to its role in enabling the UK’s net zero transition.

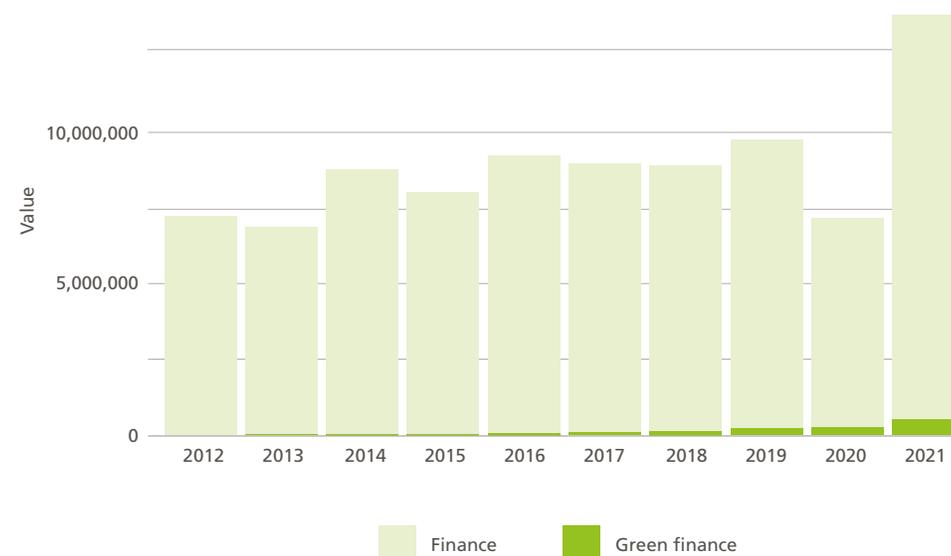
19 <https://www.thecityuk.com/our-work/key-facts-about-uk-based-financial-and-related-professional-services-2022/>  
 20 *ibid.*  
 21 <https://www.pwc.co.uk/tax/assets/pdf/total-tax-contribution-100-group-2021.pdf>  
 22 <https://www.thecityuk.com/our-work/key-facts-about-uk-based-financial-and-related-professional-services-2022/>  
 23 <https://www.thecityuk.com/news/financial-and-professional-services-show-strong-pandemic-recovery/>  
 24 <https://www.kickstartmoney.co.uk/#home>  
 25 For more information, see TheCityUK ‘Key facts about UK-based financial and related professional services 2022’ - <https://www.thecityuk.com/our-work/key-facts-about-uk-based-financial-and-related-professional-services-2022/>

#### 3.2. Green finance and a ‘Just Transition’

When compared to overall global finance (bond issues, Initial Public Offerings [IPOs], and private equity investment), green finance remains a small part of finance, representing only 1.7% of total finance over 2012-21 cumulatively.<sup>26</sup>

**Figure 1: Global green and non-green finance**

**Source:** TheCityUK analysis based on data from Refinitiv Workspace within TheCityUK’s report on Green finance: A quantitative assessment of market trends, March 2022

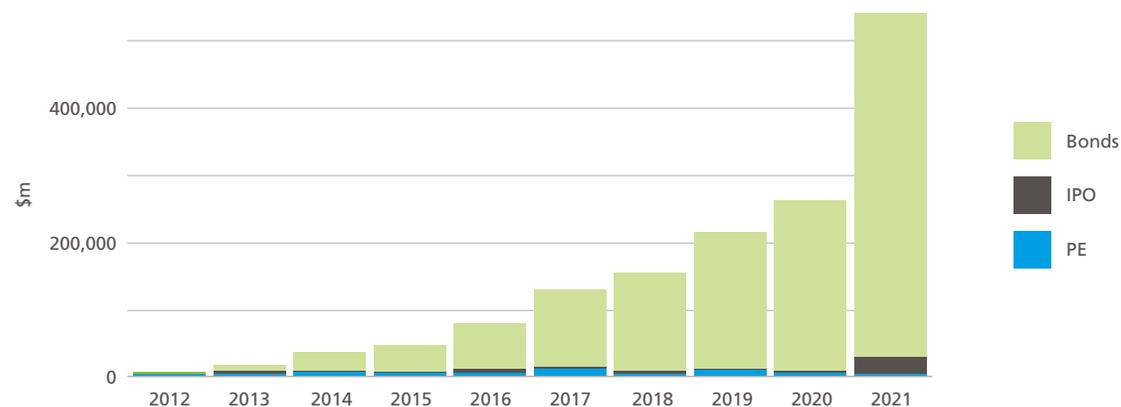


However, there has been huge growth in the green finance market in recent years. Globally, the green finance market has grown from \$5.2bn in 2012 to \$540.6bn in 2021.<sup>27</sup> The UK alone has seen significant growth with the share of green finance in total finance having increased from around 0.1% in 2012 to more than 4% in 2021.<sup>28</sup>

26 <https://www.thecityuk.com/media/0lhcntrn/green-finance-a-quantitative-assessment-of-market-trends-1.pdf>  
 27 *ibid.*  
 28 *ibid.*

**Figure 2: Global green finance**

**Source:** TheCityUK analysis based on data from Refinitiv Workspace within TheCityUK’s report on Green finance: A quantitative assessment of market trends, March 2022

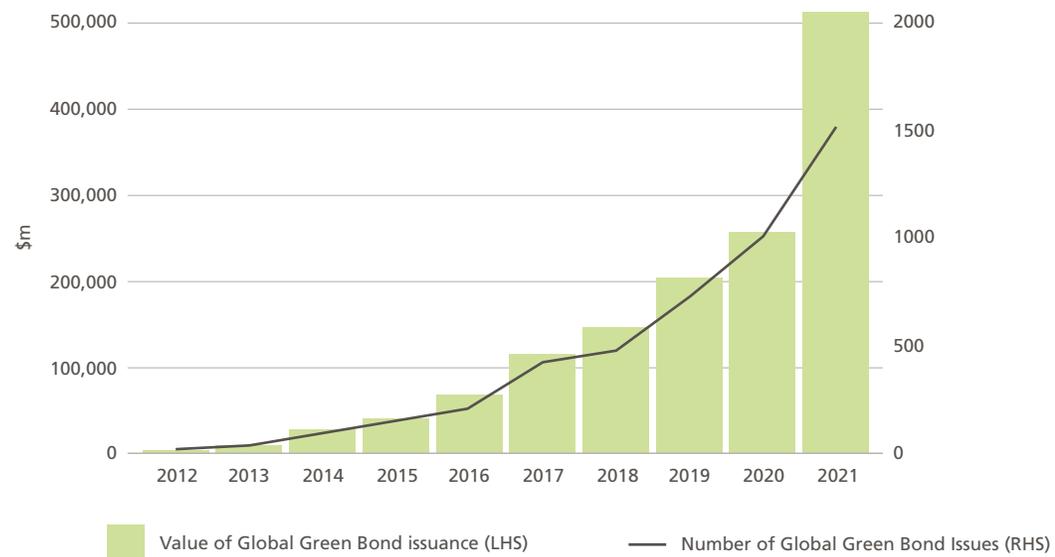


Global green bond issuance has increased from \$2.3bn in 2012 to \$511.5bn in 2021, with the UK’s growth in issuance increasing from \$1.1bn in 2012 to \$37.4bn in 2021.<sup>29</sup>

29 <https://www.thecityuk.com/media/10lhcntr/green-finance-a-quantitative-assessment-of-market-trends-1.pdf>

**Figure 3: Global green bond finance**

**Source:** TheCityUK analysis based on data from Refinitiv Workspace within TheCityUK’s report on Green finance: A quantitative assessment of market trends, March 2022



This, coupled with an increasing number of green IPOs, green lending and ESG titled exchange traded funds, demonstrates the continued growth in the industry.

Achieving net zero emissions means that the focus cannot only be on funding ‘clean’ technologies and new industries, but for such funding to act as a catalyst for existing industries and consumers to lower their emissions. Attention has therefore now widened to focus on transition finance. Transition finance can be used to target carbon intensive organisations and industries that are hard-to-abate by providing them with capital to transition their business model and activities. Transition finance can also support the financing of the United Nations Sustainable Development Goals (UN SDGs)<sup>30</sup>, by improving emerging economies access to finance.<sup>31</sup>

30 See <https://sdgs.un.org/goals> for more information on the United Nations 2030 Sustainable Agenda and the 17 sustainable development goals (SDGs)

31 See definition of transition finance as explained by OECD - <https://www.oecd.org/dac/transition-finance-toolkit/>

The achievement of net zero should be pursued alongside a Just Transition that supports local jobs and security through investment and growth. The International Energy Agency (IEA) estimates that globally, over 30 million new jobs could be created in clean energy, efficiency and low-emissions technologies by 2030.<sup>32</sup>

The Council for Inclusive Capitalism<sup>33</sup> states that “transformation of the global energy sector toward a sustainable, net zero emissions system, must take into account the social and economic impacts on individuals, workers, and communities.” And as noted in the findings from PwC’s first Green Jobs Barometer, which tracks both job creation and job loss linked to the net zero transition, regional disparities are already arising in the green jobs market that risk exacerbating existing inequities in regional access to economic opportunity.<sup>34</sup> Building on this, the Just Transition is increasingly becoming a guiding principle for financial institutions as they take strategic and commercial decisions.

Addressing biodiversity loss is becoming another guiding principle for financial institutions. Halting and reversing biodiversity loss is interlinked with addressing climate change, and could have a critical role in making industries such as agriculture more sustainable.<sup>35</sup> Biodiversity is addressed through a different United Nations intergovernmental panel and framework (Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES) and Convention on Biological Diversity respectively), and has a different Conference of Parties (COP). The financial and related professional services industry therefore needs to consider these developments in tandem with those organisations addressing climate change.

### 3.3. Role of sub-sectors within the financial and related professional services ecosystem in aligning to net zero

Financial institutions provide a variety of financial and advisory services, and therefore can play different roles. An insurer can often be an asset owner, investor and risk carrier, depending on its business model. Likewise, a bank can be active in asset management, trading, retail finance, as well as advise on how to raise capital and conduct lending activities to corporates through investment banking. And professional services often provide a multitude of services in risk management, legal services, insight and data provision, as well as independent audit and broader assurance services over companies’ financial and non-financial disclosures.

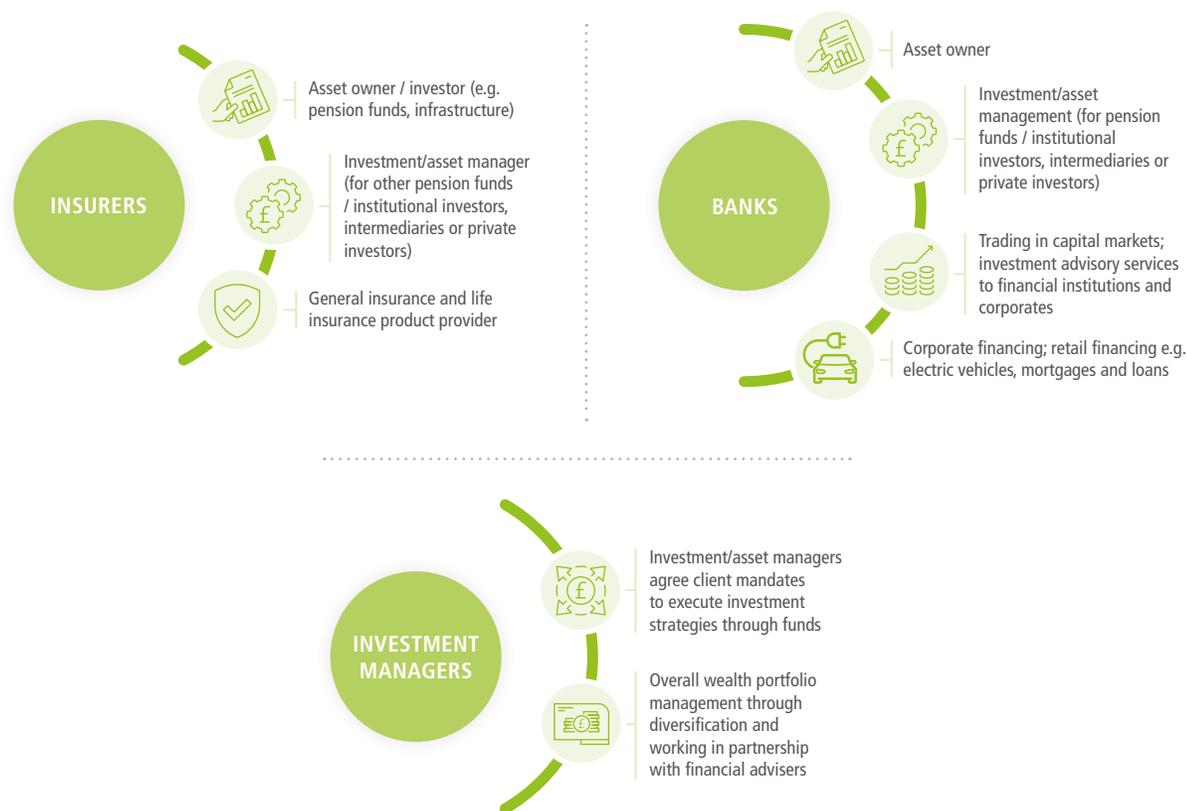
32 <https://www.iea.org/commentaries/the-importance-of-focusing-on-jobs-and-fairness-in-clean-energy-transitions>

33 <https://www.inclusivecapitalism.com/about/>

34 <https://www.pwc.co.uk/who-we-are/purpose/green-jobs-barometer.pdf>

35 <https://www.britishecologicalsociety.org/net-zero-and-ecology/>

**Figure 4: Examples of the variety of financial services that insurers, banks and investment managers can provide**



**Asset owners:** including pension funds and sovereign wealth funds help direct investments into a large array of activities, as guided by their mandates.

