



HOUSE OF LORDS

Environment and Climate Change Committee

Corrected oral evidence: Climate and Nature
Finance: Mark Carney, one-off session

Wednesday 15 March 2023

1.50 pm

Watch the meeting

Members present: Baroness Parminter (The Chair); Baroness Boycott; Baroness Bray of Coln; Lord Bruce of Bennachie; Lord Duncan of Springbank; Lord Grantchester; Baroness Jones of Whitchurch; Lord Lilley; Lord Lucas; The Lord Bishop of Oxford; The Duke of Wellington; Lord Whitty; Baroness Young of Old Scone.

Evidence Session No. 1

Heard in Public

Questions 1 – 14

Witness

[I](#): Mark Carney, Co-Chair, GFANZ, UN Special Envoy for Climate Action, Chair of Brookfield Asset Management and Head of Transition Investing at Brookfield Corporation, and former Governor of the Bank of England.

Examination of witness

Mark Carney.

Q1 The Chair: Good afternoon and welcome to this one-off session with Mark Carney where we will be looking at issues around climate and nature finance.

For the purposes of the record I will say who Mark Carney is, but clearly he needs absolutely no introduction. He is the co-chair of GFANZ, the UN Special Envoy for Climate Action, former Governor of the Bank of England, and has senior roles at Brookfield Asset Management and Brookfield Corporation.

You are extremely welcome here this afternoon. We are really grateful that you found time for us and the questions that we will have for you on these matters, both climate finance and what we can learn from that as we move forward on the journey towards embedding nature into financial institutions.

The first question is: GFANZ will have been in operation for nearly two years in April, with over 550 members and the majority of the globally significant systemic institutions as part of the alliance. Could you say a few words about what you have seen as the major challenges and achievements over those two years?

Mark Carney: Certainly, and thank you, Chair. I would like to thank this committee for the invitation. I was very pleased to receive the invitation and I welcome your scrutiny of these issues, which, as you know, are quite complex. At 30,000 feet, they are quite straightforward, but they are quite complex in terms of implementation.

On GFANZ and progress, I would put it into three categories. The first—and you referenced it, chair—is the scale and breadth of the membership. You are right that it was launched at President Biden’s climate summit in April 2021, with 160 members at that point. The leading UK financial institutions were very well represented. In fact, much of the impetus came from that. Of course, we were in the process of the UK’s COP 26 presidency at the time. Then, with the Glasgow COP summit, there were 450 members and \$130 trillion of balance sheet collectively, and now there are 550 members and \$150 trillion of balance sheet. It is an accomplishment in both numbers and at a time when the value of most balance sheets has been going down—some of them too rapidly, obviously, as we have seen in the last few days—to be able to grow the membership with common commitments: not just financed emissions for net zero, which as this committee knows but for the record means the emissions of their clients, the companies they invest in or lend to. Scopes 1, 2 and 3 were material, the commitments for 2050. What is really relevant, of course, are the interim commitments to 2030 and a fair share of the 50% reduction by 2030 and five-year transition plans. I will come back to that.

So we had the scale in terms of the core of the financial system. Within this first category of progress, I would add breadth. We have been broadening out into Asia. We have developed regional networks in Asia and in Africa, one soon to be announced in Latin America, and very senior representation in the leadership of that. For example, the chair of the monetary authority of Singapore, who is also the chair of the NGFS, which is the group of central banks and supervisors, is the chair of our Asia network. That is one example.

The second example is the critical aspect of operationalising—an ugly word—those commitments. The core of the focus is on transition and I am sure we will unpack that in more detail as we speak this afternoon. What is a transition plan? What is best practice? What are the frameworks for the transition plans of financial institutions? What are the common expectations of financial institutions of the transition plans of companies and businesses in the so-called real economy? How do you phase out stranded assets in a responsible way and what is the framework for that? To what extent and how do you judge the degree to which your portfolio—lending book or investment portfolio—is aligned or aligning with Paris-based, science-based pathways? All those frameworks were developed and agreed for the COP 27 summit in Sharm El-Sheikh. If I can make an analogy, this is analogous to the TCFD work. It is voluntary, it is under the broad auspices of the Financial Stability Board, which of course is made up of the treasuries, the central banks and the supervisors, but it is not a formal standard. It is an approach that the core of the financial sector has developed and will implement. It is something that should become a formal standard and I would commend that. I am sure we will discuss a bit the UK's transition plan task force, which bears many similarities to this approach. So the frameworks and the operationalising of the commitments were accomplished for the last COP. Now the issue is about putting them into action, getting capital to reduce emissions, again very much with a focus on transition.

The third aspect is progress on exactly that and, particularly in the emerging and developing world, a series of transactions has been put in place called just energy transition partnerships. To simplify, these are comprehensive financing packages and policy packages from major emerging economies and emitting economies such as Vietnam and Indonesia. Both of those were signed at the end of last year. Taking the Vietnamese example—the UK Government were the co-chair of this process along with the European Union—the Vietnamese Government have agreed to a series of measures that will involve shutting down many of their major coal plants and building up renewables to replace them—largely offshore wind—and financing the retraining of workers and the adjustments in their underlying economies. It is more than \$15 billion of financing, both public and private. The private all comes from GFANZ, but the punchline is that the reduction of emissions for Vietnam is 30% relative to baseline by 2030, 30%. For Indonesia, it is 20% and a similar package was put in place and announced at the Indonesian G20 summit.

These commitments need to be followed through, of course, and we need to see it, but they provide a very good example, in our judgment, of how we can blend public and private financing to accelerate the transition.

The last thing is that if I were to pick out one challenge—and I will stop on one challenge—it would be: what is transition, a focus on transition and getting capital to where the emissions are and helping to get them down? We would all like to flip a green switch and move overnight from the current energy and economic structures if we could and get emissions down and finance only green activities, but that is not realistic on any level. It is not realistic in terms of the time it takes to build technologies. It is not realistic in terms of the high-emitting sectors of our economies such as steel, transportation and many others. It is not realistic in terms of people—workers and communities—for their transition. So there needs to be a broader focus on what transition finance is and which activities are aligning with pathways to net zero, as well as those that are already green and are fully aligned. Much of our work has been to turn that approach into something that is rigorous, has clear guardrails and drives capital accordingly.

Q2 Lord Grantchester: There is an ever-increasing demand from investors into retail funds and private equity finance to insist on ESG—environmental, social and governance—perspectives to power the change to more sustainable outcomes, yet the reporting and market infrastructure lacks a coherent and comprehensive benchmarking system to reflect comparative financial returns and eliminate greenwashing. A World Economic Forum article stated that private equity firms, “must intentionally shift their organizational culture creating a sense of ownership for sustainability imperatives at all levels”. So a series of questions comes to my mind. Notably: what does a sustainable finance system look like and what are the roles and responsibilities of government, private equity firms, hedge funds, central banks and other financial institutions in order to achieve this? How can regulators facilitate the integration of sustainability principles into financial services while still encouraging financial efficiency? Also, if I could give this a little bit of a topical twist, will the collapse of Silicon Valley Bank, ostensibly due to its poor handling of the bond market, unintentionally damage the raising of finance for the technology and innovation sector in the pursuit of the imperative to achieve net zero?

Mark Carney: I will park the Silicon Valley Bank question to the end of my response. I certainly understand why you are asking it.

Maybe I will take this opportunity, Chair. I gave a lecture in Paris earlier this week. I just finalised it. I submitted it to the committee for your consideration, but I only just submitted it because I wanted to make sure the footnotes and the references were correct; I wanted to make sure it was to the standard of this committee. I will refer to it obliquely, but part of the answer to the question in terms of the roles of Governments and finance and the interplay between the roles of Governments and finance is covered in that lecture. If I were to simplify, I would say that part of the role of government is credible and predictable climate policy, and the

more that is the case, particularly supplemented with transparency about the adequacy of that policy as we have in the UK with the Climate Change Committee, for example, the more that finance can do its job and pull forward adjustment, in anticipation of future climate policy. I will give the example of the moratorium on internal combustion vehicles, which, while taking effect in the 2030s, has the impact of investment today in smoothing the transition to that point. The financial sector understands that and is financing accordingly.

