How sustainable finance can tackle the climate emergency

Essays on green finance and impact investing

Collected by the Chartered Banker Institute and the Social Market Foundation

Foreword: James Kirkup, Director of the Social Market Foundation

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Social Market Foundation

Chartered Banker

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THE SOCIAL MARKET FOUNDATION

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James Kirkup was born and raised in Northumberland, where he attended a comprehensive school. The first member of his family to go to university, he studied politics at Edinburgh University and began his career in journalism at The Scotsman in 1997. He later covered European politics and economics for Bloomberg News, moving to Westminster in 2001. He returned to The Scotsman as Political Editor and columnist before joining the Telegraph in 2007. He was Political Editor of the Telegraph and then Executive Editor – Politics, overseeing and writing commentary and analysis on politics, policy and economics.

MARY ROBINSON

Mary Robinson was the first woman President of Ireland (1990–1997) and is a former United Nations High Commissioner for Human Rights (1997–2002). A tireless advocate for justice, she was President of Realizing Rights: The Ethical Globalization Initiative from 2002 to 2010. Mary Robinson served as the UN Secretary-General's Special Envoy for the Great Lakes region of Africa from 2013-2014, stepping down in July 2014 to take up the post of Special Envoy for Climate Change. She continued in this post until the end of December 2015 which saw the successful conclusion of the COP21 Climate Summit and the historic Paris Agreement on Climate Change. In 2016, Mary Robinson served as the UN Secretary-General's Special Envoy on El Niño and Climate. In November 2018, she was appointed Chair of The Elders.

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Sir Roger Gifford is a Senior Banker at SEB in London. He read Chemistry at Oxford University and began his career in the financial sector at S.G. Warburg & Co, joining SEB in 1982. Prior to his appointment as UK Country Head (2000 – 2016) Roger headed the bank's operations in Japan for six years. He has worked in and around the primary debt and equity capital markets most of his career. Roger is Vice Chairman and past Chair of the Association of Foreign Banks (AFB) in London and Chair of the Advisory Board of the International Business and Diplomatic Exchange (IBDE). He is Chair of the London Green Finance Initiative launched in 2016 to further the contribution of the financial sector to the G20 climate agenda, and chaired the UK Government's Green Finance Taskforce last year. He was Lord Mayor of London in 2013.

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Simon Thompson was appointed as the Chief Executive of the Chartered Banker Institute in 2007. Before joining the Institute, Simon was responsible for managing the International Accounting Education Standards Board (IAESB), developing ethics and education standards for accountants. He also chairs the Global Education Standards

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BEN PAGE

Ben joined MORI in 1987 after graduating from Oxford University in 1986 and became Chief Executive of Ipsos MORI in 2009. A frequent writer and speaker on trends, leadership and performance management, he has directed thousands of surveys examining consumer trends and citizen behaviour.

Ben has worked for private sector businesses and has worked closely with both Conservative and Labour ministers and senior policy makers across government, leading on work for Downing Street, the Cabinet Office, the Home Office and the Department of Health, as well as a wide range of local authorities and NHS Trusts.

Ben is a Visiting Professor at Kings College London, and a fellow of the Academy of Social Sciences. He is a Council member of the CBI for London. Ben was named one of GQ's 100 Most Connected Men of 2015.

He regularly appears on national TV and radio programmes.

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Dr Ben Caldecott is the founding Director of the Oxford Sustainable Finance Programme. He is an Associate Professor and Senior Research Fellow at the University of Oxford Smith School of Enterprise and the Environment. He is concurrently an Academic Visitor at the Bank of England and a Visiting Scholar at Stanford University. He is also a Policy Associate at the UK's Department for Environment, Food and Rural Affairs (DEFRA), where he is a director-level secondee in the Strategy Directorate providing advice on a range of policy issues, many of which are related to finance, investment, and market design.

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HUW EVANS

Huw Evans became Director General of the ABI in February 2015, having joined the ABI in November 2008 as Operations Director.

Huw represents the UK's world-leading insurance and long-term savings industry to ministers, parliamentarians, regulators and senior stakeholders. He has a strong personal interest in the Diversity and Inclusion agenda and is a 'He for She' mentor and supporter of the Women in Finance initiative.

Huw served as a special advisor to the Prime Minister, Tony Blair and the Home Secretary, David Blunkett between 2001-2006, before working for RBS as a senior manager in its Group Strategy function between 2006-2008. He previously worked in politics and journalism having studied History at Lady Margaret Hall, Oxford.

Huw is the Senior Independent Director (SID) on the board of Flood Re and is a non-executive director of TheCityUK. He also sits on the Executive Committee of Insurance Europe. He can be found on Twitter at @huwevans71.

SEAN KIDNEY

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DR MA JUN

Dr. MA Jun is Director of the Research Center for Green Finance Development at Tsinghua University. He is also Special Advisor to Governor of the PBOC, Member of the PBOC Monetary Policy Committee, Chairman of China Green Finance Committee, and Chair of the NGFS WS1, Co-chair of G20 GFSG. Before joining Tsinghua, he was Chief Economist at the PBOC from 2014-2017. Prior to that, he worked for 13 years at Deutsche Bank, where he was Managing Director, Chief Economist for Greater China, and Head of China and Hong Kong Strategy. From 1992-2000, he worked as public policy specialist, economist and senior economist at the IMF and World Bank. He received Ph.D. in Economics from Georgetown University in 1994.

PROFESSOR KERN ALEXANDER & PAUL FISHER

Kern Alexander

Kern Alexander is Professor of Banking and Financial Market Regulation at the University of Zurich. He is the author of many research articles and several books, including Principles of Banking Regulation (Cambridge University Press, 2019), Brexit and Financial Service (co-author, Moloney et al, Bloomsbury, 2018) Global Governance of Financial Systems (co-author, Oxford Univ Press 2006), and Economic Sanctions: Law and Public Policy (Macmillan 2009) and The World Trade Organisation and Trade in Services (2008)(co-author). He was an adviser to the UK Serious Fraud Office on the Libor rate-rigging investigations and prosecutions and was a Member of the European Parliament's Expert Panel on Financial Services (2009-2014).

Paul Fisher

Paul Fisher is a Fellow at the Cambridge Institute for Sustainability Leadership. After 10 years as an academic, he had a 26 year career at the Bank of England in a number of senior roles, including 5 years as a member of the Monetary Policy Committee. Since stepping down from the Bank in 2016 he has been involved in a number of climate-related initiatives, including as a member of the EC's High Level Experts Group on Sustainable Finance. In a broad portfolio of financial sector activities, he is a consultant on central banking matters globally, and has non-executive positions at the UK Debt Management Office and the London Bullion Market Association.

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Geraldine Ang is a policy analyst on green finance and investment at the Organisation for Economic Co-operation and Development (OECD). She works for the OECD Environment Directorate under the OECD Centre on Green Finance and Investment, and worked jointly for the OECD Directorate for Financial and Enterprise Affairs for more than six years. *Prior to joining the OECD, she conducted research on the economics of climate change mitigation for the Earth Institute.* She also worked for Lagardere Active and the French Senate. Geraldine holds a Master of Public Administration from Columbia University's SIPA (2011), and a Master of Science in Management from HEC Paris (2006).

KEES VENDRIK

Kees Vendrik is the chief economist at Triodos Bank. Founded in 1980, Triodos Bank has become a frontrunner in sustainable banking globally, with banking activities in the Netherlands, Belgium, the UK, Spain, Germany and France as well as Investment Management activities based in the Netherlands. Prior to his appointment in 2017, he was a board member and the vice-president of the Netherland Court of Audit (Algemene Rekenkamer), a role he held from 2011.

SIMON HOWARD

Simon Howard joined UKSIF as Chief Executive in May 2013. He is a former Group Chief Investment Officer, with over twenty years of investment management experience. He worked for Liverpool Victoria and Friends Provident after being Managing Director of 3i Asset Management. Prior to joining UKSIF, Simon was Head of Sustainable Financial Markets at the charity Forum for the Future.

Simon moved into sustainability after being asked to forecast long-term asset class returns. These are likely to be materially different going forward as issues such as climate change, resource depletion and stakeholder rights bite. It is clear that other sectors of financial services will also be affected, such as banking, insurance and personal financial services. Simon now seeks to use the insight and expertise of UKSIF members throughout UK financial services to drive change to the benefit of society and clients.

NICK ROBINS

Nick Robins is Professor in Practice for Sustainable Finance at the Grantham Research Institute at the London School of Economics. The focus of his work is on how to mobilise finance for a just transition, the role of central banks and regulators in achieving sustainable development and how the financial system can support the restoration of nature. From 2014 to 2018, Nick was co-director of UNEP's Inquiry into a Sustainable Financial System. Before this, he was head of the Climate Change Centre of Excellence at HSBC from 2007 to 2014. He has also worked at Henderson Global Investors, IIED and the European Commission. Nick is a board member of Investor Watch and a member of a number of advisory boards including Carbon Tracker, the Climate Bonds Initiative and CreditEnable.

FOREWORD

JAMES KIRKUP, DIRECTOR OF THE SOCIAL MARKET FOUNDATION

The Social Market Foundation was established in the summer of 1989 and began work with the publication of Paper No 1: The Social Market Economy, by Robert Skidelsky. In that essay, Skidelsky set out the view that the market economy, where goods and services are owned by people and companies and traded between them, is the best way to deliver wealth and happiness:

“The most hopeful political development of recent years is revival of belief in the market system. It has become worldwide, uniting rich and poor, capitalist and socialist countries in a common language and the beginnings of a common practice. In Russia, China, and Eastern Europe, the monoliths of state socialism have started to crumble; in the West the army of officials is in retreat. New Vistas of freedom and peace have opened up as the world starts to converge on the ideals of political and economic liberty.”

However, Skidelsky was clear that support for the market does not mean the market alone was sufficient: “there remains a substantial role for government. Adding the word "social" to "market economy" is not just a political flourish. Its object is to draw attention to the elements of statesmanship and design necessary to sustain a market order.”

I cite that 1989 essay here not because this collection happens to coincide with the 30th anniversary of its publication, but because I think it is directly relevant to the issues raised in this publication. Changes in the earth’s climate, the warming of the planet, have at least some of their origins in the failures of the market system to properly recognise in good time the environmental costs of economic activity. Those changes also pose a fundamental threat to that market economy, both by physically disrupting human activity, and by undermining confidence in the market system to address such challenges. Unless the market system can prove its ability to allocate the resources that will be needed to decarbonise economic activity and address the climate challenge, it is unlikely to remain, in Skidelsky’s phrase, “politically acceptable”; demands for direct state intervention, control and ownership would follow.

So the essential principle that underlies green finance – private capital allocated by market exchanges and delivering wider benefit – is central to the work of the Social Market Foundation. We have always worked to understand how a sensible partnership between market participants and policymakers can ensure that capital and other resources are allocated so as to deliver social as well as economic returns.

The SMF’s 30-year history is short when compared to that of our partners at the Chartered Banker Institute. Founded in 1875, the Institute has always worked to put ethical professionalism at the heart of the banking sector. Long before modern narratives about the “crisis of capitalism” that Skidelsky feared, long before the global financial crisis that raised public and political questions about the conduct of some parts of the financial services industry, the Institute was making an argument that is still utterly vital today: that bankers and others in financial services, working professionally and to shared standards, promote the public good. The Institute’s approach to green finance is just the latest example of how it puts that principle into practice. At the 2018 Green Finance Summit, the

Institute launched the Green Finance Certificate, the world's first benchmark qualification for practitioners.

A market economy that maintains its legitimacy by delivering fair outcomes and meeting social needs. A banking sector that upholds high standards and serves the public good. The SMF and the Chartered Banker Institute are natural partners, and green finance is just one area where our interests align. When Robert Skidelsky wrote that essay 30 years ago, the world stood on the brink of a new era with new challenges: the end of the Cold War brought new opportunities but also posed new threats to the market system and the people it served. The same is true today: the market economy must once again prove its worth in the face of the global climate emergency, and the financial services industry will be in the vanguard of the battle to come. We hope that the ideas and analysis assembled here will help in that task of meeting that challenge.

HOW CAN FINANCE AND INDUSTRY STEP UP TO MEET THE CHALLENGE OF CLIMATE CHANGE?

MARY ROBINSON, CHAIR, THE ELDERS

Climate change is one of the greatest existential threats the world faces today.

Its impact is already being felt around the world as unprecedented extreme weather events wreak havoc on lives and livelihoods, from droughts in the Horn of Africa and rising sea levels in the South Pacific, to wildfires in California and even the Arctic Circle.

