HOUSE OF LORDS

Select Committee on Risk Assessment and Risk Planning

Corrected oral evidence: Risk Assessment and Risk Planning

Wednesday 24 February 2021

10.30 am

Watch the meeting

Members present: Lord Arbuthnot of Edrom (The Chair); Lord Browne of Ladyton; Lord Clement-Jones; Baroness McGregor-Smith; Lord Mair; Lord O'Shaughnessy; Lord Rees of Ludlow; Lord Robertson of Port Ellen; Lord Thurso; Lord Triesman; Lord Willetts.

Evidence Session No. 10 Virtual Proceeding Questions 106 - 119

Witnesses

I: Bruce Carnegie-Brown, Chairman, Lloyd's of London; Julian Enoizi, Chief Executive, Pool Re; Huw Evans, Director General, Association of British Insurers; John Scott, Head of Sustainability Risk, Zurich Insurance Group; Professor Paula Jarzabkowski, Professor of Strategic Management, City's Business School, City, University of London.

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Examination of witnesses

Bruce Carnegie-Brown, Julian Enoizi, Huw Evans, John Scott and Professor Paula Jarzabkowski.

Q106 **The Chair:** Good morning and welcome to this evidence session of the House of Lords Select Committee on Risk Assessment and Risk Planning, in which we will be covering the issue of insurance and the role that it has to play. A transcript of the meeting will be published on the committee website. Witnesses will have the opportunity to make corrections to it wherever necessary.

We have a large and stellar panel this morning consisting of: Bruce Carnegie-Brown, chairman of Lloyd's of London; Julian Enoizi, chief executive at Pool Re Insurance; Huw Evans, director-general of the Association of British Insurers; Professor Paula Jarzabkowski, professor of strategic management at City's Business School, City, University of London; and John Scott, head of sustainability risk at Zurich Insurance Group—though not necessarily in that order. Welcome to you all.

We have a number of questions, but you do not each have to answer every question if you feel that one of the other witnesses has very happily covered the points that you might have made. We will try to be finished by 11.45, perhaps 12 pm.

Let us begin, and I will leave it up to you to choose who should first answer this general question. What, in your view, is the role of the insurance industry in building resilience and supporting the UK's efforts towards resilience?

Professor Paula Jarzabkowski: There are two ways we need to consider resilience in this question. One is financial resilience. The insurance industry plays a critical underpinning role in the financial resilience of UK economic infrastructure, in houses, mortgages and so forth. A robust insurance industry in and of itself is critical for economic resilience, and for some social equality, because those who cannot get insured, or who fall out of the insurance net, are often part of the problems of social inequality. That is the first point.

The second point is physical resilience, which is slightly more tricky. The modelling expertise of the insurance industry is excellent at showing us where resilience is falling down. For example, increased physical risk or, indeed, some intangible risk are areas that either fall outside the insurance net, which shows us there is a problem, or are areas where insurance prices are rising because they reflect the degree of risk. They are a very good signal to us of weakness in resilience, and we should be addressing them, but they often lack the specific policy or, indeed, financial levers beyond the price signal to change the physical resilience.

We have some indications, not in the private market but with Flood Re, which is now using some of the premium that it amasses specifically to address legacy assets where, through no fault of their own, home owners find themselves with assets that are no longer resilient to flood. It is using the premiums to support build back better. We could learn lessons from that. We could use the risk modelling, the price signals and the claims data from insurance, but we would then need some policy join-up to link that to improving the physical resilience of the assets that insurance gives us signals about.

Bruce Carnegie-Brown: I might build on that point with examples of natural catastrophe. There is good research evidence to suggest that, where insurance is present following a natural catastrophe event, the local economy affected by that natural catastrophe recovers more quickly in the physical infrastructure being restored and economic growth being accelerated. This is about bringing external capital to the point of a disaster that without insurance would not otherwise be there.

Julian Enoizi: I will add to what Bruce said about natural catastrophe with reference to manmade catastrophe—that is, terrorism. The insurance industry, as well as risk financing—paying claims—is also able to add quite a lot in the area of risk management, specifically in influencing the behaviour of the consumer to take care of himself rather than relying on government or society at large. For example, there is the investment of some of the premium we collect in joint initiatives with the Home Office designed to reduce risk, which Lord Browne is very familiar with, and to influence the behaviour of the customer, by giving him a premium reduction in exchange for good behaviour in reducing his own risk. Disaster risk financing is one element of it and disaster risk management is another extremely important part of it. The insurance industry, through its understanding of peril, and of how to price and assess a peril, can give the appropriate advice to the consumer on how they protect themselves from that.

The Chair: I was hoping you would say that, because that is a huge issue that we want to expand on.

Huw Evans: To build on what others have said, the insurance and long-term savings sector has a vital role to play in risk managing and providing insurance policies across pretty much every field of human endeavour, both individual and commercial, as well as providing people with the means to have financial resilience, particularly in retirement, and through the provision of long-term savings.

The UK has a particular role to play in that. We are the fourth largest insurance market in the world, the largest in Europe, and easily the most international and most innovative.

We have a good track record of working with the UK Government on resilience projects. Flood Re has already been mentioned. Pool Re is here today. We have worked on auto-enrolment, for example, which was a project that took over 10 years to bring to fruition and is critical to the long-term financial resilience of this country. More recently with the Covid-19 pandemic, the trade credit reinsurance agreement was put in place with the Government, the slightly smaller scheme on film and television, and the more recently announced scheme on care home indemnity for Covid patients. This is a country where there is a good track record of the insurance sector working with the state to increase resilience and to get the best of both worlds.

While I would say that we can play a greater role, we cannot do it all. Not every risk is insurable in the modern world. Many risks are changing rapidly. Insurance is not the panacea for everything. It is important that we build an ambitious view for the future of how the insurance and long-term savings sector can play a greater role, but at the same time not lull ourselves into a view that everything can be worked through in that way. Some aspects of resilience inevitably fall more to the state than they can do to the market, and more to the individual than they can do to the state.

John Scott: I would like to add a couple of points, including one on the financial resilience, which is a well-made point. The insurance sector is a natural investor in long-term financial assets—corporate bonds and sovereign bonds in particular. We are a bulwark of stability in the financial system as well as an important support for individuals as an insurer. I think that is a really important point to make.

On the other piece around the physical risks, one of our most important roles is the one we are playing today—informing policymakers, because so much of the risk landscape within which we operate is governed by good policy. What I mean by that is that, when we look at resilience, especially urban resilience to physical risks such as flood, for example, it is things such as socioeconomic factors and social cohesion that build resilience after a disaster. Good governance and leadership, especially at a local level, the general health of the population, the number of people in work and lack of poverty are fundamental foundations of resilience.

Of course, there is also the point about infrastructure, and being able to influence through our data analysis the trade-offs between the fight or flight examples such as in coastal protection or flood resilience. When is it sensible to build flood defences in one place and when is it not? I think we support in lots of different ways.

The Chair: So you are involved in policy discussions with national and international Governments as well.

John Scott: Yes, certainly through Zurich being a global insurer, and not just in the UK, we have been involved in the UK with flood resilience. We are one of the major supporters of providing information around the risk management of flood in the UK.

The Chair: Mr Carnegie-Brown, you were nodding.

Bruce Carnegie-Brown: Specifically with respect to the pandemic, last summer we published a paper on recovery potential around the pandemic, and we have been engaged with 35 Governments and agencies around the world in trying to share our knowledge and insight on these issues.

Q107 **Lord Mair:** Much of the discussion on resilience is about recovery, but of course it is wider than that, and it is very important in the sense of the preparedness and the planning, as well as the recovery itself. The concept of critical infrastructure resilience is emerging as an advancement on infrastructure protection, which is currently the main plank of government policy. A recent OECD survey of critical infrastructure resilience practice emphasises this very well. Will you expand on the role of insurance in building genuine resilience in the context of proper planning preparation, and not just recovery?