I will concentrate my answer, then, Lord Grantchester, on the role of government by touching on an aspect of financial regulation and supervision, but also from the context of only one aspect of ESG. I know we will touch more broadly. I would like to say that I work at the easy end of ESG, which is the E and, within the E, largely on climate change—we will talk about broader issues—so on the one aspect of ESG that is readily measurable and can be managed appropriately; in other words, emissions and the pathways of those emissions. In other words, these are hard numbers about which judgments can be made, just as one can make judgments about financial numbers of whether or not a financial institution, a bank or one of its clients, will perform against expectations. What a sustainable financial system requires from that perspective is of course a foundation of information and disclosure: the emissions themselves, scope 1 and scope 2 and scope 3. That process is now very much under way.

Secondly, it requires a broader set of disclosures around climate-related financial risk. The way I like to think about this, or one way of thinking about this, is what happens to, for example, a bank's portfolio if the United Kingdom accomplishes its objective of a net-zero economy consistent with 1.5 degrees, the legislative objective of moving to a net-zero economy by 2050? What if regulation is sufficient for that and which parts of my portfolio as a bank would then be affected and am I managing appropriately? That is the second component. We are well on the way to both those elements in the UK with the framework that has been put in place and the prospect of adopting ISSB standards as they are ready, which as I am sure you know are based on the TCFD.

The third thing is that both those aspects are foundational and somewhat defensive. You are finding out the scale of the issue and thinking about managing the risks around those issues. The third element is critical, is positive or offensive, and it is: what are the investments that are necessary, what are the loans that can be made, that will help be part of the solution? For that, a sustainable financial system needs consistency around the transition plans of companies themselves as well as the financial institutions. In this regard again, and I referenced it before, the transition plan task force work led by Amanda Blanc is to be commended. I think it is the gold standard in the world for this—the green standard, I guess—and will, once implemented, put in place all the building blocks that are necessary for large, listed public companies, because that is where it will apply.

That goes to another element of your question, which is: what about the rest? What about private companies, companies owned, for example, by private equity firms? What are their responsibilities and what are the responsibilities of the private equity firms themselves? From a GFANZ perspective, we would say—and all the GFANZ members have signed up to this—that the financial institution itself, whether it is a private equity firm, a bank or a pension fund, should have a transition plan for its assets that is consistent with the pathway, for example, in the United Kingdom. That, of course, requires understanding what is happening to its underlying portfolio companies in the case of a private equity firm. That is the next phase of putting in place a sustainable financial system.

Perhaps I will stop on that aspect and just say a word on Silicon Valley Bank. Certainly, within the ecosystem—I will call it the innovation and tech ecosystem—within the United States, it was absolutely central, too central, in fact, and systemic from a tech ecosystem perspective. If the liquidity of those underlying firms—and I mean the businesses, not the venture capital firms—were to be held up, there was a realistic prospect that most of that liquidity would be available even if the Fed and the US Treasury had not taken the steps they took over the weekend. There are issues with the asset quality, issues with management in the bond market, as you suggested, but substantial asset quality is still there.

I do not foresee that this is material to the availability of capital for climate tech investing. I think that would be the punchline. We can get into that in more detail if the committee wishes.

Lord Grantchester: I was interested as well in the role of Governments—all very clear to everybody, they have huge power—but on the other hand, they want to bring private equity and the private market into helping augment their investments. I am concerned that the stock exchange as a whole still tends to look at ESG-type investments as a niche rather than encapsulating it within all their reporting structures. Do you have a comment about how that could be further enhanced?

Mark Carney: I agree with the concern in that we will not get to net zero in a niche, which is why the work for COP 26 and the work of GFANZ is focused on mainstream finance. It is a few simple building blocks that everybody either has access to or does. Everyone will have access to climate-related financial disclosure. It will be proportionate, depending on the size of the company. Obviously, the same is not asked of a medium-sized company as of a large, listed multinational in terms of disclosure, but basic climate reporting is expected and will be expected.

Secondly, there is this focus on the transition planning of the major providers of capital, which would include private equity. I would say that there are some private equity firms in GFANZ; there are many that are not but there are initiatives that are welcome, including the further sustainable markets initiative. There is a private equity task force led by James Brocklebank of Advent that is developing some of these frameworks, which will be helpful.

If I may, and I am conscious of time, if the core of the system, the major pension funds, the major banks, the major asset managers, have expectations, soon-to-be requirements, for transition planning, that means that the rest of the system has to support that because, after all, private equity is investing money on behalf of pension funds, wealth funds and others.

The last point, maybe, that I will make, which is outside of the UK but relevant to the UK, is that part of the objective for COP 28 would be to have greater participation of sovereign wealth funds to these standards. They have got to the level of climate-related financial disclosure but they need, in our judgment, to get to the level of transition planning as well.

Q3 Baroness Boycott: Can we turn to the subject of nature and what came out from Montreal? I know you have said that half of the world's GDP is "moderately"—you used the word—reliant on nature.

Last week, for instance, I put forward an amendment about deforestation and whether finance could be held responsible, and we got back an answer from the Minister that there are currently no consistent equivalent disclosure requirements that will be set up. They were saying that they cannot do that. They can do it about a product but cannot do it about finance.

I am also curious to know how you see the measurement. You have to declare as a country climate impact and climate dependency and, as I understand it, it is hard to understand climate dependency, so it is a difficult one to come back with.

There are also so many metrics. We have been looking at various biodiversity things in this committee and even within the UK, quite honestly, it is a minefield of different groups all trying to prove different things about biodiversity net gain. Someone has given me a figure that there are 3,000 biometrics across the world, which someone like you or the Montreal Protocols are trying to juggle.

Could you talk quite generally about it and, in the end, are you happy with the targets that were agreed in the Kunming-Montreal global initiatives and how committees like ours can help sort those into policies?

Mark Carney: Yes, absolutely. Maybe I will start with the last bit, which is that I am happy with the result from the Kunming-Montreal Global Diversity Framework, the 30 by 30 commitments and the still relatively soft but directionally relevant expectations around the financial sector's support and participation in this. To my reading, and I was not involved in the negotiation, it is a softer version of Article 2.1(C) of the Paris accord, which was much clearer about fully aligning all financial flows with climate adjustment. However, all those aspects provide the direction and the anchor for committees such as yours, but really, ultimately, businesses and financial institutions, to start to more formally and consistently measure and manage these issues. That is the first thing: I am happy with what in many respects is an achievement that has eluded Governments up until that point, but that is not to suggest that

subsequent nature and biodiversity COPs do not need to further codify or strengthen those with time.

Secondly, the questions you are raising are absolutely in play. They are very relevant. Your views on them will be very timely, I think, for processes such as the TNFD—the Taskforce on Nature-related Financial Disclosures—which again, as this committee will know but I will read it into the record, is a voluntary initiative analogous to the Taskforce on Climate-related Financial Disclosures and is doing important work in looking to finalise that work by the autumn of this year.

As well, and to a higher level of application, if I can put it this way, the International Sustainability Standards Board, which, to remind, was launched at Glasgow COP 26 and which has a reach of 120-plus countries over time, is due to finalise its climate-related recommendations by June of this year. The chair of the ISSB, Emmanuel Faber, has indicated that—this is not a quote but is the essence of what he said—there is logic that the next topic that they will address is nature and potentially biodiversity. There is a very simple reason for that, which starts with one of the biggest causes of climate change being deforestation, as this committee will well know. Last year, 11% of emissions were from deforestation itself, so just stopping deforestation, if we could, and need to, there is 11% of the carbon budget that has been saved as a flow, and that is before we get to nature-positive outcomes that, at least in the extreme, if we did them all, would contribute about one-third of the emission reductions that we require this decade. So these are very large numbers in both directions.