Hundreds of thousands of people across countries and across generations are mobilising to demand urgent climate action from their governments and business leaders. The young people striking from school every Friday for their futures speak with the same voice as people of my generation, who are appalled at what we risk leaving to our grandchildren in terms of an irreparably damaged planet.

Every one of us is implicated here; we all have a responsibility to consider our individual and family consumption behaviour, whether in terms of diet, lifestyle, investments, or transport habits.

The old slogan "think globally, act locally" continues to ring true. But we also need to act globally and acknowledge that only concerted multilateral measures have any chance of seriously addressing the problem on a meaningful scale.

This is what I call "climate justice", and it informs the work I have done for many years as a UN climate envoy and as a member of The Elders, the group of independent leaders founded by Nelson Mandela who work for peace, justice and human rights.

Climate justice links human rights and development to achieve a human-centred approach, safeguarding the rights of the most vulnerable people and sharing the burdens and benefits of climate change and its impacts equitably and fairly.

In this regard, we would all do well to heed the words of Pope Francis, who recently declared that…

> *"faced with a climate emergency, we must take action accordingly, in order to avoid perpetrating a brutal act of injustice towards the poor and future generations."*[1]

The Pope's words stand in stark contrast to the track record of many secular leaders, whether from government, finance or business, who have spurned their responsibilities or prioritised short-term profits over sustainable strategies.

To quote again from the Pope:

> *"Political decisions, social responsibility on the part of the business community and criteria governing investments – all these must be guided by the pursuit of the long-term common good and concrete solidarity between generations. There should be no room for opportunistic and cynical efforts to gain small partial results in the short run, while shifting equally significant costs and damages to future generations."*[2]

What could be more opportunistic and cynical than still seeking to exploit and extract fossil fuel reserves from under the ground, when the scientific evidence is abundantly clear that we need to end **all* combustion of fossil fuels by 2050 if we are to have any hope of keeping global temperature rises to below 1.5°C?

As UN Special Envoy on Climate Change in the period just prior to the Paris Agreement of 2015, I spoke at length on the need for a “just transition” to a zero-carbon, climate-resilient economy that provides jobs, dignity and opportunity for all.

Those who most deserve climate justice are those who are the least responsible for fossil fuel emissions: the women and men who live in the least-developed countries, including small island states whose very existence is threatened by rising sea waters.

But I strongly believe that the principle of a just transition applies equally to the fossil fuel industries themselves. We know that fossil fuels are finite, and that there are increasingly stringent environmental, economic, and ethical imperatives to keep them in the ground and pursue new, clean forms of energy production.

How will oil and gas companies manage this transition in a way that sustains their business, satisfies their regulatory requirements, retains their employees, and enables their investors to meet their own fiduciary obligations?

The Governor of the Bank of England, Mark Carney, set out this challenge starkly in a recent article with his French counterpart François Villeroy de Galhau:

> *“Carbon emissions have to decline by 45% from 2010 levels over the next decade in order to reach net zero by 2050. This requires a massive reallocation of capital. If some companies and industries fail to adjust to this new world, they will fail to exist.”*[3]

The future of our planet will not be well served if the titans of the energy industry become obsolete and defunct, because they did not act in time to adapt to the realities of our changing climate and economic paradigms.

How much more profitable would it be - in every sense of the word - for the industry’s creativity, industriousness, and capacity for growth and innovation to be placed at the service of a new vision of clean, renewable, sustainable, and equitable energy production?

This is why I believe it is essential for the key players in the industry, and the investment community with whom it is so intertwined, to commit to radical, urgent but eminently feasible actions to help meet the goals of decarbonisation set out in the Paris Agreement and the UN’s 2030 Development Agenda.

This must include:

- A firm and clear commitment to halt any and all plans for future fossil fuel extraction, whether through drilling, mining, fracking or any other forms;
- Developing a comprehensive, transparent database of all existing fossil fuel assets and reserves.

Such a database would constitute a global registry of future emissions of carbon dioxide, in the form of existing and planned fossil fuel projects.

It would show investors that the companies are serious about providing adequate and substantive disclosure on how they are managing the business risks and opportunities associated with climate change and the transition to a low carbon economy.

Existing data already suggests that there are between five to seven times more proven fossil fuel reserves of coal, oil and gas that can possibly be burned given the level needed to stay well below temperature rises of 2°C.

A publicly-accessible registry, whether state- or investor-owned, would enable all stakeholders to organise a new plan for an orderly wind-down of pending or proposed projects – a just transition, in other words.

It would give clarity to investors, who hold an extraordinary latent power to further the sustainability agenda, and thus secure a long-term future for their own assets and investment strategies.

It would also enable all companies to maximise every last drop of existing reserves, rather than squandering valuable resources on future extraction which may never yield a cent of profitability.

I am under no illusion about the challenges the energy and finance industry faces in managing a just transition. But I am also under no illusion about the risks posed to every living person on Earth if these challenges are not faced head on, with honesty, seriousness and integrity.

Let us listen to our children and grandchildren, and act to prevent the grave act of intergenerational injustice they fear will deprive them of a future.

If we fail today, it will be an unconscionable betrayal for which our successors will pay an intolerably high price.

GREEN FINANCE: HARNESSING THE POWER OF MARKETS

SIR ROGER GIFFORD, CHAIR, GREEN FINANCE INITIATIVE & ALDERMAN, CITY OF LONDON, CORDWAINER WARD

The public's demand for action on climate change can be measured in many ways.

You are hard pressed to find someone who has seen Sir David Attenborough's immensely popular 'Blue Planet' documentary series and is not moved by the vivid portrayal of the destruction being wrought upon our natural environment by greenhouse gas emissions and plastics.

Protests also give pause for thought. Earlier this year, schoolchildren from across the country marched on the streets, highlighting the deadly threat our scientists say is posed by rising global temperatures, and demanding the UK government steps up its effort to tackle the effects of climate stress. More recently, Extinction Rebellion, the activist group campaigning for action on climate change, seized the news agenda through a separate series of protests, demanding the government declare a climate emergency and commit to reducing greenhouse gas emissions to net zero by 2025. So effective were the protests, that they briefly toppled Brexit from the front pages of the press.

So, it is good to note that successive UK governments have edged the country closer to sustainable energy consumption. The 2008 Climate Change Act was a world-first at establishing a credible and enforceable emissions reduction pathway. Emissions in the UK have fallen 38% since 1990, an impressive development. And just as noteworthy is that, at the time of writing, the UK has gone 21 days (and counting) without using coal as an energy resource.

While it is clear that climate change is a concern for many reasons, and requires immediate action, assessing the associated economic risk is necessarily complex – which is one reason it has taken a long time for a consensus to form around the right way forward. There is also little doubt that, via taxation and fiscal policy, governments have the most direct means of reducing CO2 emissions. But there is a fundamental problem which has been termed the tragedy of the commons or, more recently, the horizon: the inescapable truth that no market player today needs to take responsibility for shared negative consequences far off in the future. And yet as we are increasingly coming to understand, perhaps the shared negative consequences from climate change are not yet so far away. The market is starting to recognise, and to internalise, climate risk.

From the development of new environmental forms of energy to the finance required to fulfil its production and application, the innovative capacity of markets has done much to drive the proliferation and prominence of sustainable energy. It is, however, clearly not yet enough. Research by NASA shows that the current warming trend has a probability greater than 95% of stemming from human activity since the 20th century. More alarming still, the warming trend is proceeding at a rate that is unprecedented over decades to millennia. We must all, therefore, do our bit – and more.

So, the question for the financial services sector in the UK and beyond is this: what more can markets do?

First, an appreciation of the critical role that the financial services – and the private sector more generally – has in successfully combating climate change must be at the heart of all relevant initiatives. Following the 2015 Paris Climate Summit, this need to place markets at the heart of tackling climate change drove the City of London Corporation and the UK Government to establish the Green Finance Initiative some 3 years ago. By bringing together international expertise from across the financial and professional sector, the Initiative has provided market leadership in green finance, enabling advocacy for specific regulatory and policy proposals that enhance the global green finance sector.

The UK is well-placed to coordinate such efforts, particularly with London being one of the world's principal financial centres. Through the world-first Green Investment Bank, the UK wrote the book on financing green. And with firms like Abundance Investment, local green projects are riding the wave of green finance – more than £90 million has been invested using the Abundance platform. This innovative drive is clearly demonstrated by the 38 green companies which have raised $10 billion combined on the London Stock Exchange.

Second, the financial services sector must work in a concerted manner towards the aim of establishing a net zero emission economy. Doing so requires coordination. The Green Finance Taskforce published a report in March 2018 which provides a clear path forward. After working with 140 organisations across the finance and energy sector, the Taskforce made the following recommendations to the UK government:

- Boost investment in innovative clean technologies
- Drive demand and supply for green lending products
- Set up 'Clean Growth Regeneration Zones'
- Improve climate risk management with advanced data
- Improve corporate disclosure and enhance pension fund investment requirements
- Build a green and resilient infrastructure pipeline

Third, we must assemble the necessary resources and construct the necessary regulation to enable an environmentally sustainable UK economy. On 2nd July 2019, the Green Finance Institute will be launched. The Institute – one of the core recommendations of the Taskforce – will be the one-stop-shop for world-leading climate science and capital, dedicated to the further embedding of green finance. The Institute will mobilise green finance missions to accelerate sector-specific transitions to a low-carbon future. Indeed, these missions will draw on actors across the green finance landscape, from government to finance and industry. The Institute will ensure London can use its leadership in green finance, and influence international dialogue through policy, innovation and by creating more awareness around the issues that underpin green finance.

Fourth, while driving change at a local and national level, the financial services sector and UK government must work with international partners. One such partnership is the UK-China Green Finance Centre, which will enhance cooperation between UK GFI and China's Green Finance Committee. The Centre opens a host of new possibilities including improved access to data for green investors in both countries, cross-border flow of capital including for Belt and Road projects, and more robust UK-China policy and leadership on green finance. Equally, there are opportunities with other international centres to continue to expedite green finance globally and accelerate activity in the green finance sector.

The sharing of best practice, learning from one another's achievements and coordination on regulatory matters is of mutual benefit. The UK has a lot to offer. Green bonds listed on the London Stock Exchange, which has over 100 green bonds from 16 different countries, have raised in excess of $26 billion of funding to date. This is a good start, though efforts must be strengthened if we are to raise $90 trillion by 2030, the estimated sum required to achieve global sustainable development and climate objectives.

Harnessing the power of the markets means coordination with government to generate consensus, widen access to finance, and promote the free exchange of ideas, best practice and expertise – in the financial sector and beyond.

And that's what we're here to do.

BANKS AND BANKERS CAN SAVE THE WORLD

SIMON THOMPSON, FCBI – CHIEF EXECUTIVE, CHARTERED BANKER INSTITUTE

Since 1875, the Chartered Banker Institute – the oldest institute of bankers in the world – has played a leading role in helping finance professionals develop and demonstrate the traditional banking values of stewardship, thrift, prudence and professionalism. Our founders stressed the importance of financial stewardship – of banks being stewards of depositors' funds. Now we speak of stewardship of people and planet – but it's the same principle at heart.

Which brings me to green finance, and why I firmly believe that green finance principles and practice must form the foundation for the future of banking and financial services.

Mitigating the effects of climate change and managing a successful transition to a low-carbon world is the greatest global challenge we face. Facilitating this transition will require the combined and sustained efforts of global bodies including the United Nations, national governments, central banks and regulators, and the private sector. The scale of the challenge and speed of response required has continued to grow since the announcement of the 2015 Paris Agreement, with the most recent Intergovernmental Panel on Climate Change (IPCC) report recommending limiting global temperature rises to 1.5°C.[4]

While the interest in green finance from regulators and policymakers is very welcome, it is a customer and client demand that will ultimately reshape our sector to align fully around green finance. The green finance sector is already growing rapidly and there are very significant commercial opportunities for banks, investment funds, insurers and other financial services organisations to support the transition to a low-carbon world. Despite rapid growth in recent years, however, there is still a very substantial investment gap. The scale of the challenge is beyond that of public finances alone, and, given the commitments made by the majority of national governments, a significant increase in support from the financial services

sector is required to achieve the objective of Article 1.2c of the Paris Agreement – to make flows of finance consistent with reducing greenhouse gas emissions and building a climate-resilient world.[5]

In 2014, the Global Commission on the Economy and Climate estimated that approximately $93 trillion was required over a 15-year period to fund the transition to a low-carbon world, i.e. approximately $6 trillion per year, with two thirds of that needing to be deployed in developing countries.[6] The United Nations Environment Programme (UNEP) estimates the transition to require capital of 'at least' $60 trillion to 2050, with approximately $35 trillion of this required to decarbonise energy and other carbon-dependent systems; and the remainder to support the climate change adaptation required.[7]

This is not only a commercial opportunity for the financial services sector, however. Importantly, it is also an opportunity for the sector to demonstrate its social purpose, by playing a key role – the key role – in the transition to a low-carbon economy and a more sustainable world. By supporting activities, organisations and sectors that can mitigate climate change and help individuals and communities adapt to the effects of climate change, financial services organisations can help solve the world's greatest collective challenge.

