HOUSE OF LORDS

Select Committee on the European Union

Financial Affairs Sub-Committee

Uncorrected oral evidence: Climate Change and COP 26

10.05 am

Watch the meeting

Members present: Lord Sharkey (The Chair); Lord Bruce of Bennachie; Baroness Couttie; Viscount Trenchard; Lord Vaux of Harrowden.

Evidence Session No. 1 Heard in Public Questions 1 - 12

Witness

I: Dr Mark Carney, Finance Adviser to the Prime Minister for COP 26, and UN Special Envoy for Climate Action and Finance.

USE OF THE TRANSCRIPT

1. This is an uncorrected transcript of evidence taken in public and webcast on www.parliamentlive.tv.
2. Any public use of, or reference to, the contents should make clear that neither Members nor witnesses have had the opportunity to correct the record. If in doubt as to the propriety of using the transcript, please contact the Clerk of the Committee.
3. Members and witnesses are asked to send corrections to the Clerk of the Committee within 14 days of receipt.

Examination of witness

Dr Mark Carney.

Q1 **The Chair:** Good morning and welcome, Dr Carney, to the EU Financial Affairs Sub-Committee public evidence session on green finance and COP 26. This session is part of cross-Committee work on climate change in the lead-up to COP 26 in Glasgow, in November. The president of COP 26 and the Secretary of State for Business, Energy and Industrial Strategy will give evidence to a joint session of those Committees next Wednesday.

The session is being broadcast on parliamentlive.tv. A full transcript is being taken and will be made available shortly after the session for you to make any corrections.

The questions we discussed asking today did not include any reference at all to coronavirus, but I thought that the elephant in the room was sufficiently large as to ask an initial question about its implications. In your Guildhall speech, you said: "The objective for the private finance work for COP 26 is simple: ensure that every financial decision takes climate change into account". To what extent is that ambition or objective modified for COP 26 by the current crisis, if at all?

Dr Mark Carney: Thank you, Chair, and thank you for maintaining your focus on this vital issue. It goes to a broader point, which is that in the current health crisis we all have individual responsibilities for our own comportment, and responsibilities for our families, our neighbours and our communities. We then have a responsibility, to the best of our ability, to discharge our work. That will be exceptionally difficult in certain sectors, which is why certain support packages are being put in place. One thinks of the retail sector and hospitality, but there are many others.

There are few areas of policy development more important than addressing climate change, and we will do everything we can to continue to advance the objectives of COP 26. They are not just objectives but the legislation of the United Kingdom, which is to transition to a net zero economy by 2050. We do not see that there would be any modification of those objectives. How we go about achieving them will, of course, be modified, as will be the case in our daily lives and those of anyone who is listening. We are in the process of amending our strategies to do that. It does not make it easier, to be clear. There is a heavy element of international diplomacy for COP, for which the Secretary of State assumes senior responsibility, and, of course, the Prime Minister and the Cabinet have responsibility as well. In the private finance work, there is international and financial diplomacy that will have to be conducted by other means, but we will do our utmost to accomplish that.

Q2 **The Chair:** Turning now to COP 26 itself, could you outline for us your key priorities in the run-up? What specific outcomes are you hoping to achieve?

Dr Mark Carney: The overarching point you made in your introduction is that professional financial decisions should take climate change into account, just as they take interest rate risk, credit risk and future cash flows into account. Climate change, specifically, or largely, focused on the transition to a net zero economy, is one of the vectors; it is one of the lenses that is used in making financial decisions.

For that to be the case, we need to put in place the right frameworks. We focused on the three Rs, with which I am sure you are familiar: making sure that the reporting is in place; making sure that risk management capabilities are developed; and making sure that in the management of their exposures and optimisation of their portfolios, investors are able to both analyse and explain to their end clients—our fellow citizens, because all these pools of investment are individuals' money ultimately—where those investment pools are, whether they are asset managers, asset owners, insurance companies or banks, and where they are positioned on the transition to net zero.

A number of specific deliverables come under each of those areas, and it is probably better not to read them all into the record. They involve a mixture of public and private action. The harder regulatory actions—not hard to do but definite decisions—revolve largely around the reporting pillar. It is about having a pathway to mandatory reporting so that there is consistent, comparable and decision-useful information.

The FCA has taken a lead. The pension regulators are looking at it as well. There are potential complementary moves under way in the European Union. As COP, we will try to ensure that these approaches, which will vary by jurisdiction, are as consistent and as timely as possible, and that they have appropriate input from the private sector; not just those who are placing money with the companies—the banks, insurance companies and asset managers—that are the users of the information, but the preparers and suppliers of the information, because we want an efficient process as well. Decision-useful is an American term, but we do not want a lot of extraneous information reported.