Through their capital allocation, stewardship activities and member engagement asset owners can play an important role in enabling net zero. Asset owners can invest in companies that provide low carbon infrastructure such as offshore

wind or electric vehicle (EV) charging. Investing in green gilts, such as the UK's two green gilt issuances, can also provide stable returns for beneficiaries whilst driving the transition.<sup>36</sup> Through their investment mandates, asset owners can ensure their asset managers are allocating their capital and being active owners in support of net zero. Asset owners can also educate their beneficiaries, such as pension policy holders, to encourage them to invest sustainably.

**Insurers:** As risk managers and risk carriers, insurers underpin much economic activity and enable innovation, entrepreneurialism and investment. Insurers can also be asset owners and stewards of capital. Some insurers have their own investment arm that manages their own and third party capital. Reinsurers in turn help underwrite insurers' risks.

Insurers have deep expertise in understanding, modelling and preventing climate risks and have a strong commercial incentive to help tackle climate change.<sup>37</sup> Supported by institutions such as Lloyds of London, insurers can extend insurance cover to enable low carbon technologies to be scaled and deployed, support climate adaptation and boost resilience to climate change.

**Investment managers (including asset managers)** manage the assets of their retail and institutional clients. They agree mandates with clients, make investment decisions and engage in stewardship and proxy voting to ultimately grow their clients' assets over time. Some investment managers also look after overall wealth portfolios through diversification and working in partnership with financial advisers.

Investment managers can agree mandates with their clients to invest in net zero-aligned assets and activities, and provide climate-aligned products for retail and institutional investors such as Paris-aligned exchange traded funds (ETFs). Paris-aligned ETFs provide pathways for investors who wish to align their investment portfolios (typically through a stock market index) through listed companies that have committed to reducing their own carbon emissions in line with Paris Agreement requirements. Investment managers can also use stewardship to press their investee companies to disclose and manage climate-related risks and opportunities, and set net zero goals. For example, the Investment Association's Institutional Voting Information Service has been asking investee companies to disclose such risks and opportunities.<sup>38</sup> Many organisations have developed stewardship codes which set out detailed principles; increasingly, these codes have been updated to consider long-term, sustainable value creation.<sup>39</sup> Proxy voting (i.e. shareholder voting on company resolutions on behalf of their clients) is another tool through which investment managers can enable net zero – and increasingly more ESG resolutions are being tabled.

36 <https://www.gov.uk/government/news/uks-first-green-gilt-raises-10-billion-for-green-projects> and <https://www.gov.uk/government/news/second-uk-green-gilt-raises-further-6-billion-for-green-projects>

37 See the Association of British Insurers' (ABI) blog on 'Climate change demands that insurance changes', June 2022 - <https://www.abi.org.uk/news/blog-articles/2022/06/climate-change-demands-that-insurance-changes/>

38 <https://www.ivas.co.uk/media/13898/ia-shareholder-priorities-and-ivas-approach-for-2022.pdf>

39 See e.g. list of stewardship codes globally through the International Corporate Governance Network - <https://www.icgn.org/global-stewardship-codes-network>

### CASE STUDY: BNP Paribas Asset Management

As an investment company managing more than €500bn of client assets in both active and passive strategies, BNP Paribas Asset Management takes its stewardship responsibilities very seriously. In 2021 it voted in favour of 98% of ESG resolutions at company AGMs, as well as being one of very few managers to file a shareholder proposal on an ESG issue.<sup>40</sup> Towards the end of last year, it worked with index providers to move 18 of its Exchange Traded Funds to ESG-and Paris-aligned benchmark indices, meaning that 83% of its range is classified as Article 8 or Article 9 according to SFDR regulations.<sup>41</sup> It has expanded its product offering to include funds covering themes such as the blue economy, circular economy and green hydrogen, as well as launching BNP Paribas Ecosystem Restoration, a fund enabling investors to access companies engaged in the restoration and preservation of global ecosystems and natural capital.<sup>42</sup>

**Banks** provide deposits and withdrawals, wealth management, and credit facilities for borrowers. They also provide capital to help businesses across industries and geographies grow. Similarly, investment banks help firms raise capital and ensure capital is allocated efficiently across the economy. They can also provide investment advisory services relating to debt and equity capital markets and interest rate risk management services amongst others.

Banks can raise capital for companies or projects which are enabling the transition to net zero as well as companies who are transforming their business to reach net zero. Lenders can also use their influence when refinancing to reset climate-related expectations in loan covenants. Banks often have a significant convening power in certain industries, agriculture for example, where they can help these industries to decarbonise and promote biodiversity, and through initiatives such as the Equator Principles where they apply wider ESG standards to project-related lending and advisory services.

### CASE STUDY: Lloyds Bank

Lloyds Bank has set up the Clean Growth Financing Initiative, designed to provide discounted lending for green purposes to reduce business' environmental impacts and harness the opportunities from moving to a low carbon economy. Funding from as little as £25,000 is provided for a host of different investments to make businesses more sustainable - from small improvements in environmental impact to investment in large-scale renewable energy infrastructure. Some examples of eligible investments include reducing emissions, increasing energy efficiency, low carbon transport, reducing waste and recycling, and improving water efficiency.<sup>43</sup>

40 <https://mediaroom-en.bnpparibas-am.com/news/bnpp-am-ranked-second-by-shareaction-for-proxy-voting-strategy-on-environmental-and-social-issues-4c61-0fb7a.html>

41 <https://mediaroom-en.bnpparibas-am.com/news/bnp-paribas-asset-management-enhances-responsible-index-fund-range-20be-0fb7a.html>

42 <https://mediaroom-en.bnpparibas-am.com/news/bnp-paribas-asset-management-launches-ecosystem-restoration-fund-edaf-0fb7a.html>

43 <https://www.lloydsbank.com/business/commercial-banking/clean-growth-financing-initiative.html>  
<https://www.lloydsbank.com/business/resource-centre/case-studies/bickfield-farm.html?WT.ac=lloyds-business-casestudies-promotile-bickfield>

**Private equity** invests in privately held companies, usually SMEs in mid-early stages of maturity, where they can work with the organisation to increase their value. They can have a significant influence over their acquisitions especially where they are the majority owner.

Private equity can exercise their influence to encourage rapid improvement of climate-related risk management and disclosures. Their deep strategic engagement with organisations means that they can gain deep sectoral understanding of decarbonisation levers, and climate-related governance and metrics needed to decarbonise their portfolio companies. This can be replicated at scale to drive portfolio wide decarbonisation.

**Venture capital**, a form of private equity, provides capital to start-ups and SMEs who have high-growth potential. They often invest in nascent technology that is yet to reach full investment grade. Given their high risk, high return appetite they are often willing to invest in innovative business models where data is limited. The last year has seen a transformation in the venture capital landscape and new types of capital and funding mechanisms have resulted in significant flows of investment into private markets.

Venture capital is vital to helping scale up and deploy new low carbon technologies that may be deemed too risky for other investor types. They can also influence parts of the economy where public markets cannot, and thus enable the transition in private markets. Venture capital remains core to climate tech's growth and in the last few years SPACs (special purpose acquisition companies) have driven significant growth in climate tech, raising \$28bn in the second half of 2020 and the first half of 2021, enough to account for a third of all funding. As highlighted in PwC's State of Climate Tech report, climate tech now accounts for 14 cents of every venture capital dollar.<sup>44</sup>

**Market exchanges** provide a platform where securities or other trading instruments can be bought and sold. Also known as Financial Market Infrastructures (FMIs), FMIs have a unique place in the financial ecosystem. FMIs hold trusted, central and neutral positions in the global financial market and include central securities depositories (CSDs), international central securities depositories (ICSDs), payment systems, central counterparties (CCPs), security exchanges, securities settlement systems and trade repositories.

FMIs can help ensure that listed companies provide accurate and reliable climate-related information to investors. FMIs can also provide low carbon indices, and boost innovation by providing a platform for low carbon firms to raise capital. They have unique visibility of – and access to – data which underpins global financial transactions and can therefore support continued sustainable finance market development. As explored in PwC and Euroclear's paper on scaling the sustainable finance market, a cross-border financial market infrastructure-driven approach has the potential to uplift the growth of the sustainable finance market by up to 2.5% annually. This results in the mobilisation of roughly \$25trn additional capital by 2030.<sup>45</sup>

<sup>44</sup> <https://www.pwc.com/gx/en/services/sustainability/publications/state-of-climate-tech.html>

<sup>45</sup> <https://www.euroclear.com/content/dam/euroclear/news%20&%20insights/Format/Whitepapers-Reports/Scaling%20the%20sustainable%20finance%20market%20-%20full%20report.pdf>

### **CASE STUDY: Intercontinental Exchange (ICE)**

Intercontinental Exchange (ICE) is a leading global provider of data, technology, and market infrastructure. ICE was founded 20 years ago on the principle of bringing price transparency to energy markets and soon after became one of the first movers in environmental markets, by first establishing a partnership with, and then the acquisition of, the Climate Exchange. Combining price transparency in energy and environmental markets, puts ICE data, technology and digital networks at the heart of the world's most important energy transition together with the mitigation pathway for climate risk.

Environmental markets price externalities, to allow us to erode the green premium and conserve the world's finite atmospheric carbon budget by delivering the universal currency of energy, joules, on a sustainable pathway and putting a value on carbon sinks, such as natural capital. A price signal for pollution, through a carbon allowance, can incentivise fuel switching from less carbon intensive fuels and promote innovation in new, cleaner, technologies. This has been seen most clearly through the almost complete removal of coal in the UK electricity generation system.<sup>46</sup>

Recently ICE launched a series of Nature-Based Solutions carbon credit futures contract (NBS future) and announced collaborations with two leading carbon credit project developers, Permian Global and GreenTrees, to conduct primary auctions of carbon credits. The NBS future physically delivers Verified Carbon Unit (VCU) credits certified under Verra's Verified Carbon Standard (VCS) Agriculture, Forestry and Other Land Use (AFOLU) Projects with Climate, Community and Biodiversity (CCB) Certification. Each NBS futures contract is equal to 1,000 carbon credits, where each credit is equal to the removal or reduction of one metric ton of greenhouse gas emissions achieved by projects that conserve and grow natural ecosystems. This is an important step towards more transparency within carbon credit markets, providing a price signal for the positive externality of carbon sequestration and storage and valuing natural capital.<sup>47</sup>

A subset of this is the development of voluntary carbon markets (VCMs). VCMs have seen significant growth in the past 18 months, with several new exchanges emerging to accelerate financing towards a low-carbon economy and allow organisations to trade carbon credits. These include the London Stock Exchange VCM solution, the AirCarbon Exchange, and Carbon Trade Exchange (CTX).

