HOUSE OF LORDS

Select Committee on Economic Affairs

Uncorrected oral evidence: Governor of the Bank of England 2020

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Members present: Lord Forsyth of Drumlean (The Chair); Baroness Bowles of Berkhamsted; Lord Burns; Viscount Chandos; Lord Fox; Baroness Kingsmill; Lord Livingston of Parkhead; Lord Tugendhat.

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

Witness

I: Mark Carney, Governor of the Bank of England.

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Examination of witness

Mark Carney.

Q1 **The Chair:** Governor, welcome once again to the Economic Affairs Committee. We are extremely grateful to you for coming to see us just before you depart. We have been very grateful to you for your willingness to come and talk to us, indeed sometimes, as in the case of RPI, encouraging us to look at particular issues. We have a number of questions, as you would expect, but if there is anything you would like to say by way of introduction, please do so.

Mark Carney: Thank you very much, Chair, and members of the Committee. For the record, I would like to acknowledge the vital role this Committee has played and underline a few of probably the most important interventions and initiatives you have undertaken during my tenure.

I should start by saying that it would not be strictly accurate for me to claim that I look forward to these sessions.

The Chair: We look forward to them.

Mark Carney: My colleagues and I always prepare very carefully for them, because the weight of expertise and experience in this room can be daunting. That is as it should be, because this Committee is very much part of the accountability framework of the Bank of England and our accountability to Parliament and the people of the United Kingdom. In addition, the ad hoc sessions that you have held in recent years and the more detailed inquiries have touched on some of the most pressing economic challenges facing the UK economy. In particular, the sessions and exchanges on the future relationship with the European Union have been both engaging and effective in raising the issues, and are always held in the most professional and courteous manner.

I commend the Committee, as you briefly referenced, on its approach to some of the most important issues facing the financial system and its governance. Most recently, prominently and effectively, the Committee took evidence and gave a report on RPI. Noting the shortcomings in the retail prices index, the Committee rightly recommended that we move towards a single measure of inflation and put in place a timed phase-out of its use in contracts. Prompted by your work, the Chancellor recently announced that a consultation on the proposed changes to address the shortcomings will accompany the Budget on 11 March.

I recall that as long as four years ago, which is a lifetime in fintech land, you held hearings on distributed ledger technologies and crypto and digital currencies. That helped to set the stage for some of the subsequent advances in that area. The Bank of England has recently founded a consortium of the central banks of all the major advanced economies to pool resources and move forward on that, and I am certain that my successor will have the opportunity to testify here on the future outlook, challenges, risks and opportunities associated with it.

We thank the Committee for its involvement in the debate, scrutiny and improvements in the Bank of England's own governance, in the Bank of England and Financial Services Bill. Several changes came with that, including putting our three statutory committees on equal footing. That was crucially important and more important than some might realise. Sometimes it is seen that monetary policy is primus inter pares, but as we will discover, including in today's questioning, which I am sure will touch on monetary policy, the macro and microprudential responsibilities of the Bank are essential. That legislation helped our institution to operate more effectively as one bank.

This is not really an aside, but I want to underscore the point that, looking forward, it is useful from time to time to review the remits and structure of the institution, whether it is a periodic review of its monetary policy remit or the role of government economic policy and how that is co-ordinated with the Bank, including with respect to sustainability. One of the outgrowths of recent developments will be the balance of powers in regulation now that we are in the process of onshoring regulation, and how we are going to balance powers between Parliament, the Government and the regulators in order to deliver the necessary regulatory dividend, particularly in a time of great change.

My final point is that the UK economy is entering a period of what is likely to be profound structural change. New trading arrangements are being struck; new immigration policies are being introduced; and there are major new initiatives, as we have just heard today, on infrastructure, regional development and the transition to a lower-carbon economy. In parallel, the UK financial system is being transformed through the digital and sustainable revolutions, so the insight and inquiry of the Lords Economic Affairs Committee will continue to be vital in the service of the people of the United Kingdom.

With that, I thank you for giving me this opportunity and I look forward to your questions.

The Chair: Thank you very much, Governor. It is very kind of you to pay that tribute to the Committee, which is very much appreciated, but it will not make the questions any easier.

Mark Carney: I did not think so.

Q2 **The Chair:** I know I speak for the whole Committee in wishing you well in your future. We very much appreciate the courteous way in which you have engaged with us, as you have demonstrated this afternoon.

Perhaps I can begin by asking the first question. What do you think the long-term consequences of persistent low interest rates will be for the UK economy? Should we just assume that low growth is going to be the new normal?

Mark Carney: You rightly add the addendum on low growth. Before talking about the consequences, maybe I should say a few words on the causes of low interest rates, which have been with us for over a decade. Deep structural factors have driven the lowering of equilibrium interest rates. Just in the balance of savings and investment, there has been an increase in demographic factors globally that has driven up global savings. That has been reinforced in general by two factors: fiscal consolidation, broadly speaking, across advanced economies over the last decade, although there are exceptions; and greater precautionary savings, particularly in the corporate sector as a whole.

In parallel, there has been relatively low public investment and, particularly in an environment of greater policy uncertainty—I am speaking generally, not just about the UK—lower corporate investment for a persistent period. That, added to relatively weak underlying structural growth, and driven by weaker productivity, which we may come back to later, has kept equilibrium interest rates low. It is something that we at the Bank recognised a number of years ago and tried to give guidance on, and we have managed policy accordingly. One can always debate the relativities, but your question and the record of inflation and the performance of the economy underscores the fact that equilibrium rates are very low.

One consequence, exactly for the conduct of monetary policy, is that we would expect interest rates to be relatively low for the foreseeable future and that adjustments to rates would be relatively modest, certainly upward adjustments to interest rates. That is why we have ad nauseam used the phrase that interest rate increases, when they come, are likely to be limited and will proceed at a gradual pace.

One of the things we are very conscious of is that a low interest rate environment, and money illusion in parallel with that, can lead to a search for yield behaviour. In fact, one of the intentions of having low interest rates is to promote risk taking and help us move out of that equilibrium, but a search for yield can bring pockets of risk and that is where the other parts of the Bank of England have to come into play. We need to be vigilant on both the supervisory side of individual institutions and very much across the system as a whole. We have taken steps, from the housing market through to open-ended funds, to help address those issues.

There are some pressures on bank profitability because of the low-rate environment and the squeezing of net interest margins, although I think we should put those into context. Net interest margins across the banking sector in the UK are around 230 basis points, just under 2.5%. They would have been just under 3% prior to the crisis, so they have been compressed but they have not been eliminated. I contrast that with much lower net interest margins on the continent; you hear more about these issues with continental banks. There are exceptions, but on average they are running at about 1.25% on the continent, a full percentage point higher than the UK.

There are positives about that. This is a segue, if you will, into whether the low-growth environment is here to stay. The positive of a low interest rate environment is that it adds fiscal capacity. We think we are going to be here for a while, and we have been saying that for a while, so debt-servicing costs are expected to be low for a while. It gives firepower for corporates if they have confidence to put money to work. This is an environment in which the right infrastructure and the right corporate investment projects make sense, and will be necessary in order ultimately to get us out of this situation.

Q3 **Lord Tugendhat:** Governor, you have touched on the point I was going to raise. To what extent do you think that QE, along with low interest rates, has paved the way to speculative bubbles?

Mark Carney: It is something we have to be very conscious of, and we have been very conscious of it, but we need to take a step back from a financial stability perspective. With respect to the decisions around quantitative easing, which were taken principally in the 2008 to 2012 period, the counterfactual was much weaker growth, much higher unemployment and the knock-on financial stability effects of that. QE supported economic activity and employment. There are various estimates of them. One can quibble about them on the margins, but in orders of magnitude we think the contributions are considerable.

The second thing is to look at the UK as a whole at macro level. What are the levels of valuations in this country? Asset price valuations can appear elevated, but they are not that high relative to where they were. For example, the actual level of house prices in real terms, in general across the country, is comparable with where it was prior to the crisis. People often look at the FTSE, which is largely an international index priced in dollars, but the equity risk premium on UK-focused equities is two percentage points above international levels. While there has been quite a substantial rally in international equities, that has not been shared by the valuations of UK equities, and the valuations in relative terms are attractive. It is a similar story in UK corporate debt.

If I may take a big step back to where the Chair began, on the overall environment of lower interest rates, globally there has, in general, been a repricing of assets to much lower discount rates. The extent as to whether globally there has also been a repricing of assets to associated lower terminal growth rates, and the reasons for those lower discount rates, is debatable. In other words, in some respects financial markets and other asset valuations have taken the good news on discount rates and have not fully factored in the less positive news about where economies are likely to be headed. That is much less the case in the UK.

The question is exceptionally well motivated because those risks are certainly there. Because of them, even though we can comfort ourselves, and we can take some comfort because of the points I have just made, there are risks and pockets of risk that have to be addressed.

Lord Burns: This morning, I happened to read a commentary by Jacques de Larosière suggesting that the ECB should lower its interest rate target. Instead of saying that it should be around 2% or lower, or whatever it is, it should reduce the target. Do you think our inflation rate target should be adjusted?

Mark Carney: I take any comment by Jacques de Larosière exceptionally seriously. As I think you and he are aware, the ECB is in the process of reviewing its monetary policy framework, a review that is expected to culminate within the next six months or so.

It goes to a general point I made when I was coming into this role, which is that in my opinion it is desirable to review monetary policy frameworks on a periodic basis, not continually, for a few reasons. The first is that, from a democratic accountability perspective, in the end constrained discretion is given to technocrats and a technocratic institution; and to be reminded why that is the case and whether it is still fit for purpose makes sense. Secondly, it is possible, although it is not always the case, that there are structural changes that would merit adjustments to those targets, and they should be reviewed. There are slow-moving structural changes and those should be considered.

Some humility from central bankers is always welcome—Chair, I see your head snap up—in the sense of not thinking that we have reached the end of monetary policy history; in other words, that we have discovered absolutely the best way to achieve price stability goals with inflation targeting. For all those reasons, I support the general point of having a careful, deliberate review of the remit.

My perspective, which I outlined in more detail in a recent speech, is that the bar for change is very high. In my judgment, it has served the UK quite well, particularly with the structure that this Committee and this House helped to put in place, whereby we have a Monetary Policy Committee that can work with the other committees effectively, which is essential in this low interest rate environment. It is essential to ensure that the monitoring and the macro and microprudential arms are talking to each other and working together effectively.

Q4 **Baroness Bowles of Berkhamsted:** During your time at the Bank, have you come to any conclusion that might help explain the UK's productivity puzzle? Do you think that the poor performance of the UK's productivity over the last decade is likely to continue, and, if so, why?

Mark Carney: In the productivity puzzle, "conclusion" is a strong word, so I will not say it. I have some opinions, and their grounding is of various strengths, if I can put it that way. The first is that, as you are well aware, there has been a generalised slowdown in productivity across the advanced world since the financial crisis. Initially, it was understandable and explainable for a few reasons associated with the crisis, which were that there were excesses that would have contributed to both a cyclical increase in productivity in the latter years and an excess of measured productivity, and that is given back. We saw that particularly in financial services. The second reason why the crisis mattered was the scarring effect of the crisis itself. It was particularly relevant in the UK, where for several years the financial system was effectively not there for the real economy.

Those explanations ran their course at about the time of my arrival, because Lord King and others had put in place measures to repair the financial system. We had some work to do to finish the job, but effectively it was there. The drag from financial services should then have dissipated, but what we have seen is continued poor productivity performance. The reasons I would ascribe to it, although I would not say that they are comprehensive, are, first, that there has been some reordering of the underlying economy because of technological advances. I apologise for using a buzzword, but I think "fourth industrial revolution" applies to those aspects of the reorientation of the economy. As is frequently the case, when there is truly a substantial reorientation, initially the productivity gains are not evident because it requires a degree of business process and other re-engineering, and it takes time fully to realise the gains.

There is evidence that that is happening. My colleague Andy Haldane, in his various capacities, has drawn attention to one example, which is that the distribution of productivity performance, in this country particularly, has elongated. The so-called long tail or differential between the most productive firms in this economy and the least productive ones has become much more marked. That is true in general in advanced economies; it is particularly true in the United Kingdom, so it is a question of diffusion of best practice. There are things that can be done to accelerate that and it is best not just to wait for time, or just to let time elapse, but time is an element.

More recently, a couple of factors have probably played a bigger role. We think that the uncertainty around the future relationship with Europe and the Brexit process has played a role. There is fairly strong evidence in two aspects. First, uncertainty itself is holding back business investment. I suspect the Committee is well familiar with the statistics on that; they are fairly strong.

The second aspect is something we picked up and reported on in the most recent monetary policy report. I would not say that it is diversion of attention, but companies, particularly in manufacturing and financial services, have been spending a lot of time on contingency planning for various cliff edges. Time spent on contingency planning is time not spent on strategic initiatives. It is appropriate from a risk management perspective, but it has taken away effort. Over the Brexit negotiation process, if I can put it that way, probably about two percentage points of productivity shortfall accumulated, which is about two-thirds from less investment and its knock-on effects and one-third from that distraction effect. More generally, there are issues around the trading relationship that all countries are facing, and they have been weighing on productivity.

When you step back, the good news from those explanations is that some of them go away. The financial services explanation has run its course; the excesses prior to the crisis have certainly run their course; and the uncertainty effects, the contingency planning effects and the future relationship questions will run their course. There are still aspects of them, but I think the Government, particularly in recent weeks, have tried to be as clear as possible about the likely relationship, so that companies can prepare and move forward.

Baroness Bowles of Berkhamsted: Can I take you back to the technology point? I understand entirely what you are saying about expenditure up front and the benefits later, but there is another argument about technology. Maybe we are not measuring the same thing, or we are measuring output when everything is getting cheaper and therefore there is a deflationary effect because we are getting more bang for our buck due to technology. Is that a significant disruptive factor?

Mark Carney: Sir Charles Bean's review of the ONS raises some of those issues and makes suggestions for them, many of which have been implemented, so I would refer to that. There is an element of it. I cannot put my finger on exactly the order of magnitude.

One of the questions is whether a wedge effect has come in or is building over time. The fact that we have moved down to a lower level of productivity and not picked up from there suggests an element of compounding, which I find a little hard to credit. Secondly, if it is true, it is a good time to pass on the reins to my successor because it means that the disinflationary pressures in this economy are even greater than we had expected, or that we see, and it would have consequences. If we went back to the stance of monetary policy, it would have further consequences for the level of interest rates going forward.

Looking at some of the elements of this improved activity, it is often observed that there is a variety of services that we get for "free", but if we look at the profits of the companies providing those services for "free", it is clear that they are ultimately priced through use of personal data, better targeting of advertising and other services that are monetised and picked up in the national income accounts—if not, I might add, the tax revenues.

Lord Fox: May I ask a brief follow-up question before asking the one I was going to ask? Your explanation for the productivity disappointment essentially covered the whole of the United Kingdom, yet the recent report from the Industrial Strategy Council highlights huge disparity across the regions, the highest level of disparity for over a century. That will not necessarily be driven by global issues, so what do you think has caused that particular disparity, which seems to be a big issue?

Mark Carney: It is a big issue. It is a simple exercise, but if, magically, levelling up were to deliver the rest of the country the productivity of Greater London, the economy would be one-third bigger, so the orders of magnitude are considerable. As you rightly point out, they have widened in recent decades. They are wider than other European countries, and they are the widest for almost a century.

I am straying a bit from my brief, but it is okay; I am in my last weeks and demob happy. There are several likely causes. Infrastructure and infrastructure interconnection is one. The skills gaps are considerable, and in many respects, unfortunately, across the educational spectrum—primary, secondary and tertiary—there are matching gaps. The network effects of modern economies are very strong, so the cluster effects are very strong. Again, I am straying from my brief, but I applaud the Government’s focus on those issues because it will take concerted, deliberate, multifaceted policies put in place over a number of years to make a meaningful difference to them. Of course, the prize, in social and economic terms, is great.

Q5 **Lord Fox:** Turning to growth, the MPC has estimated that the British economy would be able to grow about 1.1% over the next three years without sparking inflationary pressures, based on your current target. The Chancellor is clearly aiming for much more than that—2.8% at the moment—and you mentioned the possible effects of levelling up, were it to be successful. How do you think the Bank should approach the pressure on inflation? In answer to the previous question, you mentioned the possibility of reviewing targets, or are we looking at some potential tightening up?

Mark Carney: We are switching horizons from longer-term structural policy to the two to three-year horizon of monetary policy. We start from a position, in the judgment of the MPC at present, that there is some slack in the economy; there is spare capacity in companies that still could be used up, whereas the labour market is relatively tight. We think that we should be providing some stimulus to bring the economy back to its trend rate of growth.

That said, I am sure you are familiar with the way we conduct our forecasting, but so that it is clear in the record, we conduct our forecast using the market’s expectation of where the path of interest rates will go. That curve had some easing of policy and was relatively flat thereafter when we did the forecast. On that curve, the economy would move into excess demand in the later years, and inflation would be a little above target; in other words, the economy goes a bit above full capacity at that time.

As to the conduct of policy, to repeat what we said at the last meeting, in effect we were making a few judgments, one of which was about the path of the supply capacity of the economy. Then, the 1.1% that you rightly quote is the trend growth rate over the next few years. There was some spare capacity to begin with. Thirdly, and crucially, our judgment at the time, given the information we had, was that the rate of growth in the global economy was stabilising; and that there was a bounce in the domestic economy following the election, and greater certainty about the outlook came with that.

The language we used was "so far, good enough"; the judgment was that what we had seen at that point was consistent with a bounce coming, but we would look closely to see whether it actually followed through. If not, there would be some expectation that we would provide stimulus to ensure that the economy moved forward. There is going to be a Budget on 11 March. It is possible that it will not be an austerity Budget, and the committee will have to take into account in future decisions the stimulus that is potentially provided there.

Lord Fox: That estimate of capacity is probably the key point in that analysis, and it is one that is hard to judge given things like workforce changes and those kinds of things, which currently cannot be resolved.

Mark Carney: It is hard to judge, although I am glad you are pressing on it because what is important is that we have made judgments. The judgment on productivity will be disappointing for some, but in effect it is more of the same. There is productivity growth of around half a per cent, given the lack of investment in recent years and the prospect of some reorganisation of this economy as we move to the new relationship with the European Union. Within 12 months, we will be moving to that new relationship, and with the frictions that come with it come some weight on short-term productivity.

The labour supply point that you raise is crucial. Since the crisis, we have seen quite a substantial contribution from the labour supply in the, almost, decade until this forecast. It has contributed 1.1% to potential growth. We expect going forward that that will be about half a per cent, which is more consistent with what it contributed prior to the crisis. In effect, we have not just the lowest unemployment virtually since these types of records began in the early 1970s, but, at the same time, the highest employment ratio, and desired hours are not increasing. There are people who want to shift jobs and who want more hours of work, but we are pretty close to maxing out labour force participation, which means that the growth will come with growth in the labour force—in other words, population growth—and it puts much more weight on productivity growth for growth in incomes and GDP.

Lord Burns: Governor, could I press you a little on the issue of the remit? I was involved way back in 1992 and in 1997 when much of the framework was set up. Indeed, it is astonishing how well it has lasted, simply measured in numbers of years. Do you have anything to share with us about where you feel it has not always been as helpful as it might have been, either in relation to governance or the way the target is framed? Should there be more balance between inflation and unemployment? Do you think the separation between monetary policy and financial stability, which I want to return to in a moment, remains right? Could you ever envisage a day when the two committees were one committee and the issues that are looked at in relation to monetary policy become very similar to the issues related to financial stability policy?

Mark Carney: Those are crucial questions and are exactly the types of questions that a deliberate review of the remit can help to surface and consider. I commend you. As you say, it has served the country exceptionally well. A few weeks ago, I tried to frame it as a framework for all seasons because it has seen both crises and stability, and proved adaptable to those circumstances.

That said, there have been some changes to the target itself, with which you are familiar. In 2013, an important change came when Chancellor Osborne made clear the flexibility that was inherent in the inflation target remit. While the inflation target applies at all times, the committee, in "exceptional circumstances", could adjust the time horizon over which inflation returned. It tried to get inflation back to target either from above or from below.

The above situation presented itself following the referendum when the depreciation of sterling, we knew and had learned, would lead to inflation above target, yet uncertainty and other factors could weigh on output and employment. Although with a strict short-term horizon there would have been an argument either to hold policy or even tighten it, the judgment of the committee was to use that flexibility and support the adjustment. I am obviously biased; I declare an interest, but I think subsequent events showed that that was at least not the wrong judgment, but it explicitly used that flexibility.

What has not yet been used, but was inherent in that judgment and that adjustment to the remit, which was part of your question, is that there could be a case where there is a generalised risk to financial stability, consistent with earlier questions about policy, which in the judgment of the FPC could not necessarily be effectively addressed by targeted measures to the housing sector or some sector of the financial system, and would be better addressed by adjustment to monetary policy—in other words, either bringing inflation below target for a period of time or taking longer to bring it back.

The genius of the remit in the way it has been written is that we can do that up to a point. We have to explain why we are doing it in the circumstances. It is not something we would do as a matter of course as a committee. Certainly, the view of the Financial Policy Committee would be very relevant, which in part gets us to the question of whether or not it is better to have one committee in order to do it.

My view, having served on both committees, is that the external members on those committees have different areas of expertise. The system works quite well with a mixture of real-economy financial sector expertise and some academic perspective on the FPC, and more macroeconomist and macro real-world experience on the MPC. What is crucial for the institution is to ensure that the complementarities between the committees are exploited, if I can use that term. That means joint research, sharing of analysis and periodic joint meetings.

I want to give a couple of examples where the committees have worked effectively together. The first is on housing policy, which goes back to the very first question about the low interest rate environment and risk. The most obvious place for this to be a risk is in the housing market. The question raised at the time, in 2013-14 when we were finally starting to have the recovery, was whether that was better addressed by monetary policy or macroprudential policy. In joint discussions between the committees, specific measures were taken by the FPC on housing policy; loan-to-income and affordability tests, plus stress testing, were put in place that allowed the MPC to continue to provide what it judged was the necessary stimulus.

There are other examples. I will leave you with one more. Having the supervisory expertise in the PRA in the same institution as the MPC in that case allowed the MPC to make a judgment about how low interest rates could go to provide broad stimulus to the economy without causing problems in the bank and building society sectors. We were very explicit about the building society sector, because we are supervisors of the building societies and have a sense of where their net interest margins would go and how long it would take them to rebuild capital. That helped us to make a judgment that rates could go close to but not below zero per cent in the UK. A different judgment has been made on the continent, but in our case I am confident, being on both committees, that it was well informed. We would not have that perspective if we did not have the free flow of information from the PRA.

Q6 **Lord Burns:** What do you see as the biggest risks to financial stability at the moment both in the UK and the world with things like the problems of the virus? What is top of your list in respect of financial stability?

Mark Carney: What is top of our list is laid out in our financial stability report. I will speak to the virus in a moment. The world is top of our list because of the shift from broad-based expansion to a slowdown, which we think has been stabilised, although the virus, in the short term, calls that into question to some degree. If I may, I will park the virus for a second.

The first point is about the global economy issues in China, Hong Kong, greater Asia and the knock-on effects through our financial system, given the exposure to those areas. The second point is domestically a series of risks that we think have broadly been addressed in the financial system around Brexit. There was a series of cliff-edge risks; now there are preparation risks for the new relationship, depending on the timeline and the exact arrangements, and we have to be vigilant about those. You will recall that we laid out the issues with traffic lights, and where they stand. I am sure the committee will continue to do that over the year. That is a case where we think we have a good line of sight to the actual issues, and we just have to stay on top of them. As we are here today, we are on top of them, but that does not mean we can assume them away.

We have to be vigilant about household and corporate debt. We can go into more detail on that. In general, we would term those as standard positions. Then we have a big issue, on which the FCA is leading, around the Libor transition, which it is essential to get right.

Lord Burns: And the virus?

Mark Carney: On the virus, from a financial stability perspective, I will give you a headline to put it in some context. Our stress test, the results of which were released in December, showed an outright fall in Chinese GDP of 1.5% and 2.5% in Hong Kong. External estimates of the impact of the coronavirus at present are orders of magnitude for annualised GDP being lower, so, instead of being 6%, it would be 5% or 4.5% in China. At present, those are the largest external estimates of that impact, so it is significant, but we have stressed the UK system, particularly the UK banks that have greater China exposure, to something much greater than that, so we think the spillover would be containable. In addition, we have a situation where financial conditions have not, effectively, tightened because of those developments.

All that said, we should all acknowledge first-off, as I know you do, the pain and suffering, which is real and spreading, including in this country. While there are signs of some slowing in the pace of infections in China itself, it is still very early days. From an economic perspective, this is already bigger than SARS. It is too early to say what the overall macroeconomic impact will be, but I reinforce the point that we, for other reasons, had stressed our banks and financial system to orders of magnitude different from what has happened thus far. The last point is that, in general, the experience of pandemics is that they can have quite significant impacts, but much of that, not all, is recovered in subsequent quarters.

Baroness Bowles of Berkhamsted: Can I ask you about the countercyclical buffer? At the last FPC, it was agreed that it had to increase to 2%, but at the same time you are doing a kind of capital twist, if I can use that phrase; you are improving the quality of the overall capital but phasing out or getting rid of Pillar 2. You are not increasing capital overall but just ratcheting it up to better loss absorption. What is the thinking around that, and why?

Mark Carney: I will start with the thinking about why it is desirable to have a higher countercyclical capital buffer. Let us say that we had had a countercyclical capital buffer in place prior to the crisis but it had no impact on the excesses building up. That does not fully make sense, but it is a good counterfactual. How big a buffer would we have wanted? Analysis that colleagues at the Bank have done and released is that it is in the area of 3.5% to 4%. That is the first point.

Secondly, as you and others would expect, we monitor a variety of indicators. Are bubbles building up? Are financial vulnerabilities building up? There are various indicators. We published in the financial stability report the history of those, and which of those indicators are above their 50th percentile and which are above their 75th percentile in riskiness. For those, it is only in late 2004 and early 2005 that we start to see them picking up. That means that if you had a buffer of, say, zero, you would have rapidly had to build it up subsequently. Under the legislation, as you know because you helped put it in place, you have to give 12 months' notice to build it up, so you need to be particularly farsighted and very quick, and then have quite a sharp move for capital.

For those reasons, the FPC has taken the view that, if we are to have a CCyB, and we think there is a lot of value in it, the resting place should be positive. Having done the analysis and thought about when there are excesses, you need to get around 3.5%. Having the resting place at 1% is too low, so in our judgment it made sense to have the resting place higher, at 2%.

Did it make sense to raise the overall level of capital in the sector? No, because previously we had looked at how much capital was needed for various historical loss rates. We were also informed by the stress test and other factors, so we wanted to keep the overall level of capital broadly the same and have some reallocation of capital from the minima, of which Pillar 2A is part, into the buffer.

Those are separate decisions of separate committees. We have not actually taken the decision as the PRC, responsible for Pillar 2A, but the FPC has taken the decision to have a higher buffer for the reasons I outlined, and the PRC is looking at whether to make some adjustment, not one for one, to Pillar 2A. We think that gives us a system as a whole that is more responsive because as there are losses, if we go into a downturn, banks can draw on the buffer and are not worried about hitting the minimum and can continue to lend, but we are still resilient because there is the same amount of overall capital.

We made one other adjustment as part of the overall package. We committed that, if we ever were to bail in debt because of a resolution, we would bail it in equities, so the quality of capital increased as a consequence of that.

Baroness Bowles of Berkhamsted: Does it have a net effect on when dividends can be paid?

Mark Carney: Yes. As you move into the countercyclical buffer, you start to get into the equivalent of the conservation buffer thresholds.

Q7 **The Chair:** While we are on the subject of capital, I should declare an interest as chairman of Secure Trust Bank.

I just listened to a Minister answering a question on the issue of housing in which the Government said they wanted to encourage the building of more houses and they wanted small and medium-size builders to do that. You increased the risk weighting, in line with the EBA rules, from 100% to 150%. Now that we are leaving the European Union, and the Government's policy is to encourage more housebuilding, can we expect that to change?

Mark Carney: As I alluded to at the start, it will depend on the balance of power between Parliament, the Treasury and the Bank of England. As this has now been imported into law, if I am not mistaken we have the ability to make the adjustments. Is it the EBA?

The Chair: It was an EBA regulation, but the PRA required an increase in capital for housebuilding from 100% to 150%, which reduces the supply of lending to housebuilders and makes the cost higher. That is in complete contrast to the Government's declared policy. When you talk to the Government about it, they say it is a matter for the Bank of England.

Mark Carney: It certainly is. You have caught me short, in that I have not followed whether there is a difference of view within our policy team on that precise risk weighting.

The Chair: Perhaps you could drop a line to us on that.

Mark Carney: Yes. As you will appreciate, the judgment of the PRA for the appropriate risk weighting for housebuilding would be a function of the riskiness of it, not whether or not it was part of government policy. It is not an instrument of government policy in order to encourage it. This is a dangerous slope to move towards. The Government want to encourage X infrastructure or Y activity, and one of the routes to that would be to take more risk through the prudential standards of the banking sector.

The Chair: That is totally understood, but I think the argument was that the European rules were changed to take account of what had been happening with jerry-building in Spain and in Ireland, which is completely different from the housing market here, where there is a shortage of housing. The Government want to encourage it, but the normal prudential rules would apply when considering lending. It is the actual consumption of capital.

Mark Carney: That goes to a general point. There is a range of areas in both banking and insurance where a harmonised standard for the European Union is not precisely calibrated for the risks in the UK housing market. It goes in both directions.

The final point is that housing markets are very different across jurisdictions. The Dutch housing market is very different from the UK, which is very different from the US. While we will always respect international agreements and their grounding, through Basel and others, we will look to tailor the risk weights and the various prudential requirements to the facts on the ground here.

Viscount Chandos: I would like to pick up something you mentioned a moment ago about household debt. Before that, I would like to ask you about ring-fencing. It is a year on from the introduction of the ring-fencing regime. Have you had any preliminary thoughts on how it is working? Clearly, the real test will be when there is a shock, long may that be postponed, but do you have any views on how it was working and whether it was affecting the supply of credit to businesses, particularly

SMEs?

Mark Carney: In general terms, ring-fencing is so far, so good. It has been a major undertaking, as you can appreciate. It cost over £1 billion to put into effect for the industry. In particular, the governance changes have been taken on board. All the affected institutions have effective governance arrangements, by which I mean that, if push came to shove, the boards would represent the interests of the ring-fenced banks and their creditors and clients.

On balance, it appears that the process of ring-fencing has affected the availability of credit, particularly the mortgage market. It has intensified competition in the mortgage market at a time when there has been relatively modest demand for mortgages, for reasons we can appreciate. What has been striking over the last 18 months, particularly the period of ring-fencing, is how low mortgage rates have gone and how limited the take-up of those rates has been thus far. We have seen in the last month some signs that that is starting to turn.

There has been some tightening of credit conditions for corporates, including for SMEs. We do not put that down to ring-fencing; we put it down more to the fact that the economic environment moved from fairly robust growth to modest growth over last year. I would characterise the overall economic environment as having been slightly below par. We are expecting it to pick up over the course of this year, so we will be monitoring that closely. We do not think of a cyclical shortage of capital for SMEs as something caused by ring-fencing.

Taking a bigger step back, we think that there are structural challenges in the provision of credit to SMEs. Those are long held; they are things that have been here over decades. That has been the case. It is often the case in advanced economies; Canada has issues with that as well. On some estimates, the unmet demand for credit from SMEs is £20 billion per annum, so it is considerable. One thing that we have been looking at, working with the Treasury, has been to create a new form, which is a variant of open banking but is SME-focused; it would involve single credit or single data files, effectively, for SMEs, which would not just be traditional credit information but would include social media and other platform information in a single file that could be ported across from fintech to traditional providers. As I say, we are working closely with the Treasury on that, and it would be complementary to the ring-fencing reforms.

Q8 **Viscount Chandos:** Thank you. We move from the problem of famine to the possible problem of feast. To what extent does the Bank view the rising level of household debt as a risk to the economy?

Mark Carney: In recent years, it has been something we have kept a very close eye on. We have looked at a series of areas where underwriting standards could shift from what have generally been high quality to levels that would create problems for the households themselves but macrofinancial problems for the economy. I referenced earlier the housing portfolio limits that we put in place; we think those have been quite effective, and there is a detailed review in the most recent financial stability report.

This is another example of how the committee structure has, in my judgment, worked well. Through the PRA, there were concerns a few years ago, which we discussed in this Committee, around car loans, the new PCPs in car loans and the rise in household credit, which had gone up to around 10.5% per annum growth rates. You were rightly questioning us on this, but we were already looking at it, because any time something starts growing rapidly, even if you do not think it is a problem, you should look into it. The car loan issue was a structural shift in that market, with very limited exposure to the banks and individuals. In fact, it offloads. It is more an issue for the car companies, which end up with the payment risk at the end, or the residual value of the cars.

On consumer credit more broadly, there was some sign of underwriting standards starting to slip, and this is my point on the committee structure. The FPC identified that, worked with the PRA and was able to use, instead of a sledgehammer, some sort of broad capital add-on across the whole sector, moving interest rates up using supervisory powers to ensure that there was much greater focus by the institutions themselves, and in some cases additional capital add-ons for institutions.

To take a step back and look overall, household debt is lower relative to income now than it was previously. It has come down from 144% to about 121% or 122%, and because of the lower rate environment, and because people are able to term out that debt, much less of it is floating rate. Debt servicing ratios are pretty low—very low, actually—relative to historical levels.

One last point is that history has shown, here particularly, but in other economies as well, that when debt servicing goes above somewhere in the 35% to 40% range, that is the inflexion point for problems for households in servicing. Any temporary loss of income or family challenge will lead to impairments. The proportion of households that are above 40% historically is just under 2%, and today it is 1%. We are in an environment where interest rates would have to rise by at least two percentage points, without any corresponding increase in income, to get the current level to the historical average. Theoretically, that could happen, but it is pretty unlikely that we would all of a sudden raise interest rates by two percentage points with no income growth in the environment, as we were discussing.

Viscount Chandos: From that, I take it that you do not worry too much that the level of household debt is a constraint on the normal monetary policy tools.

Mark Carney: Yes, I would say that, in that we are not in a position where, if it were appropriate to raise interest rates, we would not be constrained by tipping households over. The focus on household debt will continue. I underscore one thing, which comes out again in the stress tests in December: even though the mortgage debt on the Bank's books is four to five times the size of the consumer credit debt, the losses under stress in consumer credit are as large as the losses on mortgages, in a stress scenario. It needs constant attention, as it should, because this is finance after all.

Lord Fox: I apologise for digging in a bit deeper, but I saw some numbers, which unfortunately I did not commit to memory, showing that household debt was being weighted at the end of the market where people could least afford to pay it. In other words, there has been a gradual shift so that, although the average is more encouraging, there is a larger group of people for whom the debt is a larger proportion of what they are earning or, indeed, far more than they are earning. Have you found that in your work?

Mark Carney: In part, given that we are down to only 1% of households having debt service ratios over 40%, on a macro basis it is not there. One important thing with household debt is that we focus on household debt ex student loans, although we look at both. Student loans are a burden but of a different type.

Lord Fox: Yes, they come in at a certain level of income.

Mark Carney: Yes, exactly. We all know that a contingent repayment structure can sometimes affect behaviour and, of course, for the individuals who have the debt and intend to pay it off, it is debt; but it is a different form of burden. Sometimes numbers get moved around because of that, but, as regards ability to repay, the numbers have improved quite substantially.

The Chair: What sort of level of funding has been provided under FLS and other schemes by the Bank that you are discontinuing?

Mark Carney: The level has been coming down. The TFS peaked at £119 billion, from memory. I can write to give you the precise numbers. It rolls off in 40 years. Towards the end of this year will be its anniversary.

The Chair: They are quite substantial numbers. The effect of ring-fencing, which Lord Burns touched on, is that the big clearing banks, which get a reasonably low-cost source of money through deposits, no longer have the opportunities for lending that existed prior to ring-fencing, and that is driving down mortgage rates. Do you worry that at some point in the future, with the scale of these things, we will find some difficulties, perhaps heading for a credit crunch?

Mark Carney: We do worry, and we look at the proportions of bank balance sheets that are encumbered through lending facilities from the Bank of England, as well as in other ways. It tends to be the case that it is a higher proportion of the balance sheets of smaller or challenger banks. Proportionately, the biggest users of those facilities are challenger institutions. In pound value, everything for the big clearers is big, but the marginal impacts are concentrated around the challengers and the smaller banks.

Q9 **Lord Livingston of Parkhead:** Governor, first, thank you for everything you have done for the country in the last seven years. That should be said.

Mark Carney: Thank you.

Lord Livingston of Parkhead: I guess, if you were looking at the start of your term to when you leave, you would probably have taken inflation at below target and unemployment under 4% on your record, but you probably would not have bet on it coming after years of anaemic growth. Has the relationship broken down? What has changed?

Mark Carney: Thank you for referencing that. I think that 1.7% inflation is the average since I came here. Of course, I inherited some of that, and I am going to bequeath some of it, so it is never perfect. Growth averaged over the last six-plus years is around 2%, so it is anaemic relative to historical levels. The pre-crisis level was just south of 3%.

Lord Livingston of Parkhead: What about the last three years, for example?

Mark Carney: Yes, in the last three years there has been a steady step-down of the rate of growth. We were running at less than 1% last year, and probably at 0.8% for 2020.

Has there been a change in the relationship? That is a big question on employment and growth. Even in the period of the post-crisis recession, there was a change in the relationship, in that there was missing unemployment. That is an economist's term, but, in other words, unemployment should have been higher by 1.5 to 2 percentage points. Even though it shot up to above 8%, it could have been expected to go to double digits at the time, given historical relationships.

One thing that has happened is that there has been a very large and positive labour supply shock in the economy; again, I speak as an economist. Initially, we think it was driven by some of the effects of the crisis, such as lower pension pots and high indebtedness, so people stayed in the job market longer to rebuild pensions and pay down debt. Some of the changes and benefits that happened earlier last decade also had an impact, with people returning to the job market and staying in the job market. Some of the changes to the nature of work arguably had an impact. We have had a huge increase in the participation rate and the supply of labour.

In parallel, we have had the productivity puzzle that we talked about earlier. The supply of labour has supported growth, and the productivity puzzle has taken it away. The net consequence has been average or modest growth across the period as a whole, and decelerating growth in recent years.

The deceleration of growth we would put down largely to the uncertainty effects related to the negotiations, and a series of cliffs. One always has to treat short-term data with a huge grain of salt, but, with the figures released today, we see that, purportedly, there was a very sharp fall in business investment in the fourth quarter of last year, which is probably directionally right. What we have seen in surveys and hard data is that, when cliff-edge points get quite close, the uncertainty effects are particularly marked. You have been in business, so you know this: why be a hero? You find out the important piece of information, and then you take action. We have in our forecast a pick-up in business investment over the course of the forecast, which should help, but we are still left with the productivity issue.

To go to your question, if you had asked me in 2013 whether I expected interest rates to be so low, I would have said I expected them to be lower than they would have been historically, but not this low. I certainly would not have expected that the United Kingdom's trend rate of productivity growth was something around a half to three-quarters, which is how we see it at the moment.

Lord Livingston of Parkhead: Do you foresee the UK economy having a marked ability to create jobs because of low unemployment and good employment? The supply side would suggest that you might have good employment, but you would have rising unemployment. Is that something you expect going forward, and what impact does it have on the way the Bank looks at some of its policy decisions? It is not the way we were all brought up.

Mark Carney: This is an incredibly flexible labour market, and it demonstrated that in a way that we would not fully have expected. I count myself in that: I would not have expected it. Immediately post crisis, real wages fell substantially. That is very difficult for people, but one consequence was that there were a lot more people in work and a lot more jobs. One can debate which is better.

I will come back to your question, but to go to what Lord Burns was asking about earlier on remit and flexibility, we, as the MPC, explicitly took a judgment post referendum that we felt that real incomes would go down for a period because of the exchange rate move, and we could take it in two ways: a little higher inflation or lower employment. We thought that, given that it was a one-off move for underlying structural reasons, we should take it in a little higher inflation, and we did that.

To come back to the way the job market has been operating, in the relationship between unemployment or employment and wages—you could do it in two ways—wages adjusted for productivity have broadly held up. The wage Phillips curve, to use the economic term, has broadly held up. We are in a position today where labour costs are where they should be; they are growing at around 2.5%, at rates broadly consistent or a little above what we would see in achieving the inflation target. Pre-crisis, you would expect nominal wages to be growing at 4.5%, and they are growing at a little more than 3%, but that is because productivity used to be 2.5% and now it is where it is.

Your core point is absolutely right: the labour market performed quite exceptionally. There is a big story, and that is a big element of the story, but those relationships, particularly as the labour market has become tight, are holding up broadly as we would have expected.

Q10 **Baroness Kingsmill:** Governor, I have a couple of questions on the impact of Brexit on the financial services sector. What are the forthcoming risks associated with rule-taking in the financial services sector? How is that going to work? How could the EU's equivalency regime be changed, or would it have to change, to make it suitable for the UK financial sector? I know that is a big question.

Mark Carney: It is a big question, and it is one that will, I am sure, increasingly have the scrutiny of this Committee, and people more broadly. There will be exceptions. We may have talked about one earlier, in respect of risk weights on certain assets. There will be exceptions, but, in general, the structure of EU rules for the financial services sector was developed in partnership with the UK, and the UK had a very strong voice at the table. Broadly speaking, we agree with the starting point. There are exceptions, for example in the insurance sector around the risk margin, where we would have a more proportionate approach to banks, so that smaller and challenger banks, not internationally active banks, would have differences in their capital regimes.

There is a series of things, but in general we agree with the approach, not least because UK authorities have been at the table helping to set the rules and develop them. That is no longer the case, and it is a very dynamic sector, so that goes to one of the most immediate risks, which is that financial regulation continually changes. If you have a sector such as the UK's, which has a pretty unique structure, particularly in some of the most complex areas, and you are not at the table helping to set the rules, through no fault of anyone's it is unlikely that those rules are going to be exactly what you think they should be.

There is a conceptual challenge from not being there, which is separate from more fundamental points about sovereignty; it is just a question of practice, expertise and application. Those risks will grow with time. Being in that position, particularly for the wholesale financial services part of the business—the derivatives, securities and other markets—and not being at the table for the development of the rules, will grow financial stability risks over time and, in parallel, competitiveness risks. That is the first point.

The second point is much commented on, but it bears repeating. The equivalence regime in the EU is relatively unstable; in other words, equivalence can be withdrawn on relatively short notice. For example, there has been a lot of focus, and rightly so, on the cleared derivatives market. It was one of the risks associated with the cliff edges. The issue is that, if a UK-based clearing house—there are a few, very large clearing houses—has a client that is not authorised to use it, that client needs to leave; they need to take their collateral and have an orderly process of unwinding that collateral. In the judgment of some of the most complex clearing houses, and we would agree as their supervisor, that process should take about three months, so that a bunch of collateral is not pulled out of the market and, if you will, dumped into the market. The EU can withdraw equivalence recognition from a clearing house in one month, so, from the start, there is an inconsistency between the two.

We worked with the ECB and the European authorities, and full credit to them, as the cliff edges approached. Temporary equivalence, effectively, was granted to the CCPs for a year, which took away that problem. Under the existing equivalence regime, there would at a minimum need to be an amendment for that one specific circumstance. It is a very large, complicated and obvious circumstance, but there would need to be an adjustment.

That goes to a more general point. If equivalence is granted, or if we grant equivalence to somebody, we would do it on a few terms or bases in general. At least, our predisposition would be that; it is ultimately a decision for the Government, who will set the framework, and then we will apply it, but we think it would be based on outcomes and we would take reference to the rules. The question is whether a bank operating in the UK from the EU or Canada, say, is resilient and strong. We can tell by the capital rules, but we can also tell by the second thing, which is some form of supervisory co-operation. Do we have line of sight of issues with the bank? Do we have information? In a crisis, will it return our phone call? Will we be in a crisis management group? Obviously, that is entirely reciprocal.

The third thing we would look for in an equivalence relationship is some sort of deliberate and appropriately sequenced off-boarding process. We may decide that there has been divergence, ultimately, for whatever reason, although the reason would likely be that the outcomes were becoming sufficiently divergent. Let us say that, in my example, the Canadian banking system was not being kept up to the standards that we would expect to allow it to operate freely in the UK. We would unwind that relationship in an orderly fashion, with due notification and appeal, and a process of that sort.

None of those elements exists in the pure form of equivalence, as laid out in Europe, and it will undoubtedly be, or it needs to be, part of the discussion. The systems are highly integrated at present, and there are some common interests in maintaining them. Judgments have to be made about which elements of that integration should be preserved under some form of stable equivalence relationship.

Baroness Kingsmill: In your response, the underlying thought is that there is a potential for instability in the Brexit negotiations or the Brexit situation.

Mark Carney: There is. I took your question first and foremost to be about the future relationship, designing a future relationship that is not inherently unstable, or one that does not outsource to others the supervision or rule-making of the system here. In our judgment, or my judgment, that will require developing a form of equivalence that would look like the forms of equivalence that have been applied with respect to derivatives between the Bank of England and the CFTC, the US authority. It would also look consistent with the principles that were developed through the Financial Stability Board, when I chaired it—the college of regulators.

If the global system is to be open over time, and there are to be flows of data between like-minded jurisdictions, with proper governance of AI, and management of cybersecurity, as well as conventional financial services, those types of arrangements need to be in place. You cannot have the arrangements being decided by one jurisdiction, the rules being set by one jurisdiction, and then withdrawn, or potentially withdrawn rapidly.

Baroness Kingsmill: You are thinking of something global.

Mark Carney: It is a global issue. It is part of the issue of how to arrange the global system, and it is a point that we have made for a while. We use levelling up in a different context, which is how to arrange global services trade, with common reference to international rules when they existed, but focusing on the outcomes of how those rules were applied.

Q11 **Baroness Kingsmill:** You probably do not want to be too frank about this, but do you feel that the direction of travel in the last three years, with leaving the EU, the continued uncertainty over the terms on which we leave, and all the multitude of negotiations that will be associated with it and the agreements that have to be drawn up, have weakened London as a major financial centre? Do you think that weakness will continue, if such a weakness exists?

Mark Carney: We are where we are. Those issues are on the table, and sometimes it is hard to dissociate them from the specific very important negotiations with Europe. But the issues have broader application: how is the global system going to be organised between the major economies and financial centres? If we project forward 20 or 25 years, we are not going to have textual equivalence relationships with China on financial services. We are going to have something outcome based; we are not going to be a receiver of Chinese financial services regulation holus-bolus, or vice versa, but we will get to a level where there is a degree of supervisory co-operation. We have already started that process. We will have cross-referenced standards developed through the FSB, the Basel committee and others, with domestic application, and we will build those markets. We are looking to build those markets in renminbi bonds, hopefully with ShareConnect and others, but gradually more broadly. That is what we have to do for those types of approaches, so we might as well get started on it now.

In addition, the strengths of the City and the UK financial services sector are many and varied. One of the things that the City is able to do in parallel to these very important discussions is that it is exceptionally active in developments in fintech and in mainstreaming sustainable finance, which are both hugely valuable for the citizens of the country and huge commercial opportunities for this country.

Lord Fox: The recent minutes from the Monetary Policy Committee say that the monetary policy report is "based on the assumption of an immediate but orderly move, at the beginning of next year, to a deep free trade agreement between the United Kingdom and the European Union". Can you help us with the word "deep"? For example, is Canada an example of a deep or a shallow free trade agreement? Perhaps you can illustrate it.

Mark Carney: The minutes have that assumption, and it is an important question. The language is taken from the political declaration between the UK and the EU, as you will recognise.

Lord Fox: But you have had to turn it into a set of assumptions.

Mark Carney: Exactly, and we have turned it into what is broadly consistent with CETA, the Canada-EU trading arrangement, with an assumption of some loss of passporting, which is exactly what we have been discussing, but not total. For example, portfolio delegation would continue in asset management, which is the global norm; that is less relevant for Canada but it is notable here. Effectively, in the forecast we have a CETA deal that begins to be applied on 1 January next year. As the Chancellor of the Duchy of Lancaster said yesterday—

Lord Fox: I was coming to him.

Mark Carney: Yes. He said that there will be frictions involved in that, in customs checks and others. We have done what we can to model those, and we modelled them in both directions. That was our assumption, which he confirmed in his comments, and it happened to be correct.

Lord Fox: But you have zero tariffs?

Mark Carney: Consistent with the political declaration, yes: zero tariffs and zero quotas. The frictions come from the customs arrangements, which are there. That is the first point.

Secondly, what would really happen offstage, beyond the forecast horizon, if one were to continue to model this, is that there would be some expectation of regulatory divergence over time; it would be a natural process across the economy. There would be some loss of passporting and some frictions, as well as some uncertainty effects, in that other agreements would be struck. There is an adjustment to the new relationship that comes with that.

It is a relatively modest growth profile, as a consequence. The productivity growth and labour supply effects are consistent with recent experience. That is the first point. We have a pick-up in investment over the horizon. Whereas when we had to release our analyses for the Treasury Select Committee for potential Brexit scenarios we emphasised that they were scenarios, not forecasts, this is a form of forecast. It is broadly consistent with what we released at the time under what we called a less close partnership, which was basically a CETA deal.

Lord Tugendhat: Given the range and scale of the London markets, do you think it is possible to work out an agreement between the UK and the EU on a purely bilateral basis, or do you think issues will arise that also involve the interests of New York?

Mark Carney: That is a great question. In many aspects of the EU trade negotiations, considerations of the opportunities and potential constraints of other trading relationships will need to be taken into account. As you know, in a trade negotiation, you think of the various chapters and sectors of that negotiation, and it is a question of comparative advantage, of which sectors are most advantageous to liberalise and open up to have a deeper relationship, and which ones are not. If you are negotiating simultaneously and in short order a series of trade negotiations, you make those other calculations as well, at the same time.

In financial services, particularly in wholesale financial services, it is very important, given that London is the world's leading international financial centre, full stop, that we remain open to as many jurisdictions as we can. We are the gateway to the global system for many countries, including in Europe for certain products, and that is not going to change in the foreseeable future. For the benefit of those clients, and for clients around the world, we should not take steps that would constrain our openness, whether to New York, Toronto, Shanghai or Johannesburg.

Lord Tugendhat: One of the things in my mind was not that we would try to restrict our openness but that there could be circumstances where the EU would try to impose conditions on the extent to which EU-based institutions could operate in London. Were that to happen, it would clearly create precedents for other financial centres.

Mark Carney: It would be an interesting step to take, but it would not create a precedent that would necessarily have to be followed. We made a very clear signal, almost immediately following the referendum, that we would grant unilaterally temporary permissions to EU financial institutions operating here, on the expectation that in the fullness of time we would develop new supervisory co-operation relationships with European authorities, and that the regulatory standards and supervisory application in the European Union would result in broadly similar outcomes. Those three-year temporary permissions were granted to almost 300 European institutions and are operative for up to three years following the end of the implementation period, from the start of 2021. That is the right way to operate an international financial system.

In parallel, my colleagues at the PRA, and more broadly at the Bank of England and the FCA separately, have each signed about 30 MoUs with various EU member state authorities, to help to put into effect elements of that supervisory co-operation. We are not looking to restrict the activities of others coming in, and we will do what we can to ensure that that continues to be the case. We expect reciprocity over time in that regard.

Q12 **The Chair:** Governor, I expect that one thing you will not miss is Brexit, so I will change the subject to something that will be of more interest to you, with particular reference to the Bank. What do you think the target of net zero will mean for the UK economy? Could you give us some indication of the scenarios that the bank will use to factor this into its policy-making?

Mark Carney: I will start with the second question. For the purposes of stress-testing the bank and insurance sectors, we are in the process of developing, in consultation with the industries, three scenarios for the UK economy. One is a smooth transition to the legislated target of net zero by 2050; the second is a sort of delayed and more abrupt transition, where climate policy is delayed and comes in more sharply; and the third is business as usual, which is, basically, no adjustment to climate policy.

The consequences of those scenarios are both around climate policy and macroeconomic outcomes, and they are then fed into the banks and insurance companies, which assess their portfolios and whether the strategies are reasonable for them. We will release them in spring this year, in April, so they will be open source, effectively. We are working with the institutions, particularly the cat risk insurers, on the physical risks in those scenarios. The bigger risks or economic drivers are actually around the transition paths and the changing economics of certain business activities associated with that.

It is likely, or I am confident that it will be the case, that the economic outcomes on the do-nothing scenario are much worse than those on the smooth and steady transition scenario. With reference to the expertise resident in Lloyd’s of London, as in other entities that we supervise in the UK, the do-nothing scenario does not mean business as usual; it means business as usual with mounting physical risks that affect the value of mortgages and business activities, and real physical loss. Sometimes, the discussions around climate change and the costs of adjusting to net zero are entirely in isolation from those physical costs. We will put those out and run the stress tests. A number of other major jurisdictions are adopting similar approaches, which will become increasingly evident in the course of the next year, in the run-up to COP.

To take a step back, as regards the opportunities around the transition to net zero, we alluded a little earlier to the financial services sector. In effect, what is happening is that transition risk and transition opportunities are becoming one of the lenses by which the financial services sector values assets and companies. It is very simple in the United Kingdom; it is the law of the land to go to net zero. It is the imperative of climate physics, whichever temperature we are going to sustain at, ultimately at some point to get to net zero. It is an entirely reasonable question for any listed company: "What's your plan for net zero? And if you don't have a plan for net zero, over what horizon are you running your business?" It could be a possible strategy. A plan for net zero could be, "I have no plan for net zero, and I'm hoping that some cold fusion will turn up or something new will happen". But then the judgment is made within the financial sector about whether or not that is a realistic plan or for what period it is.

To shift to the broader COP, one of our priorities is to make sure that the financial sector has the information it needs to make those judgments in a way that is consistent and comparable and takes into account the entire economy. In the absence of the right information, the defaults often become simplistic, and that is quite dangerous. The default becomes only green, and certain things are classed as that: "Renewables are clearly green, so I will invest only in green". Or there is a divestment strategy, whereby whole industries are viewed as being too brown for the ultimate transition and then are taken out.

The reality of transitioning to net zero properly, in a smooth, deliberate and effective manner, is that it is for the whole of the economy. You need the information to figure it out within each sector and make judgments, and different institutions will make different judgments about who is ahead of the curve, who is behind, and who is above the line but will go below the line accordingly. That creates a tremendous commercial opportunity for UK financial services, because those are all judgments. They are very difficult judgments to make, but they are crucially important judgments, and the allocation of the associated capital decisions is enormous and will make a tremendous difference to the speed with which we move. I shall pass to Lord Burns, with your permission, Chair.

The Chair: Before coming to Lord Burns, can I clarify this in my mind? You may not be aware of this, but the *Times* is having a go at the Bank of England because, of a £10 billion issue of bonds, £300 million, or 3%, went to energy extraction companies. Is there a danger that, in considering the impact and the risks associated with climate change, it gets translated to, "You mustn't lend any money to anyone involved in fossil fuel extraction", thereby preventing them being able to move forward? Could you clarify what the policy is?

We were very privileged the other day to have a lecture from David Attenborough. I talked to him afterwards, and he is quite realistic about making the change and about the pathway that needs to be taken, but there are some people, such as those criticising the Bank for its bond issue, who see it differently. How do you see it?

Mark Carney: It is an important question. The corporate bond purchase programme, you are absolutely right, is for £10 billion, and 3% is for energy companies, because that is the proportion of the non-financial bond universe; in other words, it is the investment grade, but not companies that we regulate. It is that proportion of the bond market. What we have done for monetary policy is to be absolutely neutral across the market, because our job is not to allocate capital but to set the overall price of capital for the purposes of achieving the inflation target and, more broadly, employment and growth outcomes.

There is a general point. Unless directed by government to use monetary policy or instruments in a different way, that is not a decision that the Bank of England takes. We think, rightly, about the financial stability risks of the financial sector not adjusting over time for what is now the legislated objective of the country. That is the financial stability risk, which is why we do stress-testing, and other things. You raise a more general point about the transition. There is an energy transition, which is absolutely necessary; a profound energy transition is necessary to achieve net zero, and it will need to happen faster than previous energy transitions. Some of the drivers of that energy transition are large energy companies, because they have cashflow and expertise and in some cases, although not all, the will to put that into effect.

The market, along with citizens with social licence, needs to make a judgment about who is going to contribute and who is going to lag behind. Wholesale divestment of industries does not accomplish that; the transition is whole economy. There will be leaders and laggards, and the laggards will be punished, in my view, by the market. There will be great value destruction as a consequence of company decisions to ignore the issue and not take society’s objectives seriously. There will also be huge beneficiaries and leaders, including from established energy companies, which will be part of the solution. There is no one solution to all this, as you can appreciate, but they will be part of the solution, and they should be allocated capital to get on with it.

Lord Burns: I have an analytical question. Normally, when one does these scenarios, no-change tends to be the scenario that gets the least attention, because one thinks of it as the most straightforward. Then one looks at the alternative scenarios, which by and large come with shocks of one kind or another.

It sounds to me as though you are arguing that the real debate is going to be about what the do-nothing outcome would be, because you are implying that it already has shocks of its own. I see a great debate about the do-nothing, and it being almost a greater issue than the issue about taking the gradual approach. Your preliminary work is presumably beginning to show up some of these issues.

Mark Carney: It is an interesting point. The baseline for a steady-as-she-goes economy and macroeconomic stress is just the baseline, and people do not focus on it, whereas what happens in a business-as-usual and no-adjustment scenario is that the physical risk gradually increases in the latter stages of the test, which then has consequences for values of mortgages and all the things we referenced, such as the volatility of GDP because of extreme weather events. There is a variety of ways in all of this, and certainly with climate modelling there are ranges around it.

There are also markets around a variety of these things, such as the cat bond market, and other longer reinsurance markets, which can inform it. We rely on external expertise, but there is expertise resident in the Bank of England as well, as you would expect, to oversee it.

Lord Livingston of Parkhead: Can I interrupt you? You talked about the scenarios and about going to net zero or facing an increasingly catastrophic impact. Is there not a scenario whereby we go to net zero, but, because of the actions of other countries, we have the costs of going down that road, because we are not the world? Both things happen at the same time.

Mark Carney: The middle scenario we have done, which I shall come back to, is that we go to net zero, but we go to net zero later, so we delay adjustment and then there is a sharper adjustment later. The pace of adjustment for companies is much more abrupt, with the consequences of that.

Yes, there is such a scenario as you describe. It is not one of the ones we are modelling, but you could map it, although it is not a perfect combination to do the physical risk from the first scenario with the transition costs of the second.

Lord Livingston of Parkhead: But it is a possible world, and not entirely unlikely.

Baroness Kingsmill: It is highly likely.

Mark Carney: As a future adviser to the Prime Minister on COP 26, I know he has made it a personal priority to start a decade of action, so I am afraid that I cannot agree that that is a highly likely scenario.

Lord Livingston of Parkhead: But we do our thing; the UK does its thing.

Mark Carney: The UK is chairing the COP, in partnership with Italy, and the objective is a global approach to address the issues.

The Chair: It is the Dieter Helm point, which he has made to this Committee on a number of occasions: you end up importing other people’s carbon and disadvantaging yourself.

Mark Carney: Being legislators, you can appreciate that that is probably an unsustainable situation in a couple of regards. There are two choices. One is to stop adjusting, and the second is not to permit the import of other people’s carbon. The European Union has already signalled which one it intends to follow, with the possibility of border adjustment taxes based on carbon. It will be an issue, and it will depend on the relative speeds of adjustment, given the starting points.

I do not start from a position—let me flip it around and say it more positively. I start from a position that the issue is very large, but it can be addressed. It is within the possibilities. I underscore the point that the

UK's leadership in this is absolutely essential, not least because of the position of our financial system, and I am very pleased that the UK Government have taken on the mantle.

Baroness Kingsmill: The real point of all this is that all things are in the pot when negotiating trade deals. It may just be that we are very compliant; we have a net zero target and we are taking steps, so we are leaders in some respects in that area, but it may be that it becomes a choice to be made.

The Chair: Is it not also the point that, in working out whether you are net zero, you should also take account of the amount of carbon that you are importing?

Baroness Kingsmill: Yes, there are two points and two pressures.

Mark Carney: There are two pressures, but there is also pressure from a corporate perspective. Let us take the example of Microsoft, which has set the standard for what a corporate objective is. Three weeks or so ago, it set out that it would be net negative on a flow basis, but net zero over the lifetime of the corporation. In other words, it would abate all the emissions since it was formed, and it would be on a scope 3 basis, which means that it is across its entire supply chain, and the cost of using Microsoft products, in GHG. Once you are scope 3, as a company you cannot offshore carbon. With Apple and Foxconn on scope 3, all that carbon and then the carbon from the servers and the iPhone is all part of it. That is where the logic is likely to lead, not immediately, but it will. Then the question is whether the broader structures are there.

This is an evolving area, and the incentives are evolving too. Sometimes the discussion is that there are no incentives for the other major emitters in emerging economies to find solutions. Having some experience in dealing with those economies, and the leadership of those economies, I do not credit that view. Part of what is missing is a cross-border offset market, and that has been one of the real challenges of the COP process. In coming years, it needs to be resolved.

The Chair: Probably, as you have been going for two hours, we should draw a line under this. Perhaps I could be allowed one anecdote in respect of Apple. I bought a new Apple computer, and the sales guy told me that it was made of recycled aluminium and that they were doing their part in saving the planet. Then he told me that my charger would not work and that I had to buy another charger, with all the consequences for copper and everything else. Sometimes you have to look behind the headlines.

Governor, you have answered all our questions very fully. We appreciate that, and we have every confidence that in your new role you will deliver the agenda, which is certainly a very tricky one. I am sure that the Prime Minister will be very well advised by you. Thank you very much. That concludes the session.

Mark Carney: Thank you very much.