That is part of the process we have set in train. It is well in train. I want to make it clear that we are not starting from a standing start, certainly with the reporting pillar. The risk management pillar has accelerated under the leadership of the Bank of England and the members of the NGFS. The return pillar is probably the area where most work needs to be done to develop a private sector consensus. I could go on, but I will hand back.

The Chair: Given our position as a major international financial centre, are there special opportunities that the growth of green finance represents, or may represent, to the UK?

Dr Mark Carney: Given London's and the UK's position as the leading international financial centre, they are not niche opportunities but opportunities across the spectrum. First, this is an enormous financing opportunity. We are going to try to shift the nomenclature and the focus over the course of this year from uniquely green finance towards sustainable finance. To put it another way, if every financial decision takes climate change into account, it will just be mainstream finance. If you are the largest centre in the world for cross-border flows in banking and insurance, which is certainly the case, and second for asset management, it becomes integral to the business, and all the core competencies that exist here will integrate those issues.

London has an advantage, as it should, because it helped to build the green bond market. At this point, it is among the leaders, and could be the leader, in climate risk management. That is not the reason for the Bank of England's stress test of climate-related financial risk, but it will be one of the consequences of that work.

We should be taking advantage of things such as the Climate Financial Risk Forum, which is a public/private body we have set up. It is an opportunity for our insurers, who, in many respects, are the leading modellers and insurers of catastrophe risk, and are well aware of a very large so-called protection gap that exists around the world as extreme weather events multiply. Unfortunately, there are very large swathes of the global economy that are not protected. There are ways efficiently, and potentially profitably, to cover some of that protection gap, and that too is part of the work.

Q3 **Lord Vaux of Harrowden:** Could you explain or expand on where you see the major climate-related risks to the financial system? Are UK banks and insurers sufficiently integrating those risks in their business models?

Dr Mark Carney: The risks run across the financial sector. We categorise them, as others do now, in two buckets. The first is physical risk: the tangible manifestations of climate change now and in the future, which are increasing. They are principally concentrated as a risk in the property, casualty and reinsurance elements of the sector. Because of that, those companies are, on the whole, pretty sophisticated in managing such risks. They have an inbuilt advantage, in that they tend to price contracts for a year, so that they can adjust pricing and coverage fairly rapidly. Even though the number of insured extreme weather events has tripled over the course of the last three decades, and the insured losses have gone up five times, the industry can catch up, and, as the tail is becoming the central scenario, they are adjusting.

We believe that the biggest risks are associated with so-called transition risks: the risks that relate to the move from where the economy is today to where it needs to get to. They will arise from new regulations designed to accomplish our shared objective. They will result from new technologies that disrupt older, less green practices, and they will result from shifting consumer preferences. In that respect, those risks are, first and foremost, concentrated in longer-term asset owners, such as pension funds and insurance companies, which have long duration to their assets but fortunately also have long duration to their liabilities and obligations, and tend to have a perspective. That is one of the reasons why companies such as Legal & General, Aviva and other longer-term investors are among the most sophisticated managers of climate-related risks in the world and have a notable impact on some of the strategies we are pursuing.

The uncomfortable middle is in the banks and asset managers. Their horizons are shorter. Their assets turn over, but the transition risks are building up. I will give you an example. The energy and utility assets relative to the capital of banks vary from bank to bank, but those exposures are somewhere in the neighbourhood of a half to three-quarters of what is called the core equity capital of UK banks. The average exposure would be around a four or five-year horizon. We are in a situation where, at some point, there is likely to be a large proportion of stranded assets in those areas. On a developed basis, in order to be consistent with a 2 degree world and not the stretch of 1.5, 80% of coal assets and half of gas assets—proven—and a third of oil assets around the world are unburnable. You cannot burn them and meet the carbon budget unless you have heroic assumptions around carbon capture and storage.

At some point, a transition from those assets and exposures is necessary, either by the companies that our banks are lending to or by the banks choosing different lenders. One of the reasons why we are conducting climate stress tests is to understand the strategies. At a higher level, among the risks that cut across the sector, with different horizons, transition risk is the most important, along with bringing climate risks and opportunities—it is always very important to talk about the two—from a corporate social responsibility, or impact-investing mindset, to a mainstream commercial imperative. To be clear, that is part of what is going on anyway in the private sector; it is not happening because of fiat. Our role is to help the process be as effective and as rapid as possible.