<sup>46</sup> <https://www.oxera.com/insights/agenda/articles/green-derivatives-trading-for-a-low-carbon-future/>

<sup>47</sup> <https://ir.theice.com/press/news-details/2022/ICE-Launches-its-First-Nature-Based-Solutions-Carbon-Credit-Futures-Contract/default.aspx>

**CASE STUDY: NASDAQ**

Nasdaq acquired a majority stake in Puro.earth in 2021, a leading marketplace for carbon removal and the world's first marketplace to offer industrial carbon removal instruments that are verifiable and tradable through an open, online platform. The platform already provides carbon removal services to some of the world's leading corporations, including Microsoft and SEB.<sup>48</sup> In collaboration with Puro.earth, Nasdaq has launched the Carbon Removal Certificates (CORCs) Index family, which are the world's first indices focused exclusively on tracking the price of carbon removal from the atmosphere. The objective is to increase transparency in the carbon removal market, helping corporates understand the cost of cutting their carbon emissions and supporting more informed project financing decisions.<sup>49</sup>

**Risk advisers and brokers** enable the transfer of information, distribution of financial products and risk transfers between clients and financial institutions. They also support the disclosure of comparable data to financial institutions, so that risks can be priced effectively and products created to cater for that demand. These roles are crucial in a net zero context, where the management, pricing and mitigation of risk is a vital component.

**CASE STUDY: WTW**

WTW provides data-driven, insight-led solutions in the areas of people, risk and capital – using their global view and local expertise of its colleagues serving 140 countries and markets.

WTW has developed an accreditation framework to address the need for a consistent way of identifying and supporting insureds committed to a low-carbon transition. Climate Transition Pathways (CTP) works by accrediting insureds (e.g. companies) on their climate ambitions, goals, pathways and technologies against the Paris Agreement, and reviewing their performance annually, so that up-to-date information is easily provided to insurers and brokers. Insurers can then take CTP into account when deciding whether to provide capacity for the company's risks, helping them with their roles as stewards of the climate transition and incentivising the change needed for a low carbon future.<sup>50</sup>

**Credit rating agencies** analyse and rate the creditworthiness of debt securities and their issuers. Ratings demonstrate the ability of a borrower to repay their debt obligations.

On net zero, credit rating agencies can incorporate climate-related and other environmental, social and governance (ESG) considerations into their assessments and help investors allocate capital towards net zero-aligned projects.

**Accountancy firms** are responsible for financial audits, reconciling financial statements and ensuring a true and fair representation of a company's financial position. And climate risk has become a critical area of audit focus with growing

48 <https://www.nasdaq.com/press-release/nasdaq-acquires-emerging-carbon-removal-market-puro.earth-2021-06-14>

49 <https://www.nasdaq.com/solutions/carbon-removal-marketplace>

50 <https://www.climatetransitionpathways.com/>

expectations in this area.

For non-financial climate information reported by companies, that is not subject to the scope of statutory audit, there are additional types and levels of assurance available to help build trust amongst investors and stakeholders.

For net zero, accountants have an important role in applying rigour, challenge and consistency to climate-related disclosures to bring transparency and trust to the non-financial disclosures, including through external assurance.

**CASE STUDY: Aviva**

In line with their commitment to be net zero by 2040, Aviva asked PwC to significantly enhance the level of public, reasonable ESG assurance they provided so as to demonstrate to their investors, and wider stakeholders, the quality of their reporting and help build market confidence in their metrics and strategy.

PwC undertook to assure a set of Aviva's ESG metrics to the same level as an audit of the financial statements, ensuring it met the same robust standards of quality, rigour and challenge. This higher level of assurance also included a number of metrics included in Aviva's first disclosure of their climate-related risks and opportunities within the TCFD reporting framework.

**Consultancies** impart expertise and advice on a wide range of regulatory, commercial, reputational and legal matters. They provide a key function in transferring knowledge, best practice and industry insights, and can act as a useful intermediary between organisations and governments. For net zero, consultancies can help their clients understand climate risks and opportunities, develop net zero strategies and transform business models to align with net zero. They also play an important role in product creation, channelling investment flows and helping their clients navigate the net zero transition strategically and operationally.

**CASE STUDY: PwC**

Produced by PwC and commissioned by Microsoft, 'The Building Blocks of Corporate Net Zero Transformation' report is a guide to help companies as they move from ambition to action.

Delivering on net zero requires wholesale business transformation and functions across the organisation need to play a role in implementation, from strategy, product development, sales and marketing, innovation and R&D to corporate finance, risk and compliance, procurement and people.

The report outlines the 9 key building blocks for business transformation needed to deliver net zero. It provides a coherent and good practice framework that business stakeholders can use to inform and guide them on how they embed net zero into a company's strategy and operating model, and is intentionally holistic, wide ranging and sector neutral, such that it can be leveraged by any company.<sup>51</sup>

51 <https://www.pwc.co.uk/services/sustainability-climate-change/insights/accelerating-the-journey-to-net-zero.html>, <https://www.pwc.co.uk/sustainability-climate-change/assets/pdf/building-blocks-net-zero-companies-transformation.pdf>

**Data providers** collect data and supply data to third party organisations. Climate-related data is an increasingly core component of this, in response to growing demand from investors looking to manage their portfolio in relation to climate related risks and opportunities and enable net zero-aligned investments. Data providers are also helping to improve the quality of climate-related data.

**Law firms** advise their clients on their legal obligations. They interact with financial services to help them understand and comply with regulatory requirements, and where necessary provide support and advice for undertaking corporate transactions.

Advising on climate change law and developments is increasingly becoming a part of law firms' strategic offering to clients. Law firms can help advance the net zero transition by advising on regulatory, technology and legal requirements and assisting clients in balancing the risks and opportunities climate change presents to their business.

### 3.4. Our industry's commitment to net zero

There has been a huge upsurge in initiatives demonstrating and galvanising financial and professional services firms' support for net zero.

Through the Glasgow Financial Alliance for Net Zero (GFANZ), 450 financial and related professional services industry firms from over 45 countries and with responsibility for assets worth over \$130trn set themselves net zero commitments. Further, many firms are publishing TCFD-aligned disclosures, net zero transition plans and joining the Taskforce on Nature-related Financial Disclosures (TNFD), which is developing a framework for the disclosure of nature-related risks. What was seen as climate leadership a couple of years ago is now considered business as usual. This ramping up of ambition reflects the growing recognition of the importance of the industry in enabling the transition.

#### CASE STUDY: Fidelity International

In October 2021, Fidelity announced its engagement-led climate investing policy that aligns its long-term, active asset management strategy with a net zero future. Building on its commitment as a founding signatory to the Net Zero Asset Managers Initiative to reach net zero by 2050, Fidelity has pledged to reduce CO<sub>2</sub> emissions across its portfolio by 50% by 2030, from a 2020 baseline.

To guide this process, Fidelity will use its proprietary Climate Ratings. The Climate Ratings leverage Fidelity's in-house research capabilities to assess the net zero ambition and alignment, climate governance and transition capital allocation of investee companies and will be used to set targets for the net zero pathway appropriate to each fund's investment strategy and universe to reach 100% alignment with the Paris Agreement across investment portfolios by 2050. Together with an intensive transition engagement programme, enhanced voting practices to hold companies to minimum climate expectations and phasing out exposure to the highest emitters, Fidelity's climate investing policy will encourage companies to reduce their impact on the planet and deliver value for all stakeholders in a decarbonising world.<sup>52</sup>

There are a vast number of voluntary initiatives bringing together different financial and related professional services to address net zero – some of which are listed below:

Initiative	Description
<b>Glasgow Financial Alliance for Net Zero</b>	GFANZ is a global coalition which brings together net zero initiatives, targeted at different financial actors, that are focused on achieving net zero emissions by 2050. Membership includes the following alliances: Net Zero Banking Alliance, the Net Zero Asset Managers initiative, the Net Zero Asset Owner Alliance, the Paris Aligned Investment Initiative, the Net Zero Insurance Alliance, the Net Zero Financial Service Providers Alliance, and the Net Zero Investment Consultants Initiative.
<b>Net Zero Banking Alliance</b>	Net Zero Banking Alliance (NZBA) is a global initiative that brings together banks who have committed to aligning their lending and investment portfolios with net zero emissions by 2050. Launched in 2021, the alliance currently consists of 115 members representing about 38% of global banking assets. Bankers for Net Zero (B4NZ) is the UK chapter of NZBA and brings together banks, businesses, policymakers and regulators to collaborate on finding industry solutions and interventions needed for net zero.
<b>Net Zero Asset Managers Initiative</b>	Net Zero Asset Managers Initiative (NZAM), endorsed by the Investor Agenda, is a global initiative that brings together asset managers who have committed to aligning their investment portfolio to net zero emissions by 2050. Launched in 2020, the alliance currently consists of 273 signatories representing \$61.3trn assets under management.

52 <https://mediacentre.fidelity.co.uk/press-releases/fidelity-international-commits-half-emissions-investment-portfolio-2030/>

<b>Net Zero Asset Owners Alliance</b>	Net Zero Asset Owner Alliance (NZAO), convened by the United Nations, brings together asset owners who have committed to transition their investment portfolios to net zero emissions by 2050. Launched in 2019, the alliance currently consists of 74 global institutional investors with \$10.6trn in assets under management. <sup>53</sup>
<b>Net Zero Insurance Alliance</b>	Net Zero Insurance Alliance (NZI), is a global group of insurers and reinsurers, who are committed to transitioning their underwriting portfolios to net zero. The group currently consists of over 20 leading insurers representing more than 11% of world premium volume globally. <sup>54</sup>
<b>Net Zero Financial Service Providers Alliance</b>	Net Zero Financial Service Providers Alliance (NZFSPA), brings together investment advisors, rating agencies, auditors, exchanges index providers, ESG research and data providers and proxy research providers who have all committed to align their services and activities to net zero. <sup>55</sup> Launched in 2021, the group currently has 17 members. <sup>56</sup>
<b>Net Zero Investment Consultants Initiative</b>	Net Zero Investment Consultants Initiative (NZICI) sets out actions investments consultants can take to align their operations and advisory services to net zero. Launched in 2021, the initiative currently has 12 signatories who are responsible for advising on assets exceeding \$10trn. <sup>57</sup>
<b>Net Zero Lawyers' Alliance</b>	The Net Zero Lawyers' Alliance (NZLA) is a 'race to net zero accelerator', which supports the transition toward net zero. Currently with over 30 members, members commit to: reducing operational emissions by at least 50% by 2030 from 2019 levels; contributing pro bono time to projects to achieve climate objectives; building capacity among all their lawyers; and providing net zero-aligned advice. <sup>58</sup>
<b>Paris Aligned Investment Initiative</b>	Launched by the Institutional Investors Group on Climate Change in 2019, the Paris Aligned Investment Initiative (PAII) is an international group which helps investors align their portfolio and activities to goals of the Paris Agreement. In March 2021, it launched a Net Zero Investment Framework which helps investors align their portfolio to net zero.
<b>The Investor Agenda</b>	The Investor Agenda is focused on accelerating investor action on net zero. The Investor Agenda draws on expertise from across the investor landscape to set out clearly joint expectations in four interlocking areas: investment, corporate engagement, investor disclosure and policy advocacy. <sup>59</sup> Members include the Carbon Disclosure Project, Ceres, Investor Group on Climate Change, Institutional Investors Group on Climate Change, Principles for Responsible Investment and UN Environment Programme Finance Initiative.

53 <https://www.unepfi.org/net-zero-alliance/>54 <https://www.unepfi.org/net-zero-insurance/>55 <https://www.netzeroserviceproviders.com/>56 *ibid.*57 <https://www.unpri.org/climate-change/leading-investment-consultants-form-global-initiative-to-push-for-net-zero/8549.article>58 <https://www.netzerolawyers.com/>59 <https://theinvestoragenda.org/>

<b>Institutional Investors Group on Climate Change</b>	The Institutional Investors Group on Climate Change (IIGCC) is a global investor membership body with the objective of supporting the investment community in making significant progress towards a net zero and resilient future. They do this by working with businesses, policy makers and investors to define investment practices, policies and corporate behaviours required to address climate change. Their membership includes over 350 asset managers and asset owners with €51trn AUM. <sup>60</sup>
<b>Climate Action 100 +</b>	Climate Action 100+ is an investor-led initiative which engages with the largest emitters in the wider economy to encourage action on climate-related considerations. Launched in 2017, the initiative currently includes 700 investors, responsible for over \$68trn in assets under management, who engage with companies responsible for over 80% of global industrial emissions. <sup>61</sup> The work of the initiative is coordinated by five regional investor networks: the Asia Investor Group on Climate Change (AIGCC), Ceres, Investor Group on Climate Change (IGCC), Institutional Investors Group on Climate Change (IIGCC) and Principles for Responsible Investment (PRI).
<b>Initiative Climat International</b>	The Initiative Climat International (iCI) is a global community of private markets investors who seek to display leadership in improving the industry's understanding and management of the risks and opportunities associated with climate change. iCI was originally launched as the iC20 (Initiative Climat 2020) in 2015 by a group of French private equity firms with the aim to contribute to achieving the objectives of the Paris Agreement. <sup>62</sup>
<b>Impact Investing Institute</b>	The Impact Investing Institute, launched in 2019, aims to grow and improve the effectiveness of the impact investing market internationally. <sup>63</sup> In 2022 the Institute launched the Just Transition Finance Challenge to mobilise investment focused on a Just Transition to Net Zero. Commitment currently includes institutions with £3.6trn AUM and includes public and private institutional investors. <sup>64</sup>
<b>Sustainable Markets Initiative</b>	The Sustainable Markets Initiative (SMI), has launched three financial services taskforces: insurance taskforce, financial services taskforce and an asset manager and asset owner taskforce. All three industry groups have been tasked to work on meaningful and actionable plans to help accelerate the world's transition to a sustainable future. As part of SMI, in 2021 His Royal Highness The Prince of Wales (now the current monarch), launched the Terra Carta – a mandate that puts sustainability at the heart of the private sector.