This requires green finance itself to transition – to move from being part (currently a small, albeit growing part) of finance to becoming the mainstream practice of banking and finance. There is still a long way to go achieve this. Despite some notable recent announcements from some institutions on green and sustainable finance, many banks and investors still provide substantial funding to environmentally destructive activities, including the burning of fossil fuels, that contribute to potentially catastrophic climate change.

While international and national institutions, and organisations large and small, have key roles to play, in this transition – so too do individuals. Finance is built on pillars of financial and human capital. Change is led, ultimately, by individuals – not by organisations. The change we seek in mainstreaming green finance principles and practice needs to be led by increasing numbers of finance professionals. These individuals will need an understanding of the critical role of financial services in supporting the transition to a low-carbon world, combined with the knowledge and skills of finance to be able to develop and deploy products, services and tools that will mobilise capital to support the transition, address climate-related risks, and direct customers and communities toward investments that exploit green finance opportunities.

Developing the green finance knowledge and skills of finance professionals will help support the mainstreaming of green and sustainable finance. This was the motivation behind the Chartered Banker Institute's Green Finance Certificate™ – the world's first benchmark qualification for green finance. Proposed by the UK's Green Finance Taskforce in 2017, the Green Finance Certificate was launched at the Global Green Finance Summit in London in July 2018 and sets the global benchmark standard for the knowledge and skills required by individuals working in green finance. Later this year, the Chartered Banker Institute will launch a new Green Finance Professional™ designation for individuals who complete the Green Finance Certificate™, supporting a global network of financial services professionals committed to green finance principles and practice.

The opportunity green finance provides for our finance sector and finance professionals should not be underestimated; it is the opportunity not just to trade profitably but to play a key role in solving our greatest global challenge. Playing a proactive role in supporting (and, at times, leading) the transition to a sustainable, low-carbon world will help demonstrate a positive social purpose for financial services, help to reconnect banks and society, and contribute to the process of rebuilding trust in the financial sector overall. To put it crudely: banks and bankers can help save the world – and we should grasp this opportunity.

DOES PUBLIC PRESSURE MEAN THAT WE ARE REACHING A TIPPING POINT WHEREBY BIG BUSINESS HAS NO CHOICE BUT TO PURSUE A SUSTAINABLE FINANCE STRATEGY?

BEN PAGE, CHIEF EXECUTIVE, IPSOS MORI

Is climate change important to consumers?

As scientists become increasingly convinced that we are living in a new geological epoch, defined by humankind's impact on the planet – the Anthropocene – it seems that the public are increasingly heeding messages around climate change.[8]

Even a few years ago, data from the Ipsos Global Trends survey showed that three-quarters of Britons attributed most climate change to human activity, while two-thirds believed the country was headed for an environmental disaster without rapid changes to people's habits.[9,10] As always, there is a gulf between what people 'say' motivates or concerns them and what actually drives their behaviour, but 2019 has seen the highest spontaneous concern about climate change Ipsos MORI has measured in 29 years. In addition to increasingly frequent public demonstrations – whether by hardened activists Extinction Rebellion, or the fresher faces marshalled in school strikes inspired by Greta Thunberg – we are also seeing the dial beginning to move at the macro level.

Polling we conducted to coincide with Earth Day in March 2019 showed 37% of global citizens put climate change as one of the top environmental issues, narrowly ahead of air pollution (35%) and dealing with rubbish and waste (34%). Other issues – whether deforestation (24%), depletion of natural resources (22%) and the overpackaging of consumer goods (15%) – were further behind still.[11]

Yet it is important to remain grounded. For now, at least, the environment remains a 'second order' concern. The large majority of citizens consider employment, healthcare or crime to be bigger worries than dealing with climate change. In Britain, we have Brexit to preoccupy us too – while the proportion worried about the environment has recently hit a new high of 20%, more than three times as many people say the same about Britain's exit from the EU (66%).[12]

But it is somebody else's problem to solve...

Perhaps as a result, the increasing public concern may not be sufficient to overcome the biggest barrier to taking positive steps; while actions speak louder than words, they require a lot more effort. Despite the warm words, people are not especially likely to alter their behaviour with just 9% of consumers feeling it is their responsibility to lead in tackling climate change.[13]

Recent polling around single use plastics lays this contradiction bare: 85% of the British public are concerned about the effects of plastic packaging and bags on the environment, and 41% say they are very concerned. There is a high level of support for several initiatives to tackle the problem, including taxes on shops that use a lot of non-recyclable packaging, and forcing councils to spend more on recycling.[14]

However, when we asked the public what they would be willing to do personally to deal with the problem, relatively few said they would go significantly out of their way: 18% might stop shopping at the biggest offenders, 14% would pay more tax to support local councils, and 12% would pay more for goods which used single-use plastics.[15]

Instead, we believe government and policymakers have latent permission to make changes – the plastic bag levy was introduced without a referendum, and has seen an 85% reduction in plastic bag usage in one year.9 It makes sense, it 'nudges' people to do their bit, it seems broadly fair. London has a Congestion Charge precisely because the then Mayor, Ken Livingstone did not hold a referendum, but introduced it in the face of public opposition – and got re-elected in 2004 with 55% of the vote. The alternative modes of transport were in place, and the charge was applied to all road users in what was seen as 'fair'.

So, is climate change more important to policymakers?

With trust in the political establishment at very low levels, we see climate change impacting policy in unpredictable ways. In France, the announcement of a highly unpopular fuel-tax increase led to the gilets jaunes movement, a presidential crisis and the eventual withdrawal of that policy. In the UK, as Prime Minister Theresa May prepares to leave office, we see more than 120 businesses urging her to push through legislation for the UK to slash greenhouse gas emissions to net zero by 2050. Rather than being viewed as a drag on business, the signatories, including household names John Lewis and Aviva, state that: "By being the first major economy to legislate an ambitious, domestically achieved net-zero target… the UK can show leadership on a global level while strengthening the UK economy."[16]

Alongside the target change, the letter calls for a policy package that would address areas such as energy efficiency and electric vehicles. "Business stands squarely behind the ambition for the UK to have a net-zero emissions economy by 2050," said Carolyn Fairbairn, CBI Director-General. "Immediate and decisive action is needed to avoid the catastrophic impacts of climate change and create opportunities in low-carbon technologies."[17]

With the Greens making significant gains in the European Parliament elections in May, there will also be increased pressure within Europe to reduce greenhouse gas emissions to net-zero by 2050. It seems, Brexit or no Brexit, there will be a definite need for finance to take a leading role in tackling climate change.

Will this impact investment decisions?

So, when it comes to making decisions about which financial providers to become customers of, or where to make investments, we can't expect most consumers to actively reward companies doing the most to tackle climate change. However, with younger consumers more likely to be motivated by sustainable investments – and set to inherit $30 trillion in assets from their baby boomer parents by 2025 – we can expect this picture to change and for it to become a business imperative for advisors to offer sustainable investments to attract and retain clients.[18] Similarly, we see that activist investors and even lone shareholders can have an influence and can bring boards to account on their Sustainable Development Goals.

Recently, we have seen some institutional investors such as HSBC and AXA moving out of 'fossil fuel' funds. With both consumer and political pressure, it seems inevitable we will see many more corporates voluntarily making ESG commitments, some genuine, some 'greenwashing', with some hoping we are on the cusp of a new dawn.

Sir Ed Davey, the former Energy secretary, speaking on BBC Radio 4's Today Programme, said: "What we need to do is have a new economic model. I'm talking about decarbonising capitalism, making capitalism turn green so Britain is a world green finance capital. That means being tough on our banks, on the stock exchange, on the pension funds, so they take account of climate risk."[19] His party, the Liberal Democrats, are currently seeing a resurgence, along with the Green Party itself, so this type of view – strongly aligned with a 'Remain' perspective, may gain ground.

It looks as though the tide is turning, with consumers, policymakers and some businesses recognising the need to tackle climate change. With the importance of environmental concerns gradually rising and unlikely to reverse, it would appear we are on the cusp of a step change whereby sustainable finance becomes simple 'table stakes' in the investment community.

HOW BANKS CAN CONTRIBUTE TO THE PARIS AGREEMENT AND THE SUSTAINABLE DEVELOPMENT GOALS

BEN CALDECOTT, DIRECTOR, OXFORD SUSTAINABLE FINANCE PROGRAMME & ASSOCIATE PROFESSOR, UNIVERSITY OF OXFORD

The banking sector is where the financial system and the real economy meets. Banks provide loans and services critical to companies, households, and governments. The Sustainable Development Goals (SDGs) and the Paris Agreement are unattainable without banks financing solutions to these massive social and environmental challenges. Nor can we have efficient, fair, and resilient financial and economic systems if banks fail to manage and reduce environment-related risks, particularly climate-related risks, for themselves and for their clients.

In September 2018, the Bank of England published results from a survey of 90% of UK regulated banks representing over £11 trillion in global assets.[20] The survey was designed to see how these banks view climate change. It found that while 70% of banks recognise that climate change poses financial risks, only 10% view climate change more holistically and take a long-term strategic view of the risks. Disappointingly, only 30% of banks still consider climate change as only a corporate social responsibility (CSR) issue, with little or no relevance to business strategy or operations.

The survey was interesting for a number of reasons. First, it highlighted how climate change has quickly gone from merely one CSR issue to a topic of concern for risk management, client relations, investor relations, product development, government affairs, and marketing, among other areas. In other words, it is now seen as increasingly relevant across a business and therefore needs to be managed in that way by senior executives and the board. It is worth remembering that few (if any) banks anywhere in the world would have viewed climate change as 'strategic' at the beginning of this decade.

Second, it highlighted how we still have a long way to go. How long will it take to go from 10% of banks viewing climate as strategic to 100% seeing it that way? And while viewing an issue as strategic is important, what does that actually mean in practice? How do we achieve a transition in how banks think about these issues and simultaneously achieve significant changes in practice too?

Third, while climate-related risks have risen up the agenda, there are a wider range of environment-related risks that are material and potentially of systemic importance, including risks related to nature and biodiversity loss. In April 2019, the Central Banks and Supervisors Network for Greening the Financial System (NGFS) highlighted how this is a gap where much more work needs to be done.[21] The NGFS includes 36 central banks and supervisors – representing five continents, half of global greenhouse gas emissions, and the supervision of two thirds of the global systemically important banks and insurers.

Fourth, the focus has been on climate change as a risk, but there is growing demand from clients, policymakers, and other stakeholders to also examine the positive and negative impacts of loans and services provided by banks for meeting the Paris Agreement. How do we ensure individual banks and the entire banking sector are making loans aligned with climate change and the other SDGs?

This throws up a wide range of challenges and opportunities for banks and the banking sector. Here are some:

Clearly, the transition in thinking needs to accelerate, rapidly followed by systematic operationalisation across banks. Changes in norms, practices, and standards are changing and can change quickly. This is being supported by new qualifications, for example, new courses on sustainable finance by the Chartered Banker Institute and the CFA, as well as by efforts to mainstream these topics in existing qualifications and professional standards.[22,23]

Regulatory change will also spur reform. In April 2019, the Bank of England published a new supervisory statement for UK regulated banks and insurers.[24] This means that UK regulated entities must have comprehensive plans to manage the financial risks of climate change and designate responsible managers under the Senior Managers Regime. Regulated firms will need to submit plans and identify responsible individuals by 15th October 2019.

This change in regulation and supervisory practice is impressively comprehensive. It means that all UK regulated banks (and insurers) need to have capabilities and tools to measure and manage climate-related risks, including short and long-term scenario analysis. It means that banks will need to disclose these risks and have clear lines of responsibility for the management of such risks, including at the board level. It also sets out clearly that the stringency of supervision will ratchet over time as practices evolve.

This is a major development and one that I expect will be quickly replicated across jurisdictions represented in the NGFS.

Innovations in practice will also speed up the process. The data and analysis required to measure and then manage different environmental risks and impacts is changing. Earth observation and remote sensing combined with artificial intelligence will transform the availability of information in our financial system and change how risks, opportunities, and impacts are measured and managed by banks and financial institutions.

New products, such as Sustainability Improvement Loans, where clients receive lower interest rates if they meet or outperform sustainability measures, are a powerful incentive and can create business opportunities for banks, lower credit risk, and support the real economy transition.