There is a reason from just a purely climate perspective to address these issues and be clear around them, to have the metrics around nature; I have not got to biodiversity yet. Feeding into that is timely from the climate perspective, but it is difficult for a body like the ISSB, in my judgment, to look at nature in isolation without also beginning to address biodiversity. Part of its role is to sort through metrics that would be common building blocks that would apply in the United Kingdom, Canada and sub-Saharan Africa as well in a consistent way that could potentially be supplemented along the way.

To go to your question, at a higher level, I think there is a lot we can learn from what has happened on climate. You need this core, common, consistent foundation of disclosure. What one then needs on top of it, and I have mentioned it a few times already, is to have a plan to address these issues, certainly at the level of the country but also of the institution. At a minimum—and this is an expectation within GFANZ in transition plans—financial institutions are expected to know the contribution of nature to the emissions footprint of their financial portfolios, so if there is material deforestation, for example, involved in their activities and that contributes to emissions, understanding the tracing of those activities and then having a plan that would be consistent with what many UK financial institutions have already voluntarily agreed

to, which is to end deforestation and move to nature-positive outcomes by the end of this decade.

So, similar building blocks, much more complex, as your question indicates, and absolutely timely in terms of your inquiry—and I do not know this but I expect it—because I expect that the major bodies, particularly the ISSB, will be turning their attention to these issues in relatively short order in a way that will provide the foundation for a much more rigorous approach.

Baroness Boycott: Do you feel confident that we can find common frameworks that will then not get that kind of reply from a Minister that we had last week—that there is nothing you can plug into because the world is not on the same page, in effect?

Mark Carney: Yes, I feel confident that a framework will be put in place and I would plan—I should not presume but I would expect—that more broadly within government there is focus on what the ISSB is likely to do, or possibly will do, and it is time well spent to feed into that process to ensure that the right metrics are developed that are useful in the setting of broader standards and frameworks.

Q4 **Baroness Boycott:** Finally, what do you feel about the development of the Willow Project in Alaska? What does this say to the rest of the world, what Biden has authorised, even though he has put strange little gizmos around it?

Mark Carney: Maybe I will make a general comment, if I can. I am aware of the project. I am not an expert on the specifics of that project.

Take a step back. The International Energy Agency's analysis of the net-zero pathway to 1.5 degrees is consistent—and I will put it in terms of a ratio, if I may. If we go back about 10 years, broad-brush, clean energy investment relative to fossil fuel investment is about one half, dollar for dollar. As of today, it is about 1:1, that ratio, clean energy investment relative to fossil fuel investment. By the end of this decade, clean energy investment needs to more than triple such that the ratio is about 4:1, maybe slightly higher but around 4:1 by the end of the decade. The important thing is twofold. First, it is 4:1, so we need a huge ramp-up in clean energy. We are starting to see that. The second part is that it is 4:1, not 4:0. There is some investment in fossil fuels to address depleting fields and shore up infrastructure, and in a realpolitik sense also understanding the shift in energy security. I would say one of the consequences of Putin's illegal war is that the world will strand more fossil fuels. There will be development of some additional fossil fuels, consistent with that 4:1 ratio but also for reasons of energy security, and there will be stranding of more developed resources, which justice would say—and justice is not always served—are in Russia. What is important—my last point—is that whether it is that project or another project, new projects are developed on timelines that are consistent with the transition.

It does not make sense—and I am using a different example—to develop an LNG project that has a 40-year life. It can make sense to have an LNG project that has a 15 to 20-year life, consistent with displacing Russian gas, providing transition, and also with the speed of transition, for example, in Europe.

The Chair: I have a couple of supplementaries. First, Baroness Young.

Q5 Baroness Young of Old Scone: Baroness Boycott quite rightly pointed out the complexities of dealing with biodiversity and nature issues as opposed to climate change issues.

Do you see the trajectory of the climate mechanisms and the nature mechanisms being in parallel or do you think that they need to come together and be some single, joint mechanism?

I will give you a couple of examples, really two sub-questions. One is a couple of examples, and I should declare an interest as chair of the Woodland Trust. We pour vast quantities of subsidies into Drax and yet there is ample evidence of the impact on nature elsewhere in the world; example number 1.

The other is that increasingly in this country, and I suspect it may be happening in others, the dash for carbon is producing nature-unfriendly new afforestation, which looks great against a climate change set of objectives but looks terrible against nature objectives.

My question is: do you think that the two will come together? Do they need to come together? My second question is: do you think both the financial institutions and the companies can walk and talk and chew gum, or it is too complicated?

Mark Carney: They are supposed to be able to do multiple things; it does not always happen.

It is an excellent challenge. I think they need to come together over time. We would all recognise that the net-zero transition-related building blocks are much further advanced than those related to nature and biodiversity. They are at a point, and this is happening in this country, where they are ready to move from being voluntary, trial and error, and private sector-led to formal standards that are integrated consistently. That is not the case with nature and biodiversity.

Your question, Baroness, gave part of the answer, part of the reason for this. There are examples where—you used the term “dash for carbon” or carbon removal in the case of afforestation—you can work potentially at cross-purposes or at a minimum not achieve the maximum benefit you could for nature, monoculture afforestation as opposed to something broader—you know this well. If there is integrated disclosure, and integrated management, that is less likely to happen.

I will stop with these points. One is that if we have disclosure standards that ultimately come up through the International Sustainability Standards Board, which one would expect to be applied broadly across

100-plus countries and in an integrated fashion, both climate related and nature related, we move towards that.

Secondly, if transition plans have moved to the step not just of climate-related issues in nature but also impacts on biodiversity and uses of biodiversity, if I can put it that way, we are also moving in that direction. A first cut of that has been taken by the World Wildlife Fund, which by its own accord has taken the GFANZ framework and suggested how it would be adapted to take into account nature and biodiversity.

My last point is—and I am agreeing with the thrust of your question—companies, stakeholders and financial institutions can look at climate initiatives and see whether they are either detrimental to nature or could be more nature positive if applied differently.

I think it needs to come together. The short answer is that I think there will be a lag in terms of them coming together, given the relative levels of development.

Baroness Young of Old Scone: They can walk and talk and chew gum?

Mark Carney: Can they? Yes, they can, with information. It is a question of priorities as well and how effectively they do that. Yes, the better ones certainly can and then one ends up separating leaders from laggards.

Q6 **Lord Bruce of Bennachie:** You gave a very practical example of the challenge of transition and the need to switch very rapidly away from fossil fuels to renewables. Can you help inform the policymakers? We are getting somewhat hysterical complaints saying, “We need to switch off oil and gas production immediately”. Major financial institutions have said they will no longer invest in fossil fuels now and yet we need to invest in carbon capture and storage if we are going to get to net zero, and the flow from one provides the investment for the other. Are you going to be able to provide the criteria that will say objectively that this kind of fossil fuel investment is justifiable as part of the transition whereas other kinds are not? You gave timescales, but more specifically.

My worry is that we have one group of people saying, “Just turn it all off” even though 50% of our gas is produced domestically and a very substantial amount of our alternatives, but on the other hand there are people who say, “Just keep pumping it out because we’re never going to meet these targets”. Getting that balance seems very crucial to me. We need your help so that the policymakers can make rational decisions rather than just respond to popular but superficial pressure that does not take account of the timescale of all these things.

Mark Carney: I think that we have many of the building blocks in place. One of the tests of I would like to say this COP, COP 28, potentially the next two COPs but ideally this COP, will be whether we can have greater clarity and commitment from major energy players to pathways for oil and gas that are consistent with the objectives of the Glasgow climate accord, where less than 2 degrees—1.5 degrees—is the target.