60 <https://www.iigcc.org/about-us/our-members/>61 <https://www.climateaction100.org/>62 <http://www.initiativesclimat.org/>63 <https://www.impactinvest.org.uk/about-us/>64 <https://www.impactinvest.org.uk/project/just-transition-finance/>

<p>Science Based Targets Initiative</p>	<p>The Science Based Targets Initiative (SBTi) is a partnership between CDP, the United Nations Global Compact, World Resources Institute and the World Wide Fund for Nature. They define and promote best practice in emissions reductions and net-zero targets in line with climate science, provide technical assistance and expert resources to companies who set science-based targets in line with the latest climate science, and bring together a team of experts to provide companies with independent assessment and validation of targets.<sup>65</sup></p>
<p>Relevant notable work from trade associations</p>	<p>The International Capital Markets Association (ICMA), which represents financial institutions in international debt capital markets, has developed the green bond principles which comprises of voluntary guidelines for issuing green bonds.<sup>66</sup> ICMA has also released a Climate Transition Finance Handbook which aims to provide guidance to capital markets participants on the practices, actions and disclosures available when raising funds in debt markets for the transition to net zero.<sup>67</sup></p> <p>The Association of British Insurers (ABI) launched a Climate Change Roadmap in 2021, which focuses the industry on near term decarbonisation by setting milestones for 2025 to keep the insurance sector on track for halving emissions by 2030 and reaching Net Zero by 2050.<sup>68</sup></p> <p>The Investment Association (IA) seeks to use its convening power to share knowledge and expertise within the investment management industry and to build coalitions of financial institutions to progress net zero alignment. Its Climate Change Action Plan sets out how it will work with asset owners, investors, and savers to help them make informed choices, supporting the integrity, quality and consistency of climate and sustainability disclosures, working with government to support the UK's Net Zero ambition and to lead international efforts to bring about global and systemic change.</p>

65 <https://sciencebasedtargets.org/about-us>

66 [https://www.icmagroup.org/assets/documents/Sustainable-finance/2022-updates/Green-Bond-Principles\\_June-2022-280622.pdf](https://www.icmagroup.org/assets/documents/Sustainable-finance/2022-updates/Green-Bond-Principles_June-2022-280622.pdf)

67 <https://www.icmagroup.org/assets/documents/Regulatory/Green-Bonds/Climate-Transition-Finance-Handbook-December-2020-091220.pdf>

68 <https://www.abi.org.uk/globalassets/files/publications/public/climate-change/abi-climate-roadmap---080622.pdf>

## 4. Turning commitments into action through green and transition financial services: the challenges, risks, barriers and levers

### The need for clear long-term policy signals from the UK government for business and finance

“...Policies which facilitate and amplify voluntary corporate Net Zero ambition are valuable, but should not be pursued in place of an effective regulatory environment and well-aligned financial incentives. Planned regulations and financial incentives such as carbon pricing should be communicated to the private sector well in advance to support a smooth transition.”

Climate Change Committee’s Report to Parliament on the UK’s progress in reducing emissions, June 2022 Report<sup>69</sup>

Focus is now turning to ensure that sectoral net zero commitments translate into the financial and related professional support for the wider economy sectors, technologies and companies that are critical to the transition.

The Climate Change Committee identified five sectors as key to achieving net zero; **agriculture, buildings, energy, transport and manufacturing**. The Committee also highlights the need to address the rising cost of living in a way that is compatible with net zero, and for UK and local government to make more tangible progress on cross cutting issues of public engagement, fair funding and delivery.<sup>70</sup>

The firms interviewed highlighted many challenges, risks and barriers – as well as levers - in scaling up their support for net zero. Each of these issues are examined in more detail below and the key enablers to address these are outlined in Section 5.

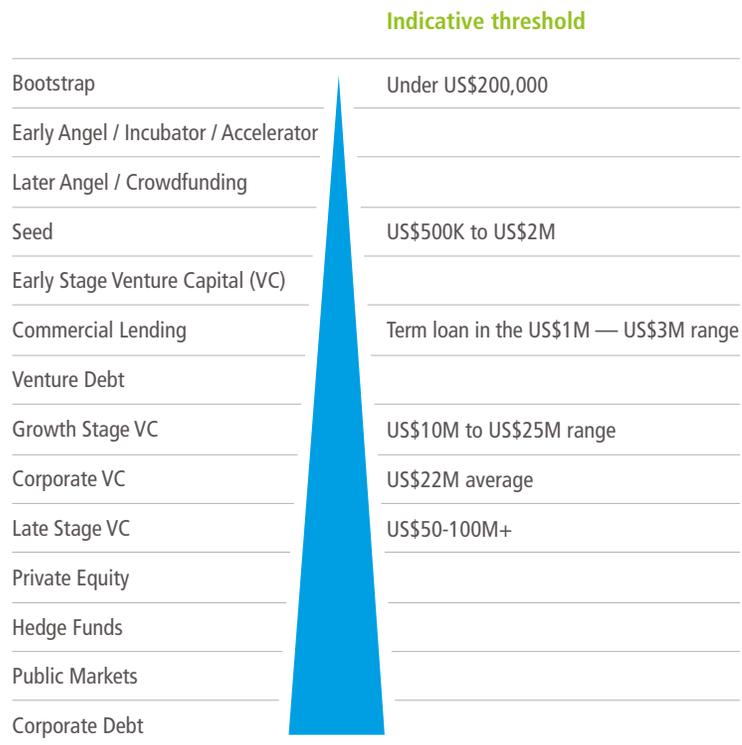
### 4.1. The role of risk

Managing and pricing of financial risks is a core activity for financial services firms. Some private capital sources have higher tolerances for risk than others. However, as the scale and volumes of capital increase, in general this overall tolerance for risk lowers.

69 See Chapter 14, section 5 of the Climate Change Committee report to Parliament on the UK’s progress in reducing emissions, June 2022 - <https://www.theccc.org.uk/publication/2022-progress-report-to-parliament>

70 See Climate Change Committee report to Parliament on the UK’s progress in reducing emissions, June 2022 - <https://www.theccc.org.uk/publication/2022-progress-report-to-parliament>

**Figure 5:** Indicative thresholds of capital against different types of financial services investors



Much work has been carried out on integrating climate risks into financial decision making, but there are also a multitude of other risks that need to be managed and mitigated. This research has identified some of the major risks facing low carbon technologies:

**Technology risk** - Low carbon technology can be relatively nascent and there can be uncertainty over the feasibility, effectiveness and future performance of the technologies. Investor appetite for carbon capture, utilisation and storage (CCUS) and hydrogen, for example, is particularly hindered by the fact that the viability of such technologies at scale have not been proven. The IEA predicts that almost half of emissions reductions needed by 2050 will come from technologies that are currently in the demonstration or prototype phase, demonstrating the need for significant early stage investment in climate technologies.<sup>71</sup>

**Business model risk** - There can be uncertainty about the revenue generating and business model of some low carbon investments. This was found to particularly affect investment in agriculture, transport, CCUS and hydrogen. The research also identified a misalignment between investors’ risk appetites and the characteristics of certain low carbon asset classes. For instance, the high risks associated with some low carbon infrastructure can be a major deterrent to investors who have responsibilities as stewards of capital, such as pension funds. This can lead to a higher cost of capital and, given the competitiveness of global capital markets, difficulties in attracting the capital required.

**Policy risk** - There can be uncertainty about how changes to government policy and regulation may affect low carbon assets over time. Policy risk affects many industries but, to take one example, interviewees reported that a lack of consistent, long term policy signals has damaged investor confidence in real estate and energy efficiency and thus hindered progress in reducing emissions from the industry. Similarly, a lack of policy action to significantly reduce the upfront costs of heat pumps was found to be a significant deterrent for consumers. In a world of rising energy prices, and a cost-of-living crisis, it is ultimately consumers who pay the price for such policy risks through higher bills and draughtier homes. Interviewees also highlighted the importance of maintaining cross-party political support for net zero, backed by long term policies, frameworks and plans to meet net zero.

The following tables present a high-level view of some of the key risks from agriculture, buildings, energy, transport and manufacturing.

71 <https://www.iea.org/reports/net-zero-by-2050>

AGRICULTURE - Low carbon farming practices	
Focus areas	Low carbon farming practices
Cross cutting for both financial services firms as investors and hard-to-abate wider economy industries	<p><b>Technology risks:</b> Substantial emissions from livestock; limited technology to date, and needs more research. Technology not commercialised e.g. vertical farming.</p> <p><b>Policy risks:</b> The landscape is not currently incentivising low carbon farming; could see future regulation of potential tech e.g. lab grown meats. Agricultural subsidies need to be based on environmental performance to encourage long term investment – many English government grants are indicative with ‘blind optimism’.<sup>72</sup> There is a complexity with different UK devolved authorities responsible for agricultural policies.<sup>73</sup></p> <p><b>Business risks:</b> Need incentivised education and training on carbon and joint projects. Low uptake due to awareness and attitude of farmers towards climate change. Food chain is segmented.</p>
Asset owners	<ul style="list-style-type: none"> <li>- Many low carbon technologies are not ready for investment and to be implemented at scale e.g. vertical farming.</li> <li>- Higher capital risk due to unclear government signals and uncertainty about how the agricultural industry will decarbonise.</li> <li>- Perception of high investment risk due to fragmented market and behavioural action required from farmers.</li> <li>- Around 70% of farms are privately owned in the UK.</li> <li>- Stewardship and engagement are on-going, where there are various examples of digital and manufactured technologies which help reduce emissions and improve the environment.<sup>74</sup></li> </ul>

72 Parliamentary Research briefing on farm funding: implementing new approaches, 6 July 2022 - <https://commonslibrary.parliament.uk/research-briefings/cbp-9431/>

73 Towards Net Zero in UK Agriculture: A practical approach, 13 April 2021 University College London in collaboration with HSBC <https://www.sustainablefinance.hsbc.com/carbon-transition/towards-net-zero-in-uk-agriculture>

74 NFU Mutual's 2022 Agri-tech report - <https://www.nfumutual.co.uk/globalassets/farming/agri-tech/agri-tech-report-2022.pdf>

Focus areas	Low carbon farming practices
Asset managers	<ul style="list-style-type: none"> <li>- Many low carbon technologies are not ready for investment and to be scaled up e.g. vertical farming. Investment risk too high.</li> <li>- Perception of high investment risk due to fragmented market and behavioural action required from farmers.</li> <li>- Around 70% of farms are privately owned.</li> <li>- Reflect concerns of clients/asset owners as responsible stewards of capital.</li> </ul>
Banks	<ul style="list-style-type: none"> <li>- Accessing SMEs can be challenging.</li> <li>- Need supporting regulatory landscape.</li> <li>- Attitudes and awareness of some farmers.</li> </ul>
Private equity	<ul style="list-style-type: none"> <li>- Lack of investment grade opportunities.</li> <li>- Lack of clear policy signals from government.</li> </ul>
Venture capital	<ul style="list-style-type: none"> <li>- Waiting for investable proofs of concept.</li> <li>- Regulation on areas such as Genetically Modified (GMO) foods.</li> </ul>

BUILDINGS - Heat pumps, energy efficiency	
Focus areas	Heat pumps, energy efficiency
Cross cutting for both financial services firms as investors and hard-to-abate wider economy industries	<p><b>Policy risk</b> is high due to a lack of clear targets and supporting policy. Need to resolve type, feasibility and geography of heating technologies (hydrogen, biogas, district heating or heat pumps).<sup>75</sup></p> <p><b>Business risk</b> is high due to the fragmented market meaning which causes challenges in scaling. Low opportunity for private financing to take a role in residential heat and energy efficiency. Lack of right incentives for consumers to switch from gas boilers, due to high capital costs, affordability depending on demographic of homeowner, and lack of long term and consistent incentives for those who are able to pay.<sup>76</sup></p> <p><b>Technology risk:</b> more pivotal solutions are needed - energy efficiency measures e.g. (insulation) still need more progress.</p>