Bruce Carnegie-Brown: I would say as a general rule that in much project management and infrastructure development an important role is played by finance and insurance. If you think of infrastructure development as providing resilience to an economy overall, much of that infrastructure would not be built were there not financing in place, and the financiers would not put financing in place if there was no insurance available for those projects. There is a virtuous circle in that respect in which the insurance industry underpins a lot of the investment that goes into infrastructure planning and building around the world.

Julian Enoizi: I would add to that that the insurance industry is extremely good at looking backwards and using historical data to map future events, and that is, essentially, the way it has operated for many years. The challenge for the insurance industry now is to use artificial intelligence and predictive analytics to look forward. It has an enormous amount of data at its disposal, but it needs that investment in the predictive analytics so that we can start to prepare for black swan, or even white swan, events as they happen in the future, as opposed to simply waiting for the disaster to happen and then financing it.

Huw Evans: I add two other points. First, the Government, and the state more generally, have in the past not been overly comfortable on some of these issues in engaging with the insurance industry in a systematic manner. As they put more focus, as you say, on resilience, that may come to pass, but there is not really a structural piece in place at the moment whereby, for example, the industry has a panel of resilience experts in a standing format that is brought in. It is far more likely that leading practitioners from Lloyd’s are asked, or Bruce is asked to pull together a group of experts, or we are, or other collective bodies will put forward people on ad hoc projects. It would be interesting for this committee to explore whether something more structural could be put in place that provides a standing level of expertise.

Away from the critical infrastructure and on the more individual piece, the challenge always for insurers with resilience and individual risk is whether it can be made to work in a one-year contract, where the customer can take their business somewhere else the following year. If the insurer helps to make their property more resilient, for example, the customer can take that benefit off to another provider the following year. That has always been the challenge when you are talking about retail insurance. I certainly think that more could be done on a national infrastructure level to build a partnership between the market and the Government.

Q108 **Lord Mair:** May I pursue that point? On the question of how the insurance industry incentivises behaviour to mitigate risk, one can understand that perhaps more in terms of individual house owners against flooding or other such incidents. As regards what government might do, what role does the insurance industry play in influencing government to mitigate risk?

John Scott: Within the UK, Zurich as an insurer has been involved with the Defra flood resilience round table. We have been able to engage and influence policy on how to manage the very complex issues around flood, and what causes flood, and how to manage it. We have also had bilateral discussions with Defra, the Environment Agency and MPs representing constituencies where flood is a big issue for them.

At a global level, Zurich has the Zurich Flood Resilience Alliance, which includes the IFRC and the London School of Economics, and a whole range of organisations. It is underpinned by the fact that when we have done studies in many countries that are prone to natural catastrophes, whether that is flood, windstorm or wildfire, $1 invested in up-front resilience saves $5 in post-event costs. That ratio is really important to bear in mind, and, where we can influence public policy to improve resilience in perhaps some of the areas that I talked about earlier, that has a significant saving for society as a whole.

Professor Paula Jarzabkowski: I would like to add to the point about planning for infrastructure resilience and the notion of the role of government.

Insurance is the ultimate ex ante planning for a stream of capital, for response. The whole point of it is to stabilise capital flow. We need to think about who owns the infrastructure. Some of the research that we have done around the world shows that with proactive use by Governments of their own infrastructure—using the insurance markets to protect their own infrastructure, for example, through the purchase of catastrophe bonds and so forth, to restore and to rebuild infrastructure in a more resilient way—we tend to see a much more virtuous circle. Where the Government own the infrastructure and pay the premiums on the infrastructure, and get the claims money afterwards, they tend to use that wisely to build more resilient infrastructure.

When you get a link between government and the insurance industry on how to join these pieces together, you get into a virtuous circle. We have seen that in probably three or four different case contexts around the world. I would not say that the UK is in that context, but there is the potential to do that, and I think that it is an important discussion to have.

Julian Enoizi: May I add one point? When you look at the Government's national risk register, there is very little, if any, mention of the ability to use insurance to mitigate the risks for which the Government are essentially the insurer of last resort. If I take one example of terrorism, the Home Office has over the last three or four years become extremely conscious and able to articulate the value of insurance and, therefore, generate a partnership in how its knowledge of a threat can be translated into a mitigation of a risk. That could be an example for other government departments. It is not widespread. There is some evidence of it happening in the cyber threat, but I have not seen it elsewhere.

Q109 **Lord Mair:** Would it be fair to say that the Government are changing their view, and thinking not only about recovery but about preparedness?

Bruce Carnegie-Brown: I would venture that it is not systematic as regards their response. It is episodic and, typically, post a substantial event. This is a behavioural challenge. We talked about coming back to this at a future point. Governments suffer from the same behavioural challenges as we do as individuals. The real issue is, of course, the urgent crowding out the important. Risks that you think may be five or 10 years away are less important in budgetary terms than things that might happen within the span of the electoral cycle.

That is a key challenge. If we remove it from the UK and look at, say, the south-eastern region of the United States, windstorms are a regular occurrence. That is a rich economy that can afford to buy insurance. Typically, only 25% of the economic damage done by a windstorm going through the south-east of the United States is insured at any point in time.

There are some key behavioural aspects that I think are reflected not only in individual behaviours but in government behaviours, which tend to make us less focused on things that are less probable or less frequent, even though their impact may be extraordinarily severe.

Huw Evans: I completely agree with that. From a UK Government perspective, you have a series of departmental conversations about specific risks that are more often incident driven than forward looking. We have a conversation with MHCLG about cladding, with Defra about flood risk, with the Treasury and the DCMS about cyber risk. Julian has many conversations with the Home Office about terrorism risk. We have conversations with the Department for Work and Pensions and the Treasury about financial resilience and financial capability—the risks posed to our society by certain types of lack of financial resilience.

What we do not have, although the committee's work could encourage it, is a more holistic HMG approach as opposed to, sadly, what is very common in this country: a more departmentally siloed approach, driven by specific incidents, where the vast majority of both official and ministerial time is focused on trying to deal with a here-and-now problem rather than looking further ahead, with the opportunity to think more creatively.

Of course, that is more difficult for government and for the Civil Service, particularly in the current context, but it is not easy at any time. The rewards when you can do that work, as we have demonstrated with the partnerships on auto-enrolment and Flood Re, can be very considerable and last for decades.

The Chair: Mr Evans, you posed a problem, namely how to deal with the fact that people may at the end of a year, having been incentivised, take their business elsewhere. I would like you at some stage—not now, because we want to get on—to give us the answer to the problem as well as posing the problem, if that is all right.

Q110 **Baroness McGregor-Smith:** I have a general question to the panel. How should the Government and the insurance industry cope with charity hazard and moral hazard?

Bruce Carnegie-Brown: I rather feel that these risks exist anyway, not just for the Government but for us all. I rather take the view that the Government own these risks in the absence of other mechanisms to support resilience in the economy. If you just look at the pandemic, and the amount of capital that the Government have been obliged to put into the economy, not just in this country but around the world, it shows that the Government are the lender of last resort in all these circumstances, whether the risks are moral or charitable.

That is why we continue to encourage partnership between government and private enterprise to try to address these issues, because some of that risk can be transferred from government to private enterprise, and Julian's business at Pool Re is a really good example of that.

I would not get overly stressed on this issue because it exists in all parts of the economy. For instance, even in banking, you see it with fraud, where an individual expects their bank to recompense them for any fraud on their account even if that individual has given their pin number to the fraudster.

There are some of those prevalences. There are things that we can do to mitigate them, aligning the interests of government, insurers and policyholders, for instance, by creating co-insurance or first loss and deductible kinds of risk. You see this in your own car insurance, where if you bash your car you are responsible for the first £200 of the claim before the insurance company pays. This is intended to align your responsibility with the outcomes. We have touched on it with respect to home ownership where you are encouraged to put secure locks on your windows, and that can improve the price that you pay for your insurance.