Let me make a second point. An individual financial institution can divest out of oil and gas. The system cannot divest out of oil and gas. The system cannot divest out of oil and gas and the world or the UK can have what would approximate a smooth energy transition. There still does need to be some financing of conventional fuels. It is much less than what is needed on clean energy, that is obvious, and it diminishes over time, which also should be obvious.

The question is, and this is your challenge, what does that timeline look like? What is that pathway? In technical terms, what is the science-based target for that pathway? The main providers of science-based targets—SBTI, for example—provide science-based targets for many industries but not for energy. They do not provide part of the answer. The best reference, and GFANZ uses this as a reference, is the International Energy Agency, which does, not surprisingly, have a pathway consistent with 1.5 degrees. I would underscore that the pathways the agency provides are physics based, if you will: in other words, what is consistent with allocating the carbon budget across multiple activities that exhaust the carbon budget but do not exceed the carbon budget. So it is what is necessary. Then the question of what is possible goes to government policy, what is financed, to the speed with which clean energy is ramped up. I would put it that way. We will not shut down unless we ramp up; that is the reality.

Can we be more specific? Yes, we can. We can use the IEA approach, and as a member of GFANZ part of your transition plan, and your view of what proportion of your assets is consistent with the transition, is referenced to those pathways in terms of your financing.

Going back to the exchange with Baroness Boycott, it is whether the new LNG financing is 20 years as opposed to 40 years or the decline rate of the field is consistent with that or, if you are financing an energy company as a whole, whether the company's overall portfolio is moving in that direction, and that is not yet the case for the major energy companies. They are moving in that direction but they are not aligned; none of the major energy companies, to my knowledge, is aligned with the transition yet. The judgment that some will need to make—and it will be transparent whether this judgment ends up being correct—is can these companies move in a reasonable time horizon to become aligned with that pathway through reinvestment or investment in clean energy and a diminishing scale of investment in fossil fuels but still consistent with the transition?

As one last point, it would come as no surprise to this committee or other observers that the energy transition will be front and centre in COP 28, as it should be, and all aspects of the energy transition, including what is the right pathway for conventional energy, fossil fuel energy, consistent with that disclosure. I think that a reasonable expectation for energy companies will be that their commitments are consistent with the objectives of COP 28. They have not yet fully been held to that standard because they have not been part of the conversation, so in some

respects, by the focus being on divestment and exclusion not being part of these processes, it has been easier for those companies, not harder. To reiterate, we will not divest our way to net zero. We will have to get capital to those who are part of the solution. My hope and to a degree my expectation is that COP 28 will provide a better and more specific answer to your question.

The Chair: We have two further supplementaries, from Lord Lilley and then Lord Duncan.

Q7 **Lord Lilley:** I have read GFANZ's 200 pages and I could not find anywhere a statement of what it is designed to achieve in the real world. Is it designed to reduce demand for fossil fuels more rapidly than otherwise would happen, reduce supply of fossil fuels more rapidly than otherwise would happen, or reduce the risk to the financial sector of stranded assets?

Taking the UK, we have an elected Government who are committed to phasing out demand for fossil fuels to net zero by 2050. Are you saying that you, through the power of the financial system, will make them go faster than that? What is your democratic authorisation for that? I do not think you are.

If you are trying to phase out the supply of oil and gas by discouraging investment in the North Sea, shale gas and whatever, is that not bizarre, given that we are importing fossil fuels from abroad? If you are worldwide trying to phase out the supply of oil and gas faster than demand is reducing, will you not end up with shortages of supply, high prices, disruption, and we will have done to ourselves exactly what Putin has just done to us?

By way of background, I used to be an energy analyst in the City and we had to forecast demand and supply, and we had to assess risk. We never realised that we needed the whole central banking system of the world to tell us how to do this. Have you abandoned any faith in Adam Smith, who said that we do not rely on the benevolence of butcher, baker and whatever but simply on their self-interest? It is in the self-interests of people to not overinvest. Are you suggesting that the oil companies will not have noticed that we are phasing out demand? They are not mad. Well, they were not in my day; maybe they have all become insane overnight. Are you suggesting that they will build structures that are not capable of withstanding extreme weather events? I have to tell you that it is an industry that does that supremely. So I do not understand quite what you are doing.

Mark Carney: There were many questions there. I have to say that I disagree with about three-quarters of what you said in terms of how you characterise both what GFANZ is doing and the way—

Lord Lilley: It was a question, not a characterisation.

Mark Carney: Yes, it was a question—and the way that the financial sector operates. Let me give you a few examples, but then I will get to the dynamic, which goes to the heart of your question. Maybe to preview

that, it is more demand related than supply, which is why it is about going to where the emissions are, financing emission reductions, whether in the steel industry, the transportation sector, the consumer product sector, any sector of the economy. I will come back to why the incentive structure, first and foremost through government policy and ultimately through a financial sector that looks forward and supports that, drives those developments.

Let me make a couple of points. One is the mismatch in the recognition of the scale of the risk, particularly the physical risk, around climate change—for example, commercial real estate or real estate in the United States, 25% of real estate in the United States is under reasonable prospect of flooding and coastal erosion by the end of this century. A few miles from here you have Lloyd's of London, which is the most sophisticated, in my judgment as their former regulator, pricer and assessor of catastrophic risk in the world, which has consistently adjusted the coverage and pricing of those risks over time, in advance of the industries on the ground—so the financial sector moving more rapidly so you get the industries moving with a lag.

Lord Lilley: So you are saying the financial industry would go ahead of the oil and gas industry?

Mark Carney: The best in the financial industry look forward and price on the forward, not on the past, as you know, so yes. The financial industry, the relative pricing of different forms of energy—you see this in relative valuations, forward valuations, valuations of cash flow and future earnings—is very clearly skewed towards clean energy solutions, which is logical. That is part of the dynamic.

Let me go, though, to the heart of what you were talking about, Lord Lilley. You said you went through the GFANZ materials, which I presume were the transition plan frameworks and the other elements.

Lord Lilley: Yes.

Mark Carney: The heart of that is to support four strategies. The most relevant is the third strategy. The first is breakthrough technology/climate solutions. The second is businesses that are already aligned to net zero: solar generator, wind generator, net zero generation, nuclear.

The third strategy is the most important: to finance industries, and we have been talking a bit about this, that are aligning with a pathway to net zero. They are high-emitting industries today. They are in the auto sector, for example, huge investment in the auto sector today; we all see it, everything from batteries through to EVs to charging infrastructure, depending on which country you are in. The question is the speed with which they are aligning with pathways for the transportation sector that are consistent.

That investment in the United Kingdom, in the European Union, in Canada, is reinforced by government policy. In places like the United States, that government policy, and I will say the UK and Europe, also is driving investment. It is not absolutely decisive because they are important markets but they are not the whole market, but the prospect of tighter policy in the United States is also driving it. It is pretty obvious where the world is going and that tipping point, once it is reached, drives huge financial flows.

As a financial institution, whether I am an asset manager, a bank, an asset owner, I want to have a perspective now, given the scale of climate policy and the speed with which it is moving; climate policy, not financial policy, not what GFANZ says, what Governments decide. I want to have a sense of who is ready, who has a plan, who has a strategy, which auto company will potentially do well in this scenario and who is asleep at the switch.

As you know from your time in the City, and as you know from your life, there is a huge range of performance in any industry. There are good management teams; there are bad ones. There are people who have the capabilities and those who do not. With respect to climate or the energy transition, which is becoming one of the drivers, one of the determinants of value, what is your mission footprint relative to your peers? Where is it going? Do you have the solutions to help get it down? The City, Wall Street, others, need the information, need the judgment around that, and that is what we are trying to put—I think we have put—on a common framework in terms of what the financial institution wants from companies to make these judgments about who will win and who will lag, which financial institutions themselves are doing. It is not dictating.