75 National Infrastructure Commission - Infrastructure Progress Review 2022, Published: 16 Mar 2022: Our annual assessment of the government's progress on implementing its commitments on infrastructure - <https://nic.org.uk/studies-reports/infrastructure-progress-review-2022/>

76 Green Finance Institute report on financing zero carbon heating: turning up the dial on investment, December 2020 - <https://www.greenfinanceinstitute.co.uk/news-and-insights/financing-zero-carbon-heat-turning-up-the-dial-on-investment/>

Focus areas	Heat pumps, energy efficiency
Asset owners	<ul style="list-style-type: none"> <li>- Fragmented markets.</li> <li>- Unfavourable regulatory environment.</li> <li>- Need increased regulatory clarity to increase transaction activity as the push to deploy heat pumps into housing and commercial properties ramps.</li> </ul>
Asset managers	<ul style="list-style-type: none"> <li>- Fragmented markets.</li> <li>- Unfavourable regulatory environment.</li> <li>- Reflect concerns of clients/asset owners as responsible stewards of capital.</li> </ul>
Banks	<ul style="list-style-type: none"> <li>- Low uptake from homeowners due to long payback periods for homeowners.<sup>77</sup></li> <li>- Difficult to scale up lending to individuals to improve the energy efficiency of their homes due to lack of demand and affordability.</li> </ul>
Private equity	<ul style="list-style-type: none"> <li>- Energy efficiency projects in regulated sectors can be hard to achieve payback within the five year regulatory cycles.<sup>78</sup></li> <li>- Could be limited to opportunities more suited to established SME and unlisted companies (e.g. supply chains).</li> </ul>
Venture capital	<ul style="list-style-type: none"> <li>- Technologies are well established – it needs UK policy to unlock the demand, so might not be so appropriate for VCs.</li> </ul>

### ENERGY - Carbon capture, utilisation and storage (CCUS)

Focus areas	Carbon capture, utilisation and storage (CCUS)
Cross cutting for both financial services firms as investors and hard-to-abate wider economy industries	<p>There is broad consensus that CCUS remains at too early a stage for large scale infrastructure investment.</p> <p><b>Business risk:</b> Lack of revenue stream for CCUS (e.g. such as carbon market, or carbon tax) - the cost is still much higher than the price customers are willing to pay. There needs to market confidence that targets will be delivered or long-term commitments on clear funding such as upfront co-grants addressing both upfront capital expenditure and revenue.<sup>79</sup></p> <p>The UK government’s CCUS investor roadmap<sup>80</sup> does not seem to address the large scale risks to financial institutions in providing financing to CCUS industry.</p>

77 <https://www.pwc.co.uk/assets/document/Unlocking-capital-for-net-zero-PwC-Nov-2020.pdf>

78 *ibid.*

79 Current status of CCUS business models, July 2022 <https://www.gov.uk/government/publications/carbon-capture-usage-and-storage-ccus-business-models>

80 <https://www.gov.uk/government/publications/carbon-capture-usage-and-storage-ccus-investor-roadmap>

Focus areas	Carbon capture, utilisation and storage (CCUS)
Asset owners	<ul style="list-style-type: none"> <li>- CCUS has not been done at scale, therefore high risk.</li> <li>- Assets would be very illiquid initially and therefore less suitable for risk averse investors (such as non-life insurers).</li> </ul>
Asset managers	<ul style="list-style-type: none"> <li>- Reflect concerns of clients/asset owners as responsible stewards of capital.</li> </ul>
Banks	<ul style="list-style-type: none"> <li>- For CCUS - Basel III requires high capital reserves for risk/unproven investments at scale.</li> <li>- Needs agreement on sharing investment risk between energy companies, development banks, commercial bank, equity investors and government for multi-billion-pound projects.</li> </ul>
Private equity	<ul style="list-style-type: none"> <li>- CCUS is done at scale, private equity might be inappropriate for high level of infrastructure required.</li> </ul>
Venture capital	<ul style="list-style-type: none"> <li>- CCUS traditionally requires a high level of supporting infrastructure.</li> <li>- Long-term strategic plans and targeted policies are needed to kickstart investment in CCUS.</li> </ul>

### ENERGY - Hydrogen

Focus areas	Hydrogen
Cross cutting for both financial services firms as investors and hard-to-abate wider economy industries	<p>Hydrogen is a means to store energy, as opposed to a raw source of energy. There is a broad consensus that hydrogen remains at too early a stage for large scale infrastructure investment.</p> <p><b>Policy risk:</b> Current progress on regulation and incentivisation appears to be difficult for investment.</p> <p>The UK government is still developing the Net Zero Hydrogen Fund. Hydrogen infrastructure needs de-risking as it is an unfavourable policy environment – Contracts for Difference (CfD) will not start until 2023.<sup>81</sup></p> <p><b>Technology risk</b> remains high. Hydrogen’s future role in the energy mix remains unclear. The renewables supply is currently too low for green hydrogen. Green hydrogen needs to be efficiently scaled so that costs are reduced by 80%.<sup>82</sup></p> <p><b>Business model risk:</b> The revenue model is unclear due to there currently being no established international hydrogen market.</p>

81 See Net Zero Hydrogen Fund strand 1 spring 2022: questions raised with responses (updated 22 June 2022) - <https://www.gov.uk/government/publications/net-zero-hydrogen-fund-strand-1-and-strand-2/net-zero-hydrogen-fund-strand-1-spring-2022-questions-raised-with-responses>

82 <https://www.iea.org/reports/global-hydrogen-review-2021/executive-summary>

Focus areas	Hydrogen
Asset owners	<ul style="list-style-type: none"> <li>- Business, policy and technology risks are too high.</li> <li>- Risk levels too high and not at sufficient scale for some asset owners due to regulation (Solvency II for insurers - the right reform could help for infrastructure projects), fiduciary duty and need for pipeline of investable projects.</li> <li>- Need to wait for value chain to scale up gradually.</li> <li>- Technology costs are initially high ('valley of death') and then comes down with scale and revenue.</li> </ul>
Asset managers	<ul style="list-style-type: none"> <li>- Reflect concerns of clients/asset owners as responsible stewards of capital.</li> </ul>
Banks	<ul style="list-style-type: none"> <li>- CfD will not start until 2023 to enable hydrogen to economically compete with other energy sources.</li> <li>- Needs agreement on sharing investment risk between energy companies, development banks, commercial bank, equity investors and government for multi-billion-pound projects.</li> </ul>
Private equity	<ul style="list-style-type: none"> <li>- Hydrogen infrastructure is done at scale so private equity might be inappropriate for high level of infrastructure required. Could be limited to opportunities more suited to more established SME and unlisted companies (e.g supply chains).</li> </ul>
Venture capital	<ul style="list-style-type: none"> <li>- Increase in renewables need to commercialise green hydrogen.</li> <li>- Business model risk.</li> </ul>

ENERGY - Renewables	
Focus areas	Renewables
Cross cutting for both financial services firms as investors and hard-to-abate wider economy industries	<p>The market has matured for renewables reducing the risk for larger institutional investors, but could be unattractive from some financial institutions looking for higher returns.</p> <p><b>Business risk:</b> Intermittency of wind energy supply makes it difficult to precisely match energy demand, so either storage and/or alternative fuels needed. Currently gas is used to meet demand, but these need to be switched to low carbon alternatives such as nuclear, power CCS, or hydrogen-powered gas turbines.<sup>83</sup></p> <p><b>Technology risk:</b> Battery storage needs to improve - battery storage is needed to bridge intermittency. However, this has an unfavourable policy environment with a high deep uncertainty on financial support.</p> <p><b>Policy risk:</b> There is much benefit from reducing time needed for planning and regulatory consents and to secure grid connections.</p>

83 Net Zero Britain: developing an energy system fit for the future, OFGEM, 8 July 2022 - <https://www.ofgem.gov.uk/sites/default/files/2022-07/Net%20Zero%20Britain%20Publication%202022%20FINAL.pdf>

Focus areas	Renewables
Asset owners	<ul style="list-style-type: none"> <li>- Contracted revenue streams too risky and unsuited to lowest cost capital.<sup>84</sup></li> <li>- No clarity on which storage solution will prevail.</li> </ul>
Asset managers	<ul style="list-style-type: none"> <li>- Contracted revenue streams can be too risky and unsuited to lowest cost capital.</li> </ul>
Banks	<ul style="list-style-type: none"> <li>- Question over consistency of supply and return on investment e.g. Solar panels - enough to meet demand in summer but need to top up in winter.</li> </ul>
Private equity	<ul style="list-style-type: none"> <li>- There are opportunities more suited to more established SME and unlisted companies in offshore wind, but addressing the intermittency of offshore wind through storage solutions is still not sufficiently mature.</li> </ul>
Venture capital	<ul style="list-style-type: none"> <li>- Crowding in has occurred driving down returns.</li> <li>- Relatively versed in start-up investing to address pressing issues in the energy industry with rapidly scalable, disruptive business models.</li> </ul>

### TRANSPORT - Electrification of transport

Focus areas	Electrification of transport
Cross cutting for both financial services firms as investors and hard-to-abate wider economy industries	<p><b>Business risks:</b> Electric Vehicle (EV) asset class is still immature in the UK, especially for the second-hand market.<sup>85</sup> There is some concern over stranded assets and the future role of EV vs hydrogen, though there remain technology risks for hydrogen fuel cells.</p> <p><b>Technological risks:</b> Demand for EVs is outpacing infrastructure and renewable electricity supply. Capital is needed to develop and scale up new technologies for industries and supporting infrastructure that cannot be easily and completely electrified by direct charging e.g. heavy goods vehicles and larger ships.</p>
Asset owners	<ul style="list-style-type: none"> <li>- Business, policy and technology risks are currently too high.</li> <li>- Concern over longevity and technology selection for EVs, lack of capacity of National Grid and infrastructure.</li> </ul>
Asset managers	<ul style="list-style-type: none"> <li>- Reflect concerns of clients/asset owners as responsible stewards of capital.</li> </ul>

84 <https://www.pwc.co.uk/assets/document/Unlocking-capital-for-net-zero-PwC-Nov-2020.pdf>

85 See Society of Motor Manufacturers and Traders (SMMT)'s used car statistics, May 2022 - <https://www.smmt.co.uk/2022/05/used-car-buyers-double-up-on-electric-vehicles-as-market-grows-5-1/>

Focus areas	Electrification of transport
Banks	<ul style="list-style-type: none"> <li>- Asset class is immature.</li> <li>- Electric vehicles are more expensive.</li> <li>- Hydrogen electrolyzers require a high utilisation to gain a return on investment - market not ready.</li> <li>- Concern over stranded assets.</li> <li>- Asset lifetime is not long - concern over batteries e.g. charging infrastructure, cars.</li> </ul>
Private equity	<ul style="list-style-type: none"> <li>- Until recently, charging infrastructure opportunities were very nascent, though growth opportunities are now becoming clearer.</li> </ul>
Venture capital	<ul style="list-style-type: none"> <li>- Too low returns for a lot of proven and scaled technology.</li> <li>- R&amp;D still required to work for certain transport types/ infrastructure/ batteries</li> <li>- Lack of market readiness for hydrogen.</li> <li>- Hydrogen electrolyzers require a high capital cost so not yet economically efficient.</li> <li>- Long-term strategic plans and targeted policies are needed to kickstart investment in hard-to-abate forms of transport.</li> </ul>