There are things that we can do to mitigate those risks, but they are quite prevalent across society.

Julian Enoizi: One point that Bruce raised was about the lack of take-up of the product. You have a Government dealing with the risk as the insurer of last resort. You have an insurance industry that is trying to deploy as much capital as it is able. We also have to recognise that moral hazard point that you raise. We are in a situation with many of these kinds of risks where the default reaction on the part of the public or consumer will be that if something happens the Government will pay.

In the UK we only have four types of insurance that are mandatory categories. As time goes on, it may be harder to distribute and sell insurance products to small businesses, whose view will now be coloured by what has happened with this latest catastrophe, that in the event something happens the Government will pay. That will create an enormous financial burden for the Government that will have to be dealt with. The take-up rate of insurance in terrorism, in cyber, in business interruption, is extremely low, and we have to find a solution to that as well as looking to finance the entirety of the risk, which of course is not possible, as Huw said earlier.

Q111 **Baroness McGregor-Smith:** On the point about, for example, business interruption insurance, I recall working in the service industry, where the stark reality was that it is too expensive. It was so expensive to insure for certain types of business. That is why many businesses cannot afford it. Is there an answer to that in the future, particularly after this pandemic?

Huw Evans: That is where state and insurer-related partnerships can sometimes help. Clearly, the central design of Flood Re is to make for a more affordable product for the consumer. You are right that the cost of business interruption insurance—certainly the more sophisticated version that included infectious disease cover, which was purchased by about only 5% of businesses—has long been a factor. You cannot get away from the low levels of demand when you are discussing this issue, because the lower the demand, the greater the protection gap, and the bigger the clamour for the state to step in when that protection gap manifests itself, as we saw last year with business interruption.

We could just as easily see that with a large-scale cyberattack where the levels of coverage are small. Despite the fact we have a very highly functioning Pool Re, demand for terror cover from small businesses is also very small. We cannot get away from the demand challenges here.

There will be growth off the back of the events of last year. There will be a higher expectation—one that has always existed, as Bruce said—that the state will ultimately step in. If we look at something as simple as the Thomas Cook insolvency 18 months ago, what happened? The state stepped in to get people back home. It is not just on the big pandemic-related issues. We have seen other issues in the recent past where the state has stepped in.

The provision of education insurance to academies is another example. There was a functioning market working perfectly well and the Department for Education decided to set up its own captive insurance scheme, and took a large chunk of what was previously in the market.

There are lots of examples, some bigger than others, where this has happened. It blurs the picture for consumers, whether they are business consumers or individuals, about who is covering what, and what happens if there is a gap.

Bruce Carnegie-Brown: I might build on that by arguing that we should not necessarily just look at this product by product. Huw makes a very good point product by product, but if you think about all the risks that we need to protect ourselves from, we have a limited pot of money that we are willing to allocate to that, whether we are individuals or businesses, so we are constantly making this trade-off of, "Do I buy pandemic insurance versus adequately insuring the contents of my house?", for instance. That is one of the challenges we have.

As I said before, the short term always crowds out the long term in these things. Events that appear remote as regards their probability tend to be much less invested in as regards insurance penetration, rather than things that happen more frequently and more immediately around us.

Q112 **Baroness McGregor-Smith:** I tend to agree with that. When you are filling in a risk register for the average big business, and you go through the remote threats, the more remote it is, the less likely you are to insure. Surely that is the logic more and more. That will leave us with a very big gap going forward. Whether people think that it is a remote risk or believe the state will step in one day, I think that there is still a real issue around the cost. An average SME cannot afford it, particularly coming out of this. Many are surviving on six to eight weeks' cash flow. What more can industries such as the hospitality industry do? There is only so much that they can do. Will a range of more affordable solutions come out of this to help with it, or do the Government need to look at this now to see what they can do?

Professor Paula Jarzabkowski: May I come in on that question? We need to distinguish between the pandemic, which is a very particular type of systemic risk, as opposed to other kinds of risks. Systemic risk comes with certain uninsurabilities because of the nature of it being concurrent and diversified.

There are a couple of points to raise with the affordability point, and this ties in, to some extent, with the moral hazard issue. There is always a fear that if you subsidise products—you provide some subsidised process so that more people can have it and it is more affordable—you are raising a situation of moral hazard.

I am inclined to agree that we should not get hung up on those issues. If our aim is to increase the amount of cover that can be taken in the private market—perhaps shared—we need to take risk sharing very seriously. That may mean that we need to take the mandatory line very seriously. There is some pushback against it being mandatory in some of the countries that we look at, but in others it is taken for granted that that is the best way to ensure a degree of affordability, a degree of subsidisation and the maximum amount of cover and protection. That is the thorny question that we need to get into if we want to unpack affordability in relation to some of these risks.

We want everyone to have some skin in the game. There will be a bit of moral hazard, there will be a bit of something in any system that you set up, but if you are willing to tweak it around the edges all the time you can manage that. You need to get the biggest pool of insureds that you possibly can and then you can afford to subsidise. Then you can work out how much risk the owner takes, how much risk the policyholder takes, and how much the insurance industry takes. Then we need to look at how much we cross-subsidise insureds, and look at what is left at the top that the Government will need to support. That creates a much better layering of risks throughout society, which is indeed what Bruce was talking about a little earlier.

Julian Enoizi: The other side of that coin is availability. Paula has talked eloquently about the affordability of insurance, but it may not be available to purchase. That is where the public/private partnership system is so important. That is also worth bearing in mind.

Q113 **Lord Robertson of Port Ellen:** I think that the last point will be covered by some questions. I want to ask Professor Jarzabkowski about the study for which she is principal investigator, snappily called *Risk Sharing Mechanisms to Mitigate the Economic Consequences of Pandemics: Mobilising Insurance Expertise & Capital to Provide Solutions for the UK*. It is almost a question in itself. Can you give us an indication of any of the preliminary conclusions that you have come to as part of that investigation?

Professor Paula Jarzabkowski: They are interim results, but I am happy to give you a rundown of the interim results and some of our partners on that project—ABI, Pool Re, the Government Actuary's Department, which is not here today, and the CBI.

First, we should think about the customer voice. We were just talking about business interruption insurance and affordability. We ran a small survey with the CBI—the Confederation of British Industry. We find with the SME sector, which is very valuable to us, that, despite everything, it would prefer to have an insurance product rather than loans. That ties in very well with what Baroness McGregor-Smith said. The businesses where affordability is a big issue tend not to want to run on a lot of credit or loan or debt. Rather than loans they would prefer to have an insurance product.

One thing that we have found is quite a reality gap. Not only is there a protection gap, there is a reality gap in their understanding of what they think they would be willing to pay as an average amount versus where we have something as systemic as, say, the pandemic has been, where we got some 80% claims, and there is no way the premium could even begin to touch the sides of the claims. There is a big education piece to be done there; none the less, I think that it is very positive from the consumer perspective that they think insurance is preferable to loans. That indicates they can be educated in behavioural issues such as ex ante planning.

There are some other issues that I think are important for us to take on board in what we are learning. Without a doubt the insurance industry will struggle to cover this in the private market going forward, at least immediately. It will do it in different ways, either through high prices or exclusions that mean there is no meaningful product at an affordable price. That makes sense because it needs to remain solvent and because, of course, the reinsurers will not sit behind it if it takes infectious disease, because they cannot pay for cancellations or something systemic.

We have to consider very seriously what we are going to do in at least the medium term. I think that there will be a demand for some sort of infectious diseases products for businesses getting back on their feet. We cannot do much about the house that is currently on fire with Covid. With a bit of luck, we are starting to come out of that, but people will need some form of product for infectious disease. It will probably not be affordable, and there will be a low risk appetite because the insurance industry cannot be solvent and take it. We will need to come up with some solutions.