Let me make another point, which goes to the thrust of your question. The financial sector is an enabler. It makes it possible. It does not deliver it. Sometimes the mistake is made—you are not making this mistake but sometimes the mistake is made—that if we tell the financial sector to do something it will just happen and it is a substitute for climate policy. No. What it does is it amplifies climate policy, and in a country like this that has a fair bit of credibility around climate policy—it is not perfect but it has credibility—you get more investment in anticipation of future measures. The gap, in other words, between the current policy framework and what is expected to come is more expected to close than it is in some other major industrialised countries and, in consequence, capital flows accordingly.

The last point, if I may: you referenced Adam Smith and, of course, you know that Adam Smith is both *The Wealth of Nations* but also *The Theory of Moral Sentiments*. *The Theory of Moral Sentiments* is—and this is what in the end we are talking about—about an exchange of esteem, to use his definition. In other words, what do we value? What do we rate as individuals? What do we rate as a society? What has happened in this country over the course of certainly the last decade, and it had longer antecedents, is that addressing this issue is highly value rated in this

society. It is why net zero is a legislated objective in this country. As a consequence, if you have something like that and you are in the financial sector or in business, you know that if you are part of the solution you will create value. It is values, but it is creating value that way. What we are putting in place is the information and the tools in order to make those judgments, not to drive those judgments that in this case the people of the United Kingdom have made through their elected representatives.

Lord Lilley: I still do not understand. Are you saying that the only weapon is reputational risk and that that will drive companies to eschew profitable opportunities they might otherwise have invested in? Or to raise the cost of financing things that would have a reputational risk to them? Or reduce the cost of finance below the market rate for things that would be beneficial?

Mark Carney: No, I am not saying that. I am making a higher-order point in terms of values that have been mapped into an objective for the United Kingdom. It is clear; it is in legislation. It could always be repealed but it has not been. With that objective comes climate policies that are consistent with that: contracts for difference, the moratorium on internal combustion engines, a variety of policies.

With the knowledge of both objective and policies and the prospect of further policies, I, as an allocator of capital, want to know who has taken that into account as a company and who has not. The reality is that unless one is absolutely a market purist and thinks everyone is rational and has perfect information, there is a wide range of preparedness in the economy. Those who have a plan, who have taken it into account, who have the capabilities, will be disproportionately rewarded because of climate policy—I will simplify it to climate policy.

The thing about climate, which is not the case for biodiversity, not the case for nature or not as clearly the case for nature, is that it is one metric. You can measure it. It is like optimising EBITDA today. It is emissions and where they are going and whether they are going down. If we are all in the same industry and the chair's emissions are expected to go down more rapidly than everybody else's and I have figured that out before, I will make money owning the chair—sorry, chair. If I had shares in the chair, I would make money in my example. All this builds up the information set that allows a bank, an investor, to make those judgments on a common template. It is about making the market work. Ultimately, the impetus comes from the people, through Parliament, in making the objectives and the laws and regulations that are consistent with that, not the financial sector. This is not finance.

I have one last point—and I know it has been a long answer but it is an important exchange. Right from the start, 10 years ago roughly, when we launched the TCFD, the climate disclosure, there were some who wanted to use the financial sector as a way of having climate policy—and you went back rightly to the democratic point—that had not been passed through democratic means. I and others always resisted that, because

the role of the financial authorities, financial institutions, is to make sure you have the information in all its senses in the relevant markets to act on the prospect or actual level of those climate policies that are rightly the province of Governments and legislatures.

Lord Lilley: Thank you. You said you disagreed with three-quarters of what I said. I agree with 100% of what you said. I still do not know the answer to my question.

The Chair: Lord Lilley—

Lord Lilley: May I make my point? You always interrupt, chair.

The Chair: I do not always interrupt but I think you have had three bites of the cherry.

Lord Lilley: Well, this is my third and a half. I still do not know whether you expect the result of all your efforts to be to accelerate the reduction in demand for fossil fuels or you are at all worried about accelerating the reduction in the supply of fossil fuels, as well as demand.

Mark Carney: One would expect that the combination of credible government policy, climate policy, and a financial sector that has the right information will be an acceleration in the reduction in demand for fossil fuels. Without question, that is to be expected, and I would suggest that we are starting to see that inflection point as we meet, notwithstanding the geopolitical situation, which is a supply disruption issue.

Q8 Lord Duncan of Springbank: I only have one cherry for you, I am afraid. I listened with interest to Baroness Young, Lord Grantchester and Lord Bruce, and one of the things that struck me was how you achieve a common means of assessment for measuring and monitoring that you could have such confidence in that you are able to act accordingly. As a member of the European Parliament we were constantly confounded by data that would come back that was partial or not particularly helpful, and as a consequence we were often getting partial results coming out. Baroness Young talked about the afforestation question, and how you measure that becomes important because there are clearly very different ways you can plant trees; some are remarkably good for a whole range of things, and some are, frankly, monoculture and not so good. The transparency of the common standards matters, because without that you end up with distortions.

Bringing in Baroness Boycott's point about the Willow drilling in Alaska, it struck me again that you need a common standard that will allow you to assess that. Looking at it, clearly President Biden has gone against his earlier statements about not doing it, and now he will do it. The question is: what consistency and common standard he is applying that meant that not so long ago it was a really bad thing to do, but now it is perfectly compliant with his laudable approach to decarbonisation?

My question is broadly about common standard measuring and monitoring, but also about consistency in the political spectrum when you

do have to explain to your people, broadly speaking, that you will not continue to do something that, as Lord Lilley would say, has once made money for your land but now will not make it anymore. It is that consistency of approach as well.

Mark Carney: There are several elements to your question. Certainly, with respect to nature and biodiversity, there is no one standard. To go back where Baroness Boycott was, the trick or the challenge will be as many metrics as necessary but no more than necessary. Without question it is a challenge. These issues of nature and biodiversity are much more challenging than those of climate, and those of climate are challenging in and of themselves. Collectively, you have set out the challenge very well. It is hard work and better people than me will figure out the answers to those questions.

With respect to energy pathways, it is simpler in aggregate, because 75% of anthropomorphic emissions are ultimately because of final direct demand for energy, so most of it is ultimately about energy sources. Science-based pathways such as the IEA are relevant in aggregate. What the IEA does not do, though, is allocate the fossil fuel pathway over time, which goes up to about 2025 in its view, then there is a peak and it comes down consistent with 1.5 degrees.

The IEA does not allocate it by country; obviously that is a huge political issue. One can sit back and say logically it is allocated to the lowest risk, the lowest cost and the lowest carbon sources of those fossil fuels. We want energy reliability for all the reasons we have just been living through collectively. We should have the lowest cost, and in the production of those fossil fuels it should be the lowest carbon. The IEA's version of lowest carbon is zero methane by 2030 and net zero scope 1 and scope 2 by 2040 globally.

Again, it is not allocated, but you start to see some of the building blocks of what a fossil fuel investment would need to meet, some of the basic criteria they would need to meet. If it is relatively high cost, if it is higher carbon scope 1 and scope 2, if it does not have the prospect of meeting the 2030 methane—in fairness, it should meet the methane from the start—one would expect that it would be screened out by some basic criteria that are consistent with the net zero transition.

Those are some of the indicators, but not all of them, and it does not answer specific investment questions—the Willow field, the Rosebank et cetera.

Lord Duncan of Springbank: Presumably, you would never get to an allocation at a country level for that reason.

Mark Carney: It goes back to issues of national sovereignty and other issues that you cannot have a body sitting in Paris allocating a scarce carbon budget

The Lord Bishop of Oxford: Do you think that we are seeing in 30 by 30 the emergence of something that will be a focal target, and do you

see any particular strengths or weaknesses in that?

Mark Carney: I think the strengths are the simplicity, the orders of magnitude. It is not a modest objective, and it is in a relatively short period of time, but it is also a measurable objective, at least in terms of what is ring-fenced in the 30.