Banks can also support retail clients, from high-net-worth individuals to the smallest millennial retail savers, and help them align their own assets with the need for much smaller environmental footprints. How banks can engage with retail clients and provide them with solutions is a big opportunity for winning business, as well as for accelerating systemic change. This extends from green mortgages, enabling energy efficiency retrofits, through to empowering individuals to engage constructively with the companies. These efforts can help normalise and mainstream behaviours necessary for tackling climate change.

The real economy cannot transition in time to meet the SDGs and the Paris Agreement without the banking sector providing the capital and services needed. It is in the interests of banks to move quickly given the scale of the opportunities and the risks that are already materialising. Banks need to develop comprehensive strategies, together with detailed plans for implementation tied to appropriate resourcing and levels of accountability to ensure implementation. This will likely become a mandatory regulatory requirement, and this is already so in the UK. But banks should be responsible and act sooner rather than later. Critically, it is also in their own commercial interests to do so and they should not wait for regulation.

GREEN FINANCE – THE ROLE OF THE REGULATOR

RICHARD MONKS, DIRECTOR OF STRATEGY, FINANCIAL CONDUCT AUTHORITY

Financial markets are an essential component of modern economies. By allowing an efficient allocation of capital, they ensure that consumers can invest money in the expectation of a return, and companies can borrow money to invest and grow. Financial services are also integral to our daily lives – through the banking and payments systems which enable us to smooth lifetime income and expenditure, and protect ourselves against unforeseen events. Effective, efficient financial markets benefit those that use them – individuals, businesses and the wider economy.

Financial firms and markets will be materially impacted by climate change. As the regulator of these firms and markets, the Financial Conduct Authority (FCA) has an important role to play in ensuring that these markets continue to serve user needs.

This essay discusses the role of the FCA in respect to climate change. It argues that effective regulation helps build trust in markets and helps markets grow, and that regulation can play an important role in enabling green finance to develop. It sets out the key issues we face today, before considering how our regulatory approach could develop in the longer-term.

FCA Role

As the regulator for UK financial markets, the FCA's mandate is clear: we have a strategic objective to ensure markets work well. We are here to serve the public interest and to serve users of financial services. To do this, we must anticipate future market developments, including those relating to climate change, and act to enable markets to develop in ways that meet the public interest.

Left to themselves, financial markets can prioritise short-term outcomes that in the medium and long-term do not serve the public interest. This was recognised almost 200 years ago by William Forster-Lloyds, describing how short-term individual interests can lead to the exploitation of shared resources, thus working against the public interest by neglecting the long- term implications of personal gains. 200 years later, the FCA takes a proactive role in service of the long-term public interest. We are doing this in relation to long-term investments, opening a discussion on primary capital market structures and regulation to assess whether they reinforce short-termism, and in respect of climate change.

Physical risks resulting from climate change, whether event-driven or resulting from long-term shifts, will most likely have damaging effects on the financial performance of firms. Investors struggle to identify which companies are most at risk from climate change and which ones are prepared and taking action. This affects efficient capital allocation. The transition to a low-carbon economy has begun and is being supported by legislative change. Both listed firms and regulated firms must adapt to those changes. Finally, there is a strong investor demand for 'green' products. For example, 78% of UK Defined Contribution members aged 22-34 feel strongly about environmental issues, and around one in four of them always boycott a brand or company because they disagree with the ethics or their behaviour.[25]

Regulation helping market growth

Regulation has played a critical role in enabling financial markets to develop. As early as 1829, public authorities in New York recognised that deposit insurance created consumer trust in banks and enabled the sector to grow. Prudential standards facilitate fractional reserve banking and support economic growth, whilst disclosure standards enable investors to reach an informed view of traded securities in order to assess true asset value, risks, and opportunities. Without these protections in place, it is unlikely that financial markets would have enabled the huge leaps forward in living standards and GDP growth witnesses throughout the twentieth century. With this in mind, effective regulation must be part of the story of market growth, not an afterthought.

Our challenge today is to determine how financial markets will need to evolve in response to the physical effects of climate change, the transition to a low-carbon economy, and increased investor demand for green financial products. We also need to work with the industry, consumer groups, and climate scientists to understand how the FCA can enable the markets to evolve.

What good may look like

If we are to ensure that financial services markets function well and protect the investors who access these markets, we need to work with industry and consumers to anticipate and prevent future problems. But what might "good" look like for investors? It is investors being able to invest with confidence in financial products with a clear understanding of what green means. It is the absence of greenwashing and mis-labelling of 'green' financial products. "Good" for investors also looks like an adequate pricing of climate-risk by financial markets and the ability to measure the 'green' or sustainable aspect of a product, as well as its financial return.

As climate change is an unparalleled issue that commands a global response, nearly 200 governments signed the Paris Agreement in 2015 to commit to reinforcing the global response to climate change and maintain global temperature increases below a certain level. Since then, the European Union launched an action plan on sustainable finance that aims to re-orient capital flows towards sustainable investments and decarbonise the EU economy to deliver climate, environmental, and sustainability goals. In order to support the transition to a low-carbon economy and mitigate the impact of the effects of climate change on the UK financial sector, we published our Discussion Paper on climate change and green finance late in 2018.[26] It sets out how the impacts of climate change are relevant to the FCA's statutory objectives of protecting consumers' market integrity and promoting competition.

Market developments and the future of regulation

Looking at the future of regulation, it seems clear that it now demands that we combine success with fairness and sustainability. We are departing from the traditional, namely more philosophical view of the purpose of regulation according to which rules are prescriptive statements that forbid, require, or permit some action or outcome. Indeed, an important and recent development in the purpose of regulation is its use to enable change consistent with our public policy objectives.[27]

Indeed, our regulation should support the development of innovative financial products in the green finance sector to assist the UK's transition to a low-carbon economy. That is why we launched our Green Fintech Challenge in 2018, actively encouraging the development of creative, market-led solutions in this area. Moreover, our Innovate regulatory sandbox allows businesses to test innovative products, services, business models, and delivery mechanisms in the real market, with real consumers.

Nonetheless, regulation must remain grounded in public policy objectives and in the field of public goods. Sometimes innovation will be consistent and other times it will need further guidance to get there. The nature of competition and innovation will make some businesses succeed and not others. We have never and will never be in the business of picking winners. For example, we remain neutral as to technologies and the types of firms we regulate in the areas of Fintech.[28]

Thus, regulation is deemed to play an important multi-faceted role in climate change. Our remit is broad, ranging from underpinning tail risk mitigation to assisting a smooth transition to a low-carbon economy in the UK. But more importantly, the role of regulation with regards to climate change is to ensure markets work well in the future and work in the interest of consumers.

CAN INSURANCE HELP DRIVE A GREENER FUTURE?

HUW EVANS, DIRECTOR GENERAL, ASSOCIATION OF BRITISH INSURERS

Few parts of the global economy have a bigger stake in tackling climate change than insurance and long-term savings. As providers of cover to households and business, the insurance industry is uniquely exposed to the immediate costs of failing to address climate change. Then, in the longer term, as risk managers and as institutional investors, our sector has the capacity to shape the future of energy provision.

Insurance protecting society from the impact of extreme weather

First, let us set aside from the outset any suggestion that the threat of climate change is overstated. Insurers across the globe, particularly in our world-leading major risk sector in London, know full well how very real the impact is. These are listed companies accountable to shareholders and they see the impact of climate change on their balance sheet first-hand.

As the leading international provider of cover for large-scale and specialist risks, the UK's insurance sector sees the financial impact of extreme weather events across the globe. The London market bore the brunt of hurricanes Florence and Michael, which are believed to have resulted in insured losses of more than $10 billion.[29]

Association of British Insurers (ABI) members also see the impact in the domestic market of cover for homes and businesses across the UK, where – even in a year without a major flood – 2018 saw an extreme freeze that resulted in insurers paying a record amount for burst pipes: £194 million in a three-month period. A heatwave later in the year led to more than 10,000 households needing to claim for damage caused by subsidence, at a cost of more than £64 million.[30]

One clear conclusion from recent experiences is that society needs to become more resilient to extreme weather, and insurance can play a role in that. In 2017, for example, while the spate of hurricanes resulted in record pay-outs, more than half of the overall estimated losses were not insured.[31] Given that those worst affected by climate change, such as the flood plains of Bangladesh, will be the world's poorest societies, there is an urgent social justice imperative to our work. Insurance gaps need to be identified, and filled before any future disasters, not in their aftermath.

Reflecting climate risk in financial regulation

Only so much can be done to manage the risks from extreme weather as they grow. The long-term prize must be reducing emissions and thus preventing unmanageable rises in global temperatures. This means changing how society generates and uses energy, and that costs money. Lots of it. The International Energy Agency (IEA) estimates that $3.5 trillion needs to be invested in the energy sector each year up to 2050, which is double the current level of investment. Alongside this, investment within 'end-users' (industry, transport, and buildings) needs to increase by ten times.[32]

Given these sums, quite rightly, people want to know that financial services are using their power as investors to encourage businesses to take a long- term view of decarbonisation. And given that insurers also bear the costs of inaction, this would seem like an area where the stars are neatly aligned. With the right regulatory framework, the £1.9 trillion of assets managed by the UK's insurance and long-term savings sector could play a major role in enabling that change.

The challenge, however, is that our sector's primary obligation has to be to pay claims reliably and to provide pensions securely. Making sure that individual insurers can meet these aims is essential to the UK's financial stability. Insurers invest in order to ensure they are equipped to meet these long-term liabilities. So, the criteria for decision-making on how our sector invests must be carefully thought through and recognise that it will take time to unwind long-term investment portfolios.

We have therefore welcomed the Bank of England's recent policy statement on managing the risks of climate change, which makes the UK the first country to make climate change a central part of financial regulation.[33] This is accompanied by detailed work programmes within both the Financial Conduct Authority (FCA) and Prudential Regulation Authority (PRA). This work has struck the right tone, recognising the areas where there is still uncertainty and that tackling climate change will therefore need to be a genuinely collaborative process between regulators and industry.

It is also worth emphasising that – whatever the long-term shape of financial regulation post-Brexit – the UK remains committed to the principles of the EU Solvency II regime, so decisions taken at EU-level will therefore have a major impact. Taken alongside the European Commission's comprehensive Action Plan on Sustainable Finance and a forthcoming consultation by the European Insurance and Occupational Pensions Authority (EIOPA) on sustainable finance that will feed into the 2020 review of Solvency II, the Bank of England's work could mark the beginning of a new chapter of finance's relationship with climate change.

Enabling a step-change in investment practice

The emergence of a wide range of Environmental, Social and Governance (ESG) investment opportunities demonstrates the increased appetite for these asset classes. But, while increased year-on-year net sales for ESG investments provide encouragement that investors do see these as a viable option, they remain only a small part of the overall investment mix, with 1.2% of total assets under management within these classes.[34]

The insurance industry is in a special position to help ESG investing grow – and it wants to. There is already evidence that, where there is scope to do so, insurers will make the switch to sustainable and ESG-compliant investments. Insurers and pension funds have made up the majority of early investors in the rapidly growing Green Bond market, with Aviva, for example, having invested £1.3 billion in the market.[35,36]

But, while these early signs on ESG are encouraging, it will require a major long-term effort to switch from well-established investment practices to areas which, currently, do not benefit from observable market prices or external credit ratings. To go further, we need support from the regulatory regime because, currently, the sector does not have a free hand to switch where they invest their capital.

Realising our sector's potential through the Prudential framework

The current Solvency II regime encourages firms to utilise government and corporate bonds as the majority of their investment mix, meaning most investment remains in the traditional sectors of energy, agriculture, and petrochemicals. Through the Bank of England's work and the forthcoming EU Solvency II review, the ABI wants to work with regulators to ensure that, over time, this evolves to allow 'impact investments' into non-traditional sectors, including renewable energy infrastructure.

This certainly does not mean the PRA setting aside all of its concerns or deviating from a focus on financial stability. But, through joint work between the sector and the regulator, more could be done to highlight possible opportunities and ensure that regulation is not acting as an unintended disincentive.

Insurers are increasingly interested in infrastructure investments, as the long-term risk exposure is well matched to the long-term liabilities insurers cover. However, as it stands, they have limited ability to do so, as most of these are 'greenfield' projects that inherently contain exposure to construction risk. As a result, they incur capital charges within the Solvency II framework that make them unattractive; asset eligible criteria act as a further restriction on investing in them.

So, while in the short-term the PRA's approach reflects the continued challenges associated with illiquid assets, including investing in 'greenfield' infrastructure projects and guiding firms accordingly, we see scope to overcome this.[37] One key avenue is to adapt to different circumstances within different parts of the market.