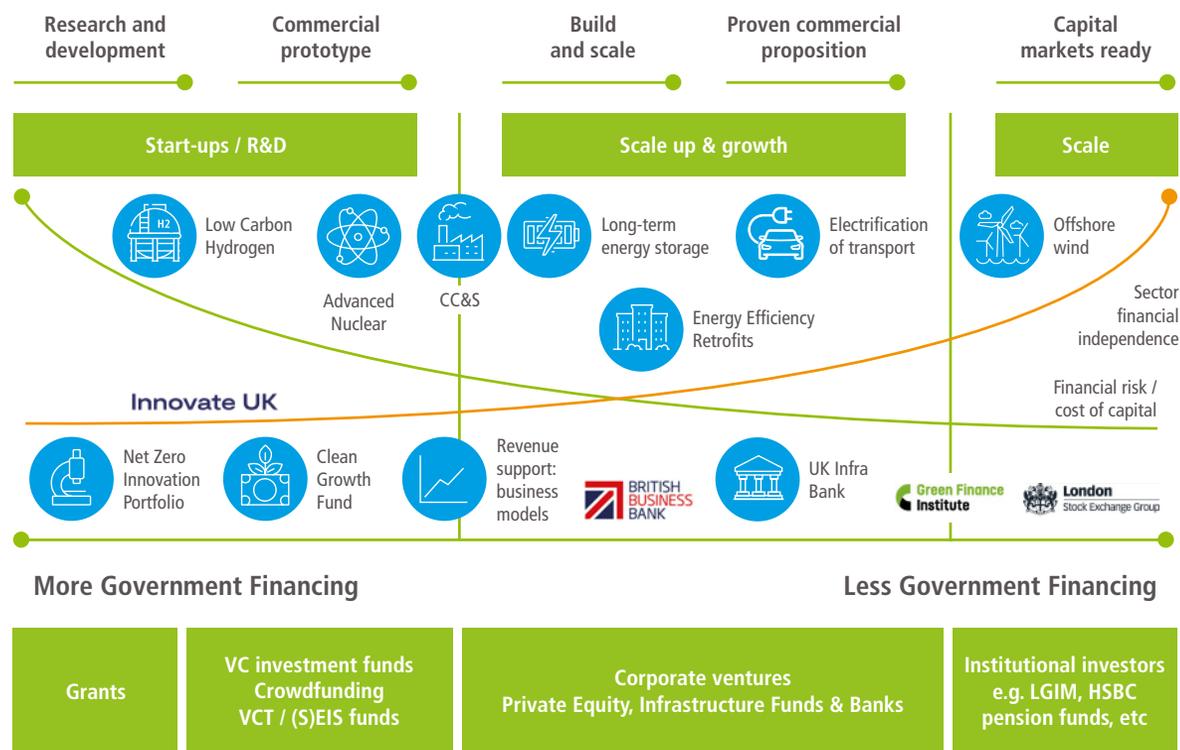
MANUFACTURING - Fuel switching and electrification of industrial processes	
Focus areas	Fuel switching and electrification of industrial processes
Cross cutting for both financial services firms as investors and hard-to-abate wider economy industries	<p>Reliance on decarbonisation of electricity - need clarity on energy alternatives.</p> <p><b>Technology risk:</b> innovation is needed in hard-to-abate areas e.g. cement.</p> <p><b>Business risk:</b> Additional funding, tax and financial landscape is needed to incentivise low carbon but higher manufacturing costs. May need de-risking of depreciation of green investments if they turn out to be short-lived.<sup>86</sup> There is a lack of data for both manufacturers and investors to track emissions, which may require installation of submeters.</p>
Asset owners	<ul style="list-style-type: none"> <li>- Clarity on energy alternatives.</li> <li>- Investment support, tax incentives need to be aligned with investment cycles.</li> </ul>
Asset managers	<ul style="list-style-type: none"> <li>- Reflect concerns of clients/asset owners as responsible stewards of capital.</li> </ul>
Banks	<p>For the electrification of industry - for large parts of manufacturing electrification is available as an option. Can capital expenditure be tied to electrification? Issue for industry are more variable prices of electricity - can this be made more certain to de-risk?</p>
Private equity	<ul style="list-style-type: none"> <li>- Investment support, tax incentives need to be aligned with fund cycles.</li> </ul>

86 Make UK: Manufacturing sector net zero roadmap 2022 <https://www.makeuk.org/insights/reports/manufacturing-sector-net-zero-roadmap>

Focus areas	Fuel switching and electrification of industrial processes
Venture capital	<ul style="list-style-type: none"> <li>- Long-term strategic plans and targeted policies are needed to kickstart investment in hard-to-abate forms of industry e.g. cement.</li> </ul>

The UK's Net Zero Strategy broadly depicts the challenge of scaling up capital and technology, using the diagram below. This highlights the level and form of intervention likely required at different stages of commercial maturity, and broadly where different technologies sit on this spectrum.

**Figure 6: Indicative thresholds of capital against different types of financial investors**  
 Source: HM Government Net Zero Strategy: Build Back Greener, October 2021



## 4.2. Availability, consistency and quality of data

Data is another major issue. This research identified three main challenges: availability, consistency, and quality of data.

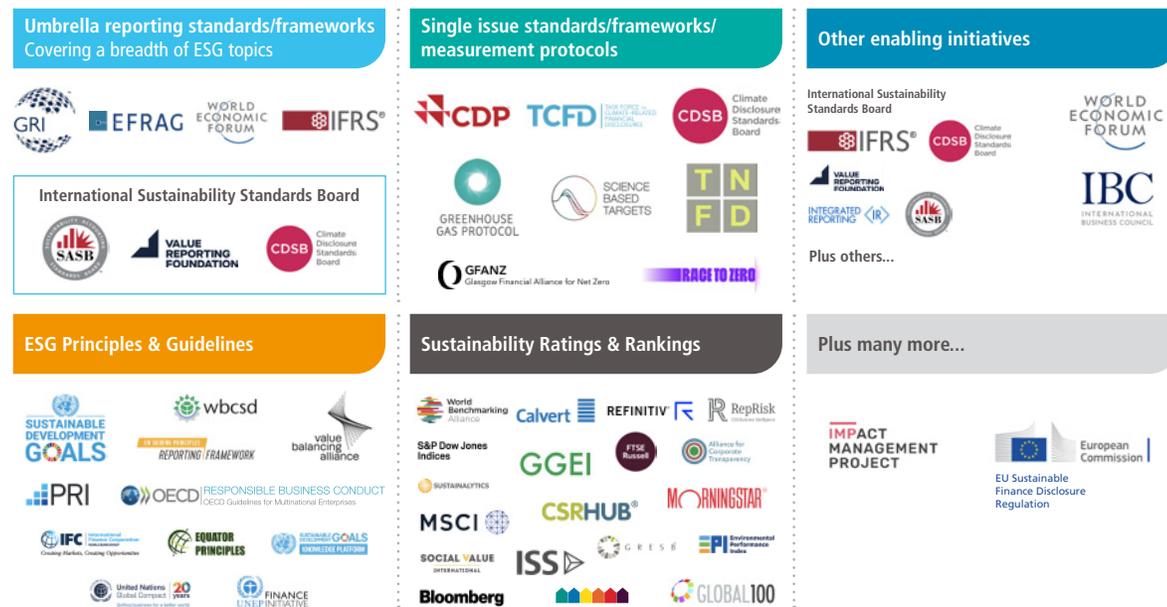
Many interviewees reported difficulty in collecting and reporting the climate-related data that they need. Scope 3 emissions data remains particularly patchy and there are significant data gaps across asset classes and geographies. Since introducing its mandatory TCFD-aligned disclosure rules, the UK has made progress in closing the disclosure gap. However, reporting remains variable and smaller and privately held companies, who make up the majority of all UK businesses, are not in scope of the mandatory requirements.<sup>87</sup> Furthermore, whilst net zero commitments have risen rapidly, few are supported by detailed data on how they will be achieved, making it difficult for investors to assess the robustness of the claims.

There is also a lack of consistency and standardisation of data, with a plethora of sustainability standards, frameworks and taxonomies. This can make it difficult for investors to collect and compare data across firms, asset classes, and geographies, and create onerous reporting requirements. It is encouraging that efforts are being made to standardise and harmonise reporting frameworks, with the International Sustainability Standards Board's (ISSB) work to develop a comprehensive global baseline of sustainability disclosures for the capital markets creating a strong market signal. The European Financial Reporting Advisory Group (EFRAG) and the US Securities Exchange Commission (SEC) are also taking action to improve the consistency and comparability of reporting. Yet further efforts are needed to ensure interoperability across the frameworks.

87 <https://small99.co.uk/net-zero/small-business-carbon-stats/>

**Figure 7:** Some of the frameworks, guidance, standards and other initiatives on data reporting and disclosures

The reporting landscape today is an 'alphabet soup' of choice; though there are moves towards standardisation



There was also lack of trust and confidence in current ESG data, with increasing scrutiny coming from across the financial and related professional services industry and broader stakeholders. There has been widespread coverage of discrepancies in ESG data in which one company can be ranked an ESG leader according to one methodology but a laggard according to another. There are also concerns about greenwashing through which firms' may make inaccurate or subjective claims about the sustainability of their products and services. Again, the efforts of the ISSB, EFRAG and others should help to address this issue and the industry also has an important role to play in providing independent assurance and third-party verification of ESG data - but further steps are needed, as highlighted by the International Regulatory Strategy Group (IRSG).<sup>88</sup>

88 See IRSG Report - ESG Ratings and ESG Data in Financial Services – A view from practitioners, 21 Feb 2022 - <https://www.irsg.co.uk/publications/irsg-report-2/>

### 4.3. Wider economy decarbonisation

The role of financial and related professional services industry is essentially an enabling one. Firms can mobilise capital to scale climate solutions, finance companies and organisations looking to transition to net zero, be active stewards to drive real world decarbonisation and accelerate the managed phase out of high emitting assets efforts to achieve net zero. Yet, ultimately, achieving net zero will depend upon the wider economy decarbonising. This can be lost in the debate, where the focus is often on decarbonising portfolios, as opposed to decarbonising the economy. It should be noted, among often siren calls for divestment, that for firms to drive net zero it might be better to remain invested and use their influence to drive net zero. Interviewees commonly pointed to the need for greater certainty around how the UK intends to drive net zero across the wider economy, what long term policies, guarantees and/or incentives will be introduced and how the requisite finance will be raised.

### 4.4. Pricing externalities

Currently business and investment decisions are based on the expected risk adjusted return of an activity. However, this risk-return profile does not currently reflect the full environmental costs of any such activity. This is because, for organisations outside the scope of mandatory carbon pricing schemes (such as those covered by the UK or EU Emissions Trading Schemes [ETS] for heavy industries), carbon is treated as an externality. Even under such schemes current prices - despite dramatic increases in the past 18 months - remain below those deemed necessary to meet international climate targets. A recent market sentiment survey indicated that a global mean carbon price of over €200 would be required to meet the 1.5°C goal by 2050.<sup>89</sup> As a result, businesses are not yet incentivised to reduce their emissions. Interviewees expressed support for a 'polluter pays' system where the indirect costs of an activity are allocated and paid for by the actor who is economically benefiting from the activity. This would in turn reduce the 'green premium' (the difference in price between one activity with high emissions and the same activity without those emissions).

### 4.5. Green skills and the Just Transition

Interviewees pointed to the need to improve green skills, as part of the Just Transition. A skills shortage in areas such as retrofitting, for example, was identified as heightening investment risk and hampering growth. Improving green skills within the financial and related professional services industry itself is also required so that the industry can continue to scale up its support for net zero and drive innovation in green finance. The UK government has set a target of creating two million green jobs by 2030; however, recent PwC research indicates a shortfall of 200,000 workers for the energy transition alone and showed regional disparity in job creation with Scotland, London and the South West positioned to reap the greatest benefits.<sup>90,91</sup>

89 <https://www.ieta.org/resources/Documents/IETA%20GHG%20Market%20Sentiment%20Survey%20Report%202022.pdf>

90 See also PwC report on 200,000 jobs shortfall for energy transition, August 2022 - <https://www.pwc.co.uk/press-room/press-releases/Energy-transition-constrained-by-c200000-jobs-PwC-GJB.html> and

91 <https://www.pwc.co.uk/who-we-are/purpose/green-jobs-barometer.pdf>

Affordability is another important factor in the Just Transition. Green finance products and services are proving popular with consumers, but there is a long way to go before they become mainstream. Making green products affordable for customers is a key consideration, especially given the rising cost of living affecting many people. There is a need to ensure that new technologies such as electric vehicles or housing retrofits are affordable for example, so that people benefit from the net zero transition and public support can be maintained. Given that many of these technologies are higher capex (capital expenditure) and lower opex (operational expenditure), and may have a lower lifetime cost of ownership, the financial and related professional services industry could develop more innovative financing products to make these products affordable, reduce upfront costs and enable demand to scale more rapidly.

### 4.6. Deeper and faster collaboration – respecting competition laws, climate litigation risks and reaching out to SMEs, retail customers and consumers

Interviewees also pointed to the need for greater collaboration across government, industry and civil society. One particular issue raised was ensuring that industry collaboration on net zero is compatible with existing competition law. The CMA's advice to the UK government in March 2022<sup>92</sup> recognises that there is some flexibility on this, but more detailed guidance would be welcome.