I believe that that is where we can learn from. There are a couple of things. One is that there have been some very rapid solutions such as the trade credit scheme, the film and TV scheme, which Huw mentioned, and the care homes scheme. I would have to say that those are a little piecemeal and worked very quickly, but they have not come across with a consistent package of, "Here's the way to do it".

Almost all the schemes of risk sharing going forward are a version of a Pool Re-type mechanism, with elements of Flood Re. We are talking not about personal lives but about businesses, so we will need to consider some form of perhaps not precisely the Pool Re model—we all know that model, and it is the basic underlying model we will probably need to consider to get a product back into the market. The private sector appetite will grow for some aspects of it when it begins to understand how it can take it, but it will not be immediate. That immediate gap may be problematic for us, particularly if lending is contingent on that kind of infectious disease cover.

Lord Robertson of Port Ellen: Mr Evans might want to comment. The ABI has been involved in this project as well, has it not?

Huw Evans: I agree with Paula's assessment that it is a huge challenge for the insurance industry to provide cover without any form of state partnership, for the reasons that she set out: the unique nature of pandemics. They happen to a wide spread of insured risks at the same time, unlike the normal insurance model where the premiums of the many pay for the misfortunes of the few. The reinsurance capacity is global, and the more global the pandemic, the more that the same reinsurers are being asked to pay for it. You may have noticed this week that Swiss Re reported a huge operating loss for this year for the first time in many years, as an example of that type of stress that works its way through.

It is also a consequence of the recent test case that was established on business interruption. The very clear deduction from the way in which the judges interpreted the mixture of contracts was that, if in doubt, exclude something that you do not intend to cover for. That was the very clear conclusion that insurers would have drawn from the way in which the judges interpreted the contractual issues that were in front of them.

As regards the solutions, which is hopefully a more positive area to look at, some of the other key considerations that would need to be looked at in any type of public/private partnership of this nature would be: is it mandatory or optional? I think that we have to look more towards the mandatory line, given the very low levels of demand that would be in place otherwise. What type of product? Are you attempting to indemnify for the whole loss or part of it? Is it a parametric-type product where you would just pay a specific amount of money, and that is it, or are you trying to indemnify the whole of the loss, or some hybrid in between? That is a key area.

I would go back to the earlier question of how you convey to the public that the Government will not just step in so you do not need to buy this product. Even if you set up the whole infrastructure, you have the financing in place, you have based it all on the academic research to put it in the right way, and you have the reinsurance cover by using the methods that Pool Re has successfully done over the years, how do you persuade customers to buy it and that the Government will not just step in and help them?

These are all considerations that have to be worked through if we are going to develop something that is capable of working and achieving the results that I think we would all like to see.

Lord Robertson of Port Ellen: Mr Carnegie-Brown, is Lloyd's part of this study?

Bruce Carnegie-Brown: Not directly part of this study, but, clearly, we are looking at how we can introduce, specifically in the case of business interruption, new policies to provide cover particularly in the small and medium-sized enterprise part of the marketplace.

The immediate challenges are the two that have been identified. First, a lot of capital has been destroyed in the insurance industry by paying claims related to the pandemic, so insurers are naturally cautious on that issue; and, secondly, can we remodel the outcomes on this? Most people's view is that the vaccine is a game-changer and will enable us to model the impact of this pandemic and potential variants in such a way that we can make it an economically viable product to offer. Almost certainly it will start small and we will need to build it over time. To Huw's point, it would provide partial solutions to smaller businesses.

In the debate about compulsion versus voluntary participation, Pool Re—Julian is much more expert than I am on this—is quite an interesting example. To benefit from the protection from the Government, you have to buy a policy, so there is a good encouragement to behave responsibly on an individual basis. The first loss for that policy is provided by the private insurance market before you trigger government coverage. If you do not buy the policy, you do not get any cover at all. The rules are reasonably clear.

This is one of the ways of trying to reduce the moral hazard in this for the Government. It may be quite a good way of incentivising behaviour rather than introducing compulsion. Julian would also be the first to say that not enough people today buy terrorism cover. That may be a smart choice if they believe the risk of terrorism is now less than a whole bunch of other risks that they need to spend money buying protection for. It is true that the world is an underinsured place, and that has to do in part with the affordability of the product against people's capacity to pay the necessary premiums.

Q114 **Lord Robertson of Port Ellen:** To go back to Professor Jarzabkowski, the Government had a big exercise in 2016 based on a pandemic. Have you been able find any of the conclusions of that exercise, any of the lessons learned that might be relevant to the study that you are doing?

Professor Paula Jarzabkowski: I would not say that any of that has fed into the current approach to the pandemic, but if you are aware of something I could access, that would be helpful. I am not aware that either the Government or the industry came up with anything conclusive to use at that time that is now informing their response to this pandemic. I would say that it was an unforeseen risk in the way we are responding to it now. I am not sure if you are asking me whether we should have anticipated this, or whether there is something in the responses that we could now use.

Lord Robertson of Port Ellen: You might have assumed it because we had bird flu, H1N1 and SARS before they ran this exercise. I am just wondering why the insurance industry was blindsided when all of this was going on.

Bruce Carnegie-Brown: May I comment on that? Post the SARS epidemic, in 2008, Lloyd's produced a report on pandemic risk, which is available on the Lloyd's website, and, if you read it, it is incredibly prescient of the events that we are going through at the moment. Indeed, Lloyd's then developed specific pandemic insurance policies to support this pandemic threat, but nobody bought them. It comes back to this issue of people's view about the probability of these things happening to them. Of course, SARS was not an event that impacted specifically on the UK.

Separately, we produce something we call the Lloyd's City Risk Index every couple of years, last produced in 2019, where we try to model a range of risks—some manmade, some natural—and their impacts on the GDP of 279 cities around the world. Human pandemic ranks as the No. 4 risk in that publication, but, again, nobody purchases protection against it because they implicitly do not believe that it will happen to them or, indeed, that it is available, to the Baroness's point, at a price they can afford.

Lord Robertson of Port Ellen: We can take that forward.

The Chair: We will come on to Lord O'Shaughnessy and then I think we will want to hear from Mr Enoizi in answer to all these things because your name has been prayed in aid by many people.

Q115 **Lord O'Shaughnessy:** We have been exploring the apparent market failure around the provision of insurance for losses arising from the pandemic. Looking ahead and more broadly, do panel members think that there are other identifiable risks out there that could expose or precipitate a future market failure? Are these risks now less likely to be covered because of our experiences? We are thinking here particularly about the impact on our ability to prepare for risks such as cyberattacks, which could be very profound and widespread in their impacts, but there might be others as well. Mr Enoizi, as indeed your name has indeed been prayed in aid, I am sure that you will have something to say on this issue, so may I come to you first and then come to the other panel members?

Julian Enoizi: It is worth building on what the guys were saying earlier—that the insurance industry is extremely good at managing financing risk that sits on the scale of predictability, if I can put it that way, or modelability. When you come to catastrophic risk—and when I say "catastrophic" the insurance industry also manages catastrophic risk—we are talking here about systemic, difficult to insure, uninsurable societally catastrophic risks. We call them tail events. The insurance industry finds it very hard to do that, first, because of modelling. You can perhaps model the blast scenario or what would happen if there was a catastrophic cyber outage, but you cannot model the frequency of those things, partly because they have human interaction, and humans tend to find a way around obstacles, unlike natural events, and because the size and the scale of those losses exceeds the amount of premium collected by the insurance industry, or even the capitalisation of the insurance industry.

The difficulty comes—with all the issues that have been raised—because the number of people buying those products is very small, and therefore you do not have a body of premium to pay for losses. You do not have a body of premium to allow you to invest in the understanding of the peril, the modelling of the peril, understanding what risk-reflective pricing would be, going and speaking to government and saying, "Look, the price that we would charge for this risk would be too great for the consumer; therefore, we need a government subsidisation", as we see with Flood Re.