Q4 **Lord Vaux of Harrowden:** That brings us fairly neatly to the next question, which is about the climate stress tests that you mentioned. What progress has been made on developing stress tests? What role is played by the Network for Greening the Financial System? How significant is the US's absence from that process?

Dr Mark Carney: For those who do not follow it as closely as you do, the NGFS—Network for Greening the Financial System—is up to just under 60 members. There are a few more to come; they are unannounced but they have agreed to join. It includes central banks and supervisors and covers two-thirds of the world's emissions. I am very confident that all the major emerging economies will be included as members.

You will recall that it began from a standing start a few years ago. The Bank of England, Banque de France and De Nederlandsche Bank set it up, originally with just eight members, including the People's Bank of China. It has moved rapidly and covers a wide range of emissions. The US is the notable absentee. It is not wholly absent; the New York State Department of Financial Services is a member and is more influential than it might sound at first blush, given that many banks are incorporated, or their branches are active in New York. Obviously, it would be better if the core US members were there, and they are welcome at any time.

The core of your question is about where we are on the stress test. The first thing to say is that it is an emerging approach. The Bank of England is the first of the supervisors to conduct a full climate stress test. It is a big exercise and it will take a few years to happen, but we are trying to get the most out of it, given its importance. One way we get the most out of it is through the scenarios for the stress test. We have gone out—I should say the Bank has gone out; it has taken me a few days to adjust—and the Bank is consulting on them. We fully support the efforts of the brilliant Bank of England in that regard.

The scenarios are being refined based on input from the private sector. The Bank will share those scenarios with the NGFS, others will comment, and the NGFS will reveal a set of scenarios: a smooth transition, a late and disorderly or Minsky moment-type transition, and, thirdly, a business-as-usual scenario. Of course, the last of those is all about physical risk, as there is not much transition risk, and in the first two there is a mixture. The NGFS will put those scenarios in the public domain; they will be open source, so that any bank, insurer or private company can use them. In our judgment, they will be unique, at least at this stage, because they will combine climate scenarios with judgments around transition and the macroeconomic impacts, which make them much more useful than just a simple—I should not say simple—pathway on emissions, for example.

There are two other points. First, in relation to scope, 15 other central banks and supervisors have either announced or just begun climate stress tests. One of the COP deliverables is to build critical mass, and we will look to continue to build that.

The second thing goes back to the first part of your question about the integration of the risks. Two or three years ago, three-quarters of the banks in the UK felt that climate was a corporate social responsibility. Now, three-quarters think it is a financial risk, and that number is going up. There are two rounds in the stress test. The first round will be a process of discovering what the banks do not know: what they do not know about their borrowers, what they do not know about climate pathways, and what they are learning about their risks, if there were to be an unchanged strategy 10 years out and beyond. The second phase is capacity built as a consequence of that. That is the most constructive phase.

Q5 **Lord Bruce of Bennachie:** Following on from that, what progress is the Task Force on Climate-related Financial Disclosures making or reporting, and why do you think it is important?

May I put in a special interest? I have lived most of my life in the north-east of Scotland and I have been closely associated with the oil and gas industry. I notice that while Shell and BP are on our list, many of the more medium-sized companies are not. Indeed, on the back of the fall in the oil price over the last few weeks, because of the crisis, quite a lot of them have indicated that they may be in financial difficulty or could be stressed out. That raises the issue of whether that is one way of ensuring that the stranded assets are abandoned.

More seriously, on the other hand, if economic activity picks up in a year's time, how can the financial sector justify putting money into oil and gas companies in the short term when the objective is to eliminate oil and gas production in the longer term? Does it not create a conflict that the environmental campaigners in particular will highlight?

Dr Mark Carney: Perhaps I should answer the thrust of your question, which is mainly around oil and gas, as opposed to the TCFD specifically. We can come back to the TCFD, because it is important.

Consistent with moving to net zero, we all know that an energy transition will be required. There are different opinions about the pace of that energy transition but not about the fact of it. We think that, relatively quickly, every company is going to have to have a view of that transition and where it fits in. For some companies—you mentioned BP and Shell—their view, expressed in different ways, is that they will be there at the end of the transition, but to do that, and to be still functioning, profitable and contributing to society, they will need fairly radical shifts in their energy mix, and that is becoming core to their strategy. We saw it last month with the BP announcement in particular.