What it does not do to the same degree—unlike interim targets on emissions, in a lot of our discussions about what is applicable and not applicable from the climate side—is necessarily tell me, if I am a consumer products company, what my anti-deforestation objectives should be or what else I do within nature and biodiversity. Unless I am directly implicated in the parts of the countries that I operate in that become preserved for nature, I am not necessarily affected, so it does not have that broader application. That is where other commitments start to come in.

Q9 Baroness Jones of Whitchurch: I want to explore the role of voluntary agreements a bit more with you. I read your lecture yesterday and you seem to be downplaying the role of voluntary agreements somewhat. Maybe it was because of the audience that you had there.

I am interested to know what you think the limits of those agreements are. You talked in a response to an earlier question about how your organisation was expanding and more members were joining and so on, but is that at the expense of the quality of the membership who are participating? To what extent do you take action against the people who you feel are not playing ball? In the UK, we are very sensitive to the whole issue of greenwashing, maybe more than in other countries, but we have seen a fair bit of it. If you see greenwashing going on in the organisations signed up to your charter, what do you do about them? Do you just take them to one side and talk to them, or do you have a bigger whip to bring down on them? In general, what are the limits of those voluntary organisations?

Following on from that is a question about the role of carbon credit schemes; again, many of them voluntary at the moment. What do you think about their use? There has been some criticism that all that does is allow organisations literally to offset, to defer their responsibility, pass it on to somebody else, sometimes at a relatively cheap cost, and that is not encouraging them to decarbonise in the way that they should do. Again, in the UK we have seen carbon offsets being placed not in the most strategic places, let us put it that way.

The final bit of that is what that means for biodiversity. We now have a government policy, which is quite laudable, about biodiversity net gain, which is great. Do you see the same failings in all of that—that we are just displacing some of the problems rather than getting organisations to address the fundamental issues?

Mark Carney: It was a special audience, but I try to say the same thing to whatever the audience is. That one just gave me more words to speak with.

What I was trying to get across is that I think there is tremendous value—that may not surprise you—in these voluntary initiatives up to a point. The value is speed, because if we were waiting for consensus to fully develop on climate-related financial disclosure, it really came together at COP 26, less than a year and a half ago, and it would have started from basically a standing start, or more specifically with multiple partial answers to the questions would have taken a period of time. There would have been no prospect of having a globally consistent climate-related disclosure by 2024, which is what we will now get with ISSB.

The fact of the TCFD coming together quickly, which is what happened. We identified an issue, it came together quickly, and then we had those who were using the information, the financial sector, and those providing the information, major companies, working together to figure out what the right answer was and having some flexibility in that so that the information was—it is an American term, but is useful—decision-useful information. Do not give us everything under the sun, everything that is nice to have; give us what is necessary to make the kind of judgments we were talking about earlier in allocating capital. It is the advantage of speed, the advantage of flexibility, and learning by doing over a period of time what works, what does not, what is too hard to do, what is not useful, what is missing.

After a point, with a voluntary initiative, you have leaders who are applying it and others who are waiting on the side lines, for whatever reason. In a market, it is best to have universal application on things like disclosure—the same comparable information, consistency of the quality that is necessary—so authorities do need to step in. We reached that point by Glasgow, in our judgment, and to his credit the then Chancellor, now Prime Minister, helped to lead that commitment in Glasgow and gathered 45 countries to get behind what is now the ISSB, and the world has moved forward.

Part of my message yesterday, part of my message two days ago in Paris and the message today is that we are in a similar place in transition plans, but we should not wait a decade for them to be put in place. In the end, on disclosure, it took a decade to move from concept to implementation, broadly. First, we have learned a lot and, secondly, we have a consensus through 40% of the global financial system of what is needed. Thirdly, this is really about getting capital to solutions. That is what a transition plan is about. We want as many of those to happen as soon as possible. The recommendation is to move from voluntary to mandatory, as the UK has already begun with large listed companies.

Your second question, which I wrote down, is about quality of membership and the trade-off between size or not. Certainly, as with any organisation, there will be better and worse performers. The good thing about what we are doing in GFANZ is that we are measuring it and all stakeholders will have access to the performance. There is something called the net-zero data public utility; you have read my remarks, so you will know about that. It is a hugely important initiative and is supported

by the UN, the OECD, the IMF, the Financial Stability Board, major Governments; and it has all the major data providers—the London Stock Exchange, Refinitiv, Bloomberg, MSCI and so on—all coming together in a single repository that is open source and freely available to all. It has the emissions of GFANZ members—what they finance, their targets and their performance against targets, and of companies that report their emissions.

That is what is being built out. Then you will be able to tell—let us take the top UK banks—which ones are performing well, which are lagging, and make judgments accordingly as stakeholders. Potentially, if whole countries are lagging, you will be able to make a judgment about whether it is all the institutions that are incompetent or bad or whether a country does not have climate policies that are consistent with its objectives. To go to the earlier exchange, the financial sector can only go so far relative to where the country is.

Baroness Jones of Whitchurch: You did not say what you did with the people who really will not step up to the mark. For some of them, just signing up to your organisation is almost a validation that they are taking action.

Mark Carney: If there are some that think that, they are being disabused of that. You have accountability, you have clear objectives; you perform against those or you do not. A very basic way to look at this is that, on average, about a third of the assets of members of GFANZ across the 550 are transition assets, so they are either green or they are expected to be consistent with a 1.5 degree world within a five or seven-year timeline, a reasonable timeline. The companies make an investment and they will move to that.

There are two expectations. One is that those companies on average deliver what they say they will, so if you think a company will transition, become aligned with net zero, they perform that way. The second is that the members are growing the proportion of their assets that are transition assets over time, so a third becomes 40%, becomes 50%. That will all be available, and judgments can be made on that. We have a large number of members, so yes, there may be some that characterise that.

I will make a gratuitous comment. I think we make a mistake. There is a lot of generalisation of limited underperformance. It is very much a baby with the bath water-type attitude on this—“Let us look for an example of an investment that goes wrong”. There are investments that go wrong every day in financial markets. There is investment going on right now. We just had a bank fail in the United States. That happens. That is what happens in financial markets, in the economy. Some companies perform; others do not. That is natural. The question is what the average is and where things are moving, and there probably needs to be a greater focus on that.

That brings me to your third question on voluntary carbon markets. I think we should put this in context. We talked earlier about 11% of emissions last year being from deforestation—the size of the Netherlands cut down last year in forest. The size of all the voluntary carbon markets, which are not all nature-based and not all afforestation or avoided deforestation, is less than 0.5%. It is very small relative to just the deforestation component. It is not the case currently under GFANZ that companies—you did not say this, but just for the record—can count credits against their emissions reductions targets. The voluntary carbon market is a \$2 billion a year market. I can think of no market in financial services in my entire experience that has had more headlines, stories and discussion about it relative to its absolute size. This thing is tiny. It is tiny in part because of the problems that have been identified about the integrity of the market: is the forest really planted, is it still there after it is planted—those types of issues.

A huge effort was launched consistent with the COP 26 process to address issues of supply-side integrity—the monitoring and verification of the nature-based solution, in my example. It needs to be twinned with an underappreciated fact that we need demand-side integrity: in other words, who can buy a credit from a nature-based solution. Right now, under GFANZ, under a size-based target, you can. You can do it in 2040. If we cut down the size of the Netherlands each year until 2040 before someone can buy a credit, that is not very sensible less than a decade on. It is theoretically sensible, but it is not practically sensible with a carbon budget that literally is being burned through.

There is a group called the Voluntary Carbon Markets Integrity Initiative—the VCMI—which has given a lot of thought to who should be able to buy. It is led by Dr Rachel Kyte, a leading expert in the broader field of climate change. One of its proposals—it is not settled yet—is that a portion of scope 3 emissions could be offset. I will get to my conclusion in a second, but here is why that potentially makes sense.