There is a whole range of issues, most of which noble Lords will see if they look at foreign Governments. The French have a state reinsurance company. The Spanish equitably share risk and the Government actually carry many of these risks. The challenge for us is to find the equitable sharing of risks between the parties to a transaction—the insurance industry, the reinsurance industry and the capital markets. How much of their capital are they willing to expose to something they have a limited understanding of? The insured also, as somebody said earlier, has to take a deductible, an excess. They also have to have skin in the game. The Government have to be the tail insurer, the insurer of last resort. The problem of course with the pandemic is that the Government are the insurer of first resort.

Lord O'Shaughnessy: It would be good to get your thoughts on whether there are other risks that we are not adequately prepared for. To reframe the question slightly, what could government or others do to provide more insurance into the system against these kinds of risks? You have just hinted about some specific solutions to it. We would be interested in hearing potential solutions to this problem.

Professor Paula Jarzabkowski: I would like to speak to this very much, particularly in the light of the point raised a little earlier about the fact that we have modelled previous pandemics and chosen not to do anything about them, for a whole host of behaviourally very sound reasons—behaviourally sound but not risk sound, if you see what I mean. What people do and what they should do are very different things. That includes institutions such as Governments.

It is very important to consider that this pandemic has been a rapid onset systemic risk—we can see the effects very quickly. When we think about things such as cyber, we tend to think of the unknown and the mysterious, which could also be very rapid onset. I am surprised, however, that the systemic risk that is occasioned by climate change, and for which there is increasing evidence, is not considered. The insurance industry is indeed doing many policy papers on it, and holding many events, and perhaps talking to itself, unfortunately. We know that the secondary risks arising from climate change are increasing. There is ample data to show that, and they are increasing apace, and going much faster than they used to. When we talk about secondary risk, we mean things such as heat-causing drought and wildfire, we mean flooding and so forth, and we mean that legacy assets are not robust for these kinds of changes.

That undermines our insurance industry significantly in a couple of ways. One is that it needs to put pricing up because it is all paid from the same global wallet. The UK situation is, in fact, affected by the wildfire in Australia or California, or the drought in southern Africa. We cannot afford to deny that, and it will increase the premiums here.

The second point is that as those premiums increase—this was brought up very well earlier—people tend to pull away from buying a product. That is the classic insurance model. But if we allow that classic insurance model just to take place—prices go up: that is correct, it is risk-reflective pricing, and behaviourally people buy less product—we end up with a bigger set of risks that sit on a government balance sheet.

I do not want to look at those headlights rushing towards us and start talking about other risks, and not talk about the one that we have a lot of data on, and where the insurance industry has been doing physical extreme weather catastrophe for a long time. We can definitely play a part and we can definitely learn from it and we can definitely use it, but we need to make that decision.

I am very hopeful that this is one of the forums where those decisions can be encouraged.

Lord O'Shaughnessy: That is crystal clear.

Bruce Carnegie-Brown: I would certainly build on that by saying that in the climate area the insurance industry is already underwriting the impacts of climate change. One of the challenges, of course, is that the severity and frequency of these events is gathering pace, as we all know.

There is a lot that the insurance industry can do to help to look at climate-related activities. It is not just about capital support for the insurance industry. It is as much about building resilience to the point where we started.

I would also give people encouragement that cyber risk is our fastest growing line of business at Lloyd’s. We have a leading market share in that. We estimate about $8 billion a year is spent buying cyber-risk insurance globally, and that about 25% of that is placed at Lloyd’s every year. The challenge is that more than 80% of that premium comes out of the United States. There is still a big awareness challenge in the rest of the world. People are not buying protection, including in this country.

There is also an evolving need to aggregate and improve data quality. One of the brave things that the insurance industry does is put a price on a risk before it really has enough data to support it, but only by putting a price on a risk do you get a customer to buy protection and in so doing to share their data with you. That data is beginning to improve. There are still some people who suggest that providing cyber-risk cover is a bit like providing house insurance but allowing the householder to leave the front door open.

When it comes to the resilience point, there is much more that can be done to improve the operational resilience of companies themselves to protect against the risk of hacking. Certainly, we know in the claims that we pay that where companies are well organised around the issue of a cyberattack, there is quite a lot of mitigation against the ultimate claim that is paid. We see in the financial services regulator somebody who is leaning quite heavily into the largest financial institutions in this country to try to ensure that they are operationally resilient.

The other point to note about cyber is that many attacks are state-sponsored. That is a very obvious reason why our own Government should be very involved, and some of the agencies of government need to be supportive of sharing data with private enterprise so that we can all begin to be more predictive in the development of these issues.

Huw Evans: Before we move on, may I politely challenge the premise of the question, which is that there has been market failure? That implies that there is an insurable risk to begin with and that the demand for that product has somehow failed to materialise. I do not think either is true. Pandemics are not insurable at affordable prices for the reasons that we have already explained. They happen to everyone at the same time and the costs are absolutely enormous.

There has been no demand for those products. As recently as 2019, Munich Re set up a whole business trying to sell pandemic insurance to small businesses, and nobody bought it.

Market failure is quite a loaded term for a slightly different picture, which is that this is largely an uninsurable risk in a normal insurance market, with the exception of specific, quite high-cost, high-value pandemic products that are sold through the Lloyd's market and that have paid out over the last year.

That leads into your question, Lord O'Shaughnessy, which is what sort of construct you need to create for there to be a better flow of affordable products, whether it is on pandemics, cyber or any of the other low-frequency, high-impact events. To go back to Baroness McGregor-Smith's first point about the risk register, often when you look at a risk register, it is not just what are the top risks, it is what are the low-frequency but high-impact risks. These are very easy for people to underinsure, because, by definition they do not happen very often, but when they do, boy, they can knock you right over. That area is core to building a more structured resilience framework going forward.

The Chair: Lord Browne, we will move to you. Mr Scott, I think you were intending to reply. Perhaps you can reply to the next one instead.

Q116 **Lord Browne of Ladyton:** Thank you to all our witnesses for their evidence so far, which has been fascinating and interesting. This question is designed to bring us back to the role of the public/private partnership for risk transfer, which came up earlier, and I think justifies us expanding a bit.

There is a general part to this question that has been substantially answered, and that is whether it is effective and sufficient. I think I know what your answer would be to that, which is that it can be effective and it probably is not sufficient. The best way into this as we have you here, Julian, and you have opined on this, is to ask whether the Pool Re model could be expanded to cover other systemic risks. We can expand the discussion among our other witnesses after you have answered.

Julian Enoizi: This issue is causing an enormous amount of debate in the insurance industry. Certainly, I have been part of the pandemic re working group and working with Bruce on the Lloyd's idea of a black swan re. These debates are going on not only in the United Kingdom but around the world.

It is worth pointing out before I give you a brief answer on this that, if a pandemic were to have been caused by a terrorist, Pool Re would have covered this. If a catastrophic cyber outage were to have been caused by a terrorist, Pool Re would have covered this; and, therefore, the British Government would have covered this. It is worth noting that. You are well aware of the work that we are about to do on biological pathogens precisely to understand this risk better. By the way, the genesis of that conference was long before this pandemic appeared.

The answer to your question, Lord Browne, is, I believe that the benefits that the insurance industry brings to understanding risk, assessing risk, pricing risk, modelling risk, mitigating risk and financing risk could be brought to bear on many of the risks that sit on the national risk register, which Huw described as low frequency but high severity, but we have to be realistic about what the insurance industry can do. It will not be able to finance the entirety of them, but it may bring a picture, which I think you have heard in abundance this afternoon.