There was widespread agreement from interviewees that preventing greenwashing is critical to maintain confidence in sustainable investments. Sustainable finance products and services are increasing in popularity and represent a substantial growth opportunity for the UK. To support this, the underlying investments in the wider economy need to be credible. Interviewees also noted that, without setting out clear regulations beforehand, action to address greenwashing could have unintended consequences for the wider market. The potential for excessive caution in creating innovative products (due to genuine disagreements on the sustainability impact of certain activities) and looking at insurance implications for underwriting indemnities need to be considered within the limited timeframe for climate action.

There is also the need to work together to increase support and guidance for SMEs and retail customers to gather data and understand and support the Just Transition. Bankers for Net Zero (B4NZ), for example, is seeking to develop a framework for measuring SME emissions and identify opportunities to disseminate information to SMEs via banking apps. Further such collaborative efforts are needed.

92 <https://www.gov.uk/government/publications/environmental-sustainability-and-the-uk-competition-and-consumer-regimes-cma-advice-to-the-government/environmental-sustainability-and-the-uk-competition-and-consumer-regimes-cma-advice-to-the-government>

## 5. Realising our industry's full potential in enabling the net zero and Just Transition

“Mitigating climate change and solving for the transition is ultimately going to take the combined efforts of government, industry, finance, regulators, and individuals. But while we may all have a role to play, it is important to remember that they are not the same roles, and that action by one cannot necessarily substitute for inaction by another. Financial regulations cannot substitute for government climate policies, and consumer spending choices cannot substitute for public and private investment.”

Sarah Breedon, Executive Director, Financial Stability Strategy and Risk at the Bank of England, given at TheCityUK International Conference, 7 April 2022

Financial and professional services sit right at the fulcrum of the economy. They touch businesses and consumers, advise government and regulators and implement policy and regulation. In short, they have a unique enabling role in supporting the transition of the economy to net zero.

To realise the full potential of the financial and related professional services industry in enabling net zero, mitigating the identified risks and barriers is critical. Based upon the research findings, TheCityUK and PwC have identified the key enablers necessary to achieve this.

### 5.1. Develop long-term policy frameworks in collaboration with the financial and professional services industry

The central issue for financial and related professional services firms is that they need long-term, clear and detailed policy signals on achieving wider economy decarbonisation.

Announcements such as phasing out new combustion engine cars by 2030, or gradually increasing the energy efficiency requirements from all residential rental properties in England and Wales, are examples of clear policy signals that stimulate investment. In the energy market, the Contracts for Difference (CfD), Feed in Tariff (FiT) and Renewable Obligation (RO) mechanisms have been highly effective at creating revenue stability and giving investors the certainty they need to make long term investment decisions. This has resulted in a radical overhaul in the UK's renewable energy generating capacity; as of June 2022, renewables' share of electricity generation was 45.5%.<sup>93</sup>

Such signals are now needed across the economy. Greater clarity is needed, for example, on the government's policies on nuclear, hydrogen, carbon capture and storage, and heat and buildings so that investors can better understand their business models and investment opportunities. These signals also need to be rolled out to more sectors and backed by detailed policy and implementing regulations. **The UK government should develop effective, quantified,**

<sup>93</sup> See Energy Trends, June 2022 produced by the Department for Business, Energy and Industrial Strategy [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/1086800/Energy\\_Trends\\_June\\_2022.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1086800/Energy_Trends_June_2022.pdf)

**and long-term national net zero targets and policies to all sectors of the UK economy, in particular high-emissions industries.**

There is also a need for greater clarity on how the UK plans to raise the public and private finance needed to support its net zero ambitions. Such clarity would help match investment needs with capital flows and help ensure that capital can be raised at the lowest cost. **The UK government should publish interim national net zero capital raising plans setting out the UK's investment needs to 2030/2035 and how it intends to raise the capital required.** This phased approach will help provide clarity on the investment needed to reach 2030 and 2035 goals of reducing the UK's GHG emissions by 68% and 78% respectively from 1990 levels.<sup>94</sup> It should include mechanisms to monitor, report and verify progress in meeting the capital raising requirements. There is also merit in setting up a hub or clearing system to conduct initial due diligence on companies focused on emerging low carbon technologies. This will help to identify the most credible ones and establish a financing pipeline.

### 5.2. Addressing and sharing risks through the scaling of blended finance and incentives

As shown, different technologies and infrastructure require different types of support depending on their maturity. This will require capital from across the financial and related professional services industry, including venture capital, private equity and institutional investors such as insurers and pension funds. In order to scale such investment, government support, through blended finance solutions, price stabilisation mechanisms and first loss positions can play a key role.

There have already been examples where risks have been mitigated and policymaking used to deliver investment, phase down coal and increase the share of renewables - such as in the UK's electricity market. Blended finance therefore offers much potential, as it can make use of small amounts of concessional donor funds to mitigate specific investment risks.

Blended finance is most needed where investments are not considered to be investment grade and where the perceived investment risk is high. Sectors such as hydrogen and CCUS are seen as being likely to benefit from blended finance solutions through both the start-up and scale up stage.

<sup>94</sup> <https://www.gov.uk/government/news/uk-enshrines-new-target-in-law-to-slash-emissions-by-78-by-2035>

**CASE STUDY: Baker McKenzie**

Global law firm Baker McKenzie advised Advanced Clean Energy Storage I, LLC, along with Mitsubishi Power Americas, Inc. and Magnum Development, LLC, in the US Department of Energy's (DOE) \$504.4m loan commitment to develop the world's largest industrial green hydrogen facility in central Utah. Closed on June 3, 2022, the loan highlights the US's commitment toward supporting the clean hydrogen sector. It also helps create a viable market for hydrogen and will make it scalable in the western United States and electrical grid, creating the fundamental infrastructure necessary to deploy this zero-carbon energy storage source.<sup>95</sup>

As investments become attractive to more traditional sources of capital, blended finance should be phased out appropriately so as not to crowd out private investors. The establishment of the UK Infrastructure Bank (UKIB) and the British Business Bank (BBB) should provide the institutional structures needed to scale blended finance mechanisms.

**The UK government, UKIB, BBB and financial and professional services firms should work together to co-create blended finance solutions designed to de-risk and scale up low carbon investments.**

The UK government should also consider how tax incentives could be used to increase investor appetite for lower carbon and transitional investments, such as those contained within the recently passed Inflation Reduction Act 2022 in the US.<sup>96</sup> These could include a super deduction for long term capital expenditure or incentives to install energy efficiency measures in buildings.

### 5.3. Visible cross-departmental working between the wider economy, policymakers and financial regulators to scale up net zero investments increase collaboration and address greenwashing for a just transition to net zero

The UK government and regulators should ensure that the overall regulatory framework remains balanced and proportionate, so that financial stability is safeguarded, consumer protection is secured and net zero is supported. The ongoing efforts between the insurance industry, UK government and the Prudential Regulation Authority to better tailor the insurance and long-term savings' regulatory regime for the UK are welcome and, if successful<sup>97</sup>, can be vital in enabling regulators and asset owners to support low carbon investment.

For finance to be mobilised for wider economy firms to then generate returns for investors, policies, regulations and incentives need to be considered using a 'systems thinking' approach. Policies, regulations, grants, incentives, tax reliefs and/or blended finance solutions need to be optimised to generate demand for finance to flow from capital markets to companies and individuals implementing low carbon solutions. The capital must be channelled in a manner that

95 <https://www.bakermckenzie.com/en/newsroom/2022/06/world-largest-hydrogen-production-and-storage-project>

96 <https://www.pwc.com/us/en/services/tax/library/congress-clears-inflation-reduction-act-for-white-house-action.html>

97 <https://www.abi.org.uk/news/news-articles/2022/07/solvency-ii-independent-analysis-of-proposed-reforms/>

is compatible with the financial regulations, policies and stewardship duties that financial institutions are subject to. For financial institutions looking to provide financial products and services into new asset classes, financial regulators need to understand and be ready to approve investments in new asset classes. Such approvals are not intended to apply discounts or underestimate risk levels for new asset classes, but rather ensure that financial regulators are in the position to make appropriate and timely decisions, by being well informed and in continuous dialogue with other policy makers and decision makers in the wider economy, where new asset classes are being created.

Addressing greenwashing is also important. New sustainable finance products are gaining in popularity, including with retail investors, and are a growth opportunity for the UK. But their success depends upon there being confidence in the credibility of the underlying investments. The credibility of those underlying investments will improve dramatically if the wider policy, technology, and business risks as described previously are addressed. Efforts by government and regulators to improve investment labels and disclosures are welcome and the green taxonomy should also help, but further actions will be needed to address ongoing concerns, and the use of robust independent assurance will likely need to become more widespread.

Action is also needed to help those least able to help themselves. All parts of society will be needed to transition to net zero, and this needs to be inclusive and beneficial to all. This will require increasing investment in green jobs and skills, providing access to low cost finance and working with local communities to ensure the benefits are spread equally. Such efforts will be crucial in supporting a Just Transition and ensuring that public support for net zero is maintained.

**The UK should ensure that all net zero-related policies and activities support a Just Transition.**

### 5.4. Improving the availability, consistency and quality of climate-related data and developing the UK Sustainability Disclosure Requirements (SDR)

In recent years, the UK government has placed particular emphasis on improving the flow of decision useful climate-related information, through the TCFD and SDR. The SDR builds on the TCFD framework, and will look at corporate, asset manager, asset owner and investment product disclosures.<sup>98</sup> TheCityUK welcomed the recent International Sustainability Standards Board (ISSB)'s work on climate-related reporting standards, and it is hoped that the EFRAG and the SEC proposals encourage global convergence and interoperability of standards and metrics.

Financial and professional services firms, along with the Glasgow Financial Alliance for Net Zero (GFANZ), Partnership for Carbon Accounting Financials (PCAF) and others are working to improve data quality by developing new methodologies to cover previously difficult to cover asset classes such as sovereign debt and derivatives. Along with regulators, market exchanges are driving up disclosure standards through their listing requirements and professional services firms are enhancing reporting standards and driving net zero through their client engagements.

98 [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/1031805/CCS0821102722-006\\_Green\\_Finance\\_Paper\\_2021\\_v6\\_Web\\_Accessible.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1031805/CCS0821102722-006_Green_Finance_Paper_2021_v6_Web_Accessible.pdf)

All such efforts should be guided by the need for ‘interoperability’ between different frameworks. This will support the scaling up of capital by facilitating cross border flows and making projects more investable and more insurable.

**The UK government should help drive global convergence and interoperability on sustainability disclosure standards and frameworks**, and ensure that the UK remains in step with efforts across key jurisdictions so that the UK can capitalise on its strengths to deliver green and sustainable investments in the UK and beyond.

The UK government should also foster the growth of sustainable digital finance technologies to help address the cross-cutting issue of sustainability reporting frameworks and climate and sustainability data. This will enable financial institutions to better price risks and opportunities. TheCityUK published a report on how to foster such fintech for sustainability data issues in October 2021.<sup>99</sup>

TheCityUK welcomes plans to make both TCFD-aligned disclosures and net transition plans a mandatory requirement for large UK firms.<sup>100</sup> TheCityUK is also supportive of the UK’s Transition Plan Taskforce’s work to develop sector-neutral guidance for transition plans, as well as GFANZ’s transition plan guidance. It is important to ensure that transition plans follow a standardised format, are not overly prescriptive and give firms the flexibility to report on their most material issues. Whilst supportive of the initial focus on the very largest, public firms TheCityUK believe that ultimately **TCFD and transition plans disclosures should be made mandatory for smaller and privately owned firms in a proportionate way**. This would provide a level playing field and prevent regulatory arbitrage, whilst proportionately ensuring that firms are not overburdened with onerous reporting requirements.

The SDR and Green Taxonomy are both important in creating an integrated framework for sustainability disclosures. As proposals develop, it is important that the sequencing is managed carefully so that investment product disclosures are not introduced in advance of corporate disclosures. It is also important to recognise transition activities, rather than focussing only on those firms or assets that are already regarded as green.