While there will clearly always be certain circumstances where it would be inappropriate for insurers to make such investments, life insurers, for example, with their long-term investment horizon, pose a lower risk to financial stability and are therefore well-placed to invest in these illiquid assets, which they can hold onto during periods of market volatility.

The overall direction of the regulator's work on climate change is positive; ABI members now have a good platform on which to work collaboratively to establish the areas where their investments can make the most impact. But a key challenge will be ensuring that the overall aim of facilitating green finance is integrated financial regulation, and not something seen as an addition on top. For insurers, that means moving away from a traditional approach to capital. Facilitating such a shift towards investing in the green economy would be an excellent example of regulation working together with industry as an enabler of change.

HOW DO WE ALIGN CAPITAL MARKETS WITH THE TRANSITION TO A LOW-CARBON ECONOMY?

INGRID HOLMES, HEAD OF POLICY AND ADVOCACY, HERMES INVESTMENT MANAGEMENT

Prior to the 2015 global agreement to cap a global temperature rise below 2°C and pursue efforts to limit increases to 1.5°C (the Paris Agreement on Climate Change), the Global Commission on the Economy and Climate was set up to examine and subsequently report on whether it would be possible to achieve lasting economic growth while also tackling the risks of climate change.[38] The report concluded with a resounding yes.[39] Moreover, the report stated that the capital for the necessary investments – estimated at $90 trillion – is available to meet the costs of this transition to a low-carbon economy. However, the report found several barriers to implementation. These include a lack of strong political leadership and a dearth of policies to accelerate the redeployment of capital into the energy, information communication technology, building and transport infrastructure, and land use change needed to avoid a climate catastrophe.

Four years later, the UK's Committee on Climate Change 2019 'Net Zero' report echoes and reinforces the same messages. The Committee forecasts that the UK could end its contribution to global warming within 30 years by setting and delivering an ambitious new target to reduce its greenhouse gas emissions to zero. However, the report also warns that to achieve this, market signals need to drastically and rapidly change – and policies will have to ramp up significantly to deliver the required transformation across all sectors of the economy. Lastly, the Committee stated that it is imperative to keep the public on side during this process of change, which requires the costs of the transition to be fairly distributed.

It is possible to achieve these goals. The reduction in cost of a number of key zero-carbon technologies means that achieving the 'net-zero' target is now possible within the economic cost estimated when Parliament passed the Climate Change Act in 2008. For example, latest cost data and prices emerging from auctions for renewable power contracts indicate that renewable generation can or will produce electricity at the same cost, or cheaper, than fossil fuel alternatives in most parts of the world.[40] In some countries, electric cars are already more cost effective than petrol or diesel alternatives; analysts expect this trend to grow across a number of markets over the next decade.[41],[42] Furthermore, large corporates such as Danone and General Mills are adopting regenerative agriculture techniques that protect and enhance the environment, improve carbon storage, and cut the dependence of farmers on agrochemicals, many of which are derived from fossil fuels. Mass deployment of these technologies is the next step, underpinned by a sea change in consumer preferences – not least in what we choose to eat.

Despite these positive trends, the global economy is still far off from delivering the low-carbon vision promised by the Paris Agreement. Best estimates put us collectively on track (with current policies) for a 3°C increase in global temperatures.[43] Precautionary estimates from international climate experts state that, as a result, the 1.5°C barrier will be breached in as few as 11 years.[44] In short, we are in a climate crisis, and there is no time to wait for a predominantly market-led shift to a low-carbon economy.

It is clear that investors, corporates, governments and citizens need to commit to and significantly step up their efforts to address these issues in order to achieve global climate security. Nonetheless, the boundaries of responsibility are blurred and overlapping. A recent editorial by the Chairman of BP, Helge Lund, set the conundrum out neatly when he noted no company can drive the transition to a low-carbon economy on its own; success will require new levels of collaboration across industry, consumers, and governments, aided by technological improvements and well-designed government policies.[45]

Against this backdrop, however, plenty of asset owners and investment managers can and should play their part in the transition and accelerate the alignment of capital markets with a low-carbon economy.

The first step is to build their awareness of the climate change threat and opportunity – and integrate such considerations into how asset owners award mandates and investment managers design funds and investment processes. This will help adjust pricing signals to reflect climate change risk and opportunity. The market share of such socially responsible or Environmental, Social and Governance (ESG) approaches to investing, which incorporate such information on climate risk and opportunity, is significant and growing, with around 20% of EU AUM now managed in this way.[46] We are also seeing the growth of positive impact funds – capital looking not just to manage risk but also capitalise on the opportunity that comes from addressing climate change and other environmental and social issues. Brexit notwithstanding, this is something all EU-regulated investment firms will soon need to consider and disclose how they take such issues into account going forward.[47]

It is not only the investment decision making process that must adapt. Given how far away we still are from delivering a low-carbon world, arguably the biggest change asset owners, investment managers, and indeed capital market makers such as the investment banks can make is to engage with companies most exposed to the low-carbon transition. These engagements should look to address climate risks or opportunities and challenge companies to move further, and at a faster pace, through assertive stewardship.

The Financial Reporting Council, one of the UK's financial regulators, recognises the importance of investors playing a more purposeful and outcome-focused stewardship role: it is the driver behind the proposed revisions to the UK Stewardship Code. The new Code, which is due to be finalised in summer 2019, states "stewardship is the responsible allocation and management of capital across the institutional investment community to create sustainable value for beneficiaries, the economy and society. Stewardship activities include monitoring assets and service providers, engaging issuers and holding them to account on material issues, and publicly reporting on the outcomes of these activities."[48]

The equal footing that the beneficiaries – the economy and society – are placed on within this definition is controversial for some who are arguably still entrenched in the 1970s Milton Friedman 'Chicago School' thinking: that there should be a clear separation between the goals of companies and the goals of individuals and government (i.e. public companies should focus on making money and leave ethical issues to individuals and governments).[49] Such thinking misses the changing academic consensus – which leading responsible investors internalised some time ago. Even at the Chicago School, the latest generation of academics are now arguing a shift toward maximising shareholder welfare is needed– and engagement and voting are a key means to achieve this.[50]

This is a critically important shift and is complemented by the stance taken in the Corporate Governance Code which states successful companies are led by effective, diverse and entrepreneurial boards "whose role is to promote the long-term sustainable success of the company, generating value for shareholders and contributing to wider society". This step change breathes new life into Section 172 of the UK Companies Act, which states that directors should promote the success of the company while considering the long-term impact of decisions; the interests of company employees; and relationships with suppliers and customers as well as the community and environment in which it operates.[51]

Investors are also beginning to demand that firms at the frontline of the low-carbon transition properly reflect climate risks in revenue forecasts, supported by proactive dialogue between audit firms, investors, and audit chairs of companies to ensure prudent assumptions are used.

These policy changes are imperative as they make it easier for capital market participants – companies, asset owners and investment managers alike – to have the challenging conversations needed about how business models, products and services must be adapted to help, not hinder, the delivery of a low-carbon economy.

The swiftest and most effective way to align capital markets with the transition to a low-carbon economy is to focus on transforming the underlying economy it finances. Amid the excitement of the growing green bond market – estimated in 2018 to be worth $167.3 billion (but still less than 0.2% of the global bond market) – and an emerging green loan market, the reality is that there is a huge amount more to be done to address the climate crisis, and that no single group can tackle it alone.[52]

The need for collaboration between investors, corporates, governments and individual citizens is urgent. If each wait to act, we will waste valuable time in mobilising the resources to tackle the immediate challenges we face. Furthermore, this could mean missing out on opportunities presented by the trailblazers that are innovating to solve such barriers presented by this climate crisis. Companies, asset owners and investment managers must act in collaboration and use their influence and expertise to drive companies to transition to a low-carbon economy urgently. They must also call for governments to create the market frameworks needed to accelerate the transition process. The need is great, the capital is available, and we can achieve lasting economic growth while also tackling the risks of climate change by seizing the opportunities presented by those providing capital solutions. So what are we waiting for? The time to act is now.

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THE POTENTIAL OF GREEN FINANCE

SEAN KIDNEY, CO-FOUNDER AND CEO, CLIMATE BONDS INITIATIVE

The October 2018 release of the International Panel on Climate Change's (IPCC) SR15 report exploded any faint illusions that the world still has the comfort of decades to take decisive action on climate.[53] Global emissions have continued to climb when they need to be reducing at 10% per annum, with potentially catastrophic consequences for life on Earth.

The astonishing thing about this is that we know what the solutions are; they are clearly laid out in the report.[54] It involves clean energy, low-carbon transport, energy-efficient buildings, industry and cities, and so on.

There are a plethora of reports estimating the levels of finance in green infrastructure needed through the 2020s to influence outcomes to 2050- 2060.[55,56,57]

In March 2018, Christiana Figueres and five other climate leaders called for $1 trillion in green finance by 2020.[58] However, much of what needs to be invested in climate solutions involves a re-directing of existing capital flows rather than new capital.

The OECD estimates that $6.9 trillion a year is required up to 2030 to meet climate and development objectives in its report Financing Climate Futures: Rethinking Infrastructure.[59] It further notes that current energy, transport, building and water infrastructure make up more than 60% of global greenhouse gas emissions, and stresses that an unprecedented transformation of existing infrastructure systems is needed to achieve the world’s climate and development objectives.

The rapid growth of green bond markets provides one optimistic signal about capital investment. In 2018, global green bond issuance was $167.6 billion, with significant growth expected in 2019. Some $600 billion in green bonds is currently outstanding.[60]

While green bonds are not the be-all and end-all of climate finance, their popularity is making it easier to re-finance climate-related investments and thus speeding up the recycling of equity and loan financing.

Issuance needs to be scaled up to help fund the transition from a largely “brown” economy to a “green” one.

One challenge for the nascent market has been a lack of clarity on what are “qualifying” investments. When Chinese regulators kickstarted their green bond market in 2016, they used a “green bonds catalogue” to define qualifying investments, as recommended by the 2015 People’s Bank of China Green Finance Taskforce report.[61]

In June 2018, the EU Technical Expert Group on Sustainable Finance published the draft of an “EU Taxonomy of Sustainable Finance” that provide regulated guidance around investments material to achieving the Paris Climate Change Agreement.10 The guidance is for European banks, investors and for corporates looking to raise funds in the region; there is also a new EU Green Bonds Standard. The European Commission has also convened an alliance of countries promoting sustainable finance to collaborate and coordinate on such measures, including taxonomies. China and India are the two biggest economies involved.

Expert panels on Sustainable Finance have become fashionable. Canada has now published its final report and, in Australia, investor and Environmental, Social and Governance (ESG) groups have sidestepped political inertia and have formed a Sustainable Finance Taskforce.

Regulators have stirred. The central bank-led Network for Greening the Financial System published its first comprehensive report in April 2019. China continues its steps towards greening its financial system. India, Indonesia, the Philippines, Japan, Mexico, Morocco, and Nigeria have introduced green bond regulations or guidelines. The creation of the Sustainable Banking Network of banking regulators is helping efforts to share knowledge and maximise impact.[62]

The UK is acting on its Green Finance Taskforce recommendations to enhance London's burgeoning role as a green finance hub. The International Capital Market Association has updated the Green Bond Principles; the Loan Market Association's Green Loan Principles, released in March 2018, could have an even greater impact on how banks finance infrastructure, property and industry.[63] A year on, the International Finance Corporation has announced that it will begin applying the Green Loan Principles to help spur the growth of the $33 billion green-loan market.[64]

Against the ticking clock that SR15 amplified, pressure comes from all quarters to increase climate and green investment. Predictions of annual issuance for 2019 range from $140 billion to $300 billion.[65] However, to be making any substantive contribution, the market needs to see issuance of at least a trillion a year – a big benchmark for banks, insurers and corporates to deliver.

The public scrutiny of those not investing in green instruments, nor contributing to the transition to a low-carbon economy, is increasing. In many countries the recommendations of the Task Force on Climate-Related Financial Disclosure are being translated into formal guidance or regulation for the financial sector that make the environmental aspects of investment decisions more visible.[66] Investors face growing scrutiny about the extent of their pro-active investment in the transition as well as the extent of their exposure to what are beginning to be seen as dying industries.

At the same time, investors are pushing harder on the world's largest emitters. The Climate Action 100+ initiative, one of the projects that forms the 'Investor Agenda', has established a line of corporate governance engagement between a $32 trillion coalition of institutional investors and the 160 largest global emitters.[67]

Speeding the brown-to-green transition is one of the end points of this engagement. This means moving attention from risk assessments and statements of intent to actual investment from large emitters.[68] An investor letter to EU power industry generators, grid operators, and distributors reflects this coming focus, calling for capital expenditure plans 'compatible with the Paris Agreement' and, in time, with a zero-carbon economy.[69] Metals, mining, chemical and cement industries will face similar calls in the near future.