If the British Government were to create a resilience re, for want of a better title, which looked at all the risks that sat on the national risk register, so that you look at what Flood Re is doing in flood mitigation, flood resilience, what Pool Re is doing likewise in terrorism, but you thought in advance of what might happen in the future with some of those other risks, some of those capabilities of the industry to understand and predict what might happen in the future bring to bear pockets of capital. On day one those pockets of capital may be relatively small, but, over time, the industry, getting more comfortable with risk, will be prepared to bear more of the risk.

At the same time resilience would be increased because we would design buildings to be resilient to CBRN attack, or design in the capabilities to deal with some of these risks, so that you create a more resilient society—one that has more understanding of the risks, is able to mitigate it or finance it, and you get a better understanding and a more resilient society and economy as a result.

Lord Browne of Ladyton: Thank you very much indeed. Mr Carnegie-Brown, may I invite you at this point, since you have spoken publicly about this issue, to contribute to this discussion?

Bruce Carnegie-Brown: As Julian says, Lloyd's produced a paper on recovery from the pandemic last summer, and one of the ideas was the so-called black swan re, which effectively encompasses not just putting something in place for a pandemic re but trying to find a mechanic for supporting systemic risks more broadly across the economy.

One of the challenges for Pool Re, of course, is that there is a whole bunch of assets that have not been able to be deployed in this event, specifically because it was not caused by a terrorist. The idea of having more flexibility has to be positive.

The challenge with more flexibility is clearly that different risks have different characteristics, different risk profiles and different premiums associated with them. If you try to do something that is all-encompassing, it becomes potentially incredibly complex.

To your underlying question, the Pool Re mechanic works very well, and at Lloyd's we are incredibly supportive of it. Why would you reinvent the wheel? Whether you create things in parallel with Pool Re or ask Pool Re to broaden its remit to cover more than just terrorism risks, the fact that it exists, it has integrity, and has been running now for the best part of 20 years, is a great place to start, and something we might get up and running more quickly than if we try to reinvent the wheel.

Lord Browne of Ladyton: Did you indicate that you wish to say something, Mr Evans?

Huw Evans: I would add a bit of experience from having helped set up Flood Re. I am still on its board, so I have a feel for how it operates on a day-to-day level.

I do not think that we should ever underestimate the difficulty of establishing public/private partnerships and making them work. They are inherently quite uncomfortable arrangements for both the state and the industry partner. Everyone talks about Flood Re as though it was a fait accompli. It took three years of very detailed and very difficult negotiations to get it mutually agreed. The Treasury—and this will not surprise you, Lord Browne, as a former Chief Secretary—was extremely reluctant to stand behind this in any way, shape or form. In normal times, and these are not normal times, it is exceptionally reluctant to contemplate anything that looks like an additional contingent liability for the state.

It is quite important that we have a degree of realism about what the normal dynamic is between the state and the insurance market, or any other partner, when it comes to setting up these partnerships. They are never equal. The state is always the dominant partner, and there can be degrees of unpredictability, as we have seen in recent years with the ONS decision to reclassify Pool Re. It was done by unelected officials, with no scrutiny and no consultation. These things are not straightforward to set up, to run or to make on an ongoing basis.

In addition to the points that Julian and Bruce have already made about the challenges of setting up something that is fit for purpose and making it work, I would add that you have to enter into these things with your eyes wide open, and that the benefits for both sides—the state and the industry—outweigh what are often quite considerable operational challenges both to set them up and to make them work in practice.

Lord Browne of Ladyton: That is a good point about the Treasury.

The Chair: I am keeping an eye on the time and I would be grateful if we moved smartly now.

Lord Browne of Ladyton: I will invite Professor Jarzabkowski to contribute and that will be me.

Professor Paula Jarzabkowski: I will be very brief in the circumstances. A lot of these things have been said. Without a doubt, it is a very complex thing to set one of these up. We call them in our research "uneasy truces", for that reason. For that reason as well, expanding a scheme that is known is often easier than setting up a whole new scheme.

There are two things that it would be useful to bear in mind from our work. We have written a Geneva Association paper on this, related to the notion of a more broad systemic re or black swan re, and so forth. If you try to drive it purely from an insurance perspective, it will be nearly impossible to set up because you will get lost in the weeds of how you price it, and how you model it. How do you model for that which you do not know will be the disaster that you want to cover? It would need to be driven from a different perspective, although an insurance-based approach, and particularly an old-fashioned insurance-based approach of taking the number of insureds, dividing the premium and charging everybody accordingly, which is an old solidarity model, may be a way to deal with it at the start, just to get products priced.

The second point, which is often seen as controversial—but it need not be if we had a pool—is that the premium amassed could be used to support research into the best ways to build resilience, and to start building some of this resilience that we talk about. If we saw that as a legitimate use of a system re, to analyse the systemic risks, and start to seed-corn fund getting those things into greater resilience, at the moment it seems that we do not have any way to join that up. We have seen with Flood Re an example of how when that is baked into the remit that sort of money can be used to consider how we make property, individual home owners, more flood resilient, so it is that with a system re we could start to use some of the premium that other res may sit there and amass, to do something that would address some of the systemic risks that we think are coming forward. There are a couple of things there that might add to that debate, but I will not say more given the time.

Q117 **Lord Willetts:** May I invite our expert witnesses to focus on climate change, which you have touched on briefly? Clearly, it is not an uncertain risk; it is a highly predictable risk, albeit one coming in a range of different shapes and sizes. Clearly, there is a lot going on already. What would you practically like to see by way of improved public policy to boost our resilience in partnership with the insurance industry to deal with the consequences of climate change? Perhaps Mr Scott might like to comment first on that.

John Scott: Thank you for the opportunity. You are right that climate change is one of the greatest challenges that we are facing as a species. It is a fact that the current acceleration in carbon dioxide emissions over the last 150 years, and the increasing rate of global warming as a result of that, is anthropogenic. It is caused by humans.

The other characteristic of it, unlike a lot of other global risks that we are discussing, is that it is really long term. A lot of the risks related to climate, whether they are the physical risks or even the transition risks, will play out over decades and centuries. Human beings have evolved to deal with fight or flight responses to risk, to events. When the lion comes into the campsite we all run up a tree. That has kept us alive and in our current situation for millennia.

In this case, it is like the frog in the boiling water, if you pardon the pun. It is so slow acting, and it comes back to what Baroness McGregor-Smith was saying about the challenges of managing risks that are not events. There are lots of other events like that at a global risk level.

As for what we are doing and how we can build resilience, there are three risk areas that the insurance industry is particularly good at informing the rest of the world about. One is around the physical risks, the second is around the transition risks, and the third is around what we call litigation risks.

On the physical risks, it is a core competence of our industry that we understand natural catastrophe modelling extremely well—in other words, the peril regions as we would describe them: the Gulf coast windstorm, north-west European windstorm, Australian wildfire and the like.

Of course, not all these natural catastrophe events are severe weather- or climate-related, but a lot of them are. The challenge that we are trying to address at the moment with climate scientists, especially through the IPCC, is to try to bring the climate science models or simulations of how global warming will play out, and build them into our natural catastrophe models.

Why is that important? It is important because it helps us think through at a policy level how to deal with resilience and adaptation to the physical consequences of climate change. Should we be building flood defences in certain places to deal with historic levels of storm surge flooding as global sea levels rise inexorably and land ice melts, for example?

The other really important issue is around transition risk and resilience to that. Of course, if we are to achieve the Paris Agreement goals to get to net zero, and substantially less than 2 degree warming by 2050, we have to consider the really big and important carbon-intensive sectors that provide the important services that all economies rely on: energy, mobility, transport not just for people but for supply chains, the components of infrastructure—iron and steel, glass and cement—petrochemicals, agrichemicals, and agriculture more broadly. We still need to feed 8 billion-plus people on the planet.

All those industries will have to be done in a different, low-carbon way in the next 30 years, and the scientists will tell you that in the next decade we need to halve emissions from those sectors.