Other companies may have a view about relatively expensive energy with relatively high greenhouse gas content—well-to-wheel, if I can put it that way—that is highly capital intensive. The three often go together. The consequence is that they have a role in the transition, but it is shorter term. If those companies are concentrated in a certain asset pool, potentially there is more run-off of that asset pool. Is it a 10, 15 or 20-year horizon? It is probably not a 30-year horizon, but it is somewhere in there. It is a question of making judgments about that, and, of course, if we were the management of one of those companies, the judgment is about whether we could extend that or not.

Lord Bruce of Bennachie: Is it a legitimate mindset for a company to set itself a limited time horizon and say, "We will be out of business in 10 years, but we could have 10 good years of business doing something in transition which will not be required afterwards, because not everybody can diversify at the same time"?

Dr Mark Carney: It is a legitimate mindset. The question is going to be asked the other way: "Tell me again why you are still going to be in business in 20 years". An answer might be, "I don't believe that we are going to transition to net zero". For the record, it is not me saying that, but it could be the response of a company. An investor, a lender, a client or a supplier can make a judgment about whether they want to be associated with that company. The essence is that the question goes to the heart of the shift in capital markets, and what is required in the shift towards net zero is that that question, or those types of questions, become commonplace and need to be answered. To answer those questions properly there needs to be consistent information so that an investor can compare, and so that an investor's portfolio, or an insurance company or bank portfolio, can be judged by their clients or their investors.

To turn it around slightly, or bring out another point, it goes back to the exchange at the start around green versus transition or green versus sustainable. In the energy sector, there will be companies whose strategy could mean that they will be there in 30 years and be part of the transition to net zero. That is a judgment for their investor or lender. Even though it might be a relatively conventional energy company for a period of time, it would be reinvesting and adjusting its portfolio. You get the point.

One of the questions we are asking as part of the COP 26 work is, "If I am a bank or an investor, and I am convinced that your strategy is consistent with net zero, how do I consistently report that?" If my objective is to support the transition, and I think that is how I am going to make a return for my shareholders, I should fund the company, even though on a green taxonomy what it is doing is not green, because it is a conventional oil company in a sector that some would want wholesale divestment from, and yet it is part of the solution, or at least intending to be part of the solution. One of the core questions we are asking under the return leg is how we report that. That type of disclosure feeds into the TCFD, but it does not provide the whole of the answer.

Q6 **Baroness Couttie:** How have asset managers responded to both the risks and opportunities of climate change? Probably more importantly, how can politicians and the regulators support the positive changes that they are making?

Dr Mark Carney: It has shifted very rapidly, at least in our general experience, in the last 18 months or so. There had been a steady growth in the ESG part of asset management, but, as I am sure you know, ESG is a very wide area. In many respects, the S and the G dominate the E, so we are talking about E, the climate change, as opposed to the very important social and governance issues.

More recently—it accelerated over the course of the last year, even in the last six months—there has been a mainstreaming of these issues. We are pushing with momentum. Obviously, in these very immediate weeks, the focus of the financial sector, as of everybody else, is on the immediate crisis, but we are pushing with momentum. Larry Fink, the CEO of Black Rock, described as a "fundamental reshaping of finance" what is happening as the transition becomes mainstream.

That is the good news. The question is about building capacity, having the right information and optimising the returns. Asset managers will pursue a range of strategies, including overweight transition stocks, and buying companies that have started to shift and therefore have some momentum, on the assumption that, if you are above the line on transition but you are going to go below the line, you are going to create much more value. Part of our job is to help that sector develop some common approaches, not to their investment but in how they report on their investment, and the types of information they get, to make those judgments.

Big structural shifts in the economy do not happen as frequently as people think, but they happen. China integrating in the global trading system in 2000 is one. The widespread advent of the internet is another. The coming ubiquity of artificial intelligence and machine learning is a third. Shifting to a transition economy is the fourth. When there are those big shifts, activist investment management, making judgments and doing research, pays off. A pattern does not exist, because it is a structural shift, so you cannot rely on the algorithm; and just relying on the index, which is in many respects backward-looking at companies that have been successful before, is less reliable. For the industry as a whole, there are advantages, and, of course, for the economy as a whole there are advantages, because we want a lot of hard-working, smart people looking at thousands and thousands of companies and ideas, and deciding which ones are on the right path and which are not.

Baroness Couttie: We have seen in Europe, and in the UK, regulators looking at what they can do to support investment in green finance. There has been talk in Europe about reducing regulatory capital for loans. I would like your opinion on that and on what else could be done. Personally, I am quite cynical about whether reducing regulatory capital is a good idea. I would like to get your view on that because I might be wrong, and it is your field of expertise. Are there other things that regulators, or even politicians, can do to support the industry?