First, it creates a demand from companies for a limited amount of offsets, carbon credits, from a part of their emissions over which they have influence but not control. I can control my scope 1, scope 2 emissions from my own operations, from my power. I can buy in renewable power, I can do other things. I can influence my suppliers over time, but I cannot flip it overnight, so it is about having some proportion.

Secondly, it creates potentially quite substantial demand for these offsets. In the end—to go from a global climate perspective—what we are talking about is capital from companies that are largely in the advanced economies going to projects that are almost exclusively in the emerging and developing world in nature and biodiversity. It needs to have the right framework around it, it needs to have integrity, it needs to be monitored, but this is one of the flows that we need to happen. As I referenced in my remarks, again I am putting a lot of weight on COP 28, but we should grasp the nettle around that or at least the leadership.

I wrote down “biodiversity and displacing”, but I cannot remember exactly what the question was on that.

Baroness Jones of Whitchurch: I was asking what lessons we could learn in the UK. We have biodiversity net gain now, which is a government policy. My question is about the same sort of thing, basically—offsetting biodiversity. I just I wonder whether that is desirable. From what you are saying, done in the right way, it might be.

Mark Carney: Even if what I described as the VCM-type approach were adopted—that is not for us to decide; others would decide whether that is the convention—as a general principle, the first thing you have to do as a company is get your absolute emissions down, and you certainly have to report that. Then you would consider offsetting on the scope 3, or a portion of the scope 3. In the example of the biodiversity, I would assume that the first question would be, “Are you biodiversity neutral or positive?” The judgment is about what you are taking from biodiversity first, before you are providing that.

Baroness Jones of Whitchurch: It is intended in the UK, I think, mainly for housebuilders that build on land and are therefore taking biodiversity out and then seek to reinvest in biodiversity schemes elsewhere. But I take your point.

Q10 **Lord Lucas:** We have covered a lot about reporting standards, so I will not go over the same ground again but will pick up on some of the things I think that you said; you may wish to correct me.

You hope that the International Sustainability Standards Board recommendations for climate will be there in 2024. Is that right, and when do you think they will be there for nature? Do you see that then as a complete structure, or are there additional bits of structure to be dropped in to make something that works?

You talked about it being a self-improving system. What is the driver for that? Who will make sure that it gets better, rather than just being satisfied with where it has got to? Again, my understanding of what you said is that the output of this will largely be for professionals, who will make judgments about whether a company has come up to scratch or not in their investment portfolio or whatever.

Is this a process that will allow a judgment to be made by citizens and, indeed, politicians? Will we get information that will enable us to see whether our big companies are up to scratch, without having to attain the level of expertise that we would expect our financial professionals to get to?

Mark Carney: Thank you for the question. For clarity, on the ISSB standards, the ISSB released its draft recommendations last month, which it intends to finalise by I believe June of this year for climate-related financial disclosures. The first year it would apply is the 2024 reporting year, so the first year those reports would show up in would be the first half of 2025, in effect. Even there, there would be some phasing of the disclosure. For example, the standard of disclosure for scope 1,

scope 2 emissions, that which you can directly see, is higher than that for scope 3, where you would use estimates and you would have some likely element of safe harbour for that. Of course, the last point about the ISSB recommendations is that it is down to the member organisations whether they apply them. It is just like IFRS financial reporting standards: not everybody applies them, or they apply them in a slightly different way. That is broadly the timeline.

The timeline for nature is that timeline but with a lag, because the ISSB has not really started on it yet. It had a more mature climate reporting framework. The TCFD had been operational for a few years. The TNFD recommendations for later this year are still finalising. I think, and I do not want to put words in its mouth, that the ISSB would suggest that it can move more rapidly on nature. If climate took 10 years from start to finish, nature as a whole could happen more rapidly, but there would still a number of years before it was formalised.

There is a very important question about the ability of citizens, Governments, politicians, all stakeholders, to make these judgments. I think that, on the level of actual performance, the answer is yes, all stakeholders should be in a position to make certain judgments about actual performance because of the net-zero data public utility that I referenced earlier, which is open source, freely available, everyone has the same information, and whether I am an NGO, media, or a government analyst department I should be able to take that information, slice it and compare it in different ways. That will be emissions and targets, so you can compare emissions to the targets that, let us say, the Bank had.

What you cannot necessarily do, or you cannot do from that information, is say, "Where will they be in three years or five years?" but you can tell how well they have performed at that point, which in our judgment is incredibly valuable. Then it is up to the institution to explain either underperformance or prospective performance and why its strategy will work. It is analogous to being able to compare financial performance of an institution today where there is lots of readily available sources to make those comparisons, and all institutions need to provide guidance on where they are going tomorrow.

Q11 Lord Whitty: I will introduce a slightly different dimension, which came up in relation to your answer to Baroness Jones just now. As we move from what are relatively clear standards in carbon reduction to as yet pretty much undefined standards in relation to nature, there is also the reality that we need major improvements, or at least to stop further deterioration, largely in the poorest countries in the world.

Does the financial sector have a problem dealing with trying to prevent very drastic deterioration of nature in countries like Brazil or Africa, or Indonesia even, middle-ranking countries, as compared with cutting the level of carbon emissions in what are by and large the richest countries? Presumably, their creditworthiness, the trading implications of dealing with poorer countries, make it less of a return for the financial sector in

anticipating where those countries will be. I am sorry, I am not expressing myself very well—

Mark Carney: No, I understand.

Lord Whitty:—but you need, if you like, a social dimension to this, a just transition as some call it. How does the financial sector view that?

Mark Carney: I will distinguish between nature and climate, as we have been doing today. I agree with the thrust of your question, which is that the risk-adjusted financial returns, setting aside the poorest countries in the world but even some of the middle-income countries, the major emerging economies—Brazil and Indonesia are two examples you gave; Vietnam would be a third—are a much higher risk. There is a political risk, a foreign exchange risk, data deficiencies—lots of risks that could mean that the cost of financing for those reductions is potentially prohibitive, or just no availability of that financing.

As a whole, two-thirds of the world's emissions at present are outside the so-called advanced economies, so one of the challenges is how to reduce those risks such that a scale of financing can be available, and the orders of magnitude we are talking about are an increase in financing of about \$1 trillion a year by the end of this decade. That does not include financing to China, so to the emerging and developing world. These are big, big numbers.

Part of the solution is in the combination. Of course, you cannot finance somebody who is not willing to make the adjustment, so it obviously starts with the country and its policies and intentions. In our judgment, it will require some blending of multilateral development bank finance with private sector finance and some tiering of the law structure there so that some of the foreign exchange risk, political or policy risk and expropriation risk is taken out, and that private finance provides the bulk but after those risks have been reduced.

It also goes back to one of the issues we have been talking about, which is that the carbon offset market is potentially a major source of finance. It is a tiny market at present: \$2 billion. It could be \$150 billion to \$500 billion per annum—I am quoting independent experts on that—that order of magnitude of financing. Again, most of that would go to the emerging and developing world and, depending on how you structure it, that is not just finance but a potential source of loss absorbency or equity in a transaction, which then allows for higher forms of finance to come into play.

I referenced earlier, and I will just remind you, that these just energy transition partnerships in Indonesia and Vietnam are an early stage of these type of approaches. They are quite sizeable—over \$35 billion in total financing between the two of them. They are not the whole answer, but they are on the road to these types of answers.