Brown-to-green transition in practice means large companies straddling both brown and green assets. The sooner investor pressure results in greener capital expenditure, the better. The first deals from high-carbon emitters may be greeted with cries of ‘greenwashing’, but this will be tempered by confirmations that investments go to EU Taxonomy qualifying sectors.

Some of the world’s biggest banks have issued benchmark-sized green bonds – Bank of America, HSBC, Barclays; In China, ICBC, Bank of China, and China Construction Bank have issued large Certified Climate Bonds. A range of top 100 banks in Australia, Canada and Europe have also issued green bonds. Eleven of the Top 15 green bond underwriters are green bond issuers.

While some banks are extending their green bond efforts to green loans, green mortgages and other retail and corporate banking and investment products; more need to do so. Those that do not, will, in time face scrutiny from institutional investors and civil society around their licence to operate.

A banking sector that collectively can still hold trillions in brown investments around the world but cannot make its vital contribution reaching the first trillion of green should expect no less.

Nation states as sovereign issuers of green bonds also have a major role. Chile, Egypt, Kenya, Sweden, Denmark, and even Germany have foreshadowed green sovereign issuance. Treasuries and Finance ministries can deploy green bonds to finance NDCs under the Paris Agreement and raise the country’s green profile for investors, but, more importantly, sovereign issuance provides benchmark pricing and liquidity to support the growth of nascent corporate green bond markets.

The coming years will see a strengthening of grassroots calls for more nations to act. We are not on track to limit temperature growth under 2°C; rather, we are on track to reach 3°C or much more.

The impacts already in the planetary system are worse than we thought. The trillions of dollars needed through the next decade to support low-carbon growth paths in China, India, Africa and Latin America are not yet in sight. The revolution we are seeing in green finance has the potential to change that. It’s essential for our future that this potential is realised.

ENVIRONMENT AND CLIMATE COULD BE SOURCES OF FINANCIAL RISK

DR MA JUN, CHAIR, CHINA GREEN FINANCE COMMITTEE

There is a growing consensus in recent years among financial institutions worldwide that environment and climate-related risks could be sources of financial risk, through either physical channel – disrupting global markets through physical events and impacts, or transition channel – posing financial risks during the transition to a low-carbon and environmentally- friendly economy.

This consensus has led to collective actions, particularly after the creation of the G20 Green Finance Study Group. In 2017, eight central banks and financial regulators gathered and formed the Network for Greening the Financial System, or the NGFS, aiming to identify, quantify, and regulate financial risks related to the environment and climate change, with three separate workstreams.

The supervisory workstream (WS1) that I am chairing on behalf of the People's Bank of China, reviews existing supervisory practices for integrating environment and climate risks into micro-prudential supervision, takes stock of the current institutional disclosure frameworks for environmental and climate information, and examines the extent to which default rates differentiate between green and "brown" assets.

Over the past few years, supervisory authorities have attempted to size the financial risks from climate and environment through Environmental Risk Analysis (ERA), using both quantitative and qualitative methods to evaluate short and long-term financial exposures. However, the integration of climate and environment-related factors into prudential supervision is still limited. The most significant barriers include lack of taxonomy of green and/or brown assets and the unavailability of data.

Limited data availability, is, in many cases, due to the absence of a consistent and comparable classification of "green" and "brown" assets, and remains a major barrier towards identifying the default rate differential. So far, only

China and a few other countries have set explicit definition on green loans. Statistics on Chinese green loans reveal an average default rate of 0.34%, which is much lower than the portfolio average of 1.8%. With the support of such evidence, lowering the risk weight for green assets can greatly reduce the financing cost through cutting down the level of provisions for credit losses, as opposed to extra government spending into the credit market, which underscores the importance of further data collection on green loan default rate across jurisdictions.

Meanwhile, as information disclosure is fundamental to supervision, most authorities already have in place or are planning to implement certain environmental disclosure requirements for their entities, but there are still discrepancies across jurisdictions, regarding the content and methodology, while investors and market participants will benefit from a more standardized framework.

The Task Force on Climate-Related Financial Disclosures (TCFD), established by the Financial Stability Board, has made a set of voluntary recommendations. These recommendations have received broad support and recognition from financial institutions and even corporations, which points to the possibility of a global standardized framework on these disclosures.

Challenges remain to be tackled in the coming years. In 2019, the supervisory workstream will continue its work on both the compilation of the current best practices and methods of ERAs, to provide a guidebook for its members, and the exploratory data collection on default rate of both green and "brown" assets within banks and regulators that already possess internal definitions or taxonomies, to help identify the default rate differential. In the broader context of capacity building, it will also provide technical assistance on the establishment of definitions and taxonomies for its members.

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BANKING REGULATION AND CLIMATE CHANGE

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PAUL FISHER, FELLOW, THE CAMBRIDGE INSTITUTE FOR SUSTAINABILITY LEADERSHIP

Climate change is a major threat to the stability of the global economy, as the G20 and the Financial Stability Board (FSB) have both pointed out. Many studies, and individual investment experiences, have demonstrated the links between environmental sustainability challenges and economic and financial risks – which leads to the inconvenient truth that climate change is a systemic threat to financial stability. Bank regulators in some countries are starting to take action but others have yet to take notice.

The Basel Committee on Banking Supervision, the institution charged with international rules and standards covering bank capital, liquidity, corporate governance and risk management practices, has sounded out its members about the relevance of environmental risks to banking stability. But it has not yet taken any action to ensure that banks manage these risks. That omission flies in the face of the evidence showing that environmental risks are: financially material; can create systemic risk to the banking sector; and aren't factored into the decisions of individual banks. It's up to regulatory authorities and banking institutions to better manage these systemic risks – which will, in turn, help redirect capital away from unsustainable activities and towards those sectors that are contributing to a more sustainable and stable future.

Incremental steps from banks

Most sustainability risks are negative externalities for the banking sector, since the true societal cost of carbon emissions are not priced by the market. As shown in a 2018 survey by the UK Prudential Regulation Authority, many banks have hitherto only looked at the issue in terms of their Corporate Social Responsibility, rather than business opportunity and risk.[70] Thus, individual banks are taking mostly uncoordinated and insufficient approaches, managing only the risks they can clearly perceive. The best are mainstreaming sustainability factors into their risk management models and business strategies. This allows them to reallocate capital away from unsustainable economic activities (i.e. industries heavily reliant on fossil fuels) to more sustainable ones (i.e. renewable energy production).

The most advanced banks are also incorporating green credit guidelines and other sustainability measures into their business practices. Two particular areas of interest have emerged. The first is the development of Environmental, Social and Governance (ESG) guidelines for risk management in project finance involving the allocation of long-term credit to renewable energy infrastructure projects. For example, the Equator Principles were established as long ago as 2003 to provide banks with voluntary guidance on incorporating environmental and social risks into their assessments of credit and operational risks in large infrastructure projects.[71] As a result, many large global banking institutions have mainstreamed environmental governance principles into project finance.

Second, many banks are structuring specialised short-term credit transactions that mobilise more capital for the green economy. Banks are also mainstreaming certain areas of ESG practices into their overall governance strategy. In this way, they are becoming a crucial source of capital for the emerging green economy.

Nevertheless, as economies adapt in response to environmental sustainability risks, asset prices will be volatile, credit will be restricted, and borrower defaults will rise in economic sectors that the market has determined to be environmentally unsustainable. For example, the recent bankruptcy in January 2019 of one of the largest US utility companies – Pacific Gas and Electric – occurred because of the company's huge losses that arose from extreme weather events (widespread fires and intense windstorms) that resulted in the company filing for bankruptcy, with $52 billion in debt outstanding.[72,73]

Evidence suggests that market discipline, on its own, cannot adequately control the externalities in financial markets associated with environmental sustainability challenges. Mark Carney, Governor of the Bank of England, called this "the tragedy of the horizon" because the costs of taking action are borne in the short-run, but the benefits are accrued by future generations.[74] Combine this short-termism with the relentless political cycle in most countries, and the likelihood of delay in taking appropriate actions for achieving long-term sustainability increases substantially. Delayed actions to avoid a financial and environmental crisis – or to deal with it once it happens – also become costlier.

What role for international regulations?

Some national policymakers have taken steps to incorporate environmental sustainability risks into financial regulation. The UK has decided that managing climate-related risks is a defined function under the Senior Managers Regime, to ensure that very senior managers incur personal responsibility on behalf of the firm.[75] Among a wide range of policies in their action plan, the European Commission is considering whether the EU bank capital rules should incorporate a sustainability factor into the risk weightings (given that such a factor should be risk-based).[76] China requires banks to take account of sustainability risks in their risk management and business model analyses. China also adopted the Green Credit Guidelines in 2012 that encourage banks to enhance their ESG practices. Similarly, the Central Bank of Brazil requires banks to report on environmental risk exposures and to conduct stress tests for environmental phenomena, while Peru mandates that banks require commercial borrowers to conduct sustainability due diligence assessments for large lending projects.

These policies are largely uncoordinated, however, and experiences suggest that international regulation may have a bigger role to play in developing harmonised standards to incentivise banks to more adequately address these financial risks. That's the role of the Basel Accord (known as Basel III), administered by the Basel Committee on Banking Supervision, whose members are the bank regulatory authorities from the G20 countries, including the United States. Basel III addresses financial risks in the banking sector through three pillars: Pillar one – Minimum Capital Requirements; Pillar two – Supervisory Review (regulatory); and Pillar three – Market Discipline (disclosure to the market). The three pillars currently do not explicitly take account of the emerging financial stability risks associated with climate change and other environmental challenges.

To address these risks, the Basel Committee should encourage and support national regulators to work with banks in order to adopt best practices in the management of financial risks that derive from unsustainable activities. To achieve this, they should collect the necessary data and conduct analysis to refine the banking sector's understanding of how much capital and liquidity they should hold against environmental systemic risks. This should include governance and strategy arrangements – at board level; with measurement and disclosure issues including technical matters such as stress testing portfolios using forward-looking scenario analysis.

Regulators can play an especially important role under Pillar two by requiring banks to conduct such stress tests to estimate the potential financial stability impact of supplying credit to environmentally sustainable or unsustainable activities over time.

Under Pillar three, regulators can assess the feasibility of requiring banks to disclose information about their exposures to, and management of, environmental systemic risks, perhaps consistent with the 2017 recommendations from the FSB's Task Force on Climate-Related Financial Disclosures.[77] It is important that such disclosures are comparable across banks and jurisdictions. The Basel Committee has a duty to determine that whatever regulatory standards they adopt are standardised across countries.

Banking executives tend to lobby reflexively against the idea of new regulation, citing their professed market discipline and risk management protocols. But policymakers should remember what Alan Greenspan told the US Congress in the wake of the Financial Crisis in 2008: "those of us who have looked to the self-interest of lending institutions to protect shareholders' equity, myself included, are in a state of shocked disbelief."

Regulatory intervention, if not calibrated properly, can produce market distortions that can result in further externalities and misallocations of capital and investment. So, a careful combination of market innovation and policy frameworks that suit national circumstances may be needed. As banks are the largest providers of credit for most economies, how they manage these risks is an important policy and regulatory concern. International regulators have an important role to play in coordinating improved bank risk management.

Finally, one could argue that at this current juncture, a shortage of capital supply is not the biggest challenge in financing a sustainable economy, since there are already a growing number of large investors and asset managers seeking to move their portfolios towards sustainable returns. Rather, the problem is that there are insufficient green/low-carbon projects being undertaken that require financing. Hence we actually have a shortage of green assets available to invest in. Green bonds that are issued seem to fly out of the door and issues are often upsized, whilst pricing is kept very tight. But banks can help create their own business opportunities, particularly for smaller corporates and at consumer level, by tapping latent demand through advertising and pushing new products. Part of the motivation for that has to come from the realisation that some existing industries currently financed by banks – like the coal industry – are simply going to be phased out in the economy's transition to a more sustainable footing. The banks that understand these trends will be those who are the most sustainably successful themselves.

THE TRILLION DOLLAR QUESTION: HOW CAN SUSTAINABLE FINANCE TACKLE CLIMATE CHANGE, BIODIVERSITY AND OTHER SUSTAINABLE DEVELOPMENT GOALS?