There is also a particular need to improve the availability and accuracy of Scope 3 emissions data. Scope 3 emissions are invariably the largest source of a firms’ emissions and so accurate scope 3 data is essential to enable lenders, investors and insurers to accurately assess and manage climate-related risks and opportunities. Financial and professional services are making great strides in improving scope 3 data through the development of new methodologies and models, but availability and reliability remains a hurdle. **TheCityUK believes that, as data availability improves, the UK government should elicit Scope 1, 2 and 3 emissions disclosures, subject to the availability, maturity and proportionately of information, and the materiality to the firm, in line with the TCFD guidance.**

Whilst TheCityUK wholly supports the focus on improving climate-related, decision useful information to markets,

99 See TheCityUK report: Sustainable digital finance: How technology can accelerate the transition to a sustainable economy, October 2021 - <https://www.thecityuk.com/our-work/sustainable-digital-finance-how-technology-can-accelerate-the-transition-to-a-sustainable-economy/>

100 <https://www.gov.uk/government/publications/fact-sheet-net-zero-aligned-financial-centre/fact-sheet-net-zero-aligned-financial-centre>

that is not an end in itself. There is a commensurate need to ensure that investors will act on the information and integrate it within their business decisions, risk management and stewardship activities. This information will help to shift investment flows over time to avoid the build-up of systemic risks and ensure that financial and professional service firms continue to support the transition. **TheCityUK encourages the UK government to conduct an initial assessment of how markets are using climate-related data and include this within its update to the Green Finance Strategy.**

## 5.5. Pricing externalities and increasing the volume, integrity and confidence in voluntary carbon markets

The UK has set itself a series of ‘carbon budgets’ which provide a quota on how much the UK can emit, consistent with limiting global temperature rise to 1.5°C by 2050. Global environmental markets offer the opportunity to address the problem of a finite global carbon budget, by pricing in the cost of environmental damage, such as excessive carbon emissions. Such markets offer mechanisms for corporates and policymakers to quantify, manage and value the environmental impact of their activities.

Pricing externalities such as carbon emissions **can be expanded through carbon and environment credit markets, widening carbon cap and trade schemes appropriately, and ideally working on a global carbon price through an international carbon price floor**. This would encourage investors to reallocate capital toward low-carbon or climate-resilient activities and ensure that more sustainable firms are not disadvantaged against their more unsustainable peers. Ideally carbon pricing would be agreed globally so as to mitigate ‘carbon leakage’. It is estimated that a global carbon price, such as an international carbon price floor, could potentially reduce emissions by up to 12.3%.<sup>101</sup> Plans to expand the UK Emissions Trading Scheme (ETS) in the right way are welcomed<sup>102</sup>, and **steps must be taken to ensure that the UK government’s ambition for the UK ETS to be the world’s first net zero cap and trade market<sup>103</sup> remains consistent with the net zero pathway.**

Carbon credits provide revenue from buyers to the developers who have invested in CO2e reduction and removal projects. Developing and using carbon credits can therefore play an important role in reaching net zero. Well-designed carbon and other environmental credits represent verified and measured emissions reductions (with potentially other benefits) from climate and biodiversity projects around the world. Such credits can help drive capital towards cost effective emissions reductions and address biodiversity loss through nature-based solutions and projects.

However, confidence and transparency in carbon credits and their use as offsets for corporates need to improve.

101 <https://www.pwc.co.uk/press-room/press-releases/global-carbon-pricing-could-pay-for-itself-while-cutting-emissio.html>

102 <https://www.gov.uk/government/consultations/developing-the-uk-emissions-trading-scheme-uk-ets>

103 See ‘Greening imports: a UK carbon border approach: Government Response to the Committee’s Fifth Report of Session 2021–22’ - <https://publications.parliament.uk/pa/cm5803/cmselect/cmenvaud/371/report.html>

Historically, carbon credits and offsets have been criticised due to lack of trust and limited transparency over the quality of credits being purchased and claimed by organisations. Several NGOs have highlighted issues in the methodologies used to assess climate projects, including the need to demonstrate the ‘additionality’ and ‘permanence’ of emissions reductions being claimed. However, as the volume of corporate net zero targets has increased, so has activity in voluntary carbon credit markets. In November 2021, the market value of carbon credit markets exceeded \$1bn for the first time.<sup>104</sup>

In response, several initiatives have emerged to add greater regulation and standardisation to the carbon credit market. These include the **Integrity Council for Voluntary Carbon Markets (IC-VCM) and the Voluntary Carbon Markets Integrity Initiative (VCMI)**.

The **IC-VCM** has emerged to provide supply-side integrity by establishing a standard for high-quality carbon credits, through the Core Carbon Principles (CCPs) and associated Assessment Framework. The CCPs provide guidelines around key issues (e.g. additionality, double-counting and permanence) to provide more information to help buyers understand the quality of credits sold on carbon credit markets. Although the CCPs set a threshold for what a high-quality credit is, they do not outline the role of carbon credits as part of an organisation’s credible climate target. The **VCMI** - through their Claims Code of Practice - is therefore setting guidance for such organisations as users of offsets, as part of the user’s claims (i.e. stated commitments and actions) towards a net zero target. The VCMI draft guidance outlines three tiers of certification (Gold, Silver, Bronze) based on the user’s (i) progress towards their next interim emissions target; (ii) emissions coverage across value chain (i.e. Scope 1, 2 and 3); and (iii) use of high-quality carbon credits.

The financial and related professional services industry is also playing its role in addressing these issues through initiatives such as the City of London Corporation’s UK Voluntary Carbon Markets Forum.<sup>105</sup> As a leading international financial centre, the UK is well-positioned to lead in the development of VCMs. Building on the work of the IC-VCM and VCMI, there is an opportunity for the UK to set the global standards and appropriate safeguards that will be needed for these markets to grow. Based on the work of industry-based initiatives, **the UK government should in time establish a regulatory framework for carbon and environmental credit markets, to achieve transparency, environmental integrity, and standardisation of methodologies for carbon and environmental credit certification**. This will ultimately boost confidence of participants across the entire value chain and help to develop a successful market and better price such externalities.

<sup>104</sup> <https://www.ecosystemmarketplace.com/articles/voluntary-carbon-markets-top-1-billion-in-2021-with-newly-reported-trades-special-ecosystem-marketplace-cop26-bulletin/>

<sup>105</sup> <https://www.cityoflondon.gov.uk/supporting-businesses/economic-research/uk-voluntary-carbon-markets-forum>

## 6. A 10-point action plan

Harnessing the opportunities of net zero requires collaboration and co-operation across the economy. Based upon the findings of this research, TheCityUK has developed a 10-point action plan to further harness the financial and related professional services industry’s support for net zero and the Just Transition.

### TheCityUK calls on the UK government to:

1. Deliver effective, quantified, detailed and long-term national net zero policies, incentives, and regulations for the wider economy industries.
2. Develop and publish interim national net zero capital raising plans, to set out the UK’s investment needs to 2030/2035 and how it intends to raise the capital required.
3. Address and share investment risks through the scaling of blended finance and other incentives.
4. Facilitate deeper collaboration between policymakers, regulators, corporates and SMEs to scale up investment, address greenwashing and support the Just Transition.
5. Continue to engage with other jurisdictions to drive global convergence and interoperability on sustainability disclosure and reporting standards, so that the UK as an international finance centre can build on its strengths to deliver green and sustainable investments in the UK and beyond.
6. Extend the scope of Taskforce on Climate-related Financial Disclosures and net zero transition plans to include smaller and privately owned businesses in a proportionate way, and ensure that the UK’s green taxonomy and Sustainability Disclosure Requirements distinguishes between green and transitioning activities.
7. Seek to increase the level of disclosures for direct and indirect GHG emissions, as and when data availability and accuracy improves.
8. Commit to producing an initial assessment of how markets are using climate-related data within its forthcoming update to its Green Finance Strategy.
9. Further develop the role of carbon pricing through carbon and environmental credit markets, widening carbon cap and trade schemes appropriately, and working on an international carbon price floor.
10. Establish a regulatory framework for carbon and environmental credit markets, to achieve transparency, environmental integrity, and standardisation of methodologies for carbon and environmental credit certification.

## 7. Conclusions

There is a huge opportunity to harness the UK's world leading financial and related professional services industry to enable the net zero transition. Doing so could be the difference between success and failure in the achievement of the UK's net zero target.

The financial and related professional services industry have significantly increased their support for net zero in recent years. Whether it be through capital allocation, active stewardship, advisory services or independent assurance, the industry's contribution towards net zero is on a scale that would have been deemed unimaginable only a few years ago.

The UK government has also transformed its climate ambitions, setting ambitious targets for the UK to reach net zero emissions by 2050, announcing plans to be the world's first net zero-aligned financial centre and introducing policies to raise net zero aligned private finance.

Yet neither government nor industry can achieve this alone. Instead, deeper collaboration, coordination and cooperation across governments, industries, and financial and related professional services is needed.

This report has sought to highlight some of the priority actions. TheCityUK will continue to press for action and encourage others to ramp up their efforts.

For one thing is clear, the risks from climate change are huge. But the opportunities are even greater.

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ICE

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JP Morgan

Lloyds Bank

Lloyds of London

LSEG

Marsh

NASDAQ

Nomura

Provident Financial

Rathbones

Santander

Société Générale

Standard Chartered

WTW

**Please note** that the recommendations have been developed by TheCityUK and PwC; because of the diversity of the sectors represented, it does not necessarily reflect complete endorsement of all aspects of the recommendations from some or all of the firms / organisations listed above.

# Glossary

<b>AGM</b>	Annual General Meeting
<b>BBB</b>	British Business Bank
<b>BECCS</b>	Bioenergy with Carbon Capture, Use and Storage
<b>Carbon equivalent (CO<sub>2</sub>e)</b>	A way to account for carbon footprint which includes other greenhouse gases
<b>CCC</b>	Climate Change Committee
<b>CCUS</b>	Carbon Capture, Utilisation and Storage
<b>CGFI</b>	Centre for Greening Finance and Investment
<b>DACCS</b>	Direct Air Carbon Capture and Storage
<b>EFRAG</b>	European Financial Reporting Advisory Group
<b>ESG</b>	Environment, Social and Governance
<b>ETS</b>	Emissions Trading Scheme
<b>EV</b>	Electric vehicles
<b>FDI</b>	Foreign Direct Investment
<b>GFANZ</b>	Glasgow Financial Alliance for Net Zero
<b>GFI</b>	Green Finance Institute
<b>GHG</b>	Greenhouse Gas emissions (gases such as carbon dioxide and methane which contribute to global warming)
<b>IEA</b>	International Energy Agency
<b>IIGCC</b>	Institutional Investors Group on Climate Change
<b>IPO</b>	Initial Public Offering

<b>IRSG</b>	International Regulatory Strategy Group (co-venture between TheCityUK and City of London Corporation)
<b>ISSB</b>	International Sustainability Standards Board
<b>MtCO<sub>2</sub></b>	Metric tons of carbon dioxide
<b>PCAF</b>	Partnership for Carbon Accounting Financials
<b>SDR</b>	Sustainability Disclosure Requirements
<b>SEC</b>	US Securities and Exchange Commission
<b>SFDR</b>	EU Sustainable Finance Disclosure Regulations
<b>TCFD</b>	Taskforce for Climate-related Financial Disclosures
<b>TNFD</b>	Taskforce for Nature-related Financial Disclosures
<b>UKEF</b>	UK Export Finance
<b>UKIB</b>	UK Infrastructure Bank
<b>UN SDGs</b>	United Nations Sustainable Development Goals

# Definitions

For the purpose of this report:

**'Green finance'** is defined as financing in line with a jurisdiction's taxonomy's environmental objectives. These include climate change mitigation and adaptation, sustainable use and protection of water and marine resources, transitioning to a circular economy, pollution prevention and control, and protecting and restoring biodiversity and ecosystem.<sup>106</sup>

**'Just Transition'** is defined as a transition to a net zero global economy which is inclusive and socially beneficial.<sup>107</sup>

**'Carbon emissions'** includes carbon dioxide equivalent (CO<sub>2</sub>e) emissions, which encompasses the other greenhouse gas emissions which contribute to global warming and subsequent climate change.

A **'taxonomy'** sets out investment screening criteria which classify which activities meet those criteria, to provide confidence and assurance to investors. Taxonomies include 'green' activities, or investments into activities that meet 'social' criteria.

<sup>106</sup> See for example the EU taxonomy - [https://ec.europa.eu/info/business-economy-euro/banking-and-finance/sustainable-finance/eu-taxonomy-sustainable-activities\\_en](https://ec.europa.eu/info/business-economy-euro/banking-and-finance/sustainable-finance/eu-taxonomy-sustainable-activities_en)

<sup>107</sup> <https://www.impactinvest.org.uk/project/just-transition-finance/>

# Methodology

This report brings together the specialist representation from TheCityUK, with the strategic and analytical expertise of PwC. The analysis and conclusions in this report are based on:

- Interviews with 28 firms and organisations, some of which are the largest and most active financial and professional services firms in the UK and internationally. They range from banks, insurers, investment managers, market exchanges and brokers – to law firms, consultancies, and accountancy firms.
- Secondary research on the financial and related professional services industry and its role in supporting net zero.
- TheCityUK's Green and Sustainable Finance Group's responses to calls for evidence, such as the UK government's update to the Green Finance Strategy and the Transition Plan Taskforce framework for private sector transition plans.

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