That will have an impact on us as investors because of the revaluation of assets. There will be winners and losers in different sectors as they transition. It also has a very strong link to policy-making. Carbon pricing, for example, will have a very big influence on the economic viability of these technologies—on the production side or the supply side of these value chains and supply chains—but other policies affect consumer behaviour and demand for low-carbon products, which may be anything from the labelling of white goods for energy efficiency all the way through to building codes on energy efficiency or the low-carbon content of buildings.

As regards building resilience, for both the physical risks and transition risks, the insurance industry plays a really important part in data analysis and understanding these risks. It plays a part in influencing the real economy—the carbon-intensive sectors, and helping them manage the risks of their transition—and, of course, it works with policymakers to help create the right policy frameworks to encourage and incentivise the transition.

Lord Willetts: Mr Evans, I think that you were expressing some frustration about the type of dialogue you have with government. Would you like to suggest how there could be an improved dialogue with government on this whole issue?

Huw Evans: Please forgive that. I think that is an occupational hazard when you have a trade association chief.

There are three areas where this could be improved, but I do not think that we are starting from zero. I am really encouraged by the efforts that this Government have made, particularly over the last 18 months, starting with Theresa May's setting of the net zero target, to try to inject some momentum into this agenda and take a much more forward-looking approach. That has been hugely positive.

There are three things that the Government could do that would really make a difference. The first is on the Treasury Solvency II reforms: to take the freedom that is now offered by a Brexit deal to enable UK insurers, which manage in total £1.6 trillion of assets, to take what we estimate to be £60 billion of those assets, and invest them in green and longer-term infrastructure projects. These are currently focused on high-grade corporate bonds, often in mining and commodities companies, or in sovereign debt. Insurers are currently straitjacketed in terms of where they can invest some of that money at a time when there are huge opportunities to invest for the long term, over 30 years, in wind farms and renewable energies and physical infrastructure. That is one concrete thing that would repurpose those assets to a more productive end.

The second is to continue where I think the Government are going, which is to provide more clarity about targets and planning. It is bewildering for firms to try to navigate their way through the alphabet soup of different commitments, promises and pledges. Recently, when we did a piece of work for the ABI board, the annexe was 14 pages long, detailing all the different commitments that firms could sign up to and all the different groups that were monitoring them. The recent clarity that the Chancellor offered about TCFD by 2025 was a very positive example. The 10-point plan is a good start in trying to simplify and clarify what the

Government's expectations are so that firms can plan and contribute in a more sustainable way.

The third and final point is to keep a strong focus on sustainability—going to John's point—not just on mitigation. Net zero, as we understand, is all about mitigation for the risks of a warming planet. The real focus has to be on sustainability: how can we live on this planet in a way that is sustainable for generations, and for the next two millennia? That requires, I think, an even broader and deeper government focus, and that in turn will ensure that we live in a world that is insurable. I hope that third part is also an element of what the Government continue to invest more time and focus on.

Lord Willetts: Professor Jarzabkowski was looking as if she was about to intervene. Do you have anything to add?

Professor Paula Jarzabkowski: I made my statement on climate change earlier, and I think I should stop now, keeping an eye on the time for everybody.

Viscount Thurso: May I follow up that point and perhaps go to you first, Mr Scott, and afterwards to Mr Evans?

As has been mentioned, the London market is probably more dependent than any other market in the world on carbon assets, both in the FTSE 100 and through the corporate debt markets. At the same time, over the last two years, investors have moved very rapidly towards looking at ESG assets, particularly the E part of the ESG.

It seems that there are two risks. There is a risk to the London market in that it ends up with a lot of stranded assets, and there is the risk that there is not enough capital available to go into ESG. I gather that the industry is looking at that.

My question is: how will the industry look at that, assess it and be part of looking for the solution because, in addition to the two risks, there is the opportunity to influence the behaviour of the investors?

John Scott: There is a huge wave of appetite for ESG investments globally at the moment.

The Chair: I am sorry to interrupt, but for those people who are listening who would like to know what ESG is, Mr Scott, would you explain it, please?

John Scott: I will try to avoid the alphabet soup of acronyms. Environmental, societal and governance is E, S and G, and together those three areas form part of what the financial services industry would refer to as sustainability. Within environmental, clearly, climate change is an important component, but so would be the removing of plastics from the environment and developing a circular economy to be more sustainable, which Huw was talking about earlier.

There is this huge wave of desire to invest in these ESG products. The question is: what are they, and how do we define them? We want to avoid a kind of greenwashing, where people create investable financial assets such as corporate bonds or green bonds, for example, where people are not creating businesses or investing in businesses through these vehicles that are reducing carbon emissions. That is one really important thing. Some very good work has gone on recently within the EU context about improving classification of ESG financial asset products. That will be a key part of enabling the ESG investment industry to take off.

The second point, coming back to your point about the London market and stranded assets, is that this is not just a challenge for the London market. It affects all investors. We are currently working with the UN-convened Net-Zero Asset Owner Alliance, which together has about $5 trillion of assets invested, to work with the real economy—with the carbon-intensive sectors through organisations such as the CA100+, the group of most carbon-intensive companies in the world—to ask, "What are your transition plans? How are you going to change your business in different jurisdictions?"

As you are probably aware, every country has a different economy. The larger countries that contributed to the Paris Agreement through the nationally determined reduction commitments are all different depending on the nature of their economy; therefore, the transition pathways will be different. We are trying to work as investors with the real economy to support it through voting at AGMs and bringing up new votes, or voting out board members who are not supporting the right strategies that enable these transitions, to enable and encourage the transitions to happen within the timeframes that the IPCC is asking them to do, so that we can have a chance of achieving the Paris Agreement goals of a net-zero world by 2050.

Viscount Thurso: May I come to Mr Evans, and perhaps in your answer you will address that point about whether government can do anything to help direct capital into truly carbon-lowering companies rather than people such as me, who already own peat bogs and do not get paid just because somebody else needs some carbon?

Huw Evans: I will speak on behalf of the long-term savings side of the insurance industry. I am sure Bruce will want to talk about the general insurance side. There are two areas. I have already mentioned the Solvency II review, so I will not repeat that point. That is £60 billion of assets.

The other is the work that the Chancellor kicked off in his Statement in November on a so-called long-term asset fund. This is looking at how defined contribution pension assets more generally can be used to invest in, using the technical term, illiquid assets, which tend to be the longer-term, greener projects.

At the moment, that is very hard to do. It is difficult for trustees to get comfortable with it. It is difficult within the regulatory framework. Things such as the permitted links regime make it very difficult.

That is a really important piece of work. It is being co-chaired by the Governor of the Bank of England, the chief executive of the FCA and the Economic Secretary. I am on that group with several other colleagues, and I think that the work it is doing is critical to being able to unlock what could easily be £1 billion-worth of assets that are currently kept within very restricted mandates that could be invested in safe but sustainable longer-term assets.

The regulatory regime is critical. We are talking about highly regulated financial sectors. I think that the PRA has done a very good job in recent years in working with insurance, long-term savings providers and other parts of the financial services world to start to help work through the transition scenarios, so that assets can gradually be derisked away from what are increasingly looking like quite risky long-term bets around certain sectors of the economy and moved slowly but surely into areas that are more sustainable for the long term.

Viscount Thurso: I will hand back to the Lord Chairman, but I am sure we will come back to this.

The Chair: I am sure we will.

Q118 **Lord Clement-Jones:** We have touched on cyber, but I wanted to come broadly to the impact of new technology. Bruce Carnegie-Brown, Lloyd's has commissioned a number of reports in the area of new technology—IoT, robotics, artificial intelligence and cybersecurity—and collaborated with a range of research institutes. The insurance industry is clearly alert to the issues, but how in practice is it dealing with anticipating the specific and novel societal risks of new technology? Of course, that includes data breach security and autonomy issues, data bias and algorithmic decision-making. What is the industry's approach to this and what mitigation is the industry incentivising?

Bruce Carnegie-Brown: Thank you for the question, which is very broad and deep. When I summarise the challenges for the insurance industry, and we have captured some of them already today, I think that there are three. First, there is the cost of delivering the product at an affordable price. Secondly, there is confidence: will the product perform when I need it to perform, if I buy it? Thirdly is the area that you are now focused on, which is relevance.

Traditionally, the insurance industry has been incredibly good at insuring tangible assets. It is what we grew up around. Increasingly, more of the value in our economy is from intangible assets. In simple terms, if you look at the market capitalisation of the S&P 500 in the United States, you see that 50 years ago 70% of that value was made up of tangible assets—plant, product, inventories—and 30% of intangible assets. Today, the reciprocal is true. Most of these things, of course, fall into categories such as reputational risk, which need to be increasingly protected.

A couple of simple examples would be Airbnb, a hotel company that does not own any hotels, and Uber, a taxi company that does not own any taxis. We are good at insuring hotels and taxis, but we are not necessarily very relevant to Uber or Airbnb. Their principal risks are reputational in terms of selling you a product that works. We are trying to develop products for what we call the sharing economy. We have some quite good syndicates at Lloyd’s that specialise in these issues, and I think it is a huge growth opportunity for us, but the pace of development in this sphere is lagging.

As you rightly say, it touches on a huge range of related risks, cyber being the most obvious one. As we all become more connected, which is part of the service world in which we live, so the risk that we turn cyber into a systemic risk grows by the day. Understanding the correlations between these risks is a huge source of challenge for the industry because, clearly, they are developing very rapidly, and the database of information on these issues is still evolving.

What we have done, to your point, is produce research on these issues, get people focused on the issues, and try to be innovative around products. For instance, in Lloyd’s we host an innovation laboratory. It has been going for two years now, where we bring in insurtech businesses and try to learn from them. Equally, we try to help them turn into product their ideas, by introducing them to market participants.

This has a two-way benefit. One, it shows the traditional insurance capital within Lloyd’s what the future might look like and why they should engage. Equally we are trying to help to accelerate start-ups looking at addressing risks in this area by bringing capital and customers to them more quickly.

That would be my answer to your question. It is a series of initiatives, but there is a real challenge about whether we are moving fast enough.

Lord Rees of Ludlow: To follow up on that, do you have ways of trying to estimate the speed at which these innovations will occur? To take an example, driverless cars are now thought to be further into the future than they were. It is relevant to estimate not just the direction of travel but the speed of travel. Is that part of what you are doing?

Bruce Carnegie-Brown: The short answer is yes, but again, like you, we are looking at it from the outside and trying to calibrate the pace. Clearly, the nature of the risk changes dramatically in your example. A driverless car almost certainly becomes a risk against the manufacturer rather than against the individual, which is where most motor insurance policies today are targeted.

There are some quite significant changes in where risk and liability occur depending on the obligations taken on. You see this even in the provision of data into corporations. Where will the liability for that data come, whether the corporation uses that data, or indeed if the systems of the service provider in your supply chain are hacked? This is creating dramatically different risks, specifically for the industry and clearly for our global economy in its impact.

We are working with people such as Google directly in Lloyd's. That sounds like a very modern counterparty for an ancient institution to be engaged with. We have a syndicate at Lloyd's, for instance, that is entirely algorithmically based, as a way of trying to reduce the cost of delivering the product. All its analysis is done by algorithm. Those algorithms were worked up in partnership with Google.

We are trying to embrace the new world in our ways of working, to ensure that we continue to be relevant for the risks that are generated in the counterparties we serve.

Q119 **Lord Triesman:** May I ask each of you: if your desire was to see one recommendation in this report that would be made to the Government, what would it be? If there is something that you would implore us not to recommend to the Government, what might that be? May we perhaps start with you, Professor Jarzabkowski?

Professor Paula Jarzabkowski: The thing that I would implore you to do is to start with a purpose. With all these policy recommendations, it is important to start with a purpose. If you take the core principle, the core value proposition of insurance as it has been generated over centuries, it is prior planning for protection—the three Ps. Accepting that risk is growing and that we know much of the risk that is growing, although there are certainly some that we do not know and that will come upon us unexpectedly, at least with that which we know is coming, if we were to put protection at the heart of the policy-making, it may allow us to get past many of these complexities of how much the market should bear, and how much it should be shared by this, and how much is the moral hazard. Those are the minor questions when we put protection at the heart of policy-making. So I would encourage that. Do not get lost in the weeds is my not-to-do.

Lord Triesman: We always try not to get lost in the weeds.

Julian Enoizi: Perhaps I can limit my comment to physical security and resilience, given that that is what I am responsible for. I would focus on the idea that we have a tremendous police force and security services in this country, but when they retire the benefit of all the training they have had is lost. If you look at Oxford Street on any one day, you may have a couple of policemen walking down the street, but you will have 1,000 security guards, often ex-police or ex-security forces. The idea that the insurance industry, Pool Re perhaps, could invest in the idea of an academy for continuous professional education and training so that they remain up to date would provide a tremendous amount of physical resilience in areas of high footfall and as regards critical national infrastructure.

Lord Triesman: I always regard Oxford Street as an existential threat as well.

John Scott: I have two recommendations related to climate change, one of which came out of the Green Finance Taskforce work in 2018. The insurance working group suggested having a platform within the UK that was about improving climate risk management and advanced data analytics. We are incredibly rich in this country in climate expertise, with the Met Office, our universities, and the engineering and actuarial professions. It would be one huge step forward if we could put that in place, not just for the UK but for the world.

Secondly, and this is more related to COP 26, it is vital that the UK in its leadership of COP 26 this year drives successful agreement or conclusion of Article 6 of the Paris Agreement. Article 6 is essentially the rulebook for global carbon trading. That is the foundation stone of setting a globally effective carbon price. Without a globally effective carbon price, administered in many different ways and many different jurisdictions, there will not be the economic incentive to create the transition that the carbon-intensive sector needs to go through to achieve the Paris Agreement. I think that those two things would be useful.

Bruce Carnegie-Brown: I am greedy for three, I am afraid, but they are brief. The first would be to advocate for a closer partnership between private enterprise and government agencies, with more urgency around our definition of systemic risks.

The second would be a standardisation of the metrics of performance as we think about transition risks. That relates particularly to climate, but I think that it has an application in areas such as cyber risk, for instance.

The third would be the reporting of resilience. Our economic environment overrewards growth and lean inventories, just-in-time supply chains, and underrewards resilience. We need to develop much better reporting metrics of resilience, particularly in our corporations.

Lord Triesman: I am coming to you last, Mr Evans, because you had three things you wanted the Government to do earlier. Would you like to add to them?

Huw Evans: I will be quicker this time. The one recommendation would be some form of holistic capacity in the UK Government to take a broader view—not to take away every individual issue from each department, but to take a broader view, possibly supplemented by some standing panel of experts that can help inform this work. I think that would be a real value add to the infrastructure that we have currently. I do not think it should be some well-kept secret in the Cabinet Office, which just talks to itself, like some of the existing parts of government do. It should be something set up with a new, slightly more outward-looking agenda. That would be the recommendation.

The thing to avoid would be a simplistic exam question with a simple answer, because what I hope this discussion has partly illustrated, from all our different perspectives, is that there is a range of different questions that you can ask about how you can improve this, and a range of different answers, with some variables and some quite challenging trade-offs. These are, rightly, the subject of the sort of public policy discussion we have been having this morning. I do not think this is a situation that lends itself to either simplistic questions or simplistic answers.

Lord Triesman: Thank you all very much indeed.

The Chair: Thank you very much. I should have known that the depth of knowledge and experience in this panel of witnesses was such that we would overrun, and we did overrun. We could go on for another couple of weeks. I do not think that we should because I do not think anyone would approve of that. Thank you very much indeed for a really rich discussion this morning. I declare this meeting formally over.