GERALDINE ANG, POLICY ANALYST, OECD

Amongst the various challenges facing countries today, one is truly unprecedented and global. In the "Anthropocene era"[78], human impact on the planet Earth has become so profound that it is changing the climate in ways never before seen in humankind's history. It is also resulting in mass extinction of species and ecosystems loss at global level. Current global action to address these issues is unfortunately nowhere near sufficient. To meet climate and biodiversity objectives and the broader sustainable development goals (SDGs), much more investment is needed. Private finance and the financial sector more broadly are essential to achieving the transition towards sustainable growth. Conversely, sustainability considerations are increasingly relevant for the financial sector. The trillion-dollar question is how to scale up sustainable finance, to support climate and biodiversity objectives, human wellbeing and the SDGs, while ensuring the long-term sustainability of the financial system.

Last October, the special report on global warming of 1.5°C by the UN Intergovernmental Panel on Climate Change (IPCC) reminded us that achieving climate and sustainable development objectives requires urgent climate action.[79] The extreme weather events we experienced recently[80] are merely a taste of how climate change could spin out of control, threatening human wellbeing and our planet. For instance, one by-product of carbon-intensive assets is local air pollution and associated health costs. More than 90% of the world's children breathe toxic air every day.[81]

Climate action is urgently needed and requires systemic change. We need to nearly double our infrastructure in the next decade to meet global development needs, while transitioning to a low-emissions, climate-resilient economy to avoid catastrophic climate change. The OECD estimates that around USD 6.3 trillion of investment in infrastructure is required annually between 2016 and 2030, to meet global development needs, regardless of climate concerns.[82] Making these investments "climate-compatible" only costs around 10% more. However, it requires a systemic shift away from business-as-usual, carbon-intensive options to low-emissions, resilient infrastructure. It is clear that public finance alone cannot fill the infrastructure investment gap. Instead, policy makers need to find ways to scale up and mobilise private sources of capital.

Action is also needed to halt and reverse biodiversity and ecosystem services loss. A recent report by the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES)[83] showed that one million species are threatened with extinction. Natural forests declined by 6.5 million hectares per year between 2010 and 2015.[84] Yet the economic value of ecosystem services is estimated to be between 125 and 140 trillion USD globally per year.[85] Business and financial organisations also depend on biodiversity: the annual market value of crops dependent on animal pollination ranges from USD 235 billion to USD 577 billion.[86]

We urgently need to rethink our relationship with the environment. Transformational change is needed, not incremental progress, to transition to sustainable development.[87] The good news is that it is not too late to build inclusive economic growth in a way that respects nature. To do so, we need to take a critical look at our economic and business models, and we must take stronger action now to achieve transformational change. In particular, we need to ensure our financial system is fit for purpose, to deliver on the SDGs.

A shortage of globally available capital is not the problem to meet sustainable investment needs. After all, institutional investors manage USD 55 trillion in assets in OECD countries alone.[88]

Thankfully, we have witnessed the start of a transformation in thinking and action by investors in recent years. Investors increasingly recognise the negative impacts of climate change on portfolio performance. Such investors thus try to integrate climate risks and other ESG factors in their governance, strategies and risk management. According to a recent survey, 78% of asset owners worldwide are integrating ESG factors into their investment.[89]

Another bit of good news is that investors see that financing sustainable growth creates new markets and investment opportunities. Renewable technologies for instance are increasingly cost-competitive. The costs of utility-scale solar photovoltaic electricity have fallen 70% since 2010.

Interest in green, sustainable finance can also be seen in the impressive growth of the green bond market in just a few years. Since its inception ten years ago, annual green bond issuance reached USD 168 billion in 2018, up from USD 37 billion in 2014.[90] Total green bond issuance over the past 10 years has passed the USD 500 billion mark cumulatively, largely for climate objectives.

And the trend towards sustainable investing is expected to grow. In next 15 years, USD 24 trillion of wealth will be inherited by millennials, who are more than twice as likely as other generations to invest in assets that target social or environmental outcomes.[91]

Despite all of these developments, progress is too slow and time is running short. Global carbon emissions jumped to an all-time record high in 2018.[92] As for biodiversity, natural wetlands declined by 35% between 1970 and 2015. Although b**usinesses are starting to take commitments to protect biodiversity,**[93] **efforts to integrate biodiversity risks remain limited compared to climate risks.**

How can policy makers help scale up sustainable finance, including in support of climate action and biodiversity protection?

First, policymakers have a critical role to play in getting the prices right by internalising negative externalities associated with environmental degradation. They also need to strengthen domestic enabling conditions for green infrastructure, to improve the risk-adjusted return profile of individual projects. Private investment in green infrastructure is also constrained by the lack of pipelines of bankable projects. Governments and other public institutions are essential actors in project pipeline development, in addition to investors, financiers, and project developers.[94]

Second, there is also a mismatch between globally available pools of capital and bankable sustainable assets. Policymakers, in co-operation with international and domestic financial institutions (such as public green investment banks and national development banks) can help channel investment into bankable sustainable projects through appropriate financial instruments (such as blended finance, cornerstone stakes or green bonds).[95]

Third, policy makers and financial regulators can help spur efforts by the financial sector towards sustainable investing, while supporting market transparency, integrity and efficiency. On this front, new initiatives are emerging throughout the world. In Europe, the European Commission launched a year ago an ambitious Action Plan on Financing Sustainable Growth. The OECD is pleased to support the Commission's efforts on sustainable finance, including by serving as observer to the EC's Technical Expert Group on Sustainable Finance. Other recent initiatives include: the Central Banks' and Supervisors' Network on Greening the Financial System (NGFS), where the OECD serves as observer; the Finance Ministers Coalition for Climate Action; and the Sustainable Finance Network of the International Organization of Securities Commissions (IOSCO).

Fourth, governments also have an important role in guiding responsible business conduct of businesses and investors. The OECD *Guidelines for Multinational Enterprises*[96] call on business to carry out due diligence to identify and respond to environmental and social risks. The OECD has developed guidance for institutional investors on how to carry out due diligence for responsible business conduct.

We need to further integrate climate and biodiversity in businesses and financial decisions, especially biodiversity. Most businesses and investors do not fully understand biodiversity-related risks and opportunities. Policy makers can better engage businesses and financial organisations towards developing a common methodological framework for measuring and integrating biodiversity in business and investment decisions.[97]

What we need now is urgent, ambitious and coordinated action to mobilise actors across the financial spectrum, including corporations, investors, capital markets, financial regulators, international financial institutions and banks.

To support this effort, the OECD launched the OECD Centre on Green Finance and Investment in 2016.[98] The Centre provides a platform to engage countries, investors, businesses, development banks and civil society and promote concrete actions across countries. The Centre's flagship event is the OECD Forum on Green Finance and Investment, which will take place on 29-30 October 2019 at the OECD in Paris. The OECD looks forward to further engaging key stakeholders to help mobilise sustainable finance, in support of the transition to sustainable development.

WHAT ROLE FOR BANKS IN FINANCING A GREEN TRANSITION? AND WHAT IS UNIQUE ABOUT TRIODOS APPROACH TO THIS?

KEES VENDRIK, CHIEF ECONOMIST, TRIODOS BANK

International and collective action is needed to make the transition to a more sustainable world a reality. A key factor in this are the goals of the Paris Climate Agreement. In 2015, this landmark agreement signalled the global community's commitment to combatting climate change. It promised to bring all nations into a common cause. It was ambitious, timely and arguably maps our last chance to transition to the sort of future most of us would want future generations to inherit.

Many countries are working hard to address climate change with concrete plans – the Dutch 'climate agreement' is one example of an effort to reach a consensus, across a number of industries, on what it will take to reduce the national carbon footprint far and fast enough to deliver on its contribution to the Paris climate goals. But these efforts, wherever they happen, are often fraught with challenges; from competing political and commercial self-interest, to inertia in the face of what can seem like an insurmountable global challenge.

The financial sector has a crucial role to encourage and stimulate others to take the right steps to tackle climate change. After all, the decisions a financial institution makes about who it lends to and invests in dictate the impact it makes on the wider world – for good, or ill. We believe money can be a force of good.

Increasing momentum for change

There are about 25,000 banks worldwide: how responsible are they right now? And how does their concept of responsibility compare to the people who are impacted by their financial decisions? Whilst a few are advancing quickly in their sustainable impact, others are only at the cusp of understanding and integrating environmental sustainability or social purpose.

One of the biggest impacts the sector can have is to help decarbonise our economy to limit global warming to 1.5 degrees Celsius. That's why an initiative announced by a group of front-running Dutch financial institutions, during the Paris meeting, is so important. These institutions, led by Dutch bank ASN, called on the negotiators at the Paris Climate Summit in 2015 to take on board the role that investors and financial institutions can play to deliver the radical shift we need to a low carbon economy.

More practically, the group committed to create a more transparent approach to assessing the greenhouse gas emissions of their loans and investments, for stakeholders inside and outside the Dutch financial industry. The group created the Platform for Carbon Accounting Financials (PCAF). It was the world's first effort of its kind, by the financial industry, for the financial industry.

Until recently, many financial institutions and businesses more widely, considered taking care of the footprint of their own operations was enough to meet their environmental obligations. Behaving responsibly as an institution, through the choices you make about how to reduce energy use, source energy sustainably, and limit business travel, for example, is important. But it plays a relatively insignificant role in the overall footprint of most financial institutions.

Accounting for the carbon emissions of loans and investments creates many and varied benefits for the institutions that do it. Banks, and the sector more broadly, can monitor their greenhouse gas emissions, create opportunities for comparison between institutions and be more accountable and transparent to their stakeholders. Ultimately, they can use this information to set climate targets and steer investments towards a low-carbon economy.

This methodology, which already exists in a similar form for many other sectors, will allow financial institutions to set 'science based targets' and create a clearly defined pathway that specifies how much and how quickly they need to reduce their greenhouse gas emissions to meet the Paris Climate Goals. The members of PCAF are co-sponsors of this work and closely connected to its development because they believe that banks should play their part in the transition to a low carbon economy of the future.

Method in the madness

PCAF requires institutions to account for the footprint of their own emissions. It's important to show stakeholders that you are 'walking the talk' while recognising that in most cases the contribution of your operation's footprint to your overall emissions, will be relatively small. Frameworks like these demand exploring what you can do to make the biggest difference to serve society, target-setting and accountability; all of which, in the climate change realm, benefit from accounting for an institution's greenhouse gas emissions.

They also require a responsible approach if they're to succeed. They must be genuinely international to ultimately avoid 'dirty' sectors being excluded and left to non-banks in parts of the world which are hard to reach. Frameworks also should be linked to balance sheets and financial performance, including risk assessments. And it should be clear to stakeholders that this is only one part of the sustainability story; many important environmental and social issues are not directly 'covered' by greenhouse gas emission accounting – such as biodiversity, water use and health.

If we take Triodos Bank as an example, assessing the absolute emissions is a crucial starting point to understand what the commitment to only finance sustainable sectors adds up to in terms of greenhouse gas emissions. Triodos did this for the first time in the Annual Report 2018. Actual emissions provide a baseline, which means the bank can start to improve and monitor the progress in working with customers to reduce our emissions. The level of sequestered emissions provides insight on how to reduce emissions in the future, effectively 'cancelling out' generated emissions. The results demonstrates which financial decisions make the most impact in relation to the generated emissions, sequestered (or absorbed emissions, like forestry projects) and avoided emissions (such as green energy generated from renewable energy projects) of the companies that Triodos Bank finances.

It's important to develop harmonised ways to report on the results of this work and we are collaborating with other financial institutions to do that. Stakeholders should be confident in the information they see and be able to make fair comparisons between the footprint of different institutions. They should also know what this information does not tell them.

For example, avoided emissions and generated emissions cannot, and should not, be presented to give the impression that they cancel each other out, leaving a 'net neutral' situation. A solar project should, in time, replace the need for energy from fossil fuels, but they do not 'cancel emissions out'. Given that we only have a finite amount of carbon that can be emitted into the atmosphere before the temperature goes above 1.5 degrees, these distinctions matter.

Carbon accounting needs to be adopted by financial institutions around the world if we are to achieve the biggest impact. The Global Alliance for Banking on Values can play a vital role in making this happen. This network of values-based banks, led by Triodos Bank (Europe) and Amalgamated Bank (North America), are collaborating and bring carbon accounting to banks operating across the world. This work resulted in 28 members of the GABV committing to assess and disclose their greenhouse gas emissions within three years, at a 10th anniversary meeting of the GABV held in Vancouver in February 2019.

The commitment, from members with combined assets of over USD 150 billion, means carbon accounting, using the PCAF methodology, will become genuinely global within three years. These developments have also been the catalyst for much wider efforts internationally to build a programme to attract conventional as well as more sustainable banks and other financial institutions to start carbon accounting.

Several national, European and global initiatives help banks on their journey towards taking sustainability more into account. One way to generalise the PCAF method further across the mainstream, are the United Nations Principles for Responsible Banking. In September 2019, many banks will sign this initiative for the banking sector. It calls for specific targets to be set, based upon understanding the most significant impacts. In our view, PCAF can help to achieve that goal.