As a last point, everything I just said holds largely for the major emerging economies, Indonesia, Brazil and others. It is a very odd way to

speaking about it, but there is a long tail of countries, 100 or so, that are much less developed where the risks are much higher, where the needs for adaptation and resilience are very large and it is not clear that there would be substantial private finance for those. It becomes an issue largely of concessional finance and finance through carbon markets as a prospect. You see a lot of discussion on reform at the World Bank and the international financial institutions. There is the G20 initiative. The United Arab Emirates has signalled a desire there. There is a change in the head of the World Bank. There is an initiative out of Barbados, the so-called Bridgetown Initiative. All that is a response to the scale of the issues that you raise. It does not have the answer yet, but it reflects that this is not an esoteric question; it is not an academic question. The orders of magnitude of what is required are such that there needs to be a fairly considerable adjustment to the international financial architecture for it to happen.

Q12 Lord Grantchester: In relation to aspects more generally, I would surmise that the challenge of the climate emergency is yet to be fully embraced. Within the GFANZ membership and elsewhere, has any work been done or is being done to undertake an internationally relevant cost-benefit analysis of comparing taking action to not taking action on climate, net zero and nature recovery, especially in relation to the \$1 billion investment international fund being promoted at COP 26 and thereafter? Could this bring long-term benefits to inform national Governments in their adaptation priorities?

Mark Carney: There are various estimates of the cost of not taking action. To my reading of them, there are no comprehensive estimates of the cost of not taking action. For example, most estimates of the economic impact of not taking action are driven by heat-related, and to some degree variability-related, impacts on physical labour, as opposed to broader financial stability and feedback implications for that. Then there are some independent estimates that are built off catastrophic risk models of increased extreme weather; we talked earlier about flooding risk and so on. Those estimates also play into the relative cost-benefit of acting.

I would point to the stress test work done by central banks and the NGFS, which used these partial estimates that are lower bound as one way to estimate the impacts on the financial sector and then on through the broader economy, although there are many things that are not in those estimates.

So there is some and it does motivate some action. I think we are at the stage where it is understood. It has revealed the preference of Governments, which really did accelerate with Glasgow, of the desirability of taking action. Now the challenge is how to take that action and in what format.

Lord Grantchester: The allocation of scarce resources from that analysis can be beneficial, I presume.

Mark Carney: Yes, I agree.

- Q13 **Baroness Boycott:** You touched on this a little in answer to Lord Whitty just now, but we had evidence some time ago in this committee from President Nasheed of the Maldives. He pointed out that 30% of his GDP was going on building things up after they had been destroyed by weather events, and that a further 20% went on paying back world institutions for the loans that he had to build the roads and the schools that were then getting flooded away. He was being offered a great deal of things like building concrete walls to stop the sea coming in rather than investing in new mangrove swamps.

You mentioned what Mia Mottley is doing. Is it better for a country like that to get debt relief, and will that be the new direction of the World Bank, given that it has had a change in leadership and is more climate-friendly? How does a country like that, and indeed Barbados, deal with the debt that it has got into over the last X decades?

Mark Carney: It is an exceptionally difficult issue. The focus of the World Bank prospectively on climate-related issues will likely be—I do not want to speak for the potential new leadership—a balance in financing between mitigation and adaptation, exactly what the Prime Minister of the Maldives was referring to. They will find it largely easier to finance at scale if they structure properly mitigation rather than adaptation—or recovery, if you will, which was your example. That will put a sharper relief on the need for resources, which is considerable.

The question of debt relief is a question for the creditors. What is mooted is a debt-for-nature swaps issue, as you know, and commitments consistent with that. I would expect that there will be some of this, but candidly I am not sure that it will be in the orders of magnitude that is expected. There will be some—again, it is down to the Governments and others who hold the debt—but the biggest prospect for a breakthrough, if there is one, would be a step change in financing mitigation everywhere that reduces the future cost that will be borne by these countries if successful. I will leave it at that.

Baroness Boycott: When can we see some movement with that?

Mark Carney: I think the focus should be for the end of the year, because we have a G20 summit, a COP summit, a new head of the World Bank coming in, the Bridgetown Initiative, and a summit in Paris in June, which would all logically lead to the end of the year. This committee knows from its experience that there is nothing like a deadline to concentrate the mind, and G20/COP 28 would be the logical deadline for a breakthrough on these issues.

- Q14 **Baroness Young of Old Scone:** You have been comparatively complimentary about the UK's performance in this area. By nature, our role is to mump and moan about things. Can I tempt you at all on the fact that we have had a green finance strategy since 2019 and we are waiting with bated breath for the next version to emerge? How do you feel about the delivery over the last four years in this country on the

green finance strategy, and what would you ideally like to see to boost the 2023 one when it finally emerges into the light of day?

Mark Carney: It is important to have transition at the heart of the strategy, so what we have been talking about, not overweighting taxonomy. Taxonomy has some uses, but if you drive all financing flows related to taxonomy, with green being heavily favoured, you are in effect pulling transition out, so you create perverse incentives. If the incentive for the individual institution is to divest of any company that is not already green, and if everyone does, no capital goes to the company that is not green that is trying to move to green and it has to sell, finance or wind down. Taxonomy is useful up to a point but a very limited point, quite frankly. It is useful as a snapshot.

What is more important is the framework that has been put in place through the UK's Transition Plan Taskforce, and that it is applied proportionately more broadly through the sector, rather than just to large listed companies and financial institutions. Obviously, commitment on disclosure and applying the ISSB standards makes sense. Given the expertise here, the UK should be leading on voluntary carbon markets. Some jurisdiction needs ultimately to bring together all the good work that has been done on supply integrity and demand integrity and say, "These will be the standards we'll use if you want to trade in the UK market", whether it is through the London Stock Exchange or others. We have a lot of the capabilities here to develop it, and London is the world's international financial centre, in many respects the ultimate international financial market. I would like to see some real impetus behind that.

The last point is consistent with the thrust of many of the questions and is where we are going on nature and biodiversity and how that will be layered in.

Baroness Young of Old Scone: Are we at the point where voluntary is no longer enough?

Mark Carney: On many issues, yes. We are certainly there on disclosure. My judgment is that we are soon there on transition plans, so I would make it clear where we are going, being very clear about timelines and core objectives. I would put aside all the call-to-action type words. Very often on climate you spend a lot of time on why we need to do things and the scale of the problem, and less on the mechanics of what needs to be done. We need to be very clear that this is where we are and this is where we are going.

It is not clear to me that there is a financial system that has more expertise in these issues than the UK financial system, so be unabashed about that and build on that so that the UK is in effect in practice establishing the framework for how the system works, and not hedging timelines and not doing half measures. Be absolutely clear that there will be this system, we need to set it up, we have a lot of the building blocks, we will have it in place by 2025, and boom, there you go. That is a strategy.

Baroness Young of Old Scone: You do not think they will be fazed at all by all the nonsense about greenwash and anti-competition that has been going on with GFANZ in the short term.

Mark Carney: The competition issues are real. You have to be careful of competition, and that is part of the challenge of having large membership. There are arguments about having safe harbour around competition issues. In the absence, then, we have to conduct ourselves accordingly, as we should.

On the greenwashing thing, I think climate is made too difficult, candidly. These are emissions. What are your emissions? What are they today? What are they going to be tomorrow? You have to report tomorrow. It is just like your financials: what are your financial results today, what are they tomorrow, what do you expect them to get to? Then you measure people against that. There is a lot of judgment, a lot of partial analysis. It is all well motivated, but on climate it is not that complicated, because these are hard numbers and we can measure them and therefore manage them. Some will manage them well and others will not.

They will be judged by stakeholders, but they will also be judged by financial markets, to the extent to which climate policy is credible and is here and we are moving towards the objective. The companies that perform and are expected to perform will be rewarded with higher valuations, and that is how you get into a virtuous circle, because the cost of capital is lower, you make the investments, you are more competitive, and you go from there.

The Chair: Thank you for your generosity of time, Mr Carney. The questions have made members excited. Thank you for all you are doing to ensure that financial institutions do push forward on the vital climate agenda. As you will have seen from our committee, we are determined to try to encourage financial institutions to pick up the ball on nature as soon as they can, because it has to be the way forward. Thank you.