Dr Mark Carney: On the specifics of using prudential policies, advantaging capital rules for whatever broader economic goal, as a recently released former regulator and supervisor, I share not your cynicism so much as—

Baroness Couttie: It is worrying.

Dr Mark Carney: Worry, exactly. It is a slippery slope. There are myriad valid policy outcomes and policy objectives that one could try to use the financial sector to achieve. The consequence could be that the system is not resilient when you need it, because you tried to do other things. We are finding right now that a risk is manifest, and we need a resilient system. We have kept it resilient, and now we are drawing on that resilience for the purpose it was designed for.

There are a couple of other points on that. The first is that in the PRA we found some evidence of outperformance—even adjusting for income and other factors—for mortgages for more energy-efficient homes, for instance. We are looking at that at NGFS level, to see whether it is a broader finding or relatively unique. That would be a prudential decision if there were an adjustment for that reason, because it is lower risk.

Baroness Couttie: But it is adjustment based on the risk profile rather than, as it should be, because it is green.

Dr Mark Carney: Yes, that is how it should be. I do not want to overplay it, but it has some consistency with at least some of the metrics around early adopters. For example, in equity performance, we find some correlation—a little more than correlation—between the early adopters of the TCFD and equity and their share price performance. The way I would put it is that it is another sign of a well-managed company.

The second point on the mortgage side is that there can be a cake-and-eat-it argument between the early adopters of the TCFD around the brown-penalising factor. It is more prudent if you have an add-on, and, of course, it adjusts the slope between brown and green in the right direction.

All that said, in my personal view, it is better in general to keep prudential policy for prudential policy and not try to do climate policy by the back door. We should rely on the judgments of banks and their supervisors to look not just at the short term but the medium to longer term. That is where climate stress testing and other approaches come in. Part of the climate stress test will be around the mortgage book. We ask: "Have you seen the cap risk modelling fast-forward 10, 20 or 30 years in various parts of the country? Are those mortgages insured? Do you recognise the potential damage?" That is a better way to approach it, because it leads to a more gradual adjustment than what we were talking about.

Q7 **Viscount Trenchard:** I would like to ask you to go a bit deeper into the growth of green bonds and other climate-related financial instruments. How important are they and how is the market growing? Further, what are the benefits of countries issuing green sovereign bonds? Should the UK Government consider that option? Is the difference in cost of issuing green versus non-green bonds narrowing? How are the two markets developing, and how important are they?

Dr Mark Carney: Green bonds are one of the success stories in green finance. I am choosing my words carefully. It is green or sustainable finance, as opposed to what we have been talking about, which is mainstream transition finance. That market is around half a trillion dollars. It has been more or less doubling for more than five years on a regular basis. It is about 5% of global bond issuance. Bond issuance has gone from a standing start to 5%, so it is a clear asset class. Standards around green bonds have become increasingly regularised. If you buy a green bond listed on the London Stock Exchange, you can be relatively assured about its quality and the consistency of its underlying green attributes.

The question of sovereign issuance of green bonds is twofold. The first is that the merits of issuing a bond would tend to be around signalling the scale of climate ambition and climate policies for the Government themselves. There has to be a clear use of proceeds and they are earmarked accordingly. From a financial perspective, if there is a green bond issuance programme instead of just a one-off green bond, there is potential for developing a benchmark in green bonds in your currency.

A lot of green bonds are underwritten in London and listed on the London Stock Exchange, but there are not that many green bonds issued by UK entities, or issued in sterling. Some $80-plus billion were issued by French entities and are outstanding, and $160 billion by US entities. It is in the tens of billions for UK entities, which is notable. There is an advantage, potentially, in building out your domestic market and the reference for that. There are investor diversification advantages. There are pools of investors focused on those types of securities, not green bonds alone but green securities. For example, KfW, which is a huge German parastatal issuer, had 75 new investors because of its green bond issuance.

On the question of cost, for the various sovereigns, it is about a third, and the so-called better-rated sovereigns will issue through their sovereign yield. They issue to the Government at a better price, as an issuer of lower yield—a so-called greenium, which is what they are called in the market. That has to be weighed against the cost of insuring use of proceeds. There is an element of bespoke security relative to just tapping another gilt issuance as part of the regular issuance programme of, for example, the Debt Management Office in the UK.

To summarise, there is some investor diversification. The better sovereigns can issue more cheaply. On top of that, they do it for a reason: to help build a benchmark and a market for private-sector issuers so that they can come into it, and, ultimately, it is signalling. If I can end where I started, we view it as a great innovation. It is developing well, and it can be supported. As part of COP 26, we are not going to spend much time on it because it will just get in the way. In the end, we are more about what is happening in the mainstream of the financial sector.

Q8 **Viscount Trenchard:** We are not all of the same mind and entirely in agreement about what is green. What is your view of the EU's sustainability taxonomy? Amid concerns about greenwashing, how should common standards be established across the industry? Although it looks as though the energy White Paper will be delayed again, we expect that it will say there is either going to be more nuclear or a lot more nuclear. Of course, the EU's sustainability taxonomy does not treat nuclear as green. I would like to know your opinion on that. Lastly, we have already talked about ESG. Do you think ESG ratings require a greater level of public oversight?

Dr Mark Carney: There are a couple of things on taxonomy. First, to take a step back, greenwashing is an issue, and we want to make sure that it is appropriately addressed. These markets are professionalising, and, as they professionalise, one should always be alert to it, but it should be less and less of a concern. As I said, for a green bond listed on the London Stock Exchange under ICMA principles—there are various third party raters of the green aspect—reasonable assurance can be provided that it does what it says on the tin.

Turning to taxonomies, and specifically the EU taxonomy, it is a valuable and worthwhile effort, but it is exceptionally important to get it right, given the scale of that economy and the weight of that capital market. Initially, we had some reservations about its development, in part because it was binary; it was green and everything else was brown. Of course, if we are concerned with a whole economy transition, as much of this discussion has been about, and we are concerned about mainstreaming sustainable finance, we need a whole-transition bucket in the middle. Yes, there may be some things that are incorrigibly brown and inconsistent with the transition, but, if we are on a path to net zero, the vast bulk of the economy in financing can be associated with moving from where we are today to where we need to get to, and that needs better classification. The good news is that, as of December, the definition buckets were opened up through the trialogue process. Having met various European officials recently, I can see that there is an effort under way to define the transition component of the EU taxonomy in a much richer way. We will see what happens.

It is still the case that its eligibility criteria for what is "green" are quite detailed and quite prescriptive. It is more than an anomaly. For example, nuclear is not classified as green, as you said, even though from an emissions perspective and a net zero transition perspective, the argument is there. I am trying to recall exactly, but I think it is caught under the "do no harm" criterion, which might be an example of trying to put too many things into an instrument. If the instrument is about the transition, it should not make a judgment about other aspects. Obviously, it is an EU decision.

Although it is a bit extreme to say it this way, we feel that instead of having green and brown, an effective taxonomy has '50 shades of green'. In the example earlier, going from dark brown to olive is worth quite a bit over the course of the next five to 10 years as adjustments on the path of reduction of greenhouse gases. Fast forward 10 or 15 years, and you would not want to be olive but moving towards light green and on the road to dark green. We need a richer taxonomy. Part of the work is to try to feed into the various taxonomies that are being developed, so that they have an appropriate transition component and can be as useful and widely applied as possible.

The Chair: I liked the '50 shades of green' reference in the Guildhall speech.

Dr Mark Carney: You have to keep the audience awake at some point.

Q9 **Lord Bruce of Bennachie:** As to how you build in transition activities, going back to the oil and gas industry, the Government have just announced more support for carbon capture and storage. Net zero includes carbon capture and storage and offsets. I notice, however, that the climate campaigners are becoming even more hard line and saying that they do not accept that; they do not want net zero—they want absolute zero.

I assume your view is that you are working with the policy rather than the campaigners, but how do you ensure that your green investment strategies, looking at transition, are consistent with outcomes and expectations? How do you deal with people who say, "We don't accept carbon capture and storage or offsets as being legitimate"? Do you take the view that that is impossible and that this is the policy we are pursuing, and as long as people are consistent with that, and it fits the overall policy objectives, we can build it into the strategy?

Dr Mark Carney: The first thing to say is that COP is a very broad process. First and foremost, it is an intergovernmental process involving 195 Governments. There is a huge range of stakeholders, including the NGO community and municipalities, and there is a huge range within the NGO community. They are all part of the process, in concentric circles with Governments at the heart of it. We are very much engaged with those groups.

In the end, our focus is on the private finance component, but part and parcel of that is ensuring that our outreach is as broad as possible. We take all views into account, not least because the private financial sector has to take all views into account; ultimately, it is people's money. Private industry is aware that societal attitudes have shifted in this area and expectations have moved relatively fast, and could continue to move, on how well the transition has been managed. That is an overall point.

The second point is that there are now 120 countries, and counting, with commitments to net zero by 2050, led by the UK. There is a net in that net zero, and that net requires, at least for a period of the transition, nature-based solutions and some sort of carbon capture and storage and carbon capture and use. The last two technologies are still in the development stage and, in general, are not economic, but they need to become economic. Shining a light on them, particularly for the capital markets and the financial system, is incredibly valuable. Once you know that something needs to be part of the solution, it will be valued, and investment will flow into those areas.

Lord Bruce of Bennachie: You mean that it might be easier to raise private money for carbon capture and storage.

Dr Mark Carney: Yes, it becomes much easier to raise capital. It is early stage. It is the battery technology of 10 or 15 years ago, so it is more in the venture stage of investment, but that is fine. Some of the big energy companies, of course, are investing heavily in it as well.

There are two issues that follow on from that. First, if a company's strategy is entirely dependent on carbon capture and storage becoming widespread—"Business as usual but I am going to rely on CCS"—a bank or an investor can make a judgment about that. It is certainly not an economy-wide strategy, but they can make a judgment on whether it is a valid individual strategy. At present, given the technology, there are industries where, as you know, it is more important than others.

The second thing goes to a broader point about where the most efficient net reduction in carbon is, and the handicapping we still have at present in not having a cross-border carbon offset or nature-based solution, and markets of any scale or consistency. It goes back to the earlier question about greenwashing. We do not yet have the infrastructure in place. I am not saying that all cross-border offsets are greenwashing—that is certainly not the case—but there is enough of a concern around it. This is a very large ask, but the extent to which the COP process can help to build those out, through the Article 6 negotiation or through other private initiatives, will undoubtedly promote a much more efficient path to net zero, not just globally but here in the United Kingdom.

The Chair: Lord Bruce, do you want to return briefly to the progress on reporting against the recommendations of the TCFD?

Lord Bruce of Bennachie: It is all part and parcel of that. What you have said, Dr Carney, has been really helpful. If we get this right, the private sector and public policy will effectively merge and reinforce each other, as opposed to operating in different directions. How does the reporting strategy reinforce that? Are you satisfied with it? Are you comfortable with the way things have developed?

Dr Mark Carney: I would almost go further. If public policy is credible, and if it is viewed that the various regulatory frameworks such as carbon pricing—to the extent it is used—the development of carbon markets, the permeating of various activities, et cetera, are all headed in the same direction, consistent with net zero, the private sector will start to pull forward adjustment. Effectively, it is not all an actual price on carbon, but a shadow price or a form of price on carbon, and you can see where that is headed. If somebody is ahead of the curve, they start to capture the value and get first-mover advantage, so the private sector then pulls forward. It therefore needs the right information. The TCFD was backed by $138 trillion-worth of assets a few weeks ago. It is somewhat lower than that now, but as a proportion of the world's assets it is the same. All of the world's top banks and nine in 10 of the top asset managers and big insurance companies, et cetera, support it. They want that information. About 1,000 entities have signed up and are reporting against it.

The quality of the reporting is okay. We have had only two reporting rounds, but the difficult bit—the forward-looking element—needs to improve. It is called scenario analysis. It goes back partly to the stress test we were talking about, and us putting out climate scenarios. It is a vital component of the answer to the questions: "What is your plan for the transition? How should I look at your milestones? What are your milestones for the next five years?" It is one thing for them to say, "I am running a company and, don't worry, I am going to get to net zero by 2050". It is a question of, "How can I track your progress in the next few years? By the way, is your compensation of senior management tied to that progress?" It is those elements that need to improve. We think they will improve.

A lot of what we do as part of the COP process is to get other people to do things and try to organise them, so the TCFD is reviewing those standards and refining them. There is a big process for companies and users of capital to feed into that, and there will be a report in September in the run-up to COP. That is to give comfort to various authorities around the world that, based on that, we will make it mandatory in a timeframe so that in a couple of years it comes in. In our judgment, it is absolutely critical to have those foundations. If we turn this exchange, these conversations, into tangible investment and capital allocation decisions, and then real decisions on the ground, it will make a difference for that pathway.

Q10 **Baroness Couttie:** What role should public bodies such as the multilateral development banks and the development finance institutions play in the COP 26 private finance agenda?

Dr Mark Carney: Clearly, they have a critical role overall, and they have a complementary role, which I guess is the best way to put it, to the private finance agenda. That is one of the reasons why I am working alongside Lord Stern, who has great expertise in the area. He is helping to lead on the multilateral development and development finance agenda. The links with the private finance agenda are around blended finance. In many jurisdictions, there are risks that need to be taken out. They are risks that go beyond transition risks, to foreign exchange and other jurisdictional risks, in some developing countries.

Secondly, there is huge opportunity for capacity building in those countries through management of the risks. I underscore that that is a role that the IMF can play, and intends to play, by integrating climate risk management in its so-called Article 4 reviews of countries and its reviews of the financial systems of various countries. There is a role for the MDBs in helping to build not just human capacity and expertise but capacity in local debt markets, local capital markets and local financial systems.

There are fundamental issues with how the MDBs are using their balance sheets and the DFIs are using their flows. Can they say that they are Paris aligned? This goes outside the private finance agenda, but to what extent are they using other resources for adaptation and resilience, both of which are main components of COP 26?

Q11 **Baroness Couttie:** How should central banks take into account climate change in their monetary policy? Touching on what we said earlier, should it go beyond a risk-based approach?

Dr Mark Carney: It touches on it, yes. First and foremost, in my judgment, it is a financial stability issue, which is why the Bank of England focused on those aspects. The most recent remit from the Chancellor was last Wednesday and came with the Budget. There was a lot going on last Wednesday, so, funnily enough, it did not make the headlines. The remit was significant, in that the Chancellor reinforced the work that the Bank and the FPC—which is the macroprudential policy committee—had been doing on climate, and underscored that it was central to both the primary and secondary objectives of the FPC, so it has a clear role.

However, that is not monetary policy. With respect to monetary policy, the prudential principle holds as well, to refer back to our earlier conversation about focus on the objective. There are a few ways that the transition could impact the stance of monetary policy. One of the most obvious is that for a long time we have been in a situation, and are likely to be for a period of time, where equilibrium interest rates are exceptionally low. As a consequence, the right rate of interest to achieve the 2% inflation target is much lower. Prior to the crisis, it used to be bounced around but would average somewhere in the 4% to 5% range; as it had since the Bank was formed in 1694, as it turns out. Even though rates have been exceptionally low, and were exceptionally low during my period as Governor, inflation averaged less than 2% over that period.

There are a variety of factors that have kept the equilibrium rate down. One of them has been a relative dearth of investment. The one thing we know, if we are to have transition to a net-zero world, is that there is going to be substantial new investment. That would in and of itself push up on the interest rate and would give a central bank more room to manage monetary policy.

I mention the last area for completeness, because it is not directly around monetary policy but around collateral policy, or the types of assets that the central bank will take in. As frameworks for disclosure develop, and more and more companies comply, under FCA guidance, with TCFD disclosure, and there is better and more consistent information through taxonomies or other frameworks about who has a credible plan for transition and who does not, those types of considerations might be taken into account by some central banks to judge what type of collateral they will take.

In the UK, and I defer to colleagues on those committees, it relates to the relationship with the Government and how the remit and other correspondence between the Government and the Bank is specified.

Q12 **The Chair:** Following on from that, what are your views on the introduction of a green-supporting factor or a brown-penalising factor?

Dr Mark Carney: We had an exchange on that a bit earlier. It is best to focus prudential policy on the risks. Those risks are shifting. Some higher-risk activities become lower risk, and vice versa, as we move along the transition. Under what is called judgment-based supervision, which is based on evidence but with a judgment overlay, supervisors here expect that banks and insurers will be forward-looking in their management of the risks.

The process of climate stress testing and the supervisory expectations that have been put out by the PRA for banks and insurers put greater weight on anticipating those types of transition risks. It is for the institutions at the front line to make those judgments. They will be tested, though, through the stress-testing process. The supervisors also expect that those judgments will be based on evidence, with clear metrics, and with the most senior-level oversight in the institution, and that the judgments are as integrated in the risk management process as any other core risk that those institutions are managing.

The Chair: Is that the same as saying that the stress tests are in themselves a green-supporting factor?

Dr Mark Carney: The combination of a legislated objective of net zero and the climate policy consequences of that, and bringing a stress test that requires a longer horizon, shines a very clear light on the relative creditworthiness of assets, loans and investments that are on the right side of history, as defined by the country's commitment, and on the relative unattractiveness, and growing unattractiveness, of investment loans and other exposures to those who are on the wrong side of history.

You can manage those risks in two ways. You can say, "Well, I am only making a loan for a few years, so it will be okay, and I'll fix it". That is a tactic; it is not a strategy. The question is, when do you get off making the loan to the incorrigibly brown industry, or the beige industry, which, ultimately, does not have a strategy to turn green?

The Chair: Dr Carney, thank you very much indeed for your evidence. It was absolutely fascinating and extremely important for us all. The formal evidence session is now closed. The Committee will resume its private deliberations. Thank you very much.