Fundamental questions

Ultimately, this movement surrounding carbon accounting will enable participating banks to make financial decisions that limit the impact of the emissions of their financed assets so they can keep their contribution within safe environmental levels. It is not the whole answer to this challenge in itself. But it is the foundation to make that happen. It is materially different to an approach – important as it is – that's based on financial risk alone. Assessing greenhouse gas emissions in this way, connecting them to a science-based target of 1.5 degrees and as soon as possible, moves beyond a focus on the balance sheet of banks, for example, and the risks inherent in climate change.

In a sense, the PCAF initiative reflects a genuine will to address a fundamental question about the positive role that business and banks, in particular, can play in safeguarding the well-being of future generations. It's a sentiment that could resonate with schoolchildren inspired to take to the streets, politicians declaring a climate emergency and central bankers warning of the catastrophic impact of climate change to business as much as society. And it could hardly be more urgent.

HOW DO WE BEST SPEAK AND ACT TO BEST HELP FINANCE TACKLE CLIMATE CHANGE?

SIMON HOWARD, CHIEF EXECUTIVE, UK SUSTAINABLE INVESTMENT AND FINANCE ASSOCIATION

People in sustainability know finance is beginning to move to tackle climate change. It's late and it's slow but it is happening. So, I'm going to leave the mechanics alone and instead look at how individuals and the financial sector should engage and behave as we discuss the need for more of our work. I doubt any of this is original, it seems like common sense, but it can be said again.

My first suggestion is that in the context of climate change we should talk of "finance" not "sustainable finance". We must talk such that we make climate (and other ESG issues) central to all finance. It must become impossible for any firm to be in finance and not contributing to tackling climate change. In terms of actions, let's ban "sustainable finance" as a phrase and concept. In fact, let's go further and call out the bad stuff, let's talk not of low-carbon indices but high-carbon indices and let's name the emitters; and let's not talk of doing stewardship and engagement, but rather, let's talk openly of people that run companies (and assets) badly, and let's name those involved. We should set the terms of this debate- we own it and we're right. Are we brave enough to frame finance this way with all the risk of coming up short? I hope so.

Communication is a tricky aspect in our work. We live in a world of hyperbole, where no product is anything but wonderful, and no opponent's policy will be anything but catastrophic. Words are devalued even before we consider fake news. But given that climate is potentially catastrophic - how can finance talk to our fellow citizens about its true scale and implications without sounding so hyperbolic that we are dismissed on first hearing, especially when the message is unwelcome to many? It's going to be very difficult. Sir David Attenborough and Greta Thunberg have probably done more for climate change in the last year than anything science and finance has done because of their integrity. We in finance will struggle to match that - finance is still tainted.

To state the obvious, we need to rebuild that trust: the sector and individuals have to play their part. Our approach has to be impeccably honest. We must always talk fact and legitimate extrapolation. We must always cite sources. We must never be a party to exaggeration. We should not pretend to know all the answers. We can and should discuss hope and aspiration, but we must get the tone and language right. When we sell, we mustn't sell the next big thing like soap, we have to adopt a different tone. Let's establish the centrality of our concerns before we sell our product. Part of the answer here could be for finance to use its substantial marketing budget to ask and answer the awkward questions in a product-neutral manner. Finance must not only talk truth to power, it must talk truth to the people, and it won't be the stuff of advertising legend. We may well face a tragedy of the commons. If one firm does objective, quiet marketing on climate and what is needed it may not benefit, perhaps the solution is sector-wide marketing like the alcohol industry with its drink aware campaign. We need to build public awareness of finance's ability to help fund the climate response and all should contribute.

I think these points on language matter since they should inform how we conduct ourselves. Given our past, finance should tackle climate change in part by being serious people, engaging on very serious subjects. We can and should celebrate ethical finance, impact investing, even “hippy-finance” as some critics term it, but let’s really push our concerns as fact-based and integral to all finance, and let’s further mainstream our thinking.

I also think we as individuals can do more. At the risk of contradicting myself about speaking calmly, it is clear we will win quicker if ambition spreads among our supporters. We win quicker if finance is all of the following: decisive, principled, ambitious and brave, and it must be the people who act this way first since the system will change more quickly if pushed from within. Yes, we need a top-down revolution in politics and society, and yes, we will push for the policy environment to help that money flow. But they won’t work fast enough without a matching bottom-up push by people in finance, people who must now also be decisive, principled, ambitious and brave.

What do I mean? I think we need to be decisive in choosing our career paths. We must choose the best employers, those that are making a demonstrable, firm-wide, culture-changing move to doing finance the right way. I can assure junior staff reading this that nothing shakes managers more than good people leaving, and conversely, they like nothing more than recruiting good people. If you have expertise in our areas, you will be in demand. Use that to choose the right employer and to demand what you want from them. This has clear links to principle. You don’t want to be the one on the Today programme defending charges of hypocrisy when your bank has lent to the wrong people or your firm’s voting record comes up short. You need to work out if you are prepared to defend the record of a defective employer in public or in private, because as we make further progress the laggards will be called out.

Ambition and bravery are easier. The next few years are going to be fantastic as finance starts to get it right at real scale. Unless you are very lucky, your employer’s current best-selling product is not going to be the sustainable fund, loan, index or voting service, but rather a climate-indifferent legacy version. This is a great opportunity for you. You can point to what is happening and say what the change in the product needs to be. Your ambition can be to shape the new core product for your firm, to mainstream our thinking at the firm level just as we mainstream it at the system level. And the bravery? Well, that’s up to you - but why not ask that it be you that runs it, or fronts it, or does the data, or whatever it may be. Since it is our skills that that will be increasingly core, let’s benefit from it.

So to conclude. We can see the tools and techniques appearing in finance to tackle climate change and I haven’t covered those. Instead, I have looked at how we talk as a sector and as individuals. We should define the terminology, let’s “own” finance; it’s time to stop being a sub-sector of an indifferent industry, from now on it should be the bad firms that are labelled. Let’s talk in a sensible, proportionate way as individuals and as a sector, for we need to bring society with us and the issues are complex. And as individuals let’s be ambitious and brave.

FINANCING A JUST TRANSITION: CONNECTING CLIMATE CHANGE ACTION WITH AN INCLUSIVE ECONOMY

NICK ROBINS, PROFESSOR IN PRACTISE – SUSTAINABLE FINANCE, GRANTHAM RESEARCH INSTITUE ON CLIMATE CHANGE AND THE ENVIRONMENT, LONDON SCHOOL OF ECONOMICS AND POLITICAL SCIENCE

The transition to a net-zero carbon and resilient economy is set to generate huge benefits in terms of economic prosperity and human well-being, as well as preventing catastrophic climate change. A highly attractive future lies ahead, where extra investment in clean energy could save the global economy "up to $160 trillion cumulatively over the next 30 years in avoided health costs, energy subsidies and climate damages" according to the International Renewable Energy Agency (IRENA). IRENA estimates that every dollar spent on the energy transition will pay off up to seven times over in terms of wider benefits.[99] The latest assessment of the New Climate Economy also concluded that ambitious climate action could generate a net employment gain of 37 million jobs across the globe by 2030.[100]

These gains are not automatic, however. Along with 'stranded assets', the financial community also faces the prospect of 'stranded workers' and 'stranded communities' as the transition away from fossil fuels accelerates. Decarbonisation cannot be allowed to create a new round of 'rust belts' across the globe. Equally, the benefits of the transition may also not be realised. The hoped-for growth in green jobs may turn out, for example, to produce 'gig economy' employment conditions, with low wages, poor rights at work as well as constrained opportunities because of a lack of focus on building up the skills required (particularly among vulnerable groups of workers).

These concerns are already coming to the surface across the world, in President Trump's support for threatened US coal-miners and in the *gilet jaunes* protests against carbon pricing in France. Indeed, as the UK's Committee on Climate Change highlighted recently "if the impact of the move to net-zero emissions on employment and cost of living is not addressed and managed, and if those most affected are not engaged in the debate, there is a significant risk that there will be resistance to change, which could lead the transition to stall."[101]

This is why policymakers, trade unions, business and financial institutions (notably investors) are increasingly focused on how to deliver a just transition. Originating in the labour movement, the notion of a "just transition" was incorporated in the 2015 Paris Agreement as a way of signalling the importance of climate policies minimizing negative repercussions and maximising positive social impacts for workers and communities. At the 2018 COP24 climate conference, 53 countries (including the UK) signed the Just Transition Declaration which recognised the need to factor in the needs of workers and communities to build the public support for a rapid shift to a zero-carbon economy.
Investors are also waking up to the need to support a just transition. More than 2,000 institutions with over $80 trillion in assets now support the Principles for Responsible Investment (PRI), with the commitment to integrate environmental, social and

governance (ESG) factors across their decision-making. Climate change is certainly an environmental issue, but the transition is not: it's a process of structural economic, social, technological and institutional change. In many ways, the just transition provides a bridge between the environmental and social pillars of the Sustainable Development Goals (SDGs), requiring a truly joined-up approach from financial institutions.

The case for investors to act is compelling. At the strategic level, a just transition minimises the systemic risk of climate change to portfolios over the long-term. Analytically, the just transition also focuses investor attention on the materiality of human capital management and community relations to a successful transition: standard frameworks such as the reporting recommendations of the Task Force on Climate Related Disclosure (TCFD) give low priority to the skills, employee engagement, and wider 'licence to operate' that companies will need. It also provides a lens through which investors can identify new opportunities, particularly those with a regional focus (such as local authority pension funds and impact investors). The just transition also provides a way for investors to contribute to the achievement of societal objectives such as the Paris Agreement itself as well the Sustainable Development Goals.

In December 2018, this strategic rationale was brought together in a global investor guide to the just transition, prepared by the LSE's Grantham Research Institute and Harvard's Initiative on Responsible Investment, working in partnership with the PRI and the International Trade Union Confederation.[102] Alongside the guide, nearly 140 institutions with over $8 trillion in assets have backed an investor statement committing to take action to support the just transition.[103] The good news is that investors now have a set of tried and tested tools that can be applied to the just transition. Shareholder engagement can be an effective mechanism to generate both a better understanding of corporate performance on the just transition and drive improved practices (for example in the utility and renewable energy sectors). The just transition can also be applied to investment decisions across all asset classes. A new low-carbon equity index with ESG factors included has just been released by a fund in Canada, for example. Real assets such as infrastructure and property offer particular opportunities to connect with place-based priorities. Fixed income is another area for innovation, connecting green bonds with social impact. And new forms of investing through crowdfunding and community shares add to the conventional menu of options.

In the UK, the just transition has moved from being a high-level concept in international climate negotiations to becoming a recognised priority for economy-wide action. Our estimates suggest that around one-fifth of current jobs in the UK have skills which will be impacted by the transition, either growing in demand or requiring reskilling.[104] The Committee on Climate Change has recommended that alongside the legislation needed to deliver a net zero economy by 2050, the UK government should also introduce a strategy "to ensure a just transition across society, with vulnerable workers and consumers protected".[105] To work out what this means in detail, the Scottish government has already established a multi-stakeholder Just Transition Commission to provide advice on how the country can develop a "carbon-neutral economy that is fair for all".[106] The Commission has drawn up a comprehensive work plan examining what the just transition means for a set of priority sectors (including energy, transport, buildings, industry, agriculture) as well as finance and investment. At a local level, a growing number of UK cities have passed motions declaring a climate emergency. In April 2019, for example, Leeds City Council adopted a science-based Carbon Roadmap, which highlighted that “a key challenge is to ensure that the transition is just and inclusive.”[107]

Over 20 leading UK-based investors have signalled their support for a just transition. One of these is the Northern Local Government Pension Scheme (LGPS), with around £46 billion in assets. The Northern LGPS’s goal is for 100% of its assets to be compatible with the net zero-emissions ambition outlined in the Paris Agreement by 2050. In addition, the scheme has committed to “actively engage with the social aspects of responding to climate change” to deliver a just transition. According to the Scheme, this commitment “fits well with our objective of seeking to ensure a regional dimension to our Responsible Investment activities.”[108] The wider financial sector in the UK has also started to explore what the just transition means for how banks can support households, enterprises and public authorities in delivering a net zero economy through an inclusive strategy.

Of course, these are just initial steps. Ambitious policy frameworks will be needed at the local, national and international level to deliver climate action in ways that also tackle poverty and inequality. Financial institutions will also need to develop practical toolkits for connecting the environmental and social dimensions of the transition. What is clear, however, is that financing a just transition now looks set to be the best way for investors and banks to manage the strategic risks and opportunities that flow from the shift to a net-zero and resilient global